**Tract II**

**NIAGARA COUNTY**

**NIAGARA FALLS, NEW YORK**

# FINAL
# SITE MANAGEMENT PLAN

**NYSDEC Site Number: 932136**

Prepared for:

**Honeywell**
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JULY 2017

**Revisions to Final Approved Site Management Plan:**

| Revision No. | Date Submitted | Summary of Revision | NYSDEC Approval Date |
|---|---|---|---|
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CERTIFICATION STATEMENT

I, Stuart C. Pearson, certify that I am currently a NYS registered professional engineer and that this Site Management Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).



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**LIST OF ACRONYMS**

| | |
|---|---|
| ALTA | American Land Title Association |
| AutoCAD | Computer Aided Drafting |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act |
| CAMP | Community Air Monitoring Plan |
| CFR | Code of Federal Regulations |
| City | City of Niagara Falls |
| cm/sec | centimeters per second |
| COC | Certificate of Completion |
| CY | cubic yards |
| EA | EA Engineering, PC |
| EC | Engineering Control |
| E&E | Ecology and Environment, PC |
| ERP | Environmental Restoration Program |
| EWP | Excavation Work Plan |
| FFS | Focused Feasibility Study |
| ft/bgs | feet below ground surface |
| GRD | Greater Radiological Dimensions |
| HASP | Health and Safety Plan |
| Honeywell | Honeywell International Inc. |
| IC | Institutional Controls |
| LLP | Limited Liability Practice |
| Mactec | Mactec Engineering and Consulting, PC |
| mg/L | milligrams per liter |
| Moore | Moore Business Forms |
| NYSDEC | New York State Department of Environmental Conservation |
| NYSDOH | New York State Department of Health |
| NYCRR | New York Codes, Rules and Regulations |
| O&M | Operation and Maintenance |
| OM&M | Operation, Maintenance and Monitoring |
| Orin | Orin Remediation Technologies |
| OSHA | Occupational Safety and Health Administration |
| PAH | Polynuclear Aromatic Hydrocarbon |
| PCB | Polychlorinated Biphenyl |
| PRP | Potentially Responsible Party |
| PRR | Periodic Review Report |
| RAO | Remedial Action Objective |
| RDWP | Remedial Design Work Plan |
| ROD | Record of Decision |
| RP | Remedial Party |
| RSO | Remedial System Optimization |
| SCG | Standards, Criteria, and Guidelines |
| SCO | Soil Cleanup Objective |
| Site | Tract II Site |
| SMP | Soil Management Plan |
| SVOC | Semivolatile Organic Compound |
| TAL | Target Analyte List |
| TCL | Target Compound List |
| TCLP | Toxicity Characteristic Leachate Procedure |
| TE | Target Excavation |
| TENORM | Technologically Enhanced Naturally Occurring Radiologic Material |

| | |
|---|---|
| USEPA | United States Environmental Protection Agency |
| USGS | United States Geological Survey |
| UST | Underground Storage Tank |
| VOC | Volatile Organic Compound |
| XRF | X-Ray Fluorescence |

# ES EXECUTIVE SUMMARY

The following provides a brief summary of the controls implemented for the Site, as well as the inspections, monitoring, maintenance, and reporting activities required by this Site Management Plan (SMP):

Site Identification: C932136 Tract II
3001 Highland Avenue
Niagara Falls, New York

| | |
|---|---|
| Institutional Controls: | 1. The property may be used for restricted residential purposes in the Park Area, commercial purposes on the remainder of the Site or any use that is more restrictive than the designated use (e.g. industrial in lieu of commercial);<br>2. The use of groundwater underlying the Site is prohibited;<br>3. Vegetable gardens and farming are prohibited on the Site;<br>4. Engineering Controls (ECs) must be inspected at a frequency and in a manner defined in the SMP;<br>5. Data and information pertinent to Site management must be reported at the frequency and in a manner defined in this SMP; and<br>6. Future activities that will disturb remaining contaminated material in the commercial areas must be conducted in accordance with this SMP. |
| Engineering Controls: | 1. Soils in areas designated for commercial use, where contaminants remain that exceed the commercial SCOs, are covered with a demarcation layer and at least one foot of cover material that meets the Part 375 Import Fill criteria. |
| Inspections: | Frequency: |
| 1. Cover inspection | Annually |
| Monitoring: | None Anticipated |
| Maintenance: | Frequency: |
| 1. Swale maintenance | As needed |
| Reporting: | Annually |

Further descriptions of the above requirements are provided in detail in the latter sections of this Site Management Plan.

# 1.0 INTRODUCTION

Mactec Engineering and Consulting, P.C. (Mactec) has prepared this Site Management Plan (SMP) on behalf of Honeywell International Inc. (Honeywell) for the Tract II Site (Site) located at 3001 Highland Avenue, east of Highland Avenue and north of Beech 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 layout of the Site with former structures in plan view. Honeywell, through a predecessor company, Eltra Corporation, as well as the City of Niagara Falls, National Grid, and R.R. Donnelley (RRD; successor to Moore Business Forms [Moore]) have been named potentially responsible parties (PRPs) for the Tract II property by the New York State Department of Environmental Conservation (NYSDEC).

The Site lies to the south and east of the Tract I site, which is located at 3123 Highland Avenue. The Tract I site (which is not in the State Inactive Hazardous Waste Disposal Site Program) is not addressed in this SMP.

## 1.1 GENERAL

The Site was remediated under the New York State Inactive Hazardous Waste Site Program and was designated as a Class 2 site in 2008. The NYSDEC, Registry of Inactive Hazardous Waste Sites number for the Site is 932136. Honeywell entered into an Order on Consent and Administrative Settlement in October 2011 with the NYSDEC to remediate the Site. The Site location and boundaries are provided in **Figure 2**. The boundaries of the Site are more fully described in the metes and bounds description that is part of the Environmental Easement (EE) provided in **Appendix A**.

After completion of the remedial work, some contamination was left at the Site, which is hereafter referred to as “remaining contamination”. Institutional and engineering controls (ICs and ECs) have been incorporated into the Site remedy to control exposure to remaining contamination, and to provide protection of public health and the environment. An EE granted to the NYSDEC, and recorded with the Niagara County Clerk, requires compliance with this SMP and all ECs and ICs placed on the Site.

This SMP was prepared to manage remaining contamination at the Site until the EE is extinguished in accordance with ECL Article 71, Title 36. This plan has been approved by the NYSDEC, and compliance with this plan is required by the grantor of the EE and

the grantor's successors and assigns. This SMP may only be revised with the approval of the NYSDEC.

It is important to note that:

- This SMP details the Site-specific implementation procedures that are required by the EE. Failure to properly implement the SMP is a violation of the EE, which is grounds for revocation of the Certificate of Completion (COC);
- Failure to comply with this SMP is also a violation of Environmental Conservation Law, 6NYCRR Part 375, and the Order on Consent and Agreement for the Site, and thereby subject to applicable penalties.

All reports associated with the Site can be viewed by contacting the NYSDEC or its successor agency managing environmental issues in New York State. A list of contacts for persons involved with the Site is provided in **Appendix B** of this SMP.

### 1.2 REVISIONS

Revisions to this plan will be proposed in writing to the NYSDEC's project manager. Revisions will be necessary upon, but not limited to, the following occurring: a change in media monitoring requirements, upgrades to or shut-down of a remedial system, post-remedial removal of contaminated sediment or soil, or other significant change(s) to the Site conditions. In accordance with the EE for the Site, the NYSDEC will provide a notice of any approved changes to the SMP, and append these notices to the SMP that is retained in its files.

### 1.3 NOTIFICATIONS

Notifications will be submitted by the property owner to the NYSDEC, as needed, in accordance with NYSDEC's DER-10 for the following reasons:

- Sixty (60) day advance notice of any proposed changes in Site use that are required under the terms of the Order on Consent and Agreement, 6NYCRR Part 375 and/or Environmental Conservation Law;
- Seven (7) day advance notice of any field activity associated with the remedial program;
- Fifteen (15) day advance notice of any proposed ground-intrusive activity pursuant to the Excavation Work Plan;
- Notice within 48-hours of any damage or defect to the foundation, structures or EC that reduces or has the potential to reduce the effectiveness of an EC, and likewise, any action to be taken to mitigate the damage or defect;
- Verbal notice by noon of the following day of any emergency, such as a fire, flood, or earthquake that reduces, or has the potential to reduce, the effectiveness of ECs in place at the Site, with written confirmation within seven

(7) days that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public; and
- Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action submitted to the NYSDEC within forty-five (45) days describing and documenting actions taken to restore the effectiveness of the ECs.

Any change in the ownership of the Site or the responsibility for implementing this SMP will include the following notifications:

- At least sixty (60) days prior to the change, the NYSDEC will be notified in writing of the proposed change. This will include a certification that the prospective purchaser/Remedial Party has been provided with a copy of the Order on Consent and Administrative Settlement, and all approved work plans and reports, including this SMP; and
- Within fifteen (15) days after the transfer of all or part of the Site, the new owner's name, contact representative, and contact information will be confirmed in writing to the NYSDEC.

**Table 1** on the following page includes contact information for the above notification. The information on this table will be updated as necessary to provide accurate contact information. A full listing of Site-related contact information is provided in **Appendix B**. The roles and responsibilities of the parties involved in the remediation are provided in **Appendix C**.

**Table 1: Notifications***

| **Name** | **Contact Information** |
|---|---|
| NYSDEC Region 9 Regional Remediation Engineer, (NYSDEC) | Phone: (716) 851-7220 |
| NYSDEC Region 9 Regional Engineer, (NYSDEC) | Phone: (716)851-7201 |
| Mr. Arunesh Ghosh, Public Health Specialist (NYSDOH) | Phone: 518-402-7860<br>Email: BEEI@health.ny.gov |
| NYSDEC Division of Environmental Remediation<br>Bureuau of Technical Support<br>Site Control Section<br>Albany NY | Phone: 518-402-9543 |
| | |

* Note: Notifications are subject to change and will be updated as necessary.

# 2.0 SUMMARY OF PREVIOUS INVESTIGATIONS AND REMEDIAL ACTIONS

The following sections summarize investigations previously conducted at the Site and subsequent remedial actions.

## 2.1 SITE LOCATION AND DESCRIPTION

The Site is located in Niagara Falls, Niagara County, New York and is identified on the Niagara County Tax Map as Section 144.06, Block 2, Lots 2.1 (Western Commercial Area), 25.1 (Park Area), and 25.2 (Eastern Commercial Area) owned by Brightfields II, Inc., and Section 130.18, Block 2, Lot 13 (15th Street Alignment), owned by National Grid. The Site consists of approximately 19.251± acres located north of Beech Avenue, between Highland Avenue and a residential area on 17th Street. The Site extends north to the former Power City Warehouse (Tract I) property. The Site included a dilapidated building known as the "17th Street Warehouse", along the northern property boundary with the former Union Carbide plant (**Figure 2**) and the remnants of a former Moore building known as the "Moore Basement Structure" (or Moore Parking Structure) located adjacent to Beech Avenue.




The western portion of the Site (Western Commercial Area and Park Area) was first developed in approximately 1902 by the Carter Crume Company (later Moore Business Forms) into a factory that printed business forms and produced carbon paper. The business forms manufacturing plant closed in 1971 and Moore donated the property to the Niagara Community Action Program, Inc. The property changed ownership several times between 1971 and the time the City took ownership via tax foreclosure (1975). In 1976, a fire destroyed the building superstructure on the eastern portion of the Site. The building superstructures were razed and the debris was apparently buried to the west of the Moore

Basement Structure. Only the Moore Basement Structure and some concrete infrastructure remained on the area.

The eastern portion of the Site (Eastern Commercial Area) was part of a larger industrial complex that produced lead/acid batteries and battery cases between the early 1900s and the early 1970s. The 17th Street Warehouse was located on the northern portion of this property. It is unclear what the 17th Street Warehouse was used for. Discarded battery casings, anodes from graphite manufacturing, concrete, brick, other industrial materials, and municipal trash were placed as fill on the ground surface in the northern portion of the Eastern Commercial Area. By the early 1970s, the Eastern Commercial Area had also been abandoned. The City subsequently acquired the property via tax foreclosure in 1972.

## 2.2 SITE REGULATORY HISTORY

The Site was originally investigated under the New York State Environmental Restoration Program (ERP), and was assigned the Site number B00022 in 1998. Between late 1998 and June 2000, a remedial investigation was conducted on the Site by the City under a grant from the NYSDEC. In 2003, a Record of Decision (ROD) was issued for the Site for the removal of two feet of lead-containing surface soil and placement of fill within the excavated area in order to support a commercial/industrial reuse of the Site. The 2003 ROD stipulated that a detailed soil sampling program should be conducted to identify the limits of the excavation.

In October 2006, the City declined to pursue implementation of the ROD and withdrew the Site from the ERP. In 2008, the NYSDEC removed the Site from the ERP and placed it into the New York State Registry of Inactive Hazardous Waste Sites as a Class 2 site. Between December 2008 and July 2009, EA Engineering, P.C. (EA), under contract to the NYSDEC, conducted a Supplemental Investigation of the Site and produced a report of those activities in October 2009. Following the completion of the Supplemental Investigation, EA completed a Basis of Design Report dated March 2010. In April of 2010, the NYSDEC proposed an amendment to the ROD that required additional remediation on the Site. The ROD amendment was not finalized and, in May 2010, the NYSDEC notified Honeywell, the City, National Grid, and RRD that all were considered to be PRPs for the cleanup of the Site.

In July 2011, Honeywell completed a predesign study of the Site, and in October of 2011, submitted a Draft Focused Feasibility Study (FFS) to the NYSDEC. Also in October 2011, Honeywell signed the Consent Order and Agreement that, among other things, required the completion of the FFS.

## 2.3 SITE OWNERSHIP HISTORY

The Site was originally divided into nine parcels in the Niagara County tax records. For the purposes of managing the remediation, the parcels were combined and/or split into nine arbitrarily numbered (1 through 9) parcels. Parcels 1 and 2 were arbitrarily split at the eastern line of the unopened 13th Street Alignment to differentiate between the area containing the former Moore Basement Structure building and the empty lot to the west. Parcel 8 was subdivided into two sub-parcels because Parcel 8b was not originally included in the Site description; however, both parcels were owned by a third party (National Grid). Finally, Parcel 9 was combined into one arbitrary parcel from two tax parcels because the former location of the battery casings and lead-containing soils occupied both. **Figure 3** presents a plan view of the Site showing the nine arbitrary Site parcels, the four current Niagara County parcel numbers, and the area of each. The following table provides a cross reference for the arbitrary parcel numbers, the original Niagara County parcel numbers, and the current Niagara County parcel numbers. Note that the only change to the Niagara County parcel numbers was in the Lot Number.

| | Niagara County Tax Parcel Number | | | |
|---|---|---|---|---|
| Map Number | Section | Block | Old Lot Number | Current Lot Number |
| 1 | 144.06 | 2 | 25 | 25.1, 25.2 |
| 2 | 144.06 | 2 | 25 | 25.2 |
| 3 | 144.06 | 2 | 25.1 | 25.2 |
| 4 | 144.06 | 2 | 25.2 | 25.2 |
| 5 | 144.06 | 2 | 25.3 | 25.2 |
| 6 | 144.06 | 2 | NA | 25.2 |
| 7 | 144.06 | 2 | 26 | 25.2 |
| 8a, 8b | 130.18 | 2 | 13 | 13 |
| 9 | 144.06 | 2 | 2, 27 | 2.1 |

Prior to closure of the manufacturing plants in the 1960's and 1970's, Parcels 1, 2, 3, 4, 5, and 6 were owned by Moore Business Forms. Parcels 7 and 9 were historically owned by the US Light and Battery Corporation as well as several successor companies. The 15th Street right of way is, and has been owned by National Grid. Between the early 1970's and 2012, the entire Site, with the exception of the 15th Street right of way, was owned by the City via tax foreclosure.

### 2.3.1 Site Parcel Descriptions

This section provides a summary of each of the parcels as they currently appear in the Niagara County tax records. The acreages provided are those documented in the current recorded parcel descriptions. The parcel descriptions and associated environmental easements are provided in **Appendix A**.

#### 2.3.1.1 Fifteen Foot Strip

In April 2016, ownership of a 15 foot strip of land bounding the north side of the western portion of Tract II was transferred to the adjoining property to facilitate commercial development of that property (the Tract I site was remediated separately under the New York State Brownfield Cleanup Program). This strip became part of the Tract I property and is identified as Niagara County Tax Office parcel number Section 144.06, Block 2, and Lot 27.1. The strip is approximately 15 foot wide in the north south direction and 875 feet in the east west direction. This 15 foot wide portion of the parcel contains no

structures and is currently grass covered. The eastern portion of this strip was remediated to restricted residential standards and the western 138 foot long portion was remediated to commercial standards with the placement of a 1 foot soil cover above an orange demarcation fabric. Environmental easements associated with this 15 foot strip of land are referenced to this Site SMP. Specifically, the environmental easements for the westernmost portion of this strip of land require engineering controls related to the maintenance and protection of the 1 foot of soil cover above the demarcation fabric in this area.

#### 2.3.1.2 Western Commercial Area

The current Western Commercial Area parcel (a portion of Parcel 1) is the westernmost parcel on the Site and runs from Highland Avenue 288.77 feet to the western boundary of the area designated for the City Park. The eastern boundary of this area runs northeast, parallel to the eastern line of Highland Avenue, 307.26 feet to the northerly line of the Site. The current Niagara County Tax Office parcel number is Section 144.06, Block 2, and Lot 25.1. The parcel consists of 1.813± acres and currently contains no structures. Structures built by a Moore Business Forms Corporation predecessor once existed on the parcel, but were demolished by the City of Niagara Falls. The parcel was remediated to remove soil exceeding the Toxicity Characteristic Leaching Procedure (TCLP) standard for lead of 5 milligrams per liter (mg/L). Soil remaining that exceeds the Restricted Commercial Soil Cleanup Objectives (SCOs) was graded to accommodate a demarcation layer, at least six inches of fill meeting the Restricted Commercial SCOs (if derived on-Site) or the Allowable Constituent Levels for Imported Fill for Commercial Use (DER-10, Appendix 5; if imported to the Site), and at least six inches of topsoil or gravel cover.

#### 2.3.1.3 Park Area

The current Park Area parcel (the remainder of Parcel 1 and Parcels 2, 3, 4, 5, 6, and 7) consists of 5.001± acres, and contained the remainder of the Parcel 1 vacant lot, the former Underground Parking Structure, and the former Moore parking lot, which were part of the former Moore Business Forms Corporation complex. The current Niagara County Tax Office parcel number for the Park Area is Section 144.06, Block 2, and Lot 25.2, and is located between the easterly line of the Western Commercial Area parcel and the westerly line of the 15$^{th}$ Street Alignment (owned by National Grid). The superstructure of the Underground Parking Structure was demolished at the same time as the building that once stood in the Western Commercial Area (circa 1980). The foundation and ground

level floor of the Moore Basement Structure was demolished between September 2012 and October 2013 during remedial actions. This parcel was remediated to meet Restricted Residential SCOs and was backfilled with soil meeting the Allowable Constituent Levels for Imported Fill for Restricted Residential Use (DER-10, Appendix 5). The area was then graded to specifications agreed to between Brightfields and the City.

#### 2.3.1.4 15th Street Alignment Area

The current 15th Street right of way (Parcels 8a and 8b) is a 50 foot wide strip running north/south the length of the Site (862.28 feet) between the easterly line of the Park Area and the westerly line of the Eastern Commercial Area. The 15th Street right of way is part of a larger parcel, owned by National Grid, and consists of 1.194± acres on the Site. Underground utilities, including water and electric, are present on the 15th Street right of way on the Site. This parcel was remediated to meet the Restricted Commercial SCOs and was backfilled with soil meeting the Allowable Constituent Levels for Imported Fill for Commercial Use (DER-10, Appendix 5). The area was then contoured to meet the final grade in the project specifications.

#### 2.3.1.5 Eastern Commercial Area

The Eastern Commercial Area is the entire area between the easterly line of the unopened 15th Street right of way on the Tract II Site and the westerly line of the residential properties located on 17th Street, east of the Site. The Eastern Commercial Area abuts the southerly line of the Industrial Properties, Inc. (former Union Carbide property) and the northerly line of Beech Avenue, and consists of 11.067± acres. This area formerly contained the 17th Street Warehouse and the battery casings, anodes for graphite manufacturing, and lead-containing soil. The 17th Street Warehouse was demolished during remedial actions. Soil located in this parcel was stabilized to meet the TCLP Standard for lead, and was consolidated into the northern portion of the parcel. The stabilized material was graded to within two feet of the proposed final grade and covered with material that met or exceeded the Restricted Commercial SCOs to within one foot of the final grade. These materials were then demarcated and overlain by a minimum of one foot of cover material meeting the Restricted Commercial SCO (if derived on-Site) or the Allowable Constituent Levels for Imported Fill for Commercial Use (DER-10, Appendix 5; if imported to the Site).

### 2.3.2 Site Parcel Ownership

The majority of the Site, including the Western Commercial Area, the Park Area, and the Eastern Commercial Area (totaling 18.057± acres) is currently owned by Brightfields II, Inc. The 1.194± acre 15th Street right of way is currently owned by National Grid.

## 2.4 PHYSICAL SETTING

The following sections summarize the physical setting of the Site.

### 2.4.1 Land Use

Following remediation, the Site consists of a graded, vacant lot containing vegetated and stone-covered areas. The former structures have been demolished and the demolition and remedial activities removed the vegetation that was present. Extensive soil excavation and subsequent backfilling has occurred throughout the Site. The Western and Eastern Commercial Areas have environmental easements restricting them to commercial or industrial use and limiting excavation to depths less than one foot or within established utility corridors. The 15th Street right of way is restricted to commercial or industrial use, having met the Restricted Commercial SCO. The Park Area has an environmental easement for Restricted Residential use, which allows residential use with specific prohibitions for activities such as single family dwellings, raising livestock for human consumption or growing vegetables for human consumption. Restricted Residential use would allow recreational, commercial, and industrial use of the property. The Site was contoured to control storm water runoff, and a storm water collection and drainage system was placed along the southern and eastern boundaries. The storm water collection system contains two connections to the City combined storm water system in order to convey storm water off-Site.

### 2.4.2 Geology

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. The Site Investigation revealed that bedrock is between five and 24.5 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.

### 2.4.3 Hydrogeology

Perched groundwater is present at the Site at the interface of the silty clay and the bedrock. Perched groundwater depths range from approximately 12 to 16 feet below ground surface with the deepest occurrences in the south central portion of the Site (Ecology and Environment Engineering, P.C. [E&E], 2000; Amec-Foster Wheeler, 2013) The perched groundwater flow appears to be generally toward the southwest, toward the Niagara River. Slug testing of the monitoring wells indicated that the hydraulic conductivity of the silty clay at the Site ranged between $1x10^{-2}$ centimeters per second (cm/sec) and $1.2x10^{-5}$ cm/sec.

Groundwater in the vicinity of the Site is not a source of potable water, nor is it likely to become one in the future. The 2012 ROD indicated that "Site groundwater has not been impacted and there is little overburden groundwater present due to low permeability soils". Additionally, a public drinking water supply system is available throughout the area. As an institutional control, a local ordinance prohibits the use of groundwater as a potable water supply in the City of Niagara Falls, and the hydraulic conductivity is such that extracting groundwater for potable use would be infeasible. Additionally, investigations conducted during development of the 2003 ROD verified that the groundwater concentrations in the wells met the New York State Class GA groundwater standards. Consequently, the 2003 ROD concluded that no action was necessary with regard to groundwater at the Site.

## 2.5 REMEDIAL INVESTIGATION HISTORY

The following narrative provides a remedial history timeline and a brief summary of the available project records to document key investigative and remedial milestones for the Site. Full titles for each of the reports referenced below are provided in Section 8.0.
The Site was investigated in three efforts between 1998 and 2011. These included the 1998-2000 E&E) investigation, the 2008-2009 EA Supplemental Investigation, and the July 2011 Mactec Predesign Study investigation. The following subsections summarize the findings of the Site characterization efforts.

### 2.5.1 1998-2000 E&E Site Investigation

In late 1998, E&E conducted the initial investigation of the Site. The E&E investigation consisted of the collection of soil, sludge, and sump water/sediment samples as well as the installation of overburden monitoring wells and subsequent groundwater

characterization. The 17th Street Warehouse and former Moore Basement Structure were also characterized. The results of this investigation were reported in the *Site Investigation and Remedial Alternatives Report* (E&E, 2000).

The results of the samples collected on the western portion of the Site showed surface soil locations containing concentrations of metals and PAHs exceeding the applicable SCOs. In addition, the sump sediment sample collected in the Moore Basement Structure contained polychlorinated biphenyls (PCBs), metals, volatile organic compounds (VOCs), and semi-volatile organic compounds (SVOCs) that exceeded the restricted residential SCOs. Asbestos containing materials were identified in the former Moore Basement Structure.

The results of the samples collected in the eastern portion of the Site indicated that the lead-impacted soil extended throughout much of that area. In addition, a large portion of the lead-impacted soil contained concentrations of TCLP lead above the standard. Mercury was also detected above its SCO in the southeastern portion of the Site.

### 2.5.2 2008-2009 EA Supplemental Investigation

In 2008 and 2009 EA conducted a Supplemental Site Investigation. The investigation consisted of Site-wide soil sampling and completion of asbestos surveys in the 17th Street Warehouse and the Moore Basement Structure. In addition, debris illegally placed on the Site was consolidated.

Asbestos was determined to be present in both structures. Soil and fill material west of 15th Street was determined to exceed standards for lead, cadmium, barium, mercury, and PAHs in limited areas. East of 15th Street, lead was determined to be present throughout the area at concentrations exceeding the Commercial SCO as well as the TCLP standard. Mercury was also present at concentrations above the Commercial SCO in the southwestern corner of the Site.

### 2.5.3 Mactec Predesign Study

In July of 2011, Mactec conducted a predesign study on the Site. The predesign study was primarily performed on soils from the eastern portion of the Tract II Site. A building evaluation was also performed to determine if the buildings could be used during the remediation. Samples that represented the highest and moderate lead concentrations on-

Site were sent to Orin Remediation Technologies (Orin) and WRS Compass for stabilization bench scale treatability studies. Based on the results, the use of Portland cement at a 5% weight ratio was determined to be the most cost-effective stabilization technique for the soils that contained TCLP lead in concentrations exceeding 5 mg/L.

### 2.5.4 GRD Radiological Investigation

In early 2012, the project team became aware of the presence of Technology Enhanced Naturally Occurring Radioactive Material (TENORM) in the Niagara Falls area. Based on historical research, the slag was linked to former electrochemical elemental phosphorus extraction process, which had operated in Niagara Falls, New York. This slag was sold or given away by the generator and commonly used in Niagara Falls as fill in road beds, utility corridors, parking lots, building foundations, etc. When this material is disturbed, the NYSDOH requires removal and disposal. The New York disposal regulations prohibit disposal within the State. In order to determine if this material was present on the Site, Amec performed a preliminary radiological survey near the Moore Basement Structure, and in the former parking lot to the east. The results of the preliminary survey confirmed that the TENORM Slag was present on the Site, and Greater Radiological Dimensions, Inc. (GRD) of Niagara Falls was contracted to perform a survey of the Tract II Site. The results of the radiological investigation were provided in the "Radioactive Slag Volume Estimate at the Tract II Site, Niagara Falls, New York" (GRD, 2012), and confirmed the presence of the material in the vicinity of the former Moore Basement Structure, in the former parking lot, and in a small area on the westerly line of the Eastern Commercial Area. TENORM Slag was also observed beneath the foundation slab of the 17th Street Warehouse and removed.

## 2.6 REMEDIAL ACTION OBJECTIVES

The Remedial Action Objectives (RAOs) for the Site as listed in the ROD, Tract II Site dated March 2003 are as follows:

### 2.6.1 Soil

RAOs for Public Health Protection:

- Prevent ingestion/direct contact with soil above the SCOs.
- Prevent inhalation of, or exposure to, contaminants volatilizing from soil above the SCOs.

- Reduce or control, to the extent practicable, the constituents present in the soil at concentrations exceeding the SCOs applicable to the intended use of the property parcels.
- Stabilize soils to meet the TCLP Standard.
- Provide for attainment of the applicable SCOs for soil, to the extent practicable.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.

### 2.6.2 Moore Building and17th Street Warehouse RAOs

- Control the physical hazards associated with the buildings and other appurtenances on the Site.

Groundwater was not identified as a medium of concern on the Site because there were no constituents detected in the Site wells that exceeded the applicable groundwater criteria. Furthermore, the groundwater table exists under perched conditions in the vicinity of the Site and the City of Niagara Falls has an ordinance prohibiting the use of groundwater as a potable water source.

## 2.7 SUMMARY OF REMEDIAL ACTIONS

Remediation was completed in accordance with the Tract II Remedial Design Work Plan (RDWP; Amec Foster Wheeler, 2012). The remedial approach was to remove soil and fill material containing lead concentrations exceeding the TCLP standard, stabilize with Portland cement, and consolidate the stabilized soil in the northern portion of the Eastern Commercial Area. Soils that exceeded the Restricted Commercial SCOs in the Western Commercial Area were excavated to a depth of one foot below the final grade for the area and disposed of off-Site. Those soils remaining in the Western Commercial Area that exceeded the SCOs, but met the TCLP standard were graded to ensure they were one or more feet below the final grade before being covered with a demarcation layer. Soils that exceeded the Restricted Residential SCOs anywhere in the soil column in the Park Area were excavated and used as cover for the treated soil in the Eastern Commercial Area. Untreated soil that exceeded only the Restricted Commercial SCO that was either placed or left in place in the Eastern Commercial Area was graded to within one foot of the final grade prior to placing a demarcation layer on the surface. Once the areas met the applicable SCOs throughout the soil column (Park Area and 15$^{th}$ Street Alignment) or were

demarcated (Eastern and Western Commercial Areas), they were backfilled to within 6 inches of the final grade with soil meeting either the Restricted Commercial SCOs (if derived on-Site) or the Allowable Constituent Levels for Imported Fill (DER-10, Appendix 5; if imported to the Site), then filled to the final grade with either topsoil or gravel.

### 2.7.1 Ownership and Land Use Designation

As described in Section 2.2, the Site was re-parceled into four parcels for future management. The following summarizes the four parcels from west to east:

- Western Commercial Area
  - Designated for Restricted Commercial Use;
  - Demarcated one foot below the final grade; and
  - Currently owned by Brightfields II.
- Park Area
  - Designated for Restricted Residential Use as a City park;
  - Meets Restricted Residential SCOs throughout soil column; and
  - Demarcation unnecessary;
  - Currently owned by Brightfields II, but to be transferred to City upon completion.
- 15th Street right of way (National Grid)
  - Designated for Restricted Commercial Use;
  - Meets Restricted Commercial SCOs throughout soil column;
  - Demarcation unnecessary;
  - Currently owned by National Grid.
- Eastern Commercial Area
  - Designated for Restricted Commercial Use
  - Demarcated one foot below the final grade; and
  - Currently owned by Brightfields II.

The following sections summarize remedial actions completed on each of the four areas. The extent of the excavation areas is shown on **Figure 4**.

### 2.7.2 Western Commercial Area

The 2012 RDWP identified one area, Target Excavation One (TE-1), containing PAHs above their respective Restricted Commercial SCOs in the initial two feet of soil and fill material. This material was excavated and sent off-Site for disposal. At the request of the NYSDEC, the excavation was extended to a depth greater than two feet to remove soil above the Restricted Commercial SCOs.

During completion of the Park Area remediation, the soil in the western sidewalls (eastern portion of the Western Commercial Area) were found to exceed the Restricted Commercial

SCOs. Additional remediation was completed in the area in accordance with the May 18, 2015 "*Request to Modify Remediation Plan for the Tract II Site*" (Amec, 2015). One sample was found to exceed the TCLP lead standard in the material remaining in the Western Commercial Area. The material exceeding the TCLP standard was stabilized and sent off-Site for disposal. The remaining material exceeded only the Restricted Commercial SCOs. These materials were graded to ensure they would lie more than one foot below the final grade, and the area was covered with a demarcation layer. Upon completion of the installation of the demarcation layer, the area was backfilled with at least 0.5 feet of cover material meeting either the Restricted Commercial SCOs (if derived on-Site) or the Allowable Constituent Levels for Imported Fill (DER-10, Appendix 5; if imported to the Site) and with 0.5 feet of either topsoil or gravel as specified in the cover plan.

#### 2.7.2.1 Additional Characterization and Remediation

During remedial efforts on the Park Area, the western sidewall (eastern portion of the Western Commercial Area) was observed to contain construction debris such as brick, concrete, metal, and wood timbers. Samples collected on the sidewall yielded PAH and lead results exceeding the Restricted Commercial SCOs. As a result, the Western Commercial Area was further characterized to delineate the extent of material exceeding the Restricted Commercial SCOs. As part of this effort, the soil in the Western Commercial Area was also examined under a low-power microscope and found to contain curled metallic chips that appeared to have been cut in a machining process. A sample consisting of only the metallic chips was sent to the laboratory for analysis and found to contain mostly lead, tin, and antimony. The presence of these metallic chips appeared to be the source of the TCLP exceedances. Soil and fill material exceeding the TCLP standard for lead was stabilized and sent off-Site for disposal. In addition, the lateral and vertical extent of the remaining material above the Restricted Commercial SCOs was surveyed.

### 2.7.3 Park Area

The initial remediation plan for the Park Area was to demolish the remnants of the Moore Basement Structure, and cut the area to approximately two feet below the planned final grade. The area was then to be demarcated and a soil cover placed. At the request of the NYSDEC, the remedial approach was revised to remove soils containing constituents exceeding the Restricted Residential SCOs throughout the soil column, and replacing it with soil meeting either the Restricted Residential SCOs (if derived on-Site) or the

Allowable Constituent Levels for Imported Fill (DER-10, Appendix 5; if imported to the Site). The goal of this change was to eliminate the need for a demarcation layer and excavation restrictions. In addition to the constituents exceeding SCOs, TENORM Slag and fuel oil were also discovered in the Park Area. These materials were removed and sent off-Site for disposal.

#### 2.7.3.1 Additional Characterization and Remediation

During the remedial efforts, confirmatory sampling was limited to analytes that exceeded the SCOs in each area. At the request of the NYSDEC, the Park Area was further characterized in accordance with the May 22, 2013 Work Plan for Supplemental Confirmatory Sampling (Amec, 2013) and the subsequent July 31, 2014 Work Plan for Park Area Confirmatory Sampling (Amec, 2014). Areas identified that contained other analytes exceeding the Restricted Residential SCOs were also included for excavation.

#### 2.7.3.2 Soil Excavations

Areas of the initial two feet of soil and fill material identified in the 2012 RDWP to contain lead above the Restricted Residential SCO were excavated, stabilized with Portland cement (if the TCLP Standard was exceeded), and consolidated in the Eastern Commercial Area. At the request of the NYSDEC, the excavations were extended to depths greater than two feet to meet the Restricted Residential SCOs throughout the soil column.

A total of seven areas were identified in the 2012 RDWP to contained non-lead material above the Restricted Residential SCOs in the initial two feet of soil and fill material. These areas were denoted as TEs 2 through 7 and TE-9. Each of the areas was excavated and consolidated in the Eastern Commercial Area. TE-2 addressed barium, TEs 3, 4, and 6 addressed PAHs, TE-5 addressed chromium, TE-7 addressed mercury, and TE-9 addressed lead. Prior to consolidation in the Eastern Commercial Area, lead-containing soil excavated from TE-9 was stabilized with Portland cement to ensure the material met the TCLP standard for lead.

TENORM Slag was present in the Park Area in the vicinity of the eastern portion of the former Moore Basement Structure and to the east in the former Moore parking lot area. The slag was excavated, physically separated from the fines, and sent off-Site for disposal. The fines separated from the slag were scanned for the presence of radioactivity

exceeding the cleanup standard. These soils met the radiological cleanup standard and were also consolidated in the Eastern Commercial Area.

As the project neared completion, while attempting to meet the Restricted Residential SCOs in the Park Area, a test pit located in the former Moore Parking Lot area encountered a petroleum product on the surface of the perched groundwater. Investigations of the material suggested that it was No. 6 fuel oil. The location of the fuel oil was delineated and impacted soil was removed to the bedrock surface (approximately 6 feet deep). As a precaution, Regenesis Oxygen Release Compound (ORC) was placed into the open excavation to assist in the degradation of any remaining petroleum product.

#### 2.7.3.3 Underground Storage Tanks

The Moore Basement Structure contained three approximately 10,000-gallon vaulted petroleum storage tanks in the southeast corner of the building footprint. Additionally, one approximately 8,000 gallon underground storage tank (UST) was located outside of the northern wall of the Moore Basement Structure.

The three vaulted tanks in the southeast corner of the building footprint were determined to have been used for wax in the manufacture of carbon paper. The tanks were registered with the NYSDEC and removed. The minor amount of product remaining in the tanks was collected and placed into drums for off-Site disposal. There was no evidence of leakage from these tanks; as such, no confirmation samples were collected following removal.

The UST located outside of the north wall of the building was encountered during demolition of the building. This tank was nearly full of a thick, tar-like hydrocarbon material believed to be fuel oil. The UST was reported to the NYSDEC, registered, and removed under NYSDEC oversight. The product was removed from this tank and sent off-Site for disposal. The hydrocarbon product was determined to have leaked in the vicinity of this tank and the hydrocarbon-contaminated soil was excavated and sent off-Site for disposal.

#### 2.7.3.4 Former Moore Basement Structure

The former Moore Basement Structure was the remnant of the eastern portion of the industrial buildings that once existed on the western portion of the Tract II Site. The building, referred to as the “Basement [or also the parking or garage] Structure”, was a basement apparently used to store raw materials for the Moore operation. Two abandoned cars were present in the basement area; however, they appear to have been

placed there by vandals. The lower level of the structure contained several tunnels, an apparent locker room area, and an access area to the three wax USTs. The top level of the building was apparently the production floor, and the building superstructure had been removed at some time prior to the initiation of the remedial project. The following provides a summary of the demolition details for the remnants of the building.

*Asbestos Removal*

Between February 4, 2013 and March 8, 2013, asbestos was removed from the former Moore building by Fibertech Environmental, Inc., under subcontract to Brightfields II. The asbestos was present as pipe insulation on overhead pipes in the basement area, as well as bagged insulation that had apparently been collected during the USEPA emergency action on the property. Fibertech removed the asbestos, and Asbestos and Environmental Consulting Corporation, Inc. (AECC) provided oversight and monitoring of the asbestos removal.

*Remaining Debris*

Minor amounts of debris were present in the Moore Basement Structure. The majority of the debris was located in the northwest corner of the building in the former sump area. These materials were gathered and placed into roll-off boxes for off-Site disposal.

*Demolition/Structural Debris*

The remnant of the building was demolished, the reinforcing bar removed, and the debris crushed to <3 inches. The debris was segregated into piles of approximately 1,000 cubic yards (CY) each and sampled for reuse on the Site. Debris passing the reuse criteria was placed as subgrade structural fill. Debris that exceeded the reuse criteria was placed into roll-off boxes and sent off-Site for disposal.

### 2.7.4 National Grid Property (15th Street right of way)

Areas of the National Grid Property that were identified in the 2012 RDWP to contain lead above the Commercial SCO were initially excavated to two feet deep, stabilized with Portland cement, and sampled for TCLP lead. Once the TCLP standard was met, the treated material was consolidated in the Eastern Commercial Area. At the request of the NYSDEC, the excavations were extended to depths greater than two feet to remove soil above the Restricted Commercial SCOs. These materials were likewise consolidated in the Eastern Commercial Area.

In addition, one area, TE-8, contained mercury exceeding the Restricted Commercial SCO. The soil in this area was subjected to TCLP analysis to ensure that it met the TCLP standard for mercury. Soils exceeding the Restricted Commercial SCO for mercury were determined to be non-hazardous, and were excavated and consolidated in the Eastern Commercial Area.

#### 2.7.4.1 Additional Characterization and Remediation

During the above-mentioned remedial efforts, confirmatory sampling was limited to analytes of concern for each area. At the request of the NYSDEC, the Park Area was further characterized in accordance with the May 22, 2013 Work Plan for Supplemental Confirmatory Sampling (Amec, 2013). Areas determined to contain concentrations of constituents exceeding the Restricted Residential SCOs were excavated, stockpiled, and sampled for TCLP lead. If the TCLP standard for lead was met, the material was consolidated in the Eastern Commercial Area. Materials exceeding the TCLP standard were stabilized with Portland cement in the pugmill prior to consolidation on the Eastern Commercial Area.

### 2.7.5 Eastern Commercial Area

The remediation plan for the Eastern Commercial Area was to demolish the 17th Street Warehouse building, excavate soil exceeding the TCLP lead standard for stabilization with Portland cement, and excavate soil exceeding the Restricted Commercial SCOs for consolidation. Beneath the impacted soil was a native clay that was mined for use as fill on other portions of the Site. The clay was mined to a depth that left at least one foot of native material above the perched water table. Stabilized soil and soils exceeding the applicable SCOs were consolidated in the excavated areas; a demarcation layer was placed over the material; and at least one foot of cover material was placed over the demarcation layer. The cover consisted of at least 6 inches of soil meeting the SCOs and 6 inches of topsoil or gravel in accordance with the final grading plan.

#### 2.7.5.1 Soil Excavations

The material identified in the 2012 RDWP to contain lead above the TCLP standard was excavated, transported to the pugmill area, and stabilized with Portland cement. Stabilized material was sampled to verify that it met the TCLP standard, and consolidated in the northwestern portion of the Eastern Commercial Area. Native clay soil located

beneath the impacted media was mined and sampled for on-Site reuse as backfill and cover material.

One area, TE-9, was identified that contained mercury above the Restricted Commercial SCO in the initial two feet of soil. The soil and fill material in this area was analyzed for TCLP mercury and determined to be non-hazardous. This material was excavated and consolidated in the Eastern Commercial Area.

*Former Union Carbide Property Excavation*

Sidewall samples collected from the western portion of the northern property boundary of the Eastern Commercial Area exceeded the Restricted Commercial SCO for lead. As such, the excavation was extended onto the Industrial Properties, Inc. (former Union Carbide) Property in an attempt to excavate the material exceeding the Restricted Commercial SCO. However, several of the confirmatory samples from the Industrial Properties, Inc. property continued to exceed the applicable standard for lead. In order to evaluate the presence of lead in this area, Amec Foster Wheeler compiled data from the Site, from the property boundary, and from an investigation performed on the former Union Carbide property for Santarosa Holdings, Inc. The results of this evaluation were documented in a memorandum prepared by Amec Foster Wheeler for Honeywell and provided to the NYSDEC. The findings of the evaluation included:

- Waste at the property boundary (and also approximately 125 feet onto the Tract II Site) was clearly generated in the former Union Carbide operation;
- Microscopic evaluation of the material on the Industrial Properties, Inc. property was mostly coal ash, whereas that in the soil containing battery casings and lead on the Site contained only a low percentage of coal ash;
- The frequency distribution and range of lead concentrations on the Union Carbide property boundary closely matched that of the Santarosa Holdings investigation in the former Union Carbide process area; and
- The frequency distribution and range of lead concentrations on the Union Carbide property boundary were significantly different from those in the pre-remediation Eastern Commercial Area.

The results of the evaluation indicate that the lead in the soil at the property boundary is more likely to have originated on the Union Carbide property, and is not associated with the Site. Therefore, no further excavation was performed to the north.

*Beech Street Excavation*

Sidewall samples collected along the western portion of the southern property boundary exceeded the Commercial SCO for mercury. As such, the excavation was extended onto the City of Niagara Falls Right of Way in an attempt to excavate all material above the applicable standard. The excavation was advanced as far south as possible without compromising the structural integrity of Beech Street. Record samples collected yielded mercury results exceeding the Restricted Commercial SCO.

*Tulip Property Excavation*

Sidewall samples collected along the northern portion of the western property boundary exceeded the Restricted Commercial SCO for lead. An approximately three foot high mound of soil material was identified on the adjacent portion of the Tulip Property. At the request of the NYSDEC, and with the permission of Tulip, this material was excavated and consolidated in the Eastern Commercial Area. Record samples were collected from this area for documentation.

*Eastern Residential Property Excavations*

During remedial actions in the eastern portion of the Site, it was observed that a thin (0.5-1.0 feet), dark-colored layer of industrial fill material existed at depths between three and six feet below ground surface and was overlain by two to five feet of overburden fill. This material was observed to extend to the eastern property boundary, proximate to the Alley Right of Way. Following excavation of the alley, it was determined that the fill material extended onto the residential properties east of the Site. In addition, sidewall samples along the eastern extent of the alley excavation indicated that the material contained concentrations of lead and polynuclear aromatic hydrocarbons (PAHs) above their respective Restricted Residential SCOs, which are applicable outside of the Site boundary.

At the request of the NYSDEC, the excavation was advanced to the east, onto the residential properties, until the dark-colored fill layer was no longer visible, or, until an obstruction such as a building foundation or concrete pad was encountered. The extent of the fill material was reached prior to encountering an obstruction on each of the properties except the Kingdom Hall property at 3200 17$^{th}$ Street. The excavation was terminated four feet west of the Kingdom Hall building foundation to ensure preservation of its structural integrity.

On the north side of the Kingdom Hall building, a shallow layer of dark-colored industrial fill was observed at between one and two feet below ground surface. This material was initially left in place to avoid damaging a light pole and the asphalt parking lot. The owners of the Kingdom Hall requested removal of this material as well, and the removal was completed in October of 2015.

Record samples, biased towards the former depth of the dark-colored industrial fill layer, were collected from the excavation bottom and sidewalls. Results of the samples were provided to the property owners.

#### 2.7.5.2 Former 17th Street Warehouse

The former 17th Street Warehouse was associated with the lead/acid battery manufacturing plant, although its purpose is not clear. The building was located on the northern portion of the Eastern Commercial Area on the Site. The 17th Street Warehouse (also referred to as the "dilapidated building") was in a state of disrepair and contained various building materials and debris. Asbestos and debris were removed from the building and disposed of off-Site. The remnants of the building were demolished, the reinforcing bar removed from the floor slab, and the concrete and brick debris crushed to <3 inches. The debris was segregated in to piles of approximately 1,000 CY and sampled for reuse on the Site. Debris passing the reuse criteria was placed as subgrade structural fill. Debris that exceeded the reuse criteria was placed into roll-off boxes and sent off-Site for disposal. TENORM Slag was identified under and around the former 17th Street Warehouse. The morphology of the TENORM included the gray vesicular slag and a blue, granular material that faded to white upon exposure to air. These materials were excavated and stockpiled with the TENORM from other areas of the Site and disposed of off-Site.

#### 2.7.5.3 Underground Storage Tanks

The 17th Street Warehouse area contained one apparent fuel oil UST outside the northern wall of the building. This UST was approximately 4,000 gallons and was discovered during excavation after demolition of the building. The UST was reported to the NYSDEC, registered, and removed from the Site on May 9, 2013. Stained soil was removed from the vicinity of the UST and the associated piping. Confirmatory samples were collected

from the UST footprint, and the results met the Restricted Commercial SCOs. The removal and confirmatory sampling activities were coordinated with the NYSDEC.

### 2.7.6 Access Roads and Staging Areas

At the completion of the remediation, access roads and staging areas utilized during remedial actions were sampled for total and TCLP lead to confirm these areas were not impacted by the transport of materials. Areas containing concentrations exceeding either the applicable SCO or TCLP standard were excavated, stabilized (if necessary), and either consolidated in the Eastern Commercial Area or disposed of off-Site.

## 2.8 REMAINING CONTAMINATION

This section provides summary of contamination remaining at the Site exceeding the Unrestricted SCO (for the entire Site) or the Commercial SCO (for areas that are demarcated). No exceedances of the Restricted Residential SCOs are present within the area designated as the future City Park. Figures 5, 6 and 7 show the conditions at completion for lead, other metals, and PAH constituents, respectively. The entire soil column in the Park Area meets the Restricted Residential SCOs or ACLs, and a cover system is not required for this area. The entire soil column in the 15th Street ROW Area meets the Commercial SCOs or ACLs, and a cover system is not required for this area.

The remedial objectives for the Site included meeting the Restricted Residential SCOs throughout the soil column in the Park Area, the Restricted Commercial SCOs throughout the soil column in the 15$^{th}$ Street right of way, and the Restricted Commercial SCOs in the soils overlying the demarcation layer (at least the top one foot) in the Eastern and Western Commercial Areas. Soils remain in areas of the Site that exceed the Unrestricted SCOs (all areas), and the Restricted Commercial SCOs (Western and Eastern Commercial Areas). The remaining exceedances of the applicable SCOs are discussed in the following subsections.

### 2.8.1 Unrestricted SCO Exceedances

Meeting the Unrestricted SCOs was not an objective of the remediation. Therefore, soils exceeding the Unrestricted SCOs remain in all areas of the Site. Exceedances of the Unrestricted SCOs included PAHs and metals, particularly lead and arsenic. In the Western Commercial Area, the Eastern Commercial Area, and the 15$^{th}$ Street right of way, Unrestricted SCO exceedances are present throughout the soil column. In the Park Area, soils exceeding the Unrestricted SCOs are present in the material below the imported

backfill. **Figures 5, 6 and 7** shows the locations, shaded in purple, of confirmatory samples that contain at least one analyte exceeding the Unrestricted SCOs; **Tables 2, 3, and 4** provide a summary of the analytical results for the confirmatory samples.

#### 2.8.1.1 Restricted Commercial SCO Exceedances

Two areas of the Site contain contaminants that exceed the Restricted Commercial SCOs. These include the Western Commercial Area and the Eastern Commercial Area. Materials were either left in place (Western Commercial Area) or consolidated (Eastern Commercial Area) in these areas and a demarcation layer placed over them. The demarcation layer consists of orange, plastic netting with a 0.5-inch, square net spacing. The demarcation layer was then covered with at least one foot of cover material meeting the Restricted Commercial SCOs, including at least 0.5 feet of topsoil or gravel as specified by the final grading plan. The material exceeding the Restricted Commercial SCOs extends to the top of the native clay in each respective area. **Figures 5, 6 and 7** shows the locations, shaded in yellow, of remaining soils exceeding the Restricted Commercial SCOs; **Figure 8** shows the surface elevation of the finished grade. The volume of soil exceeding the Restricted Commercial SCOs in the Western Commercial Area is approximately 3,650 CY and that in the Eastern Commercial Area is approximately 150,000 CY.

No areas of the Site are known to contain potential source concentrations of the constituents of concern. The elevated lead concentrations in the soil consolidated in the Eastern Commercial Area were stabilized to prevent future leaching. The concentrations remaining in the Western Commercial Area did not exceed the TCLP standard for lead, and therefore are not expected to act as a potential source. Additionally, since all of the structures on the Site were demolished, there was no infrastructure that prohibited removal of contamination.

Several areas of the Site currently contain underground utilities that may need to be accessed for maintenance in the future. These include the 15th Street right of way, which contains buried electrical lines and a buried City water line, and the perimeter of the Site in the Eastern and Western Commercial Areas, the Park Area, and a small portion of the 15th Street right of way, which all contain the storm water management system. The 15th Street right of way, the western Commercial Area and the Eastern Commercial Area meet the Restricted Commercial SCOs throughout the soil column in the areas containing

buried utilities. That being the case, excavation in these areas will be managed through an institutional control that requires notification to the NYSDEC, and the development of a health and safety plan prior to commencement of work. The area along the southern portion of the Park Area also contains a portion of the storm water management system; however, since this area was remediated to the Restricted Residential SCOs, there will be no need for institutional controls to address excavation work.

# 3.0 INSTITUTIONAL AND ENGINEERING CONTROL PLAN

## 3.1 GENERAL

Since remaining contamination exists at the Site, ICs and ECs are required to protect human health and the environment. This IC/EC Plan describes the procedures for the implementation and management of all IC/ECs at the Site. The IC/EC Plan is one component of the SMP and is subject to revision by the NYSDEC.

This plan provides:

- A description of all IC/ECs on the Site;
- The basic implementation and intended role of each IC/EC;
- A description of the key components of the ICs set forth in the Environmental Easement;
- A description of the controls to be evaluated during each required inspection and periodic review;
- A description of plans and procedures to be followed for implementation of IC/ECs, such as the implementation of the Excavation Work Plan (EWP) (as provided in **Appendix D**) for the proper handling of remaining contamination that may be disturbed during maintenance or redevelopment work on the Site; and
- Any other provisions necessary to identify or establish methods for implementing the IC/ECs required by the Site remedy, as determined by the NYSDEC.

## 3.2 INSTITUTIONAL CONTROLS

A series of ICs is required by the ROD to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to remaining contamination; and (3) limit the use and development of the Site to Restricted Residential (Park Area) and Restricted Commercial (remainder of Site) or more restrictive uses only. Adherence to these ICs on the Site is required by the Environmental Easement and will be implemented under this SMP. ICs identified in the Environmental Easement may not be discontinued without an amendment to or extinguishment of the Environmental Easement. The IC boundaries are shown on **Figure 9**. These ICs are:

1. The property may be used for : Restricted Residential (Park Area) and Restricted Commercial (remainder of Site) use;
2. All ECs must be operated and maintained as specified in this SMP;
3. All ECs must be inspected at a frequency and in a manner defined in the SMP;
4. The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Niagara Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the NYSDEC; and

5. Data and information pertinent to Site management must be reported at the frequency and in a manner as defined in this SMP;
    - All future activities that will disturb remaining contaminated material must be conducted in accordance with this SMP;
    - Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in this SMP;
    - Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in this SMP;
    - Access to the Site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Environmental Easement.
    - Vegetable gardens and farming on the Site are prohibited.

## 3.3 ENGINEERING CONTROLS

### 3.3.1 Cover (or Cap)

Exposure to remaining contamination at the Site is prevented by a cover system placed over the Western and Eastern Commercial Areas on the Site. This cover system is comprised of a demarcation layer, a clean soil cover that is a minimum of one foot thick, and vegetation or gravel to ensure stabilization of the cover system. **Figure 9** presents the location of the cover system and applicable demarcation layers. The Excavation Work Plan (EWP) provided in **Appendix D** outlines the procedures required to be implemented in the event the cover system is breached, penetrated, or temporarily removed, and any underlying remaining contamination is disturbed. The EWP does not apply to work performed within the upper 1 ft above the cover system. In addition, as there is no cover in the Park Area the EWP does not apply in this area. Procedures for the inspection of the cover are provided in the Monitoring Plan included in Section 4.0 of this SMP. Any work conducted pursuant to the EWP must also be conducted in accordance with the procedures defined in a Health and Safety Plan (HASP; **Appendix E**) and associated Community Air Monitoring Plan (CAMP; **Appendix F**).

### 3.3.2 Criteria for Completion of Remediation/Termination of Remedial Systems

Generally, remedial processes are considered completed when monitoring indicates that the remedy has achieved the remedial action objectives identified by the decision document. The framework for determining when remedial processes are complete is provided in Section 6.4 of NYSDEC DER-10.

#### 3.3.2.1 Cover (or Cap)

The cover system is a permanent control and the quality and integrity of this system will be inspected at defined, regular intervals in accordance with this SMP in perpetuity.

# 4.0 MONITORING PLAN

This Monitoring Plan describes the measures for evaluating the overall performance and effectiveness of the remedy. This Monitoring Plan may only be revised with the approval of the NYSDEC.

## 4.1 GENERAL

This Monitoring Plan describes the methods to be used for:

- Evaluating Site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment;

To adequately address these issues, this Monitoring Plan provides information on:

- Annual inspection and periodic certification.

Reporting requirements are provided in Section 7.0 of this SMP.

## 4.2 SITE-WIDE INSPECTION

Site-wide inspections will be performed annually. Modification to the frequency or duration of the inspections will require approval from the NYSDEC. Site-wide inspections will also be performed after all severe weather conditions that may affect ECs or monitoring devices. During these inspections, an inspection form will be completed as provided in **Appendix G** – Site Management Forms. The form will compile sufficient information to assess the following:

- Compliance with all ICs, including Site usage;
- An evaluation of the condition and continued effectiveness of ECs;
- General Site conditions at the time of the inspection;
- The Site management activities being conducted including, where appropriate, confirmation sampling and a health and safety inspection; and
- Confirm that Site records are up to date.

Inspections of remedial components installed at the Site will be conducted. A comprehensive Site-wide inspection will be conducted and documented according to the SMP schedule, regardless of the frequency of the Periodic Review Report. The inspections will determine and document the following:

- Whether ECs continue to perform as designed;
- If these controls continue to be protective of human health and the environment;
- Compliance with requirements of this SMP and the Environmental Easement;
- Achievement of remedial performance criteria; and
- If Site records are complete and up to date.

Reporting requirements are outlined in Section 7.0 of this plan.

Inspections will also be performed in the event of an emergency. If an emergency, such as a natural disaster or an unforeseen failure of any of the ECs occurs that reduces or has the potential to reduce the effectiveness of ECs in place at the Site, verbal notice to the NYSDEC must be given by noon of the following day. In addition, an inspection of the Site will be conducted within five (5) days of the event to verify the effectiveness of the IC/ECs implemented at the Site by a qualified environmental professional, as determined by the NYSDEC. Written confirmation must be provided to the NYSDEC within seven (7) days of the event that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.

# 5.0 OPERATION AND MAINTENANCE PLAN

## 5.1 GENERAL

The Site remedy does not rely on any mechanical systems, such as groundwater treatment systems, sub-slab depressurization systems or air sparge/soil vapor extraction systems to protect public health and the environment. Therefore, the operation and maintenance of such components is not included in this SMP.

# 6.0 PERIODIC ASSESSMENTS/EVALUATIONS

## 6.1 CLIMATE CHANGE VULNERABILITY ASSESSMENT

Increases in both the severity and frequency of storms/weather events, an increase in sea level elevations along with accompanying flooding impacts, shifting precipitation patterns and wide temperature fluctuation, resulting from global climactic change and instability, have the potential to significantly impact the performance, effectiveness and protectiveness of a given site and associated remedial systems. Vulnerability assessments provide information so that the Site and associated remedial systems are prepared for the impacts of the increasing frequency and intensity of severe storms/weather events and associated flooding.

This section provides a summary of vulnerability assessments that will be conducted for the Site during periodic assessments, and briefly summarizes the vulnerability of the Site and/or engineering controls to severe storms/weather events and associated flooding.

## 6.2 GREEN REMEDIATION EVALUATION

NYSDEC's DER-31 Green Remediation requires that green remediation concepts and techniques be considered during all stages of the remedial program including Site management, with the goal of improving the sustainability of the cleanup and summarizing the net environmental benefit of any implemented green technology. This section of the SMP provides a summary of any green remediation evaluations to be completed during Site management, and as reported in the Periodic Review Report (PRR).

### 6.2.1 Timing of Green Remediation Evaluations

Because the majority of the Site remediation is completed and the fact that future activity is limited to inspections, Environmental Easement compliance reviews, and reporting, it is not currently anticipated that green remediation evaluations will be necessary. Green remediation considerations and concepts were incorporated into the focused feasibility study and the RDWP.

Should the occasion arise in the future, modifications resulting from green remediation evaluations will be considered during planned/routine operation and maintenance activities. Reporting of these modifications will be presented in the PRR.

### 6.2.2 Remedial Systems

Active remedial systems are not planned or required for future remedial activities on the Site. Therefore, considerations regarding conservation of materials and resources to the greatest extent possible are not applicable to the Site. Consideration will be given to green operation of remedial systems should they become appropriate in the future.

### 6.2.3 Building Operations

No structures or buildings are associated with the remedy which inherently minimizes energy.

### 6.2.4 Frequency of System Checks, Sampling and Other Periodic Activities

Transportation to and from the Site and use of consumables in relation to visiting the Site in order to conduct inspections have direct and/or inherent energy costs. The schedule and/or means of these periodic activities have been prepared so that these tasks can be accomplished in a manner that does not impact remedy protectiveness but reduces expenditure of energy or resources.

### 6.2.5 Metrics and Reporting

As discussed in Section 7.0 and as shown in **Appendix G** – Site Management Forms, information on energy usage, solid waste generation, transportation and shipping, water usage, and land use and ecosystems will be recorded to facilitate and document consistent implementation of green remediation during Site management.

## 6.3 REMEDIAL SYSTEM OPTIMIZATION

A Remedial System Optimization (RSO) study will be conducted any time that the NYSDEC or the remedial party requests, in writing, that an in-depth evaluation of the remedy is needed. A RSO may be appropriate if any of the following occur:

- The remedial system is not performing as expected or as designed;
- Previously unidentified source material may be suspected;
- Site conditions change due to development or change of use;
- There is an anticipated transfer of the Site management to another remedial party or agency; or
- A new and applicable remedial technology becomes available.

A RSO will provide a critique of a site's conceptual model, give a summary of past performance, document current cleanup practices, summarize progress made toward the

Site's cleanup goals, gather additional performance or media specific data and information and provide recommendations for improvements to enhance the ability of the present system to reach RAOs or to provide a basis for changing the remedial strategy.

A schedule for RSO evaluation and reporting has not been established for this Site because the remediation is complete and does not include the operation of remedial systems. Green remediation technologies and principals are to be considered should it become necessary to perform the RSO.

# 7.0 REPORTING REQUIREMENTS

## 7.1 SITE MANAGEMENT REPORTS

All Site management inspection, maintenance, and monitoring events will be recorded on the appropriate Site management forms provided in **Appendix F**. These forms are subject to NYSDEC revision.

**Table 5: Schedule of Monitoring/Inspection Reports**

* The frequency of events will be conducted as specified until otherwise approved by the NYSDEC.

| Task/Report | Reporting Frequency* |
|---|---|
| Inspection Report | Annually, results to be included within the Periodic Review Report |
| Periodic Review Report | Annually, or as otherwise determined by the Department |

All monitoring/inspection reports will include, at a minimum:

- Date of event or reporting period;
- Name, company, and position of person(s) conducting monitoring/inspection activities;
- Description of the activities performed;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet);
- Any observations, conclusions, or recommendations; and
- A determination as to whether contaminant conditions have changed since the last reporting event.

Routine maintenance event reporting forms will include, at a minimum:

- Date of event;
- Name, company, and position of person(s) conducting maintenance activities;
- Description of maintenance activities performed;
- Any modifications to the system;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet); and,
- Other documentation such as copies of invoices for maintenance work, receipts for replacement equipment, etc., (attached to the checklist/form).

Non-routine maintenance event reporting forms will include, at a minimum:

- Date of event;

- Name, company, and position of person(s) conducting non-routine maintenance/repair activities;
- Description of non-routine activities performed;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents (included either on the form or on an attached sheet); and
- Other documentation such as copies of invoices for repair work, receipts for replacement equipment, etc. (attached to the checklist/form).

## 7.2 PERIODIC REVIEW REPORT

A Periodic Review Report (PRR) will be submitted to the Department beginning sixteen (16) months after the Certificate of Completion is issued. After submittal of the initial PRR, the next PRR will be submitted annually to the Department or at another frequency as may be required by the Department. The Site is subdivided into separate parcels with different ownership, however, a single PRR will be prepared that addresses the Site described in **Appendix A** - Environmental Easement. The report will be prepared in accordance with NYSDEC's DER-10 and submitted within 30 days of the end of each certification period. The report will include:

- Identification, assessment, and certification of all ECs/ICs required by the remedy for the Site.
- Results of the required annual Site inspections and severe condition inspections, if applicable.
- All applicable Site management forms and other records generated for the Site during the reporting period in the NYSDEC-approved electronic format, if not previously submitted.
- A Site evaluation, which includes the following:
  - The compliance of the remedy with the requirements of the Site-specific RDWP, or ROD;
  - Any new conclusions or observations regarding Site contamination based on inspections or data generated by the Monitoring Plan;
  - Recommendations regarding any necessary changes to the remedy and/or Monitoring Plan; and
  - The overall performance and effectiveness of the remedy.

### 7.2.1 Certification of Institutional and Engineering Controls

Following the last inspection of the reporting period, a Professional Engineer licensed to practice in New York State will prepare, and include in the PRR, the following certification as per the requirements of NYSDEC DER-10:

*"For each institutional or engineering control identified for the Site, I certify that all of the following statements are true:*

- *The inspection of the Site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction;*
- *The institutional control and/or engineering control employed at this Site is unchanged from the date the control was put in place, or last approved by the Department;*
- *Nothing has occurred that would impair the ability of the control to protect the public health and environment;*
- *Nothing has occurred that would constitute a violation or failure to comply with any Site management plan for this control;*
- *Access to the Site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;*
- *If a financial assurance mechanism is required under the oversight document for the Site, the mechanism remains valid and sufficient for the intended purpose under the document;*
- *Use of the Site is compliant with the environmental easement;*
- *The engineering control systems are performing as designed and are effective;*
- *To the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the Site remedial program; and*
- *The information presented in this report is accurate and complete.*

*I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, [name], of [business address], am certifying as [Owner/Remedial Party or Owner's/Remedial Party's Designated Site Representative]: [I have been authorized and designated by all Site owners/remedial parties to sign this certification] for the Site."*

At the end of each certifying period, as determined by the NYSDEC, the following certification will be provided to the Department:

The signed certification will be included in the PRR.
The PRR will be submitted, in electronic format, to the NYSDEC Central Office, Regional Office in which the Site is located, and the NYSDOH Bureau of Environmental Exposure Investigation. The PRR may need to be submitted in hard-copy format, as requested by the NYSDEC project manager.

### 7.3 CORRECTIVE MEASURES WORK PLAN

If any component of the remedy is found to have failed, or if the periodic certification cannot be provided due to the failure of an institutional or engineering control, a Corrective Measures Work Plan will be submitted to the NYSDEC for approval. This plan will explain the failure and provide the details and schedule for performing work necessary to correct the failure. Unless an emergency condition exists, no work will be performed pursuant to the Corrective Measures Work Plan until it has been approved by the NYSDEC.

# 8.0 REFERENCES


6NYCRR Part 375, Environmental Remediation Programs. December 14, 2006.

AECC Environmental Consulting Corporation, May 3, 2013, "Asbestos Abatement Project & Air Monitoring Services: Former Car Park Structure-3123 Highland Ave, Niagara Falls, NY".

AECC Environmental Consulting Corporation, May 6, 2013, "Asbestos Abatement Project & Air Monitoring Services: Main Building/17th Street Warehouse-3123 Highland Ave, Niagara Falls, NY".

Amec Foster Wheeler, October 2012, Memorandum "Tract II Parcel Descriptions and Ownership"

Amec Foster Wheeler, May 2013, "Tract I Supplemental Remedial Investigation Report".

Amec Foster Wheeler, May 2013, "Work Plan for Supplemental Confirmatory Sampling".

Amec Foster Wheeler, July 2014, "Work Plan for Park Area Confirmatory Sampling".

Ecology and Environment Engineering, P.C., May 31, 2000, "Site Investigation Report for the Power City Warehouse, Niagara Falls, New York".

EA Engineering, P.C., May 2009, "Final Site Characterization Report Power City Warehouse Site Highland Avenue (9-32-131), Niagara Falls, Niagara County, New York".

Greater Radiological Dimensions, Inc., March 2012, "Radiological Slag Volume Estimate at the Tract II Site, Niagara Falls, NY".

Mactec Engineering and Consulting, P.C., August 2012, "Remedial Design Work Plan: Tract II Site".

NYSDEC DER-10 – "Technical Guidance for Site Investigation and Remediation".

NYSDEC, 1998. Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1. June 1998 (April 2000 addendum).

NYSDEC, March 2003, Record of Decision, Tract II Site.

# APPENDIX A

## ENVIRONMENTAL EASEMENT

# NIAGARA COUNTY CLERK

## JOSEPH A. JASTRZEMSKI

*Receipt*

Receipt Date: 03/22/2017 11:47:20 AM
RECEIPT # 2017315604

Recording Clerk: DC
Cash Drawer: CASH2
Rec'd Frm: PHILLIPS LYTLE LLP
Rec'd In Person

Instr#: 2017-05774
DOC: EASEMENT
DEED STAMP: 4085
OR Party: BRIGHTFIELDS CORP
EE Party: PEOPLE OF THE STATE OF NEW YORK

| Recording Fees | |
|---|---|
| Cover Page | $8.00 |
| Recording Fee | $32.00 |
| Cultural Ed | $14.25 |
| Records Management - County | $1.00 |
| Records Management - State | $4.75 |
| TP584-2 (Public Utilities) | $1.00 |
| **Transfer Tax** | |
| Transfer Tax | $0.00 |
| DOCUMENT TOTAL: ----> | $61.00 |

Instr#: 2017-05775
DOC: EASEMENT
DEED STAMP: 4086
OR Party: BRIGHTFIELDS CORP
EE Party: PEOPLE OF THE STATE OF NEW YORK

| Recording Fees | |
|---|---|
| Cover Page | $8.00 |
| Recording Fee | $20.00 |
| Cultural Ed | $14.25 |
| Records Management - County | $1.00 |
| Records Management - State | $4.75 |
| TP584-2 (Public Utilities) | $1.00 |
| **Transfer Tax** | |
| Transfer Tax | $0.00 |
| DOCUMENT TOTAL: ----> | $49.00 |

Instr#: 2017-05776
DOC: EASEMENT
DEED STAMP: 4087
OR Party: BRIGHTFIELDS II CORP
EE Party: PEOPLE OF THE STATE OF NEW YORK

| Recording Fees | |
|---|---|
| Cover Page | $8.00 |
| Recording Fee | $20.00 |
| Cultural Ed | $14.25 |
| Records Management - County | $1.00 |
| Records Management - State | $4.75 |
| TP584-2 (Public Utilities) | $1.00 |
| **Transfer Tax** | |
| Transfer Tax | $0.00 |
| DOCUMENT TOTAL: ----> | $49.00 |

| Receipt Summary | |
|---|---|
| TOTAL RECEIPT: ----> | $159.00 |
| TOTAL RECEIVED: ----> | $160.00 |
| CASH BACK: ----> | $1.00 |

| PAYMENTS | |
|---|---|
| Cash -> | $160.00 |

P.O. Box 461, Lockport, NY 14095-0461 Phone (716) 439-7022 Fax (716) 439-7035

COPY

# ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36 OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

**THIS INDENTURE** made this 7th day of March, 2017 between Owner(s) Brightfields Corporation, having an office at 333 Ganson Street, Buffalo, New York 14203, County of Erie, State of New York (the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

**WHEREAS,** the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

**WHEREAS,** the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

**WHEREAS,** the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

**WHEREAS,** Grantor, is the owner of real property located at the address of 3201 Highland Avenue in the City of Niagara Falls, County of Niagara and State of New York, known and designated on the tax map of the County Clerk of Niagara as tax map parcel numbers: a portion of Section 144.06 Block 2 Lot 27.1, being the same as that property conveyed to Grantor by deed dated April 7, 2016 and recorded in the Niagara County Clerk's Office in Instrument No. 2016-05895. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 0.302 +/- acres, and is hereinafter more fully described in the Land Title Survey dated February 14, 2014 and last revised October 31, 2016 prepared by Kenneth L. Slaugenhoupt, L.L.S. of Niagara Boundary and Mapping Services, which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

**WHEREAS,** the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation

ORIGINAL FILED

MAR 22 2017

JOSEPH A. JASTRZEMSKI
NIAGARA COUNTY CLERK

established for the Controlled Property until such time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36; and

**NOW THEREFORE**, in consideration of the mutual covenants contained herein and the terms and conditions of Order on Consent Index Number: B9-0777-08-03, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement").

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

**Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv)**

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP;

(4) The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Niagara County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;

(5) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(6) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

(7) All future activities on the property that will disturb remaining

contaminated material must be conducted in accordance with the SMP;

(8) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;

(9) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP;

(10) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

B. The Controlled Property shall not be used for Residential or Restricted Residential purposes as defined in 6NYCRR 375-1.8(g)(2)(i) and (ii), and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, New York 12233
Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

**This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation**

pursuant to Title 36 of Article 71 of the Environmental Conservation Law.

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall, at such time as NYSDEC may require, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).

(2) the institutional controls and/or engineering controls employed at such site:

(i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved by the NYSDEC and that all controls are in the Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5) the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and

(7) the information presented is accurate and complete.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. Notice. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to:

Site Number: 932136
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

With a copy to:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

**Remainder of Page Intentionally Left Blank**

**IN WITNESS WHEREOF,** Grantor has caused this instrument to be signed in its name.

Brightfields Corporation:

By: _____

Print Name: Jon M. Williams

Title: President Date: 2/6/17

**Grantor's Acknowledgment**

STATE OF NEW YORK )
) ss:
COUNTY OF Erie )

On the 6th day of February, in the year 20 17, before me, the undersigned, personally appeared Jon M. Williams, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Nancy L Mazur
Notary Public - State of New York

NANCY L. MAZUR
Notary Public, State of New York
Qualified in Erie County No. 01MA6238417
My Commission Expires 11 Co, 2017

**THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK**, Acting By and Through the Department of Environmental Conservation as Designee of the Commissioner,

By: _____
Robert W. Schick, Director
Division of Environmental Remediation

**Grantee's Acknowledgment**

STATE OF NEW YORK )
) ss:
COUNTY OF ALBANY )

On the 7th day of March, in the year 2017 before me, the undersigned, personally appeared Robert W. Schick, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public - State of New York

David J. Chiusano
Notary Public, State of New York
No. 01CH5032146
Qualified in Schenectady County
Commission Expires August 22, 2018

## SCHEDULE "A" PROPERTY DESCRIPTION

**Environmental Easement Description for Superfund Site No. 932136**
**15 Foot Strip from Brightfields II to Brightfields**

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Niagara Falls, County of Niagara and State of New York, being part of Lot 34 of the New York State Mile Reserve and according to a map made by Julius Frehsee with changes by Porter, Jones and Schaeffer and filed November 18, 1899 under Cover No. 158 now in Book 18 of Microfilmed Maps at page 1736 and being more particularly bounded and described as follows:

Beginning at the north east corner of Old Lot 251 as shown on Map by Niagara Boundary & Mapping Services filed in Niagara County Clerk's Office March 31, 2016 in Instrument No. M2016-00008;

Thence along the east line of said Old Lot 251 S 0°54'30"W a distance of 15.00 feet to a point;

Thence N 88°58'03"W a distance of 879.79 feet to a point in the centerline of alley as shown on said Map by Julius Frehsee;

Thence along said centerline of said alley N 20°42'42"E a distance of 15.93 feet to a point on the north line of Old Lot 250 as shown on Map by Niagara Boundary & Mapping Services filed in Niagara County Clerk's Office March 31, 2016 in Instrument No. M2016-00008;

Thence along the north line of Old Lot 250 and Old Lot 251 S 88°58'03"E a distance of 874.39 feet to the Point or Place of Beginning, containing 13,156 square feet or 0.302 acre more or less.

TP-584.2 (10/96)

Recording Office Time Stamp

# Real Estate Transfer Tax Return For Public Utility Companies' and Governmental Agencies' Easements and Licenses

**This form may only be used by public utility companies regulated by the Public Service Commission and governmental agencies for the recording of easements and licenses where the consideration for the grant of such easement or license is $500.00 or less.**

Name of grantee (public utility company or governmental agency)
New York State Department of Environmental Conservation

Federal employer identification number *(if applicable)*

Address of grantee
625 Broadway, Albany, New York 12233-1500

Name and telephone number of person to contact

| | Name(s) of Grantor Of Easement or License | Address of Property | Consideration Given For Easement or License |
|---|---|---|---|
| 1. | Brightfields II Corporation | 3201 Highland Ave, Niagara Falls | 0 |
| 2. | Brightfields II Corporation | 3001 Highland Ave, Niagara Falls | 0 |
| 3. | Brightfields Corporation | 15' x 879' strip of land along southern | 0 |
| 4. | | side of S.B.L. 144.06-2-27.1 | |
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| 14. | | | |
| 15. | | | |

If more than fifteen conveyances are to be recorded, attach a schedule of such other conveyances.

## Signature of Grantee

I certify that the grantee is a public utility regulated by the Public Service Commission or is a governmental agency and the grantee of the easements and/or licenses above; that it is true to the best knowledge of the grantee that the granting of each such easement and/or license is exempt from Real Estate Transfer Tax imposed by Article 31 of the Tax Law by reason that each such conveyance is for a consideration of five hundred dollars or less and/or the conveyance is being made to a governmental agency.

New York State Department of Environmental Conservation — Name of grantee

Andrew Giglielmi — Signature of partner, officer of corporation, governmental official, etc.

Andrew Giglielmi, Esq., NYSDEC — Title

# AMENDMENT TO ENVIRONMENTAL EASEMENT

This Amendment to Environmental Easement is made as of this 7th day of March 2017, by and between The People of the State of New York, acting through their Commissioner of the Department of Environmental Conservation ("NYSDEC" or the "Department") with its headquarters located at 625 Broadway, Albany, New York 12233, and Brightfields II Corporation ("Grantor") with its offices located at 333 Ganson Street, Buffalo, New York 14203.

## RECITALS

1. Grantor is the owner of certain land known and designated on the tax map of the City of Niagara Falls, County of Niagara and State of New York as tax map parcel number: Section 144.06 Block 2 Lot 25.1, being a portion of the property conveyed to Grantor by deed dated April 4, 2014and recorded in the Niagara County Clerk's Office in Instrument No. 2014-05458.

2. The Department and Grantor entered into that certain Environmental Easement ("Easement Agreement") dated as of December 1, 2014 and recorded in the Niagara County Clerk's Office on December 15, 2014 as Instrument No. 2014-21584. Capitalized terms used herein without definition have the meanings ascribed to them in the Environmental Easement Agreement.

3. Pursuant to Section 1, 2, 3, 4, and 5 of the Easement Agreement, Grantor granted the Department rights and interests that run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of the Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of certain maintenance, monitoring or operation requirements; and to ensure the potential restriction of future uses of the land that are inconsistent with the stated purpose.

4. Pursuant to Section 2 A of the Easement Agreement, the Controlled Property may only be used for Commercial and Industrial uses described in 6 NYCRR §375-1.8(g) and may only be used consistent with controls set out in that Section 2 A of the Easement Agreement.

5. This Amendment to Environmental Easement is filed solely in order to revise the legal description for the Controlled Property that was attached as Schedule "A" to that Environmental Easement dated as of December 1, 2014 and recorded in the Niagara County Clerk's Office on December 15, 2014 as Instrument No. 2014-21584.

6. Pursuant to Section 8 of the Easement Agreement, the Department agrees to amend the Easement Agreement in the manner prescribed by Article 9 of the Real Property Law.

ORIGINAL FILED

MAR 22 2017

JOSEPH A. JASTRZEMSKI
NIAGARA COUNTY CLERK

AMENDMENT OF ENVIRONMENTAL EASEMENT

A. The above recitals are hereby incorporated into this Amendment of Environmental Easement.

B. The Department and Grantor hereby agree that the 4th Whereas clause of the Environmental Easement is hereby amended to read as follows:

**WHEREAS**, Grantor, is the owner of real property located at the address of 3001 Highland Avenue in the City of Niagara Falls, County of Niagara and State of New York, known and designated on the tax map of the County Clerk of Niagara as tax map parcel number: Section 144.06 Block 2 Lot 25.1, being a portion of the property conveyed to Grantor by deed dated December 1, 2014 and recorded in the Niagara County Clerk's Office as Instrument No. 2014-21584. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 1.677 +/- acres, and is hereinafter more fully described in the Land Title Survey dated February 14, 2014 and last revised October 31, 2016 prepared by Kenneth L. Slaugenhoupt, L.L.S. of Niagara Boundary and Mapping Services, which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule "A" – Amended Description of Controlled Property; and

C. The Department and Grantor hereby agree that the metes and bounds description of the Controlled Property attached hereto as "Schedule "A" – Amended Description of Controlled Property" shall replace the original metes and bounds description attached as Schedule "A" to the December 1, 2014 Environmental Easement.

D. All other terms of the December 1, 2014 Environmental Easement shall remain in effect.

E. This Amendment of Environmental Easement inures to and binds the parties hereto and their respective successors and assigns.

F. This Amendment of Environmental Easement shall be governed by and interpreted in accordance with the laws of the State of New York.

**IN WITNESS WHEREOF,** Grantor has caused this Amendment to Environmental Easement to be signed in its name.

Brightfields II Corporation:

By: _____

Print Name: Jon M. Williams

Title: President Date: 2/6/17

**Grantor's Acknowledgment**

STATE OF NEW YORK )
) ss:
COUNTY OF Erie )

On the 6th day of February, in the year 20 17, before me, the undersigned, personally appeared Jon M. Williams, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Nancy L Mazur
Notary Public - State of New York

NANCY L. MAZUR
Notary Public, State of New York
Qualified in [illegible] No. 1785930
My Commission Expires [illegible] 30, 2017

**THIS AMENDMENT OF THE ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK,** Acting By and Through the Department of Environmental Conservation as Designee of the Commissioner,

By:_____
Robert W. Schick, Director
Division of Environmental Remediation

**Grantee's Acknowledgment**

STATE OF NEW YORK )
) ss:
COUNTY OF ALBANY )

On the 7th day of March, in the year 2017 before me, the undersigned, personally appeared Robert W. Schick, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public - State of New York

David J. Chiusano
Notary Public, State of New York
No. 01CH5032146
Qualified in Schenectady County
Commission Expires August 22, 2018

## SCHEDULE "A" AMENDED DESCRIPTION OF CONTROLLED PROPERTY

**ENVIRONMENTAL EASEMENT DESCRIPTION FOR SUPERFUND SITE No. 932136**
**Brightfields – New Lot 1250**

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Niagara Falls, County of Niagara and State of New York, being part of Lot 34 of the New York State Mile Reserve and being more particularly bounded and described as follows:

Beginning at a point on the easterly line of Highland Avenue at its intersection with the northerly line of Beech Avenue;

Thence S.88°43'18"E along the northerly line of Beech Avenue a distance of 274.00 feet to a point;

Thence N.20°42'42"W a distance of 291.15 feet to a point;

Thence N88°58'03"W a distance of 138.49 feet to a point on the former centerline of a 16.5 foot wide alley;

Thence S20°42'42"W along the former centerline of a 16.5 foot wide alley a distance of 15.93 feet to the centerline of former Carolina Avenue;

Thence N88°58'03"W along the centerline of Carolina Avenue a distance of 135.93 feet to the east line of Highland Avenue;

Thence S20°42'42"W along the east line of Highland Avenue a distance of 273.97 feet to the Point or Place of Beginning, containing 1.677 acres of land more or less.

TP-584.2 (10/96)

Recording Office Time Stamp

# Real Estate Transfer Tax Return For Public Utility Companies' and Governmental Agencies' Easements and Licenses

**This form may only be used by public utility companies regulated by the Public Service Commission and governmental agencies for the recording of easements and licenses where the consideration for the grant of such easement or license is $500.00 or less.**

Name of grantee (public utility company or governmental agency)
New York State Department of Environmental Conservation

Federal employer identification number *(if applicable)*

Address of grantee
625 Broadway, Albany, New York 12233-1500

Name and telephone number of person to contact

| | Name(s) of Grantor Of Easement or License | Address of Property | Consideration Given For Easement or License |
|---|---|---|---|
| 1. | Brightfields II Corporation | 3201 Highland Ave, Niagara Falls | 0 |
| 2. | Brightfields II Corporation | 3001 Highland Ave, Niagara Falls | 0 |
| 3. | Brightfields Corporation | 15' x 879' strip of land along southern | 0 |
| 4. | | side of S.B.L. 144.06-2-27.1 | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
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| 12. | | | |
| 13. | | | |
| 14. | | | |
| 15. | | | |

If more than fifteen conveyances are to be recorded, attach a schedule of such other conveyances.

## Signature of Grantee

I certify that the grantee is a public utility regulated by the Public Service Commission or is a governmental agency and the grantee of the easements and/or licenses above; that it is true to the best knowledge of the grantee that the granting of each such easement and/or license is exempt from Real Estate Transfer Tax imposed by Article 31 of the Tax Law by reason that each such conveyance is for a consideration of five hundred dollars or less and/or the conveyance is being made to a governmental agency.

New York State Department of Environmental Conservation — Name of grantee

Andrew Guglielmi — Signature of partner, officer of corporation, governmental official, etc.

Andrew Guglielmi, Esq. — Title

NYSDEC

COPY

# AMENDMENT TO ENVIRONMENTAL EASEMENT

This Amendment to Environmental Easement is made as of this 7th day of March 2017 by and between The People of the State of New York, acting through their Commissioner of the Department of Environmental Conservation ("NYSDEC" or the "Department") with its headquarters located at 625 Broadway, Albany, New York 12233, and Brightfields II Corporation ("Grantor") with its offices located at 333 Ganson Street, Buffalo, New York 14203.

## RECITALS

1. Grantor is the owner of certain land known and designated on the tax map of the City of Niagara Falls, County of Niagara and State of New York as tax map parcel number: Section 144.06 Block 2 Lot 25.2, being a portion of the property conveyed to Grantor by deed dated April 4, 2014and recorded in the Niagara County Clerk's Office in Instrument No. 2014-05458.

2. The Department and Grantor entered into that certain Environmental Easement ("Easement Agreement") dated as of December 1, 2014 and recorded in the Niagara County Clerk's Office on December 15, 2014 as Instrument No. 2014-21585. Capitalized terms used herein without definition have the meanings ascribed to them in the Environmental Easement Agreement.

3. Pursuant to Section 1, 2, 3, 4, and 5 of the Easement Agreement, Grantor granted the Department rights and interests that run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of the Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of certain maintenance, monitoring or operation requirements; and to ensure the potential restriction of future uses of the land that are inconsistent with the stated purpose.

4. Pursuant to Section 2 A of the Easement Agreement, the Controlled Property may only be used for Restricted-Residential, Commercial and Industrial uses described in 6 NYCRR §375-1.8(g) and may only be used consistent with controls set out in that Section 2 A of the Easement Agreement.

5. This Amendment to Environmental Easement is filed solely in order to revise the legal description for the Controlled Property that was attached as Schedule "A" to that Environmental Easement dated as of December 1, 2014 and recorded in the Niagara County Clerk's Office on December 15, 2014 as Instrument No. 2014-21585.

6. Pursuant to Section 8 of the Easement Agreement, the Department agrees to amend the Easement Agreement in the manner prescribed by Article 9 of the Real Property Law.

ORIGINAL FILED
MAR 22 2017
JOSEPH A. JASTRZEMSKI
NIAGARA COUNTY CLERK

AMENDMENT OF ENVIRONMENTAL EASEMENT

A. The above recitals are hereby incorporated into this Amendment of Environmental Easement.

B. The Department and Grantor hereby agree that the 4th Whereas clause of the Environmental Easement is hereby amended to read as follows:

**WHEREAS**, Grantor, is the owner of real property located at the address of 3201 Highland Avenue in the City of Niagara Falls, County of Niagara and State of New York, known and designated on the tax map of the County Clerk of Niagara as tax map parcel number: Section 144.06 Block 2 Lot 25.2, being a portion of the property conveyed to Grantor by deed dated December 1, 2014 and recorded in the Niagara County Clerk's Office as Instrument No. 2014-21585. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 5.011 +/- acres, and is hereinafter more fully described in the Land Title Survey dated February 14, 2014 and last revised October 31, 2016 prepared by Kenneth L. Slaugenhoupt, L.L.S. of Niagara Boundary and Mapping Services, which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule "A" – Amended Description of Controlled Property; and

C. The Department and Grantor hereby agree that the metes and bounds description of the Controlled Property attached hereto as "Schedule "A" – Amended Description of Controlled Property" shall replace the original metes and bounds description attached as Schedule "A" to the December 1, 2014 Environmental Easement.

D. All other terms of the December 1, 2014 Environmental Easement shall remain in effect.

E. This Amendment of Environmental Easement inures to and binds the parties hereto and their respective successors and assigns.

F. This Amendment of Environmental Easement shall be governed by and interpreted in accordance with the laws of the State of New York.

**IN WITNESS WHEREOF,** Grantor has caused this Amendment to Environmental Easement to be signed in its name.

Brightfields II Corporation:

By: _____

Print Name: Jon M. Williams

Title: President Date: 2/6/17

**Grantor's Acknowledgment**

STATE OF NEW YORK )
) ss:
COUNTY OF Erie )

On the 6th day of February, in the year 20 17, before me, the undersigned, personally appeared Jon M. Williams, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Nancy L Mazur
Notary Public - State of New York

NANCY L. MAZUR
Notary Public, State of New York
Qualified in Erie Co. No. 1735930
My Commission Expires 11 20, 2017

**THIS AMENDMENT OF THE ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK**, Acting By and Through the Department of Environmental Conservation as Designee of the Commissioner,

By:_____
Robert W. Schick, Director
Division of Environmental Remediation

**Grantee's Acknowledgment**

STATE OF NEW YORK )
) ss:
COUNTY OF ALBANY )

On the 7th day of March, in the year 2017, before me, the undersigned, personally appeared Robert W. Schick, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public – State of New York

David J. Chiusano
Notary Public, State of New York
No. 01CH5032146
Qualified in Schenectady County
Commission Expires August 22, 2018

## SCHEDULE "A" AMENDED DESCRIPTION OF CONTROLLED PROPERTY

### ENVIRONMENTAL EASEMENT DESCRIPTION FOR SUPERFUND SITE No. 932136
### Brightfields – Lot 1251

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Niagara Falls, County of Niagara and State of New York, being part of Lot 34 of the New York State Mile Reserve and being more particularly bounded and described as follows:

Commencing at a point on the easterly line of Highland Avenue at its intersection with the northerly line of Beech Avenue;

Thence S.88°43'18"E along the northerly line of Beech Avenue a distance of 274.00 feet to the POINT OR PLACE OF BEGINNING;

Thence S.88°43'18"E along the northerly line of Beech Avenue a distance of 839.99 feet to the intersection of the north line of Beech Avenue with the west line of the former Fifteenth Street;

Thence N.00°54'11"E a distance of 277.75 feet to a point;

Thence N88°58'03"W a distance of 741.30 feet to a point;

Thence S20°42'42"W a distance of 291.15 feet to the northerly line of Beech Avenue and the Point or Place of Beginning, containing 5.011 acres of land more or less.

TP-584.2 (10/96)

Recording Office Time Stamp

# Real Estate Transfer Tax Return For Public Utility Companies' and Governmental Agencies' Easements and Licenses

**This form may only be used by public utility companies regulated by the Public Service Commission and governmental agencies for the recording of easements and licenses where the consideration for the grant of such easement or license is $500.00 or less.**

Name of grantee (public utility company or governmental agency)
New York State Department of Environmental Conservation

Federal employer identification number *(if applicable)*

Address of grantee
625 Broadway, Albany, New York 12233-1500

Name and telephone number of person to contact

| | Name(s) of Grantor Of Easement or License | Address of Property | Consideration Given For Easement or License |
|---|---|---|---|
| 1. | Brightfields II Corporation | 3201 Highland Ave, Niagara Falls | 0 |
| 2. | Brightfields II Corporation | 3001 Highland Ave, Niagara Falls | 0 |
| 3. | Brightfields Corporation | 15' x 879' strip of land along southern | 0 |
| 4. | | side of S.B.L. 144.06-2-27.1 | |
| 5. | | | |
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| 7. | | | |
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| 13. | | | |
| 14. | | | |
| 15. | | | |

If more than fifteen conveyances are to be recorded, attach a schedule of such other conveyances.

## Signature of Grantee

I certify that the grantee is a public utility regulated by the Public Service Commission or is a governmental agency and the grantee of the easements and/or licenses above; that it is true to the best knowledge of the grantee that the granting of each such easement and/or license is exempt from Real Estate Transfer Tax imposed by Article 31 of the Tax Law by reason that each such conveyance is for a consideration of five hundred dollars or less and/or the conveyance is being made to a governmental agency.

New York State Department of Environmental Conservation
Name of grantee

Andrew Guglielmi
Signature of partner, officer of corporation, governmental official, etc.

Andrew Guglielmi, Esq.
NYSDEC
Title

**Phillips Lytle** LLP

Jon M. Williams
Brightfields II Corporation
333 Ganson Street
Buffalo, NY 14203

January 30, 2015

Re: Environmental Easement ("EE") for the parcel with Tax Map Nos. 144.06-2-25.1, 144.06-2-25.2, 144.06-2-2.1 for New York State Department of Environmental Conservation ("NYSDEC") Site No. 932136 (Brightfields II Corporation)

Dear Mr. Williams:

Please find enclosed the original EE and EE notice letters for Tract II, which were recorded in compliance with NYSDEC's requirements. We have placed a copy in our files and are forwarding the original documents so that you may file them with your records.

If you have any questions or concerns, please feel free to contact me.

Thank you.

Very truly yours,

Phillips Lytle LLP

By
Jennifer Dougherty
JD/pjs

Enclosures

ecc: Matthew J. Beck (w/ enclosures)
David P. Flynn (w/ enclosures)

Doc #01-2836383.1

**Jennifer Dougherty**
Direct **716 504 5789** **jdougherty@phillipslytle.com**

ATTORNEYS AT LAW

ONE CANALSIDE 125 MAIN STREET BUFFALO, NY 14203-2887 PHONE 716 847 8400 FAX 716 852 6100
NEW YORK: ALBANY, BUFFALO, CHAUTAUQUA, GARDEN CITY, NEW YORK, ROCHESTER | WASHINGTON, DC | CANADA: WATERLOO REGION | PHILLIPSLYTLE.COM

# NIAGARA COUNTY – STATE OF NEW YORK

WAYNE F. JAGOW – NIAGARA COUNTY CLERK
P.O. BOX 461, LOCKPORT, NEW YORK 14095-0461

## COUNTY CLERK'S RECORDING PAGE

***THIS PAGE IS PART OF THE DOCUMENT – DO NOT DETACH***

INSTRUMENT #: 2014-21584

Receipt#: 2014220933
Clerk: TH
Rec Date: 12/15/2014 01:32:26 PM
Doc Grp: DEED
Descrip: EASEMENT
Num Pgs: 10

Party1: BRIGHTFIELDS II CORP
Party2: PEOPLE OF THE STATE OF NEW YORK
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Town: NIAGARA FALLS

Recording:

| | |
|---|---|
| Cover Page | 8.00 |
| Recording Fee | 32.00 |
| Cultural Ed | 14.25 |
| Records Management - Coun | 1.00 |
| Records Management - Stat | 4.75 |
| TP584-2 (Public Utilities | 1.00 |
| Sub Total: | 61.00 |

Transfer Tax

| | |
|---|---|
| Transfer Tax | 0.00 |
| Sub Total: | 0.00 |
| Total: | 61.00 |

**** NOTICE: THIS IS NOT A BILL ****

***** Transfer Tax *****
Transfer Tax #: 2593
Transfer Tax
Consideration: 1.00

Total: 0.00

Record and Return To:

PHILLIPS LYTLE LLP
ONE CANALSIDE
125 MAIN STREET
BUFFALO NY 14203

WARNING***
** Information may change during the verification process and may not be reflected on this page.

Wayne F. Jagow
Niagara County Clerk

2014-21584
12/15/2014 01:32:26 PM
10 Pages
EASEMENT

Clerk: TH

# ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36 OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

**THIS INDENTURE** made this 1st day of December, 2014, between Owner(s) Brightfields II Corporation, having an office at 333 Ganson Street, County of Erie, State of New York (the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

**WHEREAS,** the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

**WHEREAS,** the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

**WHEREAS,** the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

**WHEREAS,** Grantor, is the owner of real property located at the address of 3001 Highland Avenue in the City of Niagara Falls, County of Niagara and State of New York, known and designated on the tax map of the County Clerk of Niagara as tax map parcel numbers: Section 144.06 Block 2 Lot 25.1, being the same as that property conveyed to Grantor by deed dated April 4, 2014 and recorded in the Niagara County Clerk's Office in Instrument No. 2014-05458. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 1.989 +/- acres, and is hereinafter more fully described in the Land Title Survey dated February 14, 2014 prepared by Niagara Boundary and Mapping Services, which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

**WHEREAS,** the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation established for the Controlled Property until such time as this Environmental Easement is

extinguished pursuant to ECL Article 71, Title 36; and

**NOW THEREFORE**, in consideration of the mutual covenants contained herein and the terms and conditions of Order on Consent Index Number: B9-0777-08-03, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement")

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

**Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv) ;**

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP;

(4) The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Niagara County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;

(5) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(6) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

(7) All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;

(8) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;

(9) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP;

(10) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

B. The Controlled Property shall not be used for Residential or Restricted Residential purposes as defined in 6NYCRR 375-1.8(g)(2)(i) and (ii), and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, New York 12233
Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

**This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the Environmental Conservation**

Law.

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall, at such time as NYSDEC may require, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).

(2) the institutional controls and/or engineering controls employed at such site:

(i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved by the NYSDEC and that all controls are in the Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5 the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and

(7) the information presented is accurate and complete.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by

Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. Notice. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to:

Site Number: 932136
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

With a copy to:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

**IN WITNESS WHEREOF,** Grantor has caused this instrument to be signed in its name.

Brightfields II Corporation:

By: _____

Print Name: Jon M. Williams

Title: President Date: 8/18/14

## Grantor's Acknowledgment

STATE OF NEW YORK )
) ss:
COUNTY OF ERIE )

On the 18th day of August, in the year 2014, before me, the undersigned, personally appeared Jon M. Williams, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Nancy L Mazur
Notary Public - State of New York

NANCY L. MAZUR
Notary Public, State of New York
Qualified in Erie County No. 1765930
My Commission Expires 11 30, 2016

**THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK**, Acting By and Through the Department of Environmental Conservation as Designee of the Commissioner,

By: _____

Robert W. Schick, Director
Division of Environmental Remediation

**Grantee's Acknowledgment**

STATE OF NEW YORK )
) ss:
COUNTY OF ALBANY )

On the 1st day of December, in the year 2014, before me, the undersigned, personally appeared Robert W. Schick, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public - State of New York

**David J. Chiusano**
**Notary Public, State of New York**
**No. 01CH5032146**
**Qualified in Schenectady County**
**Commission Expires August 22, 2018**

## SCHEDULE "A" PROPERTY DESCRIPTION

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Niagara Falls, County of Niagara and State of New York, being part of Lot 34 of the New York State Mile Reserve and being more particularly bounded and described as follows:

Beginning at a point on the easterly line of Highland Avenue at its intersection with the northerly line of Beech Avenue;

Thence S88°43'18"E along the northerly line of Beech Avenue a distance of 313.77 feet to a point;

Thence N°20'42'42"W a distance of 307.26 feet to a point on the northerly line of Carolina Avenue (not opened);

Thence N88°58'03"W along said northerly line of Carolina Avenue a distance of 178.31 feet to a point on the former centerline of a 16.5 foot wide alley;

Thence S20°42'42"W along the former centerline of a 16.5 foot wide alley a distance of 31.86 feet to the centerline of Carolina Avenue;

Thence N88°58'03"W along the centerline of Carolina Avenue a distance of 135.93 feet to the east line of Highland Avenue;

Thence S20°42' 42"W along the east line of Highland Avenue a distance of 273.97 feet to the Point or Place of Beginning, containing 1.989 acres of land more or less.

Total Acreage: 1.989 +/-acres

Doc. Id. #2797804

# NIAGARA COUNTY – STATE OF NEW YORK

WAYNE F. JAGOW – NIAGARA COUNTY CLERK
P.O. BOX 461, LOCKPORT, NEW YORK 14095-0461

**COUNTY CLERK'S RECORDING PAGE**
*****THIS PAGE IS PART OF THE DOCUMENT – DO NOT DETACH*****

INSTRUMENT #: 2014-21585

Receipt#: 2014220933
Clerk: TH
Rec Date: 12/15/2014 01:32:26 PM
Doc Grp: DEED
Descrip: EASEMENT
Num Pgs: 10

Party1: BRIGHTFIELDS II CORPORATION
Party2: PEOPLE OF THE STATE OF NEW YORK DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Town: NIAGARA FALLS

| Recording: | |
|---|---|
| Cover Page | 8.00 |
| Recording Fee | 32.00 |
| Cultural Ed | 14.25 |
| Records Management - Coun | 1.00 |
| Records Management - Stat | 4.75 |
| TP584-2 (Public Utilities | 1.00 |
| Sub Total: | 61.00 |
| Transfer Tax | |
| Transfer Tax | 0.00 |
| Sub Total: | 0.00 |
| Total: | 61.00 |

****** NOTICE: THIS IS NOT A BILL ******

***** Transfer Tax *****
Transfer Tax #: 2594
Transfer Tax
Consideration: 1.00

Total: 0.00

Record and Return To:

PHILLIPS LYTLE LLP
ONE CANALSIDE
125 MAIN STREET
BUFFALO NY 14203

WARNING***
** Information may change during the verification process and may not be reflected on this page.

Wayne F. Jagow
Niagara County Clerk

2014-21585
12/15/2014 01:32:26 PM
10 Pages
EASEMENT

# ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36 OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

**THIS INDENTURE** made this 1st day of December, 2014 between Owner(s) Brightfields II Corporation, having an office at 333 Ganson Street, County of Erie, State of New York (the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

**WHEREAS,** the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

**WHEREAS,** the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

**WHEREAS,** the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

**WHEREAS,** Grantor, is the owner of real property located at the address of 3201 Highland Avenue in the City of Niagara Falls, County of Niagara and State of New York, known and designated on the tax map of the County Clerk of Niagara as tax map parcel numbers: Section 144.06 Block 2 Lot 25.2, being the same as that property conveyed to Grantor by deed dated April 4, 2014 and recorded in the Niagara County Clerk's Office in Instrument No. 2014-05458 . The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 5.001 +/- acres, and is hereinafter more fully described in the Land Title Survey dated Febraury 14, 2014 prepared by Niagra Boundary and Mapping Service, which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

**WHEREAS**, the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation established for the Controlled Property until such time as this Environmental Easement is



Clerk: TH Wayne F. Jagow, Niagara County Clerk

extinguished pursuant to ECL Article 71, Title 36; and

**NOW THEREFORE**, in consideration of the mutual covenants contained herein and the terms and conditions of Order on Consent Index Number: B9-0777-08-03, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement")

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

**Restricted Residential as described in 6 NYCRR Part 375-1.8(g)(2)(ii), Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv) ;**

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP;

(4) The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Niagara County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;

(5) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(6) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

(7) All future activities on the property that will disturb remaining

contaminated material must be conducted in accordance with the SMP;

(8) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;

(9) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP;

(10) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

B. The Controlled Property shall not be used for Residential purposes as defined in 6NYCRR 375-1.8(g)(2)(i), and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, New York 12233
Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

**This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the Environmental Conservation**

**Law.**

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall, at such time as NYSDEC may require, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).

(2) the institutional controls and/or engineering controls employed at such site:

(i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved by the NYSDEC and that all controls are in the Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5 the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and

(7) the information presented is accurate and complete.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by

Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. Notice. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to:

Site Number: 932136
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

With a copy to:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

**IN WITNESS WHEREOF,** Grantor has caused this instrument to be signed in its name.

Brightfields II Corporation:

By: _____

Print Name: Jon M. Williams

Title: President Date: 8/18/14

**Grantor's Acknowledgment**

STATE OF NEW YORK )
) ss:
COUNTY OF ERIE )

On the 18th day of August, in the year 2014, before me, the undersigned, personally appeared Jon M Williams, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Nancy L Mazur
Notary Public - State of New York

NANCY L. MAZUR
Notary Public, State of New York
Qualified in Erie County No. 1765930
My Commission Expires 11 30, 2016

**THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK**, Acting By and Through the Department of Environmental Conservation as Designee of the Commissioner,

By: _____
Robert W. Schick, Director
Division of Environmental Remediation

**Grantee's Acknowledgment**

STATE OF NEW YORK )
) ss:
COUNTY OF ALBANY )

On the 1st day of December, in the year 2014, before me, the undersigned, personally appeared Robert W. Schick, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public - State of New York

David J. Chiusano
Notary Public, State of New York
No. 01CH5032146
Qualified in Schenectady County
Commission Expires August 22, 2015

## SCHEDULE "A" PROPERTY DESCRIPTION

ALL THAT TRACT OR PARCEl OF LAND, situate in the City of Niagara Falls, County of Niagara and State of New York, being part of Lot 34 of the New York State Mile Reserve and being more particularly bounded and described as follows:

Commencing at a point on the easterly line of Highland Avenue at its intersection with the northerly line of Beech Avenue;

Thence S88°43'18"E along the northerly line of Beech Avenue a distance of 313.77 feet to the POINT OR PLACE OF BEGINNING;

Thence S88.43'18"E along the northerly line of Beech Avenue a distance of 800.22 feet to the intersection of the north line of Beech Avenue with the west line of the former Fifteenth Street;

Thence N00°54'11"E a distance of 292.75 feet to a point on the northerly line of Carolina Avenue (not opened);

Thence N88°58'03"W along said northerly line of Carolina Avenue a distance of 696.08 feet to a point;

Thence S20°42'42"W a distance of 307.26 feet to the northerly line of Beech Avenue and the Beech Avenue and the Point or Place of Beginning, containing 5.001 acres of land more or less.

Total Acreage: 5.001 +/- acres

Doc. Id. #2797805

# NIAGARA COUNTY – STATE OF NEW YORK

WAYNE F. JAGOW – NIAGARA COUNTY CLERK
P.O. BOX 461, LOCKPORT, NEW YORK 14095-0461

**COUNTY CLERK'S RECORDING PAGE**
*****THIS PAGE IS PART OF THE DOCUMENT – DO NOT DETACH*****

INSTRUMENT #: 2014-21586

Receipt#: 2014220933
Clerk: TH
Rec Date: 12/15/2014 01:32:26 PM
Doc Grp: DEED
Descrip: EASEMENT
Num Pgs: 10

Party1: BRIGHTFIELDS II CORPORATION
Party2: PEOPLE OF THE STATE OF NEW YORK DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Town: NIAGARA FALLS

Recording:

| | |
|---|---|
| Cover Page | 8.00 |
| Recording Fee | 32.00 |
| Cultural Ed | 14.25 |
| Records Management - Coun | 1.00 |
| Records Management - Stat | 4.75 |
| TP584-2 (Public Utilities | 1.00 |
| Sub Total: | 61.00 |

Transfer Tax

| | |
|---|---|
| Transfer Tax | 0.00 |
| Sub Total: | 0.00 |
| Total: | 61.00 |

****** NOTICE: THIS IS NOT A BILL ******

***** Transfer Tax *****
Transfer Tax #: 2595
Transfer Tax Consideration: 1.00

Total: 0.00

Record and Return To:

PHILLIPS LYTLE LLP
ONE CANALSIDE
125 MAIN STREET
BUFFALO NY 14203

WARNING***
** Information may change during the verification process and may not be reflected on this page.

Wayne F. Jagow
Niagara County Clerk

**2014-21586**
12/15/2014 01:32:26 PM
10 Pages
EASEMENT

Clerk: TH

# ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36 OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

**THIS INDENTURE** made this 1st day of December, 2014 between Owner(s) Brightfields II Corporation, having an office at 333 Ganson Street, County of Erie, State of New York (the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

**WHEREAS,** the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

**WHEREAS,** the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

**WHEREAS,** the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

**WHEREAS,** Grantor, is the owner of real property located at the address of 3079 Highland Avenue in the City of Niagara Falls, County of Niagara and State of New York, known and designated on the tax map of the County Clerk of Niagara as tax map parcel numbers: Section 144.06 Block 2 Lot 2.1, being the same as that property conveyed to Grantor by deed dated April 4, 2014 and recorded in the Niagara County Clerk's Office in Instrument No. 2014-05458. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 11.067 +/- acres, and is hereinafter more fully described in the Land Title Survey dated February 14, 2014 prepared by Niagara Boundary and Mapping Services, which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

**WHEREAS,** the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation established for the Controlled Property until such time as this Environmental Easement is

extinguished pursuant to ECL Article 71, Title 36; and

**NOW THEREFORE**, in consideration of the mutual covenants contained herein and the terms and conditions of Order on Consent Index Number: B9-0777-08-03, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement")

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

**Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv) ;**

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP;

(4) The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Niagara County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;

(5) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(6) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

(7) All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;

(8) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;

(9) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP;

(10) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

B. The Controlled Property shall not be used for Residential or Restricted Residential purposes as defined in 6NYCRR 375-1.8(g)(2)(i) and (ii), and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, New York 12233
Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

**This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the Environmental Conservation**

Law.

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall, at such time as NYSDEC may require, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).

(2) the institutional controls and/or engineering controls employed at such site:

(i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved by the NYSDEC and that all controls are in the Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5 the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and

(7) the information presented is accurate and complete.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by

Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. Notice. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to:

Site Number: 932136
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

With a copy to:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

**IN WITNESS WHEREOF,** Grantor has caused this instrument to be signed in its name.

Brightfields II Corporation:

By: _____

Print Name: Jon M. Williams

Title: President Date: 8/18/14

**Grantor's Acknowledgment**

STATE OF NEW YORK )
) ss:
COUNTY OF ERIE )

On the 18th day of August, in the year 2014, before me, the undersigned, personally appeared Jon M. Williams, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Nancy L Mazur
Notary Public - State of New York

NANCY L. MAZUR
Notary Public, State of New York
Qualified in Erie County No. 1765930
My Commission Expires 11 30, 2016

**THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK**, Acting By and Through the Department of Environmental Conservation as Designee of the Commissioner,

By: _____

Robert W. Schick, Director
Division of Environmental Remediation

**Grantee's Acknowledgment**

STATE OF NEW YORK )
) ss:
COUNTY OF ALBANY )

On the 1st day of December, in the year 2014 before me, the undersigned, personally appeared Robert W. Schick, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public - State of New York

**David J. Chiusano**
**Notary Public, State of New York**
**No. 01CH5032146**
**Qualified in Schenectady County**
**Commission Expires August 22, 2018**

## SCHEDULE "A" PROPERTY DESCRIPTION

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Niagara Falls, County of Niagara and State of New York, being part of Lot 34 of the New York State Mile Reserve and being more particularly bounded and described as follows:

Beginning at the intersection of the northerly line of Beech Avenue with the easterly line of the former Fifteenth Street;

Thence N00°54'11"E along the said easterly line of Fifteenth Street a distance of 862.28 feet to a point on the northerly line of Lot 34 of the New York State Mile Reserve;

Thence S89°40'00"E along the northerly line of Lot 34 of the New York State Mile Reserve a distance of 559.41 feet to the northwesterly corner of Lot 218 of the Re-subdivision of Lots on 17th Street, Niagara Falls, NY according to a Map made by Wallace P. Keller, P.E., L.S. and recorded in the Niagara County Clerk's Office on January 5, 1960 in Map Book 64 of Maps at Page 1595, now filed in Book 40 of Microfilmed Maps at page 4000;

Thence S00°28'15"W along the westerly line of Lots 218, 217, 216, 215, 214, 213 and part of Lot 212 of said Re-subdivision a distance of 299.61 feet to the northeasterly corner of a 10 foot wide alley;

Thence N89°04'07"W along the northerly line of said alley a distance of 10.00 feet to a point;

Thence S00°28'15"W along the westerly line of said Alley a distance of 571.90 feet to a point on the northerly line of Beech Avenue;

Thence N88°43'18"W along the northerly line of Beech Avenue a distance of 555.97 feet to the Point or Place of Beginning, containing 11.067 acres of land more or less.

Total Acreage: 11.067 +/- acres

Doc. Id. #2797808

# NIAGARA COUNTY – STATE OF NEW YORK

WAYNE F. JAGOW – NIAGARA COUNTY CLERK
P.O. BOX 461, LOCKPORT, NEW YORK 14095-0461

## COUNTY CLERK'S RECORDING PAGE

***THIS PAGE IS PART OF THE DOCUMENT – DO NOT DETACH***

INSTRUMENT #: 2014-21917

Receipt#: 2014221494
Clerk: TH
Rec Date: 12/19/2014 02:41:13 PM
Doc Grp: DEED
Descrip: MISCELLANEOUS
Num Pgs: 16

Party1: BRIGHTFIELDS II CORPORATION
Party2: NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Town: NIAGARA FALLS

Recording:

| | |
|---|---|
| Cover Page | 8.00 |
| Recording Fee | 50.00 |
| Cultural Ed | 14.25 |
| Records Management - Coun | 1.00 |
| Records Management - Stat | 4.75 |
| Total: | 78.00 |

**** NOTICE: THIS IS NOT A BILL ****

Record and Return To:

PHILLIPS LYTLE LLP
ONE CANALSIDE
125 MAIN STREET
BUFFALO NY 14203

WARNING***
** Information may change during the verification process and may not be reflected on this page.

Wayne F. Jagow
Niagara County Clerk

# NOTICE OF ENVIRONMENTAL EASEMENT

The New York State Department of Environmental Conservation (the "Grantee"), has been granted an Environmental Easement pursuant to Article 71, Section 36 affecting real property located at the following addresses:

3001 Highland Avenue, Niagara Falls, New York

Property Owner/Grantor: Brightfields II Corporation

The Tax Map Identification No.: 144.06-2-25.1

NYS Department of Environmental Conservation Site Nos.: 932136

The Environmental Easement for the above referenced property has been filed in the Niagara County Clerk's Office on December 15, 2014
Instrument No.: 2014-21584.

The Environmental Easement contains institutional and/or engineering controls that run with the land. The Environmental Easement may restrict the use of the above referenced property to commercial and recreational.

NOTICE IS HEREBY GIVEN that any activity on the land which might or will prevent or interfere with the ongoing or completed remedial program, including the controls as set forth in the Environmental Easement and the Site Management Plan, must be done in accordance with the Site Management Plan which is incorporated by reference into the Environmental Easement. A copy of the Site Management Plan can be obtained by contacting the Department at derweb@gw.dec.state.ny.us. Be further advised of the notice provisions of NYCRR 375-1.11(d) relative to contemplated significant changes in use.

Failure to Comply with the terms and conditions of the Environmental Easement may subject violators to penalties of up to $37,500 per day for violation of 6 NYCRR 375-1.11(b).

An electronic version of this environmental easement has been accepted by the New York State Department of Environmental Conservation and is available to the public at: http://www.dec.ny.gov/chemical/36045.html.

Doc #01-2826522.1

2014221494

**2014-21917**
12/19/2014 02:41:13 PM
16 Pages
MISCELLANEOUS

Wayne F. Jagow, Niagara County Clerk Clerk: TH

## Affidavit of Service

STATE OF NEW YORK )
) ss.:
COUNTY OF ERIE )

James B. Ferris, being duly sworn, deposes and says that deponent is an employee of Phillips Lytle LLP, attorneys for Brightfields II Corporation; that deponent is not a party to this action and is over eighteen years of age.

That on December 19, 2014, I served the annexed letter on the person listed below by sending a true copy of same enclosed in a post-paid properly addressed wrapper by certified mail with a return receipt requested and causing same to be delivered to an employee of the United States Post Office in the State of New York.

James B. Ferris

Sworn and subscribed to before
me on this date: December 19, 2014

Notary Public

BRYAN J. JENKINS
No. 01JE6278963
Notary Public, State of New York
Qualified in Erie County
My Commission Expires 04/01/20 17

**SERVICE LIST**

Mr. Paul A. Dyster
City of Niagara Falls Mayor's Office
745 Main Street
Niagara Falls, NY 14301

Doc #01-2826730.1

15



Phillips Lytle LLP

Certified Return Receipt Requested

December 19, 2014

Mr. Paul A. Dyster
City of Niagara Falls Mayor's Office
745 Main Street
Niagara Falls, NY 14301

Re: Environmental Easement for Parcels with the following Tax Map No. 144.06-2-25.1 ("Site")
New York State Department of Environmental Conservation ("NYSDEC")
Site No: 932136

Dear Mayor Dyster:

Attached please find a copy of an environmental easement granted to the NYSDEC on December 1, 2014, by Brightfields II Corporation for the property located at 3001 Highland Avenue, Niagara Falls, New York; Tax Map No. 144.06-2-25.1, DEC Site No: 932136.

This Environmental Easement restricts future use of the above-referenced property to commercial and industrial uses. It also assures that in conformity with the NYSDEC Record of Decision Amendment for this Site, dated February 2012, following the completion of the on-site remedial treatment and consolidation of contaminated soil, a one-foot soil cover system will be constructed over the consolidated material including a demarcation layer to mitigate potential future exposure to the treated soil in areas designated for commercial development. Clean utility corridors will be constructed through consolidated material in order to accommodate any future development construction. Future on-site activities must be completed in accordance with the Site Management Plan, which is incorporated into the Environmental Easement. NYSDEC approval is also required prior to any groundwater use.

Article 71, Section 71-3607 of the New York State Environmental Conservation Law requires that:

JENNIFER DOUGHERTY
DIRECT 716 504 5789 JDOUGHERTY@PHILLIPSLYTLE.COM

1. Whenever the department is granted an environmental easement, it shall provide each affected local government with a copy of such easement and shall also provide a copy of any documents modifying or terminating such environmental easement.

2. Whenever an affected local government receives an application for a building permit or any other application affecting land use or development of land that is subject to an environmental easement and that may relate to or impact such easement, the affected local government shall notify the department and refer such application to the department. The department shall evaluate whether the application is consistent with the environmental easement and shall notify the affected local government of its determination in a timely fashion, considering the time frame for the local government's review of the application. The affected local government shall not approve the application until it receives approval from the department.

An electronic version of every environmental easement that has been accepted by this NYSDEC is available to the public at: http://www.dec.ny.gov/cfmx/extapps/derfoil/index.cfm?pageid. If you have any questions or comments regarding this matter, please do not hesitate to contact me.

Very truly yours,

Phillips Lytle LLP

By

Jennifer Dougherty

J-Dpjs
Enclosure
cc: David P. Flynn, Esq.

Doc #01-2826518.1

TP-584.2 (10/96)



Recording Office Time Stamp

# Real Estate Transfer Tax Return For Public Utility Companies' and Governmental Agencies' Easements and Licenses

This form may only be used by public utility companies regulated by the Public Service Commission and governmental agencies for the recording of easements and licenses where the consideration for the grant of such easement or license is $500.00 or less.

Name of grantee (public utility company or governmental agency)
New York State Department of Environmental Conservation

Federal employer identification number *(if applicable)*

Address of grantee
625 Broadway, Albany, New York 12233-1500

Name and telephone number of person to contact

| | Name(s) of Grantor Of Easement or License | Address of Property | Consideration Given For Easement or License |
|---|---|---|---|
| 1. | Brightfields II Corporation | 3001 Highland Avenue | 0 |
| 2. | | Niagara Falls, NY | |
| 3. | | | |
| 4. | | | |
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| 14. | | | |
| 15. | | | |

If more than fifteen conveyances are to be recorded, attach a schedule of such other conveyances.

ORIGINAL FILED
DEC 15 2014
WAYNE F. JAGOW
NIAGARA COUNTY CLERK

## Signature of Grantee

I certify that the grantee is a public utility regulated by the Public Service Commission or is a governmental agency and the grantee of the easements and/or licenses above; that it is true to the best knowledge of the grantee that the granting of each such easement and/or license is exempt from Real Estate Transfer Tax imposed by Article 31 of the Tax Law by reason that each such conveyance is for a consideration of five hundred dollars or less and/or the conveyance is being made to a governmental agency.

New York State Department of Environmental Conservation
Name of grantee

Signature of partner, officer of corporation, governmental official, etc.

Title
Benjamin Conlon, Esq.

3001

ORIGINAL FILED

DEC 15 2014

WAYNE F. JAGOW
NIAGARA COUNTY CLERK

# ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36 OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

**THIS INDENTURE** made this 1st day of December, 2014, between Owner(s) Brightfields II Corporation, having an office at 333 Ganson Street, County of Erie, State of New York (the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

**WHEREAS,** the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

**WHEREAS,** the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

**WHEREAS,** the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

**WHEREAS,** Grantor, is the owner of real property located at the address of 3001 Highland Avenue in the City of Niagara Falls, County of Niagara and State of New York, known and designated on the tax map of the County Clerk of Niagara as tax map parcel numbers: Section 144.06 Block 2 Lot 25.1; being the same as that property conveyed to Grantor by deed dated April 4, 2014 and recorded in the Niagara County Clerk's Office in Instrument No. 2014-05458. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 1.989 +/- acres, and is hereinafter more fully described in the Land Title Survey dated February 14, 2014 prepared by Niagara Boundary and Mapping Services, which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

**WHEREAS,** the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation established for the Controlled Property until such time as this Environmental Easement is

extinguished pursuant to ECL Article 71, Title 36; and

**NOW THEREFORE**, in consideration of the mutual covenants contained herein and the terms and conditions of Order on Consent Index Number: B9-0777-08-03, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement")

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

**Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv) ;**

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP;

(4) The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Niagara County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;

(5) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(6) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

(7) All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;

(8) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;

(9) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP;

(10) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

B. The Controlled Property shall not be used for Residential or Restricted Residential purposes as defined in 6NYCRR 375-1.8(g)(2)(i) and (ii), and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, New York 12233
Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

**This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the Environmental Conservation**

Law.

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall, at such time as NYSDEC may require, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).

(2) the institutional controls and/or engineering controls employed at such site:

(i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved by the NYSDEC and that all controls are in the Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5 the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and

(7) the information presented is accurate and complete.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by

Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. Notice. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to:

Site Number: 932136
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

With a copy to:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its name.

Brightfields II Corporation:

By: _____

Print Name: Jon M. Williams

Title: President Date: 9/18/14

## Grantor's Acknowledgment

STATE OF NEW YORK )
) ss:
COUNTY OF ERIE )

On the 18th day of August, in the year 2014, before me, the undersigned, personally appeared Jon M. Williams, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Nancy L Mazur
Notary Public - State of New York

NANCY L. MAZUR
Notary Public, State of New York
Qualified in Erie County No. 1765930
My Commission Expires 11 30, 2016

THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting By and Through the Department of Environmental Conservation as Designee of the Commissioner,

By: _____
Robert W. Schick, Director
Division of Environmental Remediation

**Grantee's Acknowledgment**

STATE OF NEW YORK )
) ss:
COUNTY OF ALBANY )

On the 1st day of December, in the year 2014, before me, the undersigned, personally appeared Robert W. Schick, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public - State of New York

**David J. Chiusano**
**Notary Public, State of New York**
**No. 01CH5032146**
**Qualified in Schenectady County**
**Commission Expires August 22, 2018**

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Paul A. Dyster
City of Niagara Falls Mayor's Office
745 Main Street
Niagara Falls, NY 14301

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature

X ☐ Agent ☐ Addressee

B. Received by (Printed Name) | C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☐ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

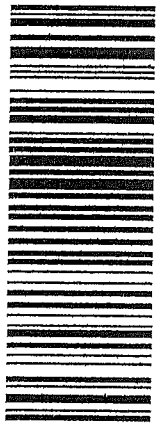
2. Article Number
(Transfer from service label)

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

7014 0510 0001 9091 4761

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS. FOLD AT DOTTED LINE

CERTIFIED MAIL™



7014 0510 0001 9091 4761

7014 0510 0001 9091 4761

**U.S. Postal Service™**
**CERTIFIED MAIL™ RECEIPT**
**(Domestic Mail Only; No Insurance Coverage Provided)**

For delivery information visit our website at www.usps.com®

OFFICIAL USE

| | |
|---|---|
| Postage | $ |
| Certified Fee | |
| Return Receipt Fee (Endorsement Required) | |
| Restricted Delivery Fee (Endorsement Required) | |
| Total Postage & Fees | $ |

Postmark Here

Sent T
Street, or PO
City, St

Mr. Paul A. Dyster
City of Niagara Falls Mayor's Office
745 Main Street
Niagara Falls, NY 14301

PS Form 3800, August 2006 See Reverse for Instructions

## SCHEDULE "A" PROPERTY DESCRIPTION

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Niagara Falls, County of Niagara and State of New York, being part of Lot 34 of the New York State Mile Reserve and being more particularly bounded and described as follows:

Beginning at a point on the easterly line of Highland Avenue at its intersection with the northerly line of Beech Avenue;

Thence S88°43'18"E along the northerly line of Beech Avenue a distance of 313.77 feet to a point;

Thence N°20'42'42"W a distance of 307.26 feet to a point on the northerly line of Carolina Avenue (not opened);

Thence N88°58'03"W along said northerly line of Carolina Avenue a distance of 178.31 feet to a point on the former centerline of a 16.5 foot wide alley;

Thence S20°42'42"W along the former centerline of a 16.5 foot wide alley a distance of 31.86 feet to the centerline of Carolina Avenue;

Thence N88°58'03"W along the centerline of Carolina Avenue a distance of 135.93 feet to the east line of Highland Avenue;

Thence S20°42' 42"W along the east line of Highland Avenue a distance of 273.97 feet to the Point or Place of Beginning, containing 1.989 acres of land more or less.

Total Acreage: 1.989 +/-acres

Doc. Id. #2797804

# NIAGARA COUNTY – STATE OF NEW YORK

WAYNE F. JAGOW – NIAGARA COUNTY CLERK
P.O. BOX 461, LOCKPORT, NEW YORK 14095-0461

## COUNTY CLERK'S RECORDING PAGE

***THIS PAGE IS PART OF THE DOCUMENT – DO NOT DETACH***

INSTRUMENT #: 2014-21918

Receipt#: 2014221494
Clerk: TH
Rec Date: 12/19/2014 02:41:14 PM
Doc Grp: DEED
Descrip: MISCELLANEOUS
Num Pgs: 16

Party1: BRIGHTFIELDS II CORPORATION
Party2: NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Town: NIAGARA FALLS

Recording:

| | |
|---|---|
| Cover Page | 8.00 |
| Recording Fee | 50.00 |
| Cultural Ed | 14.25 |
| Records Management - Coun | 1.00 |
| Records Management - Stat | 4.75 |
| Total: | 78.00 |

**** NOTICE: THIS IS NOT A BILL ****

Record and Return To:

PHILLIPS LYTLE LLP
ONE CANALSIDE
125 MAIN STREET
BUFFALO NY 14203

WARNING***
** Information may change during the verification process and may not be reflected on this page.

Wayne F. Jagow
Niagara County Clerk

# NOTICE OF ENVIRONMENTAL EASEMENT

The New York State Department of Environmental Conservation (the "Grantee"), has been granted an Environmental Easement pursuant to Article 71, Section 36 affecting real property located at the following addresses:

3201 Highland Avenue, Niagara Falls, New York;

Property Owner/Grantor: Brightfields II Corporation

The Tax Map Identification No.: 144.06-2-25.2

NYS Department of Environmental Conservation Site Nos.: 932136

The Environmental Easement for the above referenced property has been filed in the Niagara County Clerk's Office on December 15, 2014
Instrument No.: 2014-21585.

The Environmental Easement contains institutional and/or engineering controls that run with the land. The Environmental Easement may restrict the use of the above referenced property to commercial and recreational.

NOTICE IS HEREBY GIVEN that any activity on the land which might or will prevent or interfere with the ongoing or completed remedial program, including the controls as set forth in the Environmental Easement and the Site Management Plan, must be done in accordance with the Site Management Plan which is incorporated by reference into the Environmental Easement. A copy of the Site Management Plan can be obtained by contacting the Department at derweb@gw.dec.state.ny.us. Be further advised of the notice provisions of NYCRR 375-1.11(d) relative to contemplated significant changes in use.

Failure to Comply with the terms and conditions of the Environmental Easement may subject violators to penalties of up to $37,500 per day for violation of 6 NYCRR 375-1.11(b).

An electronic version of this environmental easement has been accepted by the New York State Department of Environmental Conservation and is available to the public at: http://www.dec.ny.gov/chemical/36045.html.

Doc #01-2826540.1

2014221494

**2014-21918**
12/19/2014 02:41:14 PM
16 Pages
MISCELLANEOUS

Wayne F. Jagow, Niagara County Clerk Clerk: TH

## Affidavit of Service

STATE OF NEW YORK )
) ss.:
COUNTY OF ERIE )

James B. Ferris, being duly sworn, deposes and says that deponent is an employee of Phillips Lytle LLP, attorneys for Brightfields II Corporation; that deponent is not a party to this action and is over eighteen years of age.

That on December 19, 2014, I served the annexed letter on the person listed below by sending a true copy of same enclosed in a post-paid properly addressed wrapper by certified mail with a return receipt requested and causing same to be delivered to an employee of the United States Post Office in the State of New York.

James B. Ferris

Sworn and subscribed to before
me on this date: December 19, 2014

Notary Public

BRYAN J. JENKINS
No. 01JE6278963
Notary Public, State of New York
Qualified in Erie County
My Commission Expires 04/01/20 17

**SERVICE LIST**

Mr. Paul A. Dyster
City of Niagara Falls Mayor's Office
745 Main Street
Niagara Falls, NY 14301

Doc #01-2826730.1



Phillips Lytle LLP

**Certified Return Receipt Requested**

December 19, 2014

Mr. Paul A. Dyster
City of Niagara Falls Mayor's Office
745 Main Street
Niagara Falls, NY 14301

Re: Environmental Easement for Parcels with the following Tax Map No. 144.06-2-25.2 ("Site")
New York State Department of Environmental Conservation ("NYSDEC")
Site No: 932136

Dear Mayor Dyster:

Attached please find a copy of an environmental easement granted to the NYSDEC on December 1, 2014, by Brightfields II Corporation for the property located at 3201 Highland Avenue, Niagara Falls, New York; Tax Map No. 144.06-2-25.2, DEC Site No: 932136.

This Environmental Easement restricts future use of the above-referenced property to restricted residential, commercial or industrial uses. It also assures that in conformity with the NYSDEC Record of Decision Amendment for this Site, dated February 2012, following the completion of the on-site remedial treatment and consolidation of contaminated soil, a one-foot soil cover system will be constructed over the consolidated material including a demarcation layer to mitigate potential future exposure to the treated soil in areas designated for commercial development. A two foot soil cover system will be placed over areas designated for recreational use. Clean utility corridors will be constructed through consolidated material in order to accommodate any future development construction. Future on-site activities must be completed in accordance with the Site Management Plan, which is incorporated into the Environmental Easement. NYSDEC approval is also required prior to any groundwater use.

Article 71, Section 71-3607 of the New York State Environmental Conservation Law requires that:

JENNIFER DOUGHERTY
DIRECT 716 504 5789 JDOUGHERTY@PHILLIPSLYTLE.COM

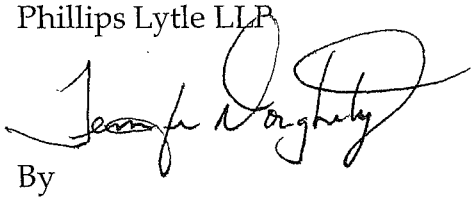
1. Whenever the department is granted an environmental easement, it shall provide each affected local government with a copy of such easement and shall also provide a copy of any documents modifying or terminating such environmental easement.

2. Whenever an affected local government receives an application for a building permit or any other application affecting land use or development of land that is subject to an environmental easement and that may relate to or impact such easement, the affected local government shall notify the department and refer such application to the department. The department shall evaluate whether the application is consistent with the environmental easement and shall notify the affected local government of its determination in a timely fashion, considering the time frame for the local government's review of the application. The affected local government shall not approve the application until it receives approval from the department.

An electronic version of every environmental easement that has been accepted by this NYSDEC is available to the public at: http://www.dec.ny.gov/cfmx/extapps/derfoil/index.cfm?pageid. If you have any questions or comments regarding this matter, please do not hesitate to contact me.

Very truly yours,

Phillips Lytle LLP



By

Jennifer Dougherty

J-Dpjs
Enclosure
cc: David P. Flynn, Esq.

Doc #01-2826620.1

TP-584.2 (10/96)



Recording Office Time Stamp

# Real Estate Transfer Tax Return For Public Utility Companies' and Governmental Agencies' Easements and Licenses

**This form may only be used by public utility companies regulated by the Public Service Commission and governmental agencies for the recording of easements and licenses where the consideration for the grant of such easement or license is $500.00 or less.**

Name of grantee (public utility company or governmental agency)
New York State Department of Environmental Conservation

Federal employer identification number *(if applicable)*

Address of grantee
625 Broadway, Albany, New York 12233-1500

Name and telephone number of person to contact

| | Name(s) of Grantor Of Easement or License | Address of Property | Consideration Given For Easement or License |
|---|---|---|---|
| 1. | Brightfields II Corporation | 3201 Highland Avenue | 0 |
| 2. | | Niagara Falls, NY | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
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| 10. | | | |
| 11. | | | |
| 12. | | | |
| 13. | | | |
| 14. | | | |
| 15. | | | |

If more than fifteen conveyances are to be recorded, attach a schedule of such other conveyances.

ORIGINAL FILED
DEC 15 2014
WAYNE F. JAGOW
NIAGARA COUNTY CLERK

## Signature of Grantee

I certify that the grantee is a public utility regulated by the Public Service Commission or is a governmental agency and the grantee of the easements and/or licenses above; that it is true to the best knowledge of the grantee that the granting of each such easement and/or license is exempt from Real Estate Transfer Tax imposed by Article 31 of the Tax Law by reason that each such conveyance is for a consideration of five hundred dollars or less and/or the conveyance is being made to a governmental agency.

New York State Department of Environmental Conservation
Name of grantee

Signature of partner, officer of corporation, governmental official, etc.

Title
Benjamin Conlon, Esq.

3207 ORIGINAL FILED
DEC 15 2014
WAYNE F. JAGOW
NIAGARA COUNTY CLERK

# ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36 OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

**THIS INDENTURE** made this 1st day of December, 2014 between Owner(s) Brightfields II Corporation, having an office at 333 Ganson Street, County of Erie, State of New York (the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

**WHEREAS,** the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

**WHEREAS,** the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

**WHEREAS,** the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

**WHEREAS,** Grantor, is the owner of real property located at the address of 3201 Highland Avenue in the City of Niagara Falls, County of Niagara and State of New York, known and designated on the tax map of the County Clerk of Niagara as tax map parcel numbers: Section 144.06 Block 2 Lot 25.2, being the same as that property conveyed to Grantor by deed dated April 4, 2014 and recorded in the Niagara County Clerk's Office in Instrument No. 2014-05458 . The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 5.001 +/- acres, and is hereinafter more fully described in the Land Title Survey dated Febraury 14, 2014 prepared by Niagra Boundary and Mapping Service, which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

**WHEREAS,** the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation established for the Controlled Property until such time as this Environmental Easement is

extinguished pursuant to ECL Article 71, Title 36; and

**NOW THEREFORE**, in consideration of the mutual covenants contained herein and the terms and conditions of Order on Consent Index Number: B9-0777-08-03, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement")

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

**Restricted Residential as described in 6 NYCRR Part 375-1.8(g)(2)(ii), Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv) ;**

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP;

(4) The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Niagara County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;

(5) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(6) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

(7) All future activities on the property that will disturb remaining

contaminated material must be conducted in accordance with the SMP;

(8) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;

(9) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP;

(10) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

B. The Controlled Property shall not be used for Residential purposes as defined in 6NYCRR 375-1.8(g)(2)(i), and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, New York 12233
Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

**This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the Environmental Conservation**

Law.

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall, at such time as NYSDEC may require, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).

(2) the institutional controls and/or engineering controls employed at such site:

(i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved by the NYSDEC and that all controls are in the Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5 the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and

(7) the information presented is accurate and complete.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by

Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. Notice. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to:

Site Number: 932136
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

With a copy to:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

**IN WITNESS WHEREOF,** Grantor has caused this instrument to be signed in its name.

Brightfields II Corporation:

By: _____

Print Name: Jon M. Williams

Title: President Date: 8/18/14

**Grantor's Acknowledgment**

STATE OF NEW YORK )
) ss:
COUNTY OF ERIE )

On the 18th day of August, in the year 2014, before me, the undersigned, personally appeared Jon M Williams, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Nancy L Mazur
Notary Public - State of New York

NANCY L. MAZUR
Notary Public, State of New York
Qualified in Erie County No. 1765930
My Commission Expires 11-30, 2016

**THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK**, Acting By and Through the Department of Environmental Conservation as Designee of the Commissioner,

By: _____
Robert W. Schick, Director
Division of Environmental Remediation

**Grantee's Acknowledgment**

STATE OF NEW YORK )
) ss:
COUNTY OF ALBANY )

On the 1st day of December, in the year 2014, before me, the undersigned, personally appeared Robert W. Schick, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public - State of New York

**David J. Chiusano**
**Notary Public, State of New York**
**No. 01CH5032146**
**Qualified in Schenectady County**
**Commission Expires August 22, 2015**

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Paul A. Dyster
City of Niagara Falls Mayor's Office
745 Main Street
Niagara Falls, NY 14301

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature

X ☐ Agent ☐ Addressee

B. Received by (Printed Name) | C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☐ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number
(Transfer from service label)

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

7014 0510 0001 9091 4761

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS, FOLD AT DOTTED LINE

CERTIFIED MAIL™

7014 0510 0001 9091 4761

7014 0510 0001 9091 4761

**U.S. Postal Service™**
**CERTIFIED MAIL™ RECEIPT**
**(Domestic Mail Only; No Insurance Coverage Provided)**

For delivery information visit our website at www.usps.com®

OFFICIAL USE

| | |
|---|---|
| Postage | $ |
| Certified Fee | |
| Return Receipt Fee (Endorsement Required) | |
| Restricted Delivery Fee (Endorsement Required) | |
| Total Postage & Fees | $ |

Postmark Here

Sent To Mr. Paul A. Dyster
Street, Apt. No., or PO Box No. City of Niagara Falls Mayor's Office
City, State, ZIP+4 745 Main Street
Niagara Falls, NY 14301

PS Form 3800, August 2006 See Reverse for Instructions

## SCHEDULE "A" PROPERTY DESCRIPTION

ALL THAT TRACT OR PARCEl OF LAND, situate in the City of Niagara Falls, County of Niagara and State of New York, being part of Lot 34 of the New York State Mile Reserve and being more particularly bounded and described as follows:

Commencing at a point on the easterly line of Highland Avenue at its intersection with the northerly line of Beech Avenue;

Thence S88°43'18"E along the northerly line of Beech Avenue a distance of 313.77 feet to the POINT OR PLACE OF BEGINNING;

Thence S88.43'18"E along the northerly line of Beech Avenue a distance of 800.22 feet to the intersection of the north line of Beech Avenue with the west line of the former Fifteenth Street;

Thence N00°54'11"E a distance of 292.75 feet to a point on the northerly line of Carolina Avenue (not opened);

Thence N88°58'03"W along said northerly line of Carolina Avenue a distance of 696.08 feet to a point;

Thence S20°42'42"W a distance of 307.26 feet to the northerly line of Beech Avenue and the Beech Avenue and the Point or Place of Beginning, containing 5.001 acres of land more or less.

Total Acreage: 5.001 +/- acres

Doc. Id. #2797805

# NIAGARA COUNTY – STATE OF NEW YORK

WAYNE F. JAGOW – NIAGARA COUNTY CLERK
P.O. BOX 461, LOCKPORT, NEW YORK 14095-0461

## COUNTY CLERK'S RECORDING PAGE

***THIS PAGE IS PART OF THE DOCUMENT – DO NOT DETACH***

INSTRUMENT #: 2014-21919

Receipt#: 2014221494
Clerk: TH
Rec Date: 12/19/2014 02:41:14 PM
Doc Grp: DEED
Descrip: MISCELLANEOUS
Num Pgs: 16

Party1: BRIGHTFIELDS II CORPORATION
Party2: NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Town: NIAGARA FALLS

Recording:

| | |
|---|---|
| Cover Page | 8.00 |
| Recording Fee | 50.00 |
| Cultural Ed | 14.25 |
| Records Management - Coun | 1.00 |
| Records Management - Stat | 4.75 |
| Total: | 78.00 |

**** NOTICE: THIS IS NOT A BILL ****

Record and Return To:

PHILLIPS LYTLE LLP
ONE CANALSIDE
125 MAIN STREET
BUFFALO NY 14203

WARNING***
** Information may change during the verification process and may not be reflected on this page.

Wayne F. Jagow
Niagara County Clerk

# NOTICE OF ENVIRONMENTAL EASEMENT

The New York State Department of Environmental Conservation (the "Grantee"), has been granted an Environmental Easement pursuant to Article 71, Section 36 affecting real property located at the following addresses:

3079 Highland Avenue, Niagara Falls, New York

Property Owner/Grantor: Brightfields II Corporation

The Tax Map Identification No.: 144.06-2-2.1

NYS Department of Environmental Conservation Site Nos.: 932136

The Environmental Easement for the above referenced property has been filed in the Niagara County Clerk's Office on December 15, 2014
Instrument No.: 2014-21586.

The Environmental Easement contains institutional and/or engineering controls that run with the land. The Environmental Easement may restrict the use of the above referenced property to commercial and recreational.

NOTICE IS HEREBY GIVEN that any activity on the land which might or will prevent or interfere with the ongoing or completed remedial program, including the controls as set forth in the Environmental Easement and the Site Management Plan, must be done in accordance with the Site Management Plan which is incorporated by reference into the Environmental Easement. A copy of the Site Management Plan can be obtained by contacting the Department at derweb@gw.dec.state.ny.us. Be further advised of the notice provisions of NYCRR 375-1.11(d) relative to contemplated significant changes in use.

Failure to Comply with the terms and conditions of the Environmental Easement may subject violators to penalties of up to $37,500 per day for violation of 6 NYCRR 375-1.11(b).

An electronic version of this environmental easement has been accepted by the New York State Department of Environmental Conservation and is available to the public at: http://www.dec.ny.gov/chemical/36045.html.

Doc #01-2826524.1

2014221494

**2014-21919**
12/19/2014 02:41:14 PM
16 Pages
MISCELLANEOUS

Wayne F. Jagow, Niagara County Clerk

Clerk: TH

**Affidavit of Service**

STATE OF NEW YORK )
) ss.:
COUNTY OF ERIE )

James B. Ferris, being duly sworn, deposes and says that deponent is an employee of Phillips Lytle LLP, attorneys for Brightfields II Corporation; that deponent is not a party to this action and is over eighteen years of age.

That on December 19, 2014, I served the annexed letter on the person listed below by sending a true copy of same enclosed in a post-paid properly addressed wrapper by certified mail with a return receipt requested and causing same to be delivered to an employee of the United States Post Office in the State of New York.

James B. Ferris

Sworn and subscribed to before
me on this date: December 19, 2014

Notary Public

BRYAN J. JENKINS
No. 01JE6278963
Notary Public, State of New York
Qualified in Erie County
My Commission Expires 04/01/20 17

**SERVICE LIST**

Mr. Paul A. Dyster
City of Niagara Falls Mayor's Office
745 Main Street
Niagara Falls, NY 14301

Doc #01-2826730.1



Phillips Lytle LLP

**Certified Return Receipt Requested**

December 19, 2014

Mr. Paul A. Dyster
City of Niagara Falls Mayor's Office
745 Main Street
Niagara Falls, NY 14301

Re: Environmental Easement for Parcels with the following Tax Map No. 144.06-2-2.1 ("Site")
New York State Department of Environmental Conservation ("NYSDEC")
Site No: 932136

Dear Mayor Dyster:

Attached please find a copy of an environmental easement granted to the NYSDEC on December 1, 2014, by Brightfields II Corporation for the property located at 3079 Highland Avenue, Niagara Falls, New York; Tax Map No. 144.06-2-2.1, DEC Site No: 932136.

This Environmental Easement restricts future use of the above-referenced property to commercial and industrial uses. It also assures that in conformity with the NYSDEC Record of Decision Amendment for this Site, dated February 2012, following the completion of the on-site remedial treatment and consolidation of contaminated soil, a one-foot soil cover system will be constructed over the consolidated material including a demarcation layer to mitigate potential future exposure to the treated soil in areas designated for commercial development. Clean utility corridors will be constructed through consolidated material in order to accommodate any future development construction. Future on-site activities must be completed in accordance with the Site Management Plan, which is incorporated into the Environmental Easement. NYSDEC approval is also required prior to any groundwater use.

Article 71, Section 71-3607 of the New York State Environmental Conservation Law requires that:

JENNIFER DOUGHERTY
DIRECT 716 504 5789 JDOUGHERTY@PHILLIPSLYTLE.COM

ATTORNEYS AT LAW

ONE CANALSIDE 125 MAIN STREET BUFFALO, NY 14203-2887 PHONE 716 847 8400 FAX 716 852 6100
NEW YORK: ALBANY, BUFFALO, CHAUTAUQUA, GARDEN CITY, NEW YORK, ROCHESTER | WASHINGTON, DC | CANADA: WATERLOO REGION | PHILLIPSLYTLE.COM

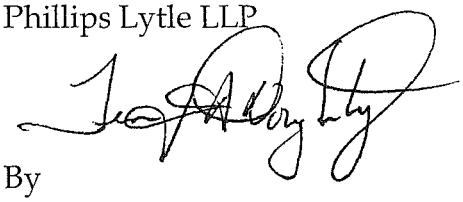
1. Whenever the department is granted an environmental easement, it shall provide each affected local government with a copy of such easement and shall also provide a copy of any documents modifying or terminating such environmental easement.

2. Whenever an affected local government receives an application for a building permit or any other application affecting land use or development of land that is subject to an environmental easement and that may relate to or impact such easement, the affected local government shall notify the department and refer such application to the department. The department shall evaluate whether the application is consistent with the environmental easement and shall notify the affected local government of its determination in a timely fashion, considering the time frame for the local government's review of the application. The affected local government shall not approve the application until it receives approval from the department.

An electronic version of every environmental easement that has been accepted by this NYSDEC is available to the public at: http://www.dec.ny.gov/cfmx/extapps/derfoil/index.cfm?pageid. If you have any questions or comments regarding this matter, please do not hesitate to contact me.

Very truly yours,

Phillips Lytle LLP



By

Jennifer Dougherty

J-Dpjs
Enclosure
cc: David P. Flynn, Esq.

Doc #01-2826606.1

TP-584.2 (10/96)

Recording Office Time Stamp

# Real Estate Transfer Tax Return For Public Utility Companies' and Governmental Agencies' Easements and Licenses

**This form may only be used by public utility companies regulated by the Public Service Commission and governmental agencies for the recording of easements and licenses where the consideration for the grant of such easement or license is $500.00 or less.**

Name of grantee (public utility company or governmental agency)
New York State Department of Environmental Conservation

Federal employer identification number *(if applicable)*

Address of grantee
625 Broadway, Albany, New York 12233-1500

Name and telephone number of person to contact

| | Name(s) of Grantor Of Easement or License | Address of Property | Consideration Given For Easement or License |
|---|---|---|---|
| 1. | Brightfields II Corporation | 3079 Highland Avenue | 0 |
| 2. | | Niagara Falls, NY | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
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| 12. | | | |
| 13. | | | |
| 14. | | | |
| 15. | | | |

If more than fifteen conveyances are to be recorded, attach a schedule of such other conveyances.

ORIGINAL FILED
DEC 15 2014
WAYNE F. JAGOW
NIAGARA COUNTY CLERK

## Signature of Grantee

I certify that the grantee is a public utility regulated by the Public Service Commission or is a governmental agency and the grantee of the easements and/or licenses above; that it is true to the best knowledge of the grantee that the granting of each such easement and/or license is exempt from Real Estate Transfer Tax imposed by Article 31 of the Tax Law by reason that each such conveyance is for a consideration of five hundred dollars or less and/or the conveyance is being made to a governmental agency.

New York State Department of Environmental Conservation

Name of grantee

Signature of partner, officer of corporation, governmental official, etc.

Title

Benjamin Conlon, Esq.

ORIGINAL FILED

DEC 15 2014

WAYNE F. JAGOW
NIAGARA COUNTY CLERK

# ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36 OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

**THIS INDENTURE** made this 1st day of December, 2014 between Owner(s) Brightfields II Corporation, having an office at 333 Ganson Street, County of Erie, State of New York (the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

**WHEREAS,** the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

**WHEREAS,** the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

**WHEREAS,** the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

**WHEREAS,** Grantor, is the owner of real property located at the address of 3079 Highland Avenue in the City of Niagara Falls, County of Niagara and State of New York, known and designated on the tax map of the County Clerk of Niagara as tax map parcel numbers: Section 144.06 Block 2 Lot 2.1, being the same as that property conveyed to Grantor by deed dated April 4, 2014 and recorded in the Niagara County Clerk's Office in Instrument No. 2014-05458. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 11.067 +/- acres, and is hereinafter more fully described in the Land Title Survey dated February 14, 2014 prepared by Niagara Boundary and Mapping Services, which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

**WHEREAS,** the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation established for the Controlled Property until such time as this Environmental Easement is

extinguished pursuant to ECL Article 71, Title 36; and

**NOW THEREFORE**, in consideration of the mutual covenants contained herein and the terms and conditions of Order on Consent Index Number: B9-0777-08-03, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement")

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

**Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv) ;**

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP;

(4) The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Niagara County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;

(5) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(6) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

(7) All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;

(8) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;

(9) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP;

(10) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

B. The Controlled Property shall not be used for Residential or Restricted Residential purposes as defined in 6NYCRR 375-1.8(g)(2)(i) and (ii), and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, New York 12233
Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

**This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the Environmental Conservation**

Law.

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall, at such time as NYSDEC may require, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).

(2) the institutional controls and/or engineering controls employed at such site:

(i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved by the NYSDEC and that all controls are in the Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5 the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and

(7) the information presented is accurate and complete.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by

Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. Notice. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to:

Site Number: 932136
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

With a copy to:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

**IN WITNESS WHEREOF,** Grantor has caused this instrument to be signed in its name.

Brightfields II Corporation:

By: _____

Print Name: Jon M. Williams

Title: President Date: 8/18/14

**Grantor's Acknowledgment**

STATE OF NEW YORK )
) ss:
COUNTY OF ERIE )

On the 18th day of August, in the year 2014, before me, the undersigned, personally appeared Jon M. Williams, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Nancy L Mazur
Notary Public - State of New York

NANCY L. MAZUR
Notary Public, State of New York
Qualified in Erie County No. 1765930
My Commission Expires 11 30, 2016

**THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK**, Acting By and Through the Department of Environmental Conservation as Designee of the Commissioner,

By: _____
Robert W. Schick, Director
Division of Environmental Remediation

**Grantee's Acknowledgment**

STATE OF NEW YORK )
) ss:
COUNTY OF ALBANY )

On the 15 day of December, in the year 2014 before me, the undersigned, personally appeared Robert W. Schick, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public - State of New York

**David J. Chiusano**
**Notary Public, State of New York**
**No. 01CH5032146**
**Qualified in Schenectady County**
**Commission Expires August 22, 2018**

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Paul A. Dyster
City of Niagara Falls Mayor's Office
745 Main Street
Niagara Falls, NY 14301

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature
X ☐ Agent ☐ Addressee

B. Received by (Printed Name) | C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☐ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number
(Transfer from service label)

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS. FOLD AT DOTTED LINE

CERTIFIED MAIL™

7014 0510 0001 9091 4761

7014 0510 0001 9091 4761

7014 0510 0001 9091 4761

**U.S. Postal Service™**
**CERTIFIED MAIL™ RECEIPT**
*(Domestic Mail Only; No Insurance Coverage Provided)*

For delivery information visit our website at www.usps.com®

OFFICIAL USE

| | |
|---|---|
| Postage | $ |
| Certified Fee | |
| Return Receipt Fee (Endorsement Required) | |
| Restricted Delivery Fee (Endorsement Required) | |
| Total Postage & Fees | $ |

Postmark Here

Sent To: Mr. Paul A. Dyster
Street, Apt. No., or PO Box No.: City of Niagara Falls Mayor's Office
City, State, ZIP+4: 745 Main Street
Niagara Falls, NY 14301

PS Form 3800, August 2006 See Reverse for Instructions

## SCHEDULE "A" PROPERTY DESCRIPTION

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Niagara Falls, County of Niagara and State of New York, being part of Lot 34 of the New York State Mile Reserve and being more particularly bounded and described as follows:

Beginning at the intersection of the northerly line of Beech Avenue with the easterly line of the former Fifteenth Street;

Thence N00°54'11"E along the said easterly line of Fifteenth Street a distance of 862.28 feet to a point on the northerly line of Lot 34 of the New York State Mile Reserve;

Thence S89°40'00"E along the northerly line of Lot 34 of the New York State Mile Reserve a distance of 559.41 feet to the northwesterly corner of Lot 218 of the Re-subdivision of Lots on 17th Street, Niagara Falls, NY according to a Map made by Wallace P. Keller, P.E., L.S. and recorded in the Niagara County Clerk's Office on January 5, 1960 in Map Book 64 of Maps at Page 1595, now filed in Book 40 of Microfilmed Maps at page 4000;

Thence S00°28'15"W along the westerly line of Lots 218, 217, 216, 215, 214, 213 and part of Lot 212 of said Re-subdivision a distance of 299.61 feet to the northeasterly corner of a 10 foot wide alley;

Thence N89°04'07"W along the northerly line of said alley a distance of 10.00 feet to a point;

Thence S00°28'15"W along the westerly line of said Alley a distance of 571.90 feet to a point on the northerly line of Beech Avenue;

Thence N88°43'18"W along the northerly line of Beech Avenue a distance of 555.97 feet to the Point or Place of Beginning, containing 11.067 acres of land more or less.

Total Acreage: 11.067 +/- acres

Doc. Id. #2797808

LOCAL LAW: PROHIBITING THE USE OF GROUNDWATER AS A POTABLE WATER SUPPLY

Agenda Item #12
NIAGARA FALLS LOCAL LAW NO.__4____FOR THE YEAR 2010

A Local Law to amend the Niagara Falls City Charter as amended, by adopting a local law relative to prohibiting the use of groundwater as a potable water supply or for other purposes by the installation or use of water supply wells.

BE IT ENACTED BY THE CITY COUNCIL OF THE CITY OF NIAGARA FALLS, NEW YORK, as follows:

Section 1. The Niagara Falls City Charter, as amended, is hereby amended by adopting a local Law relative to prohibiting the use of groundwater as a potable water supply or for other purposes by the installation or use of water supply wells to read as follows:

Section 1. Intent, Purpose and Findings.

A. Certain properties in the City of Niagara Falls, New York ("City") have been used over several decades for commercial/industrial purposes. Because of said use, concentrations of certain chemical constituents in the groundwater beneath certain areas of the City are known or may exceed groundwater quality standards as set forth in 6 New York Codes, Rules, and Regulations ("NYCRR") Part 703. The use of wells to supply groundwater for any purpose may cause or influence the migration of chemical constituents within groundwater located within the City.,

B. The use of wells to supply groundwater may have a deleterious effect on those persons exposed to contaminated groundwater pumped from such wells.

C. Groundwater remediation systems are designed to address groundwater and have been installed at numerous properties within the City to remediate and control contaminated groundwater. The effectiveness of the groundwater remediation systems in the City may be significantly impacted by the uncontrolled extraction of groundwater. Any reduction of the effectiveness of groundwater remediation systems in the City would impact the health, safety, and general welfare of the current and future residents of the City..

D. The City desires to limit potential threats to human health while facilitating the redevelopment and productive use of properties that are impacted by groundwater contamination within the City. The ramifications to the public health, safety, and welfare from potential exposure to contaminated groundwater and the potential impacts to groundwater remediation systems far outweigh the benefit of allowing the use of wells to supply groundwater for commercial, industrial, agricultural, residential, and other purposes in certain areas of the City.

E. The purpose of this Local Law is to protect the health, safety, and general welfare of the current and future residents of the City of Niagara Falls. It is also the purpose of this Local Law to prevent the extraction and use of well water within the City for any non-remedial purpose.

Section Two. Water Production Wells Within the City.

1. Scope. The provisions of this section shall apply to all water production wells located in the City of Niagara Falls, other than remediation wells installed and operated as part of an engineered remedial program approved by the New York State Department of Environmental Conservation and/or the United States Environmental Protection Agency or monitoring wells used solely for monitoring in connection with the investigation of soil and groundwater contamination ("Remediation Wells").
2. New Water Production Wells Prohibited. No person shall commence construction of or operate a new water production well within the City of Niagara Falls after the effective date of the ordinance codified by this section. This prohibition shall not apply to Remediation Wells.
3. Registration of Pre-Existing Water Production Wells. Any person, corporation, partnership or other entity which owns property in the City, which has a water production well in operation as of the effective date of this Local Law, other than a Remediation Well, shall register said well with the City and the Niagara Falls Water Board. Registration shall include, but not be limited to, exact location of the well, well history, well specifications, monthly operating information, and an assessment of the well's vulnerability to contaminants. Upon registration of a water production well, the City and the Niagara Falls Water Board shall have the right, upon reasonable notice, to inspect any water production well. The well registration must be renewed every five (5) years from the date of the last valid registration until the City and the Niagara Falls Water Board have received written notice that the water production well has been properly plugged and sealed in accordance with New York State Department of Environmental Conservation Regulations. If ownership of a property in the City with a water production well changes, the new owner must re-register the well within thirty (30) days of the transfer. Any pre-existing water production well, other than a Remediation Well as defined above, shall, upon discontinuance of use, be plugged and sealed in accordance with the New York State Department of Environmental Conservation regulations at the owner's cost.
4. Termination of Right to Operate Water Production Wells. If a pre-existing water production well is not used for a period of six (6) consecutive months, then the well shall no longer be considered a pre-existing water production well and the well shall be plugged and sealed within 90 days in accordance with New York State Department of Environmental Conservation regulations at the owner's cost. The owner shall notify the City and the Niagara Falls Water Board in writing that the water production well has been plugged and sealed.

Section Three. Penalty.

Any person who shall violate a provision of this section or who shall fail to comply with any of the requirements thereof shall be subject to a civil penalty of $5,000.00 for each violation. Each day that a violation is allowed to continue shall constitute a separate and distinct violation

Section Four. Repealer.

All ordinances or parts of ordinances in conflict with this section are hereby repealed insofar as they are in conflict with this section.

Section Five. Severability.

If any provision of this Local Law or its application to any person or under any circumstances should be adjudged invalid, such adjudication shall not affect the validity of the Local Law as a whole or of any portion not adjudged invalid.

Section 2. This Local Law shall take effect as provided in the Municipal Home Rule Law.

Council Member Fournier moved that the communication be received and filed and the recommendation approved.

| | |
|---|---|
| Yeas | 5 |
| Nays | 0 |

APPROVED

Map references:

1. Tax Map 78 and 84 from the City of Niagara Falls Engineering Office.
2. ALTA / ACSM Land Title Survey by Prudent Engineering LLP, Project No. 109.001 54, dated July 17, 2009.
3. Boundary Survey of 3123 Highland Avenue by John H. Sciarabba, Project No. 11244, dated November 1, 2011.
4. Map by Julius Frehsee with changes by Porter, Jones and Schaeffer and filed November 18, 1899 under Cover No. 158, now in Book 18 of Microfilmed Maps at page 1736.
5. Map by Julius Frehsee and filed June 8, 1896 under Cover No. 161, now in Book 2 of Microfilmed Maps at page 180.0
6. Map by Wallace P. Keller January 5, 1960 and filed in Niagara County Clerk's Office in Map Book 65 at Page 1595, now in Book 40 of Microfilmed Maps at Page 4000.
7. Map by Niagara Boundary & Mapping Services filed in Niagara County Clerk's Office March 31, 2014 in Instrument No. M2014-00009
8. Map by Niagara Boundary & Mapping Services filed in Niagara County Clerk's Office March 31, 2016 in Instrument No. M2016-00008

Title Report by Chicago Title Insurance Company, Title No. 1315-25066, dated July 8, 2013.

Schedule B, Section 2 – Exceptions:

14. The easement granted to Niagara Mohawk Power Corporation by instrument dated July 10, 1953 and recorded April 1, 1954 in Liber 1132 of deeds at page 328. Plotted on Map of Survey.

15. The easement reserved by the City of Niagara Falls by Quit Claim Deed dated August 2, 1982 and recorded August 5, 1982 in Liber 1817 of Deeds at page 42. Plotted on Map of Survey.

16. Terms, Covenants and restrictions as set forth by deed to Brightfields Corporation recorded in Instrument N. 2012-20725 on October 1, 2012. Blanket in Nature. Covers entire premise and more.

17. Terms, Covenants and restrictions as set forth by Warranty deed recorded in Liber 349 of Deeds at page 443 on May 3, 1910. Document not provided.

18. Terms, Covenants and restrictions as set forth by Warranty deed recorded in Liber 465 of Deeds at page 570 on November 6, 1922. Document not provided.

19. Terms, Covenants and restrictions as set forth by Warranty deed recorded in Liber 657 of Deeds at page 369 on February 6, 1940. Document not provided.

20. Terms, Covenants and restrictions as set forth by Declaration of Covenant and Restrictions made by City of Niagara Falls recorded in Liber 3422 of Deeds at page 818 on December 7, 2007. Blanket in Nature. Covers entire premise and more.

**Environmental Easement Description for Superfund Site No. 932136**
**15 Foot Strip from Brightfields II to Brightfields**

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Niagara Falls, County of Niagara and State of New York, being part of Lot 34 of the New York State Mile Reserve and according to a map made by Julius Frehsee with changes by Porter, Jones and Schaeffer and filed November 18, 1899 under Cover No. 158 now in Book 18 of Microfilmed Maps at page 1736 and being more particularly bounded and described as follows:

Beginning at the north east corner of Old Lot 251 as shown on Map by Niagara Boundary & Mapping Services filed in Niagara County Clerk's Office March 31, 2016 in Instrument No. M2016-00008;

Thence along the east line of said Old Lot 251 S 0°54'30"W a distance of 15.00 feet to a point;

Thence N 88°58'03"W a distance of 879.79 feet to a point in the centerline of alley as shown on said Map by Julius Frehsee;

Thence along said centerline of said alley N 20°42'42"E a distance of 15.93 feet to a point on the north line of Old Lot 250 as shown on Map by Niagara Boundary & Mapping Services filed in Niagara County Clerk's Office March 31, 2016 in Instrument No. M2016-00008;

Thence along the north line of Old Lot 250 and Old Lot 251 S 88°58'03"E a distance of 874.39 feet to the Point or Place of Beginning, containing 13,156 square feet or 0.302 acre more or less.

**Portion of Lands Conveyed in Instrument 2014-05458 on 4-11-2014.**

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Niagara Falls, County of Niagara and State of New York, being part of Lot 34 of the New York State Mile Reserve and being Lots 250, 251 and 252 shown on a map prepared by Niagara Boundary and Mapping Services entitled "Highland Avenue Subdivision" dated February 14, 2014 filed on March 31, 2014 in the Niagara County Clerk's Office as Instrument No. M2014-00009.
Overall Area of 18.057 Acres more or less.

SUBJECT TO the terms, conditions and obligations as provided in Deed recorded in the Niagara County Clerk's Office on October 1, 2012 in Instrument No. 2012-20725.

## Legend

**Abbreviations**

Ex - Existing
E - East
N - North
W - West
S - South
R.O.W. - Right of Way
A.K.A. - also known as

NBMS ○ 50349
Cap Detail

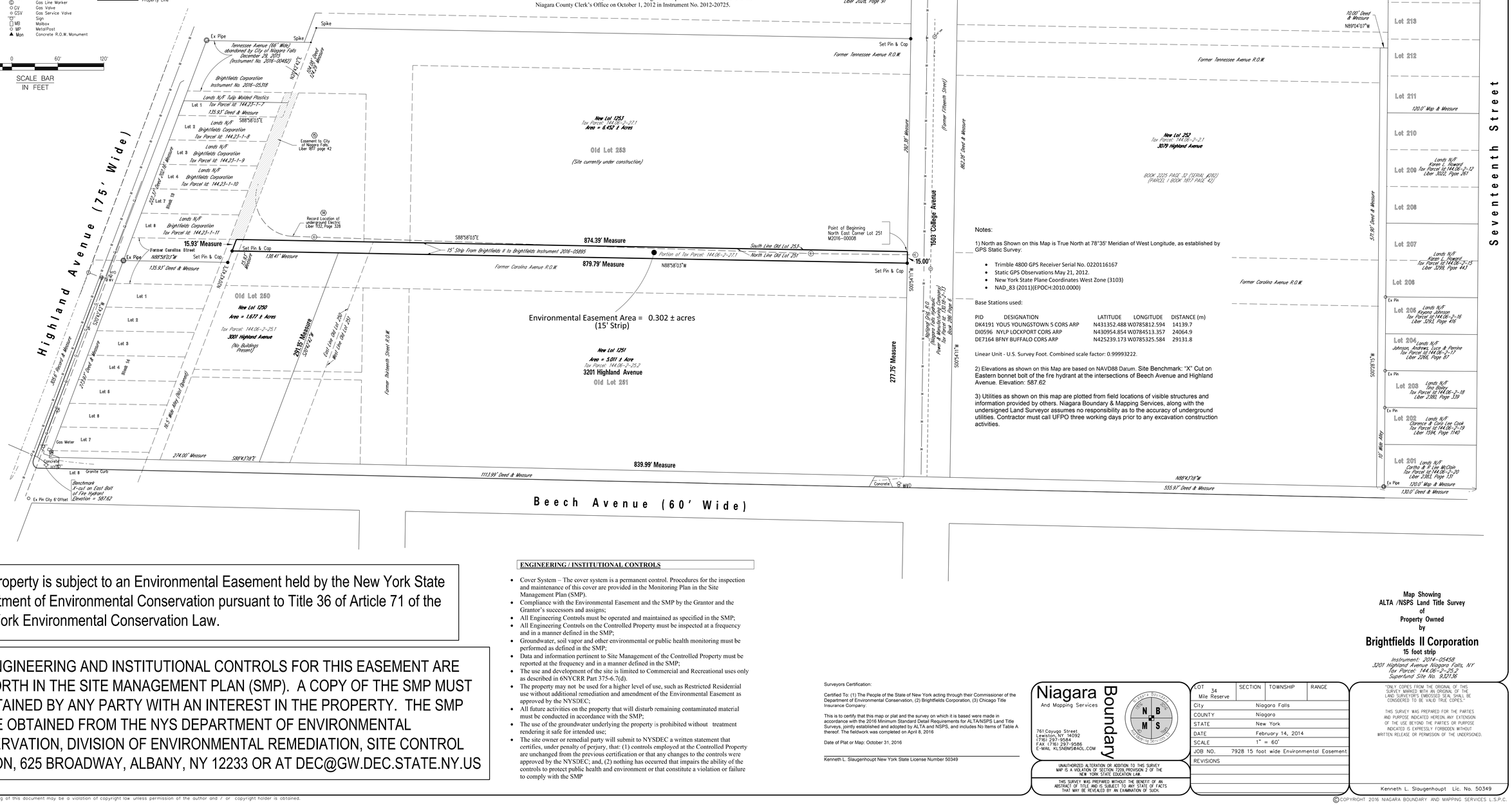
**Symbols**

- SMH Sanitary Manhole
- CO Cleanout
- CB Catch Basin
- DI Drain Inlet
- SD Storm Manhole
- YD Yard Drain
- CATV Cable TV
- Electric Riser
- Power Pole
- Guy Wire Anchor
- Telephone Riser
- HYD Fire Hydrant
- WV Water Valve
- WSV Water Service Valve
- GM Gas Line Marker
- GV Gas Valve
- GSV Gas Service Valve
- Sign
- MB Mailbox
- MP Metal Post
- Mon Concrete R.O.W. Monument

**Line Styles**

- SA Sanitary Sewer
- ST Storm Sewer
- W Water Line
- G Gas Line
- T Telephone Wires or Cables
- E Electric Wires or Cables
- OH Overhead Wires
- 100 Contour Line
- Centerline of Ditch
- Crown of Pavement
- Centerline of Road
- Right of Way Line
- Bulding Setback Line
- Easement Line
- Property Line

60' 0 60' 120'
SCALE BAR IN FEET




Notes:

1) North as Shown on this Map is True North at 78°35' Meridian of West Longitude, as established by GPS Static Survey:

- Trimble 4800 GPS Receiver Serial No. 0220116167
- Static GPS Observations May 21, 2012.
- New York State Plane Coordinates West Zone (3103)
- NAD_83 (2011)(EPOCH:2010.0000)

Base Stations used:

| PID | DESIGNATION | LATITUDE | LONGITUDE | DISTANCE (m) |
|---|---|---|---|---|
| DK4191 | YOU5 YOUNGSTOWN 5 CORS ARP | N431352.488 | W0785812.594 | 14139.7 |
| DI0596 | NYLP LOCKPORT CORS ARP | N430954.854 | W0784513.357 | 24064.9 |
| DE7164 | BFNY BUFFALO CORS ARP | N425239.173 | W0785325.584 | 29131.8 |

Linear Unit - U.S. Survey Foot. Combined scale factor: 0.99993222.

2) Elevations as shown on this Map are based on NAVD88 Datum. Site Benchmark: "X" Cut on Eastern bonnet bolt of the fire hydrant at the intersections of Beech Avenue and Highland Avenue. Elevation: 587.62

3) Utilities as shown on this map are plotted from field locations of visible structures and information provided by others. Niagara Boundary & Mapping Services, along with the undersigned Land Surveyor assumes no responsibility as to the accuracy of underground utilities. Contractor must call UFPO three working days prior to any excavation construction activities.

This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the New York Environmental Conservation Law.

THE ENGINEERING AND INSTITUTIONAL CONTROLS FOR THIS EASEMENT ARE SET FORTH IN THE SITE MANAGEMENT PLAN (SMP). A COPY OF THE SMP MUST BE OBTAINED BY ANY PARTY WITH AN INTEREST IN THE PROPERTY. THE SMP CAN BE OBTAINED FROM THE NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION, DIVISION OF ENVIRONMENTAL REMEDIATION, SITE CONTROL SECTION, 625 BROADWAY, ALBANY, NY 12233 OR AT DEC@GW.DEC.STATE.NY.US

**ENGINEERING / INSTITUTIONAL CONTROLS**

- Cover System – The cover system is a permanent control. Procedures for the inspection and maintenance of this cover are provided in the Monitoring Plan in the Site Management Plan (SMP).
- Compliance with the Environmental Easement and the SMP by the Grantor and the Grantor's successors and assigns;
- All Engineering Controls must be operated and maintained as specified in the SMP;
- All Engineering Controls on the Controlled Property must be inspected at a frequency and in a manner defined in the SMP;
- Groundwater, soil vapor and other environmental or public health monitoring must be performed as defined in the SMP;
- Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;
- The use and development of the site is limited to Commercial and Recreational uses only as described in 6NYCRR Part 375-6.7(d).
- The property may not be used for a higher level of use, such as Restricted Residential use without additional remediation and amendment of the Environmental Easement as approved by the NYSDEC;
- All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;
- The use of the groundwater underlying the property is prohibited without treatment rendering it safe for intended use;
- The site owner or remedial party will submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP

Surveyors Certification:

Certified To: (1) The People of the State of New York acting through their Commissioner of the Department of Environmental Conservation, (2) Brightfields Corporation, (3) Chicago Title Insurance Company:

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2016 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes No Items of Table A thereof. The fieldwork was completed on April 8, 2016

Date of Plat or Map: October 31, 2016

Kenneth L. Slaugenhoupt New York State License Number 50349


Niagara Boundary And Mapping Services
761 Cayuga Street
Lewiston, NY 14092
(716) 297-9584
FAX (716) 297-9586
E-MAIL KLSNBMS@ACOL.COM


UNAUTHORIZED ALTERATION OR ADDITION TO THIS SURVEY MAP IS A VIOLATION OF SECTION 7209, PROVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF AN ABSTRACT OF TITLE AND IS SUBJECT TO ANY STATE OF FACTS THAT MAY BE REVEALED BY AN EXAMINATION OF SUCH.

| | | | |
|---|---|---|---|
| LOT | 34 Mile Reserve | SECTION / TOWNSHIP / RANGE | |
| City | Niagara Falls | | |
| COUNTY | Niagara | | |
| STATE | New York | | |
| DATE | February 14, 2014 | | |
| SCALE | 1" = 60' | | |
| JOB NO. | 7928 15 foot wide Environmental Easement | | |
| REVISIONS | | | |

"ONLY COPIES FROM THE ORIGINAL OF THIS SURVEY MARKED WITH AN ORIGINAL OF THE LAND SURVEYOR'S EMBOSSED SEAL SHALL BE CONSIDERED TO BE VALID TRUE COPIES."

THIS SURVEY WAS PREPARED FOR THE PARTIES AND PURPOSE INDICATED HEREON. ANY EXTENSION OF THE USE BEYOND THE PARTIES OR PURPOSE INDICATED IS EXPRESSLY FORBIDDEN WITHOUT WRITTEN RELEASE OR PERMISSION OF THE UNDERSIGNED.

Kenneth L. Slaugenhoupt Lic. No. 50349

**Map Showing**
**ALTA /NSPS Land Title Survey**
**of**
**Property Owned**
**by**

# Brightfields II Corporation

**15 foot strip**
*Instrument: 2014-05458*
*3201 Highland Avenue, Niagara Falls, NY*
*Tax Parcel: 144.06-2-25.2*
*Superfund Site No. 9.32136*

FILE: Z:\vbms \Nbsvr01 (Z)\ACTIVE_PROJECT\7928 OSC Highland\Tract 2 Environmental Easement\7928 15 foot wide Environmental Easement.dgn


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©COPYRIGHT 2016 NIAGARA BOUNDARY AND MAPPING SERVICES L.S.P.C.

Map references:

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8. Map by Niagara Boundary & Mapping Services filed in Niagara County Clerk's Office March 31, 2016 in Instrument No. M2016-00008

Title Report by Chicago Title Insurance Company, Title No. 1315-25066, dated July 8, 2013.

Schedule B, Section 2 – Exceptions:

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15. The easement reserved by the City of Niagara Falls by Quit Claim Deed dated August 2, 1982 and recorded August 5, 1982 in Liber 1817 of Deeds at page 42. Plotted on Map of Survey.

16. Terms, Covenants and restrictions as set forth by deed to Brightfields Corporation recorded in Instrument N. 2012-20725 on October 1, 2012. Blanket in Nature. Covers entire premise and more.

17. Terms, Covenants and restrictions as set forth by Warranty deed recorded in Liber 349 of Deeds at page 443 on May 3, 1910. Document not provided.

18. Terms, Covenants and restrictions as set forth by Warranty deed recorded in Liber 465 of Deeds at page 570 on November 6, 1922. Document not provided.

19. Terms, Covenants and restrictions as set forth by Warranty deed recorded in Liber 657 of Deeds at page 369 on February 6, 1940. Document not provided.

20. Terms, Covenants and restrictions as set forth by Declaration of Covenant and Restrictions made by City of Niagara Falls recorded in Liber 3422 of Deeds at page 818 on December 7, 2007. Blanket in Nature. Covers entire premise and more.

**Portion of Lands Conveyed in Instrument 2014-05458 on 4-11-2014.**

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Overall Area of 18.057 Acres more or less.

SUBJECT TO the terms, conditions and obligations as provided in Deed recorded in the Niagara County Clerk's Office on October 1, 2012 in Instrument No. 2012-20725.

**ENVIRONMENTAL EASEMENT DESCRIPTION FOR SUPERFUND SITE No. 932136**
**Brightfields – New Lot 1250**

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Niagara Falls, County of Niagara and State of New York, being part of Lot 34 of the New York State Mile Reserve and being more particularly bounded and described as follows:

Beginning at a point on the easterly line of Highland Avenue at its intersection with the northerly line of Beech Avenue;

Thence S.88°43'18"E along the northerly line of Beech Avenue a distance of 274.00 feet to a point;

Thence N.20°42'42"W a distance of 291.15 feet to a point;

Thence N88°58'03"W a distance of 138.49 feet to a point on the former centerline of a 16.5 foot wide alley;

Thence S20°42'42"W along the former centerline of a 16.5 foot wide alley a distance of 15.93 feet to the centerline of former Carolina Avenue;

Thence N88°58'03"W along the centerline of Carolina Avenue a distance of 135.93 feet to the east line of Highland Avenue;

Thence S20°42'42"W along the east line of Highland Avenue a distance of 273.97 feet to the Point or Place of Beginning, containing 1.677 acres of land more or less.

## Legend

**Abbreviations**

Ex = Existing
E = East
N = North
W = West
S = South
R.O.W. = Right of Way
A.K.A. = also known as

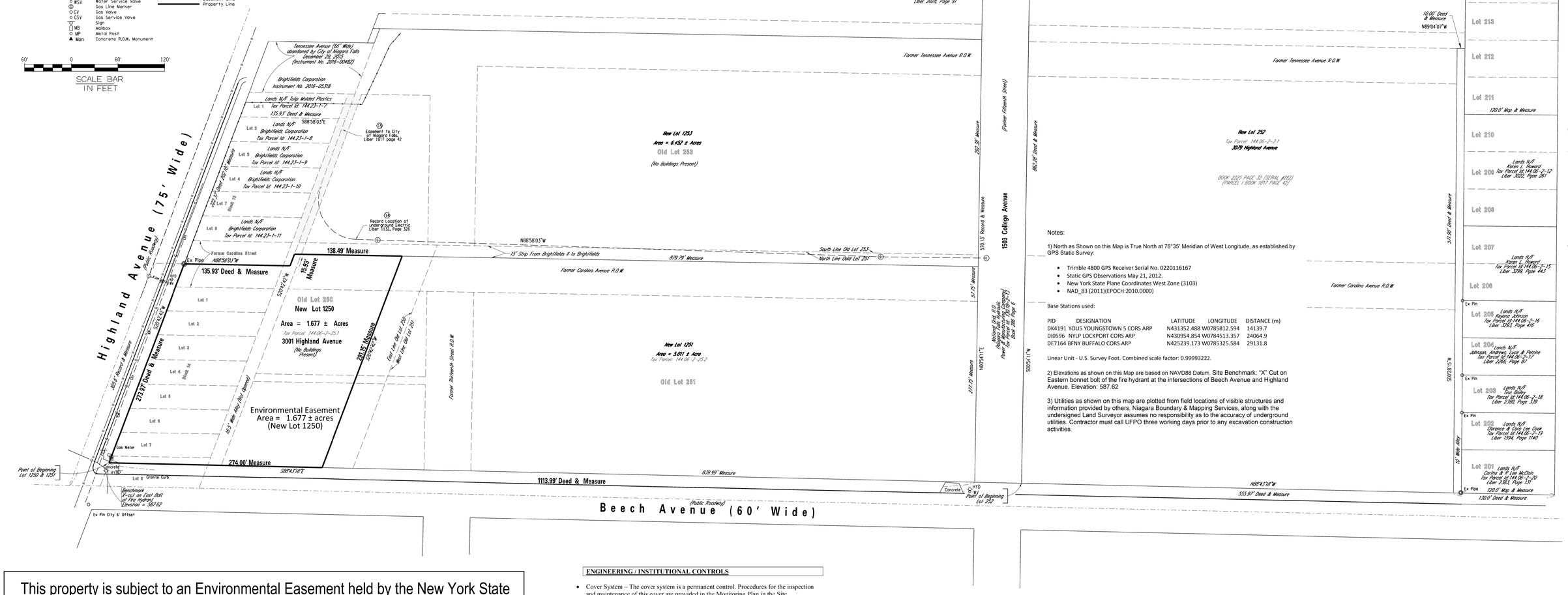
**Symbols**

- Sanitary Manhole
- CO Cleanout
- CB Catch Basin
- DI Drain Inlet
- SD Storm Manhole
- YD Yard Drain
- CATV Cable TV
- Electric Riser
- Power Pole
- Guy Wire Anchor
- T Telephone Riser
- HYD Fire Hydrant
- WV Water Valve
- WSV Water Service Valve
- Gas Line Marker
- GV Gas Valve
- GSV Gas Service Valve
- Sign
- MB Mailbox
- MP Metal Post
- Mon Concrete R.O.W. Monument

**Line Styles**

- SA Sanitary Sewer
- ST Storm Sewer
- W Water Line
- G Gas Line
- T Telephone Wires or Cables
- E Electric Wires or Cables
- OH Overhead Wires
- 100 Contour Line
- Centerline of Ditch
- Crown of Pavement
- Centerline of Road
- Right of Way Line
- Building Setback Line
- Easement Line
- Property Line

60' 0 60' 120'
SCALE BAR IN FEET




Notes:

1) North as Shown on this Map is True North at 78°35' Meridian of West Longitude, as established by GPS Static Survey:

- Trimble 4800 GPS Receiver Serial No. 0220116167
- Static GPS Observations May 21, 2012.
- New York State Plane Coordinates West Zone (3103)
- NAD_83 (2011)(EPOCH:2010.0000)

Base Stations used:

| PID | DESIGNATION | LATITUDE | LONGITUDE | DISTANCE (m) |
|---|---|---|---|---|
| DK4191 | YOU5 YOUNGSTOWN 5 CORS ARP | N431352.488 | W0785812.594 | 14139.7 |
| DI0596 | NYLP LOCKPORT CORS ARP | N430954.854 | W0784513.357 | 24064.9 |
| DE7164 | BFNY BUFFALO CORS ARP | N425239.173 | W0785325.584 | 29131.8 |

Linear Unit - U.S. Survey Foot. Combined scale factor: 0.99993222.

2) Elevations as shown on this Map are based on NAVD88 Datum. Site Benchmark: "X" Cut on Eastern bonnet bolt of the fire hydrant at the intersections of Beech Avenue and Highland Avenue. Elevation: 587.62

3) Utilities as shown on this map are plotted from field locations of visible structures and information provided by others. Niagara Boundary & Mapping Services, along with the undersigned Land Surveyor assumes no responsibility as to the accuracy of underground utilities. Contractor must call UFPO three working days prior to any excavation construction activities.

This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the New York Environmental Conservation Law.

THE ENGINEERING AND INSTITUTIONAL CONTROLS FOR THIS EASEMENT ARE SET FORTH IN THE SITE MANAGEMENT PLAN (SMP). A COPY OF THE SMP MUST BE OBTAINED BY ANY PARTY WITH AN INTEREST IN THE PROPERTY. THE SMP CAN BE OBTAINED FROM THE NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION, DIVISION OF ENVIRONMENTAL REMEDIATION, SITE CONTROL SECTION, 625 BROADWAY, ALBANY, NY 12233 OR AT DEC@GW.DEC.STATE.NY.US

**ENGINEERING / INSTITUTIONAL CONTROLS**

- Cover System – The cover system is a permanent control. Procedures for the inspection and maintenance of this cover are provided in the Monitoring Plan in the Site Management Plan (SMP).
- Compliance with the Environmental Easement and the SMP by the Grantor and the Grantor's successors and assigns;
- All Engineering Controls must be operated and maintained as specified in the SMP;
- All Engineering Controls on the Controlled Property must be inspected at a frequency and in a manner defined in the SMP;
- Groundwater, soil vapor and other environmental or public health monitoring must be performed as defined in the SMP;
- Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;
- The use and development of the site is limited to Commercial and Recreational uses only as described in 6NYCRR Part 375-6.7(d).
- The property may not be used for a higher level of use, such as Restricted Residential use without additional remediation and amendment of the Environmental Easement as approved by the NYSDEC;
- All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;
- The use of the groundwater underlying the property is prohibited without treatment rendering it safe for intended use;
- The site owner or remedial party will submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP

Surveyors Certification:

Certified To: (1) The People of the State of New York acting through their Commissioner of the Department of Environmental Conservation, (2) Brightfields Corporation, (3) Chicago Title Insurance Company:

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2016 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes No Items of Table A thereof. The fieldwork was completed on October 31, 2016.

Date of Plat or Map: March 3, 2017

Kenneth L. Slaugenhoupt New York State License Number 50349


Niagara Boundary and Mapping Services
761 Cayuga Street
Lewiston, NY 14092
(716) 297-9584
FAX (716) 297-9586
E-MAIL KLSNDMS@ACL.COM


UNAUTHORIZED ALTERATION OR ADDITION TO THIS SURVEY MAP IS A VIOLATION OF SECTION 7209, PROVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF AN ABSTRACT OF TITLE AND IS SUBJECT TO ANY STATE OF FACTS THAT MAY BE REVEALED BY AN EXAMINATION OF SUCH.

**Map Showing**
**ALTA /ACSM Land Title Survey**
**of**
**Property Owned**
**by**
**Brightfields II Corporation**
**(Lot 1250)**
*Instrument: 2014-05458*
*3001 Highland Avenue Niagara Falls, NY*
*Tax Parcels: 144.06-2-23.1 ,*
*Superfund Site No. 932136*

| | | | |
|---|---|---|---|
| LOT 34 Mile Reserve | SECTION | TOWNSHIP | RANGE |
| City | Niagara Falls | | |
| COUNTY | Niagara | | |
| STATE | New York | | |
| DATE | February 14, 2014 | | |
| SCALE | 1" = 60' | | |
| JOB NO. | 7928 Lot 1250 Environmental Easement | | |
| REVISIONS | | | |

"ONLY COPIES FROM THE ORIGINAL OF THIS SURVEY MARKED WITH AN ORIGINAL OF THE LAND SURVEYOR'S EMBOSSED SEAL, SHALL BE CONSIDERED TO BE VALID TRUE COPIES."

THIS SURVEY WAS PREPARED FOR THE PARTIES AND PURPOSE INDICATED HEREON. ANY EXTENSION OF THE USE BEYOND THE PARTIES OR PURPOSE INDICATED IS EXPRESSLY FORBIDDEN WITHOUT WRITTEN RELEASE OR PERMISSION OF THE UNDERSIGNED.

Kenneth L. Slaugenhoupt Lic. No. 50349

FILE: Z:\Admins (N)\sv01) (2)\ACTIVE_PROJECT\#7928 (OSC Highland\7-oct 2 Environmental Easement\#7928 Lot 1250 Environmental Easement.dgn


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©COPYRIGHT 2017 NIAGARA BOUNDARY AND MAPPING SERVICES L.S.P.C.

Map references:

1. Tax Map 78 and 84 from the City of Niagara Falls Engineering Office.
2. ALTA / ACSM Land Title Survey by Prudent Engineering LLP, Project No. 109.001 54, dated July 17, 2009.
3. Boundary Survey of 3123 Highland Avenue by John H. Sciarabba, Project No. 11244, dated November 1, 2011.
4. Map by Julius Frehsee with changes by Porter, Jones and Schaeffer and filed November 18, 1899 under Cover No. 158, now in Book 18 of Microfilmed Maps at page 1736.
5. Map by Julius Frehsee and filed June 8, 1896 under Cover No. 161, now in Book 2 of Microfilmed Maps at page 180.0
6. Map by Wallace P. Keller January 5, 1960 and filed in Niagara County Clerk's Office in Map Book 65 at Page 1595, now in Book 40 of Microfilmed Maps at Page 4000.
7. Map by Niagara Boundary & Mapping Services filed in Niagara County Clerk's Office March 31, 2014 in Instrument No. M2014-00009
8. Map by Niagara Boundary & Mapping Services filed in Niagara County Clerk's Office March 31, 2016 in Instrument No. M2016-00008

Title Report by Chicago Title Insurance Company, Title No. 1315-25066, dated July 8, 2013.

Schedule B, Section 2 – Exceptions:

14. The easement granted to Niagara Mohawk Power Corporation by instrument dated July 10, 1953 and recorded April 1, 1954 in Liber 1132 of deeds at page 328. Plotted on Map of Survey.

15. The easement reserved by the City of Niagara Falls by Quit Claim Deed dated August 2, 1982 and recorded August 5, 1982 in Liber 1817 of Deeds at page 42. Plotted on Map of Survey.

16. Terms, Covenants and restrictions as set forth by deed to Brightfields Corporation recorded in Instrument N. 2012-20725 on October 1, 2012. Blanket in Nature. Covers entire premise and more.

17. Terms, Covenants and restrictions as set forth by Warranty deed recorded in Liber 349 of Deeds at page 443 on May 3, 1910. Document not provided.

18. Terms, Covenants and restrictions as set forth by Warranty deed recorded in Liber 465 of Deeds at page 570 on November 6, 1922. Document not provided.

19. Terms, Covenants and restrictions as set forth by Warranty deed recorded in Liber 657 of Deeds at page 369 on February 6, 1940. Document not provided.

20. Terms, Covenants and restrictions as set forth by Declaration of Covenant and Restrictions made by City of Niagara Falls recorded in Liber 3422 of Deeds at page 818 on December 7, 2007. Blanket in Nature. Covers entire premise and more.

## Legend

**Abbreviations**

Ex - Existing
E - East
N - North
W - West
S - South
R.O.W. - Right of Way
A.K.A. - also known as

**Symbols**

- SA — Sanitary Manhole
- CO — Cleanout
- CB — Catch Basin
- DI — Drain Inlet
- SD — Storm Manhole
- YD — Yard Drain
- CATV — Cable TV
- Electric Riser
- Power Pole
- Guy Wire Anchor
- Telephone Riser
- HYD — Fire Hydrant
- WV — Water Valve
- WSV — Water Service Valve
- Gas Line Marker
- GV — Gas Valve
- GSV — Gas Service Valve
- Sign
- MB — Mailbox
- MP — Metal Post
- Mon — Concrete R.O.W. Monument

**Line Styles**

- SA — Sanitary Sewer
- ST — Storm Sewer
- W — Water Line
- G — Gas Line
- T — Telephone Wires or Cables
- E — Electric Wires or Cables
- OH — Overhead Wires
- 100 — Contour Line
- Centerline of Ditch
- Crown of Pavement
- Centerline of Road
- Right of Way Line
- Bulding Setback Line
- Easement Line
- Property Line

60' 0 60' 120'
SCALE BAR IN FEET

**ENVIRONMENTAL EASEMENT DESCRIPTION FOR SUPERFUND SITE No. 932136**
**Brightfields – Lot 1251**

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Niagara Falls, County of Niagara and State of New York, being part of Lot 34 of the New York State Mile Reserve and being more particularly bounded and described as follows:

Commencing at a point on the easterly line of Highland Avenue at its intersection with the northerly line of Beech Avenue;

Thence S.88°43'18"E along the northerly line of Beech Avenue a distance of 274.00 feet to the POINT OR PLACE OF BEGINNING;

Thence S.88°43'18"E along the northerly line of Beech Avenue a distance of 839.99 feet to the intersection of the north line of Beech Avenue with the west line of the former Fifteenth Street;

Thence N.00°54'11"E a distance of 277.75 feet to a point;

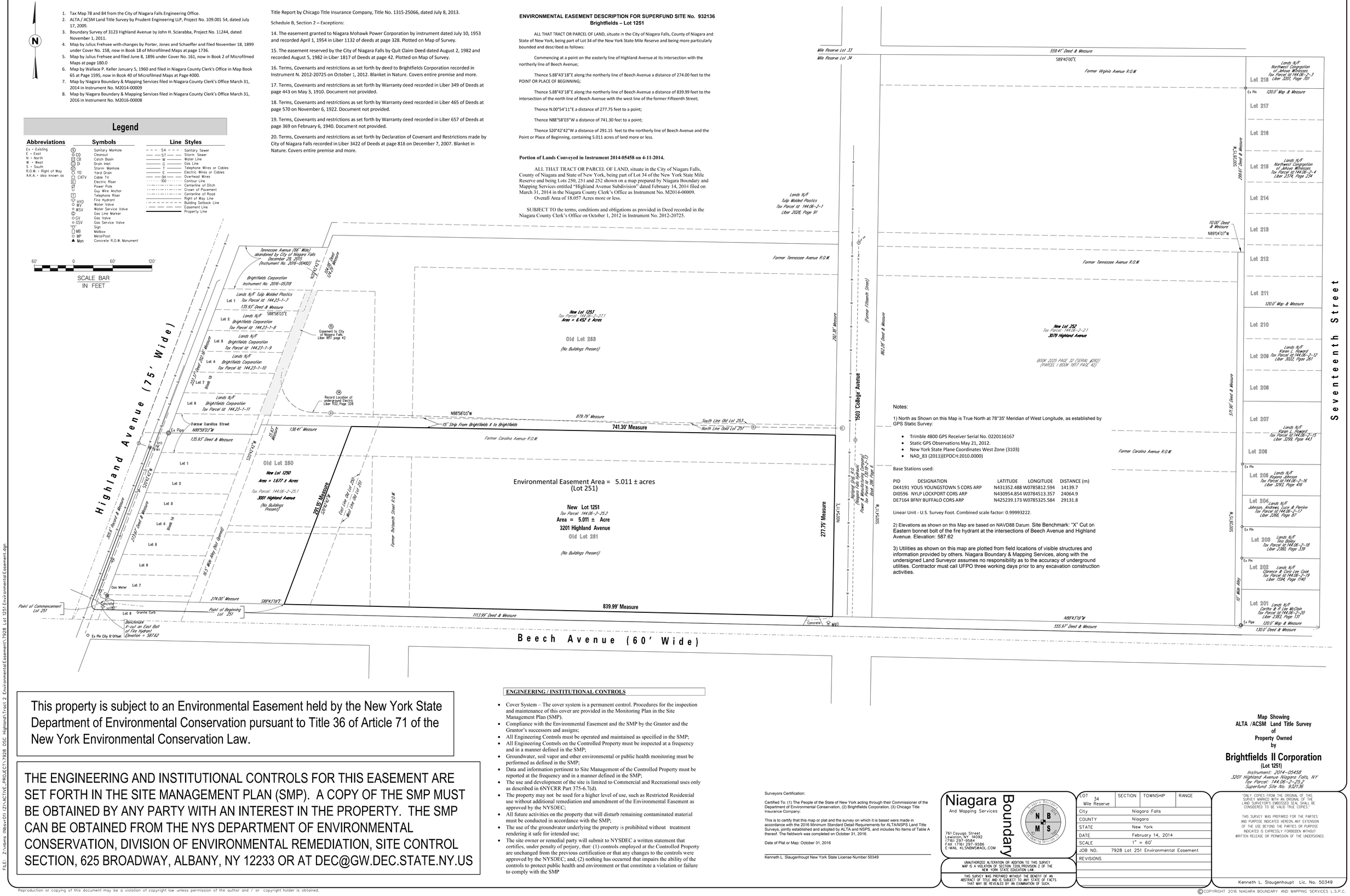
Thence N88°58'03"W a distance of 741.30 feet to a point;

Thence S20°42'42"W a distance of 291.15 feet to the northerly line of Beech Avenue and the Point or Place of Beginning, containing 5.011 acres of land more or less.

**Portion of Lands Conveyed in instrument 2014-05458 on 4-11-2014.**

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Niagara Falls, County of Niagara and State of New York, being part of Lot 34 of the New York State Mile Reserve and being Lots 250, 251 and 252 shown on a map prepared by Niagara Boundary and Mapping Services entitled "Highland Avenue Subdivision" dated February 14, 2014 filed on March 31, 2014 in the Niagara County Clerk's Office as Instrument No. M2014-00009.
Overall Area of 18.057 Acres more or less.

SUBJECT TO the terms, conditions and obligations as provided in Deed recorded in the Niagara County Clerk's Office on October 1, 2012 in Instrument No. 2012-20725.




This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the New York Environmental Conservation Law.

THE ENGINEERING AND INSTITUTIONAL CONTROLS FOR THIS EASEMENT ARE SET FORTH IN THE SITE MANAGEMENT PLAN (SMP). A COPY OF THE SMP MUST BE OBTAINED BY ANY PARTY WITH AN INTEREST IN THE PROPERTY. THE SMP CAN BE OBTAINED FROM THE NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION, DIVISION OF ENVIRONMENTAL REMEDIATION, SITE CONTROL SECTION, 625 BROADWAY, ALBANY, NY 12233 OR AT DEC@GW.DEC.STATE.NY.US

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- Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;
- The use and development of the site is limited to Commercial and Recreational uses only as described in 6NYCRR Part 375-6.7(d).
- The property may not be used for a higher level of use, such as Restricted Residential use without additional remediation and amendment of the Environmental Easement as approved by the NYSDEC;
- All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;
- The use of the groundwater underlying the property is prohibited without treatment rendering it safe for intended use;
- The site owner or remedial party will submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP

Notes:

1) North as Shown on this Map is True North at 78°35' Meridian of West Longitude, as established by GPS Static Survey:

- Trimble 4800 GPS Receiver Serial No. 0220116167
- Static GPS Observations May 21, 2012.
- New York State Plane Coordinates West Zone (3103)
- NAD_83 (2011)(EPOCH:2010.0000)

Base Stations used:

| PID | DESIGNATION | LATITUDE | LONGITUDE | DISTANCE (m) |
|---|---|---|---|---|
| DK4191 | YOU5 YOUNGSTOWN 5 CORS ARP | N431352.488 | W0785812.594 | 14139.7 |
| DI0596 | NYLP LOCKPORT CORS ARP | N430954.854 | W0784513.357 | 24064.9 |
| DE7164 | BFNY BUFFALO CORS ARP | N425239.173 | W0785325.584 | 29131.8 |

Linear Unit - U.S. Survey Foot. Combined scale factor: 0.99993222.

2) Elevations as shown on this Map are based on NAVD88 Datum. Site Benchmark: "X" Cut on Eastern bonnet bolt of the fire hydrant at the intersections of Beech Avenue and Highland Avenue. Elevation: 587.62

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Surveyors Certification:

Certified To: (1) The People of the State of New York acting through their Commissioner of the Department of Environmental Conservation, (2) Brightfields Corporation, (3) Chicago Title Insurance Company:

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2016 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes No Items of Table A thereof. The fieldwork was completed on October 31, 2016.

Date of Plat or Map: October 31, 2016

Kenneth L. Slaugenhoupt New York State License Number 50349

**Map Showing**
**ALTA /ACSM Land Title Survey**
**of**
**Property Owned**
**by**

# Brightfields II Corporation

**(Lot 1251)**

*Instrument: 2014-05458*
*3201 Highland Avenue Niagara Falls, NY*
*Tax Parcel: 144.06-2-25.2*
*Superfund Site No. 9.32136*


Niagara Boundary
And Mapping Services
761 Cayuga Street
Lewiston, NY 14092
(716) 297-9584
FAX (716) 297-9586
E-MAIL KLSNBMSRACE.COM


| | | | |
|---|---|---|---|
| LOT | 34 Mile Reserve | SECTION | TOWNSHIP / RANGE |
| City | Niagara Falls | | |
| COUNTY | Niagara | | |
| STATE | New York | | |
| DATE | February 14, 2014 | | |
| SCALE | 1" = 60' | | |
| JOB NO. | 7928 Lot 251 Environmental Easement | | |
| REVISIONS | | | |

UNAUTHORIZED ALTERATION OR ADDITION TO THIS SURVEY MAP IS A VIOLATION OF SECTION 7209, PROVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF AN ABSTRACT OF TITLE AND IS SUBJECT TO ANY STATE OF FACTS THAT MAY BE REVEALED BY AN EXAMINATION OF SUCH.

"ONLY COPIES FROM THE ORIGINAL OF THIS SURVEY MARKED WITH AN ORIGINAL OF THE LAND SURVEYOR'S EMBOSSED SEAL SHALL BE CONSIDERED TO BE VALID TRUE COPIES."

THIS SURVEY WAS PREPARED FOR THE PARTIES AND PURPOSE INDICATED HEREON. ANY EXTENSION OF THE USE BEYOND THE PARTIES OR PURPOSE INDICATED IS EXPRESSLY FORBIDDEN WITHOUT WRITTEN RELEASE OR PERMISSION OF THE UNDERSIGNED.

Kenneth L. Slaugenhoupt Lic. No. 50349

FILE: Z:\nbms (Nbsrv01) (Z)\ACTIVE_PROJECT\7928 OSC Highland\Tract 2 Environmental Easement\7928 Lot 1251 Environmental Easement.dgn


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# ENVIRONMENTAL EASEMENT DESCRIPTION FOR BCP SITE No. 932136
## Brightfields – Lot 252

Map references:

1. Tax Map 78 and 84 from the City of Niagara Falls Engineering Office.
2. ALTA / ACSM Land Title Survey by Prudent Engineering LLP, Project No. 109.001 54, dated July 17, 2009.
3. Boundary Survey of 3123 Highland Avenue by John H. Sciarabba, Project No. 11244, dated November 1, 2011.
4. Map by Julius Frehsee with changes by Porter, Jones and Schaeffer and filed November 18, 1899 under Cover No. 158, now in Book 18 of Microfilmed Maps at page 1736.
5. Map by Julius Frehsee and filed June 8, 1896 under Cover No. 161, now in Book 2 of Microfilmed Maps at page 180.0
6. Map by Wallace P. Keller January 5, 1960 and filed in Niagara County Clerk's Office in Map Book 65 at Page 1595, now in Book 40 of Microfilmed Maps at Page 4000.

Title Report by Chicago Title Insurance Company, Title No. 1315-25066, dated July 8, 2013.

Schedule B, Section 2 – Exceptions:

14. The easement granted to Niagara Mohawk Power Corporation by instrument dated July 10, 1953 and recorded April 1, 1954 in Liber 1132 of deeds at page 328. Plotted on Map of Survey.

15. The easement reserved by the City of Niagara Falls by Quit Claim Deed dated August 2, 1982 and recorded August 5, 1982 in Liber 1817 of Deeds at page 42. Plotted on Map of Survey.

16. Terms, Covenants and restrictions as set forth by deed to Brightfields Corporation recorded in Instrument N. 2012-20725 on October 1, 2012. Blanket in Nature. Covers entire premise and more.

17. Terms, Covenants and restrictions as set forth by Warranty deed recorded in Liber 349 of Deeds at page 443 on May 3, 1910. Document not provided.

18. Terms, Covenants and restrictions as set forth by Warranty deed recorded in Liber 465 of Deeds at page 570 on November 6, 1922. Document not provided.

19. Terms, Covenants and restrictions as set forth by Warranty deed recorded in Liber 657 of Deeds at page 369 on February 6, 1940. Document not provided.

20. Terms, Covenants and restrictions as set forth by Declaration of Covenant and Restrictions made by City of Niagara Falls recorded in Liber 3422 of Deeds at page 818 on December 7, 2007. Blanket in Nature. Covers entire premise and more.

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Niagara Falls, County of Niagara and State of New York, being part of Lot 34 of the New York State Mile Reserve and being more particularly bounded and described as follows:

Beginning at the intersection of the northerly line of Beech Avenue with the easterly line of the former Fifteenth Street;

Thence N00°54'11"E along the said easterly line of Fifteenth Street a distance of 862.28 feet to a point on the northerly line of Lot 34 of the New York State Mile Reserve;

Thence S89°40'00"E along the northerly line of Lot 34 of the New York State Mile Reserve a distance of 559.41 feet to the northwesterly corner of Lot 218 of the Re-subdivision of Lots on 17th Street, Niagara Falls, NY according to a Map made by Wallace P. Keller, P.E., L.S. and recorded in the Niagara County Clerk's Office on January 5, 1960 in Map Book 64 of Maps at Page 1595, now filed in Book 40 of Microfilmed Maps at page 4000;

Thence S00°28'15"W along the westerly line of Lots 218, 217, 216, 215, 214, 213 and part of Lot 212 of said Re-subdivision a distance of 299.61 feet to the northeasterly corner of a 10 foot wide alley;

Thence N89°04'07"W along the northerly line of said alley a distance of 10.00 feet to a point;

Thence S00°28'15"W along the westerly line of said Alley a distance of 571.90 feet to a point on the northerly line of Beech Avenue;

Thence N88°43'18"W along the northerly line of Beech Avenue a distance of 555.97 feet to the Point or Place of Beginning, containing 11.067 acres of land more or less.

**Portion of Lands Conveyed in Instrument 2014-05458 on 4-11-2014.**

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Niagara Falls, County of Niagara and State of New York, being part of Lot 34 of the New York State Mile Reserve and being Lots 250, 251 and 252 shown on a map prepared by Niagara Boundary and Mapping Services entitled "Highland Avenue Subdivision" dated February 14, 2014 filed on March 31, 2014 in the Niagara County Clerk's Office as Instrument No. M2014-00009.
Overall Area of 18.057 Acres more or less.

SUBJECT TO the terms, conditions and obligations as provided in Deed recorded in the Niagara County Clerk's Office on October 1, 2012 in Instrument No. 2012-20725.

## Legend

**Abbreviations**

Ex - Existing
E - East
N - North
W - West
S - South
R.O.W. - Right of Way
A.K.A. - also known as

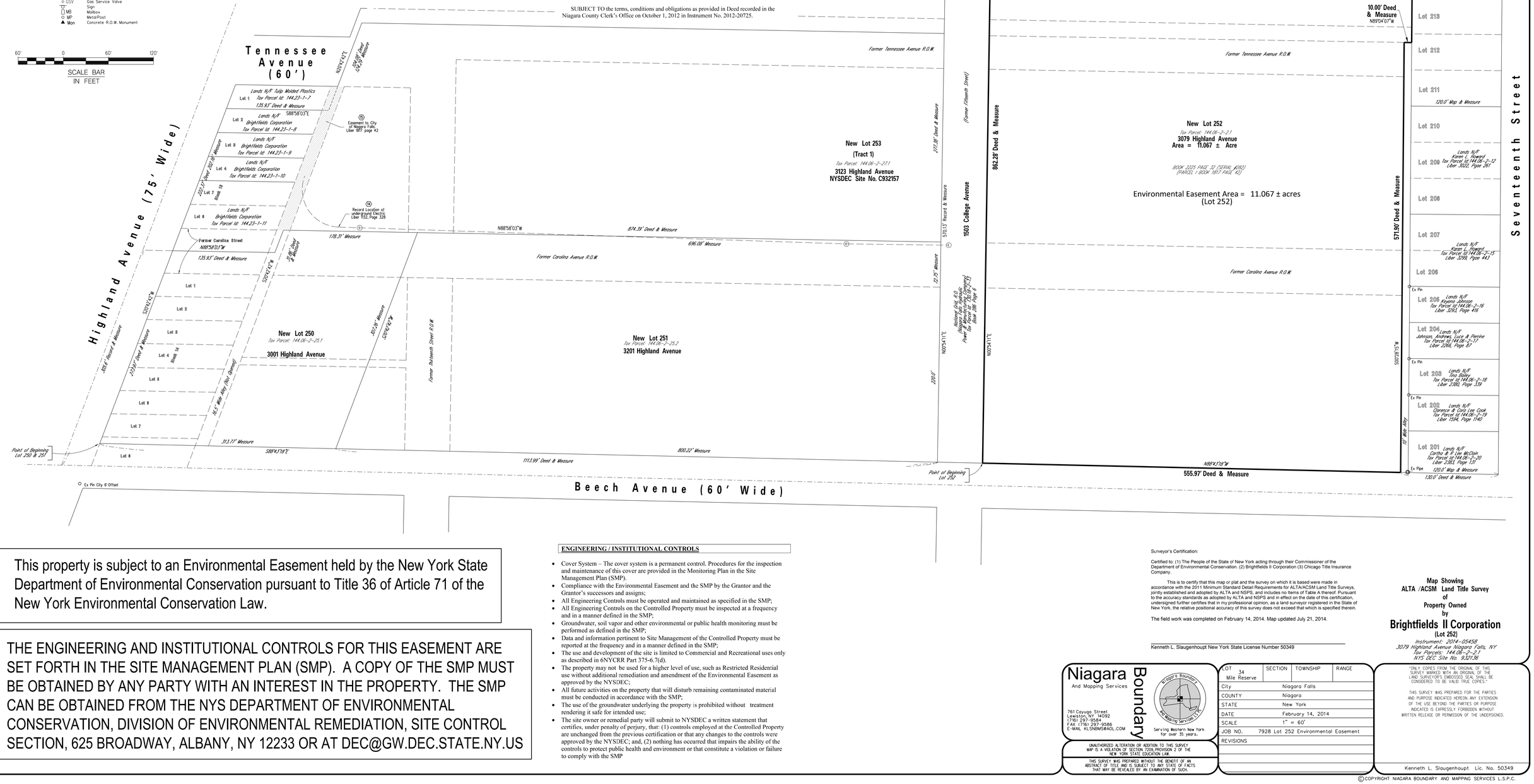
**Symbols**

- Sanitary Manhole
- CO Cleanout
- CB Catch Basin
- DI Drain Inlet
- Storm Manhole
- YD Yard Drain
- CATV Cable TV
- Electric Riser
- Power Pole
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- Telephone Riser
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- WV Water Valve
- WSV Water Service Valve
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- GV Gas Valve
- GSV Gas Service Valve
- Sign
- MB Mailbox
- MP MetalPost
- Mon Concrete R.O.W. Monument

**Line Styles**

- SA Sanitary Sewer
- ST Storm Sewer
- W Water Line
- G Gas Line
- T Telephone Wires or Cables
- E Electric Wires or Cables
- OH Overhead Wires
- 100 Contour Line
- Centerline of Ditch
- Crown of Pavement
- Centerline of Road
- Right of Way Line
- Building Setback Line
- Easement Line
- Property Line

60' 0 60' 120'
SCALE BAR IN FEET


Tennessee Avenue (60')
Highland Avenue (75' Wide)
Beech Avenue (60' Wide)
Seventeenth Street
Former Fifteenth Street
Former Tennessee Avenue R.O.W.
Former Carolina Avenue R.O.W.
Former Virginia Avenue R.O.W.
Former Richmond Street R.O.W.
10' Wide Alley
Mile Reserve Lot 33
Mile Reserve Lot 34
Lands N/F Tulip Molded Plastics Tax Parcel Id: 144.23-1-7 135.93' Deed & Measure
Lands N/F Brightfields Corporation Tax Parcel Id: 144.23-1-8
Lands N/F Brightfields Corporation Tax Parcel Id: 144.23-1-9
Lands N/F Brightfields Corporation Tax Parcel Id: 144.23-1-10
Lands N/F Brightfields Corporation Tax Parcel Id: 144.23-1-11
Lands N/F Tulip Molded Plastics Tax Parcel Id: 144.06-2-1 Liber 2026, Page 91
Lands N/F Northwest Congregation of Jehovas Witnesses Tax Parcel Id: 144.06-2-3 Liber 3201, Page 701
Lands N/F Northwest Congregation of Jehovas Witnesses Tax Parcel Id: 144.06-2-4 Liber 3174, Page 234
Lands N/F Karen L. Howard Tax Parcel Id: 144.06-2-12 Liber 3022, Page 261
Lands N/F Karen L. Howard Tax Parcel Id: 144.06-2-15 Liber 3298, Page 443
Lands N/F Rayana Johnson Tax Parcel Id: 144.06-2-16 Liber 3291, Page 416
Lands N/F Johnson, Andrew, Luca & Pecrine Tax Parcel Id: 144.06-2-17 Liber 2286, Page 87
Lands N/F Tina Bisley Tax Parcel Id: 144.06-2-18 Liber 2380, Page 339
Lands N/F Clarence & Cora Lee Cook Tax Parcel Id: 144.06-2-19 Liber 1594, Page 1140
Lands N/F Cortha & H. Lee McClain Tax Parcel Id: 144.06-2-20 Liber 2383, Page 131
Lands N/F Brightfields Corporation Tax Parcel Id: 144.06-2-21.1 Liber 3423, Page 42
New Lot 250 Tax Parcel: 144.06-2-25.1 3001 Highland Avenue
New Lot 251 Tax Parcel: 144.06-2-25.2 3201 Highland Avenue
New Lot 253 (Tract 1) Tax Parcel: 144.06-2-27.1 3123 Highland Avenue NYSDEC Site No. C932157
New Lot 252 Tax Parcel: 144.06-2-2.1 3079 Highland Avenue Area = 11.067 ± Acre
BOOK 2225 PAGE 32 (SERIAL #282) (PARCEL I BOOK 1817 PAGE 42)
Environmental Easement Area = 11.067 ± acres (Lot 252)
1503 College Avenue
Lot 1 Lot 2 Lot 3 Lot 4 Lot 5 Lot 6 Lot 7 Lot 8
Lot 206 Lot 207 Lot 208 Lot 209 Lot 210 Lot 211 Lot 212 Lot 213 Lot 214 Lot 215 Lot 216 Lot 217 Lot 218
Ex Pin
Point of Beginning Lot 250 & 251
Point of Beginning Lot 252
Ex Pin City 6' Offset
559.41' Deed & Measure
862.28' Deed & Measure
299.61' Deed & Measure
571.90' Deed & Measure
555.97' Deed & Measure
120.0' Map & Measure
10.00' Deed & Measure N89°04'07"W
130.0' Deed & Measure
N00°54'11"E
S00°28'15"W
S89°40'00"E
N89°43'18"W
N88°58'03"W
S88°43'18"E
874.39' Deed & Measure
696.08' Measure
178.31' Measure
313.77' Measure
111.39' Deed & Measure
800.22' Measure
Easement to City of Niagara Falls Liber 857 page 42
Record Location of underground Electric Liber 1132, Page 328
Former Carolina Street N88°58'03"W 135.93' Deed & Measure
Lot 1 Block 13
Lot 6 Block 14
Lot 7 Block 18
Lot 8 Block 18
305.6' Deed & Measure
272.97' Deed & Measure
252.17' Deed - 252.06' Measure
277.89' Deed & Measure
570.13' Record & Measure
21.75' Measure
3.11'E
2.81'W
2.81'E
2.81'W
2.81'E
2.81'W
2.81

# APPENDIX B

## LIST OF SITE CONTACTS

| Name | Phone/Email Address |
|---|---|
| John Yensan (Brightfields II, Inc.) | 716-856-3333 jyensan@oscinc.com |
| Rich Galloway (Honeywell, Inc.) | 973-455-4640 rich.galloway@honeywell.com |
| John Luttinger (Amec Foster Wheeler) | 716-998-6973 john.luttinger@amecfw.com |
| Michael Hinton (NYSDEC) | 716-851-7220 michael.hinton@dec.ny.gov |
| Abby Snyder (NYSDEC) | 716-851-7201 Abby.snyder@dec.ny.gov |
| David Flynn (Philips Lytle) | 716-847-5473 dflynn@phillipslytle.com |

# APPENDIX C

## RESPONSIBILITIES OF OWNER AND REMEDIAL PARTY

## RESPONSIBILITIES

The responsibilities for implementing the Site Management Plan ("SMP") for the Tract II Site (the "Site"), number 932136, are divided between the Site owner(s) and a Remedial Party, as defined below. The owner(s) is/are currently listed as:

Brightfields II, Inc. (the "owner").

**Solely for the purposes of this document and based upon the facts related to a particular site and the remedial program being carried out,** the term Remedial Party ("RP") refers to any of the following: certificate of completion holder, volunteer, applicant, responsible party, and, in the event the New York State Department of Environmental Conservation ("NYSDEC") is carrying out remediation or Site management, the NYSDEC and/or an agent acting on its behalf. The RP is:

Honeywell International, Inc.
115 Tabor Road, Morris Plains, NJ 07950

Nothing on this page shall supersede the provisions of an Environmental Easement, Consent Order, Consent Decree, agreement, or other legally binding document that affects rights and obligations relating to the Site.

**SITE OWNER'S RESPONSIBILITIES:**

1) The owner shall follow the provisions of the SMP as they relate to future construction and excavation at the Site.
2) In accordance with a periodic time frame determined by the NYSDEC, the owner shall periodically certify, in writing, that all Institutional Controls set forth in an Environmental Easement remain in place and continue to be complied with. The owner shall provide a written certification to the RP, upon the RP's request, in order to allow the RP to include the certification in the Site's Periodic Review Report (PRR) certification to the NYSDEC.

3) In the event the Site is delisted, the owner remains bound by the Environmental Easement and shall submit, upon request by the NYSDEC, a written certification that the Environmental Easement is still in place and has been complied with.
4) The owner shall grant access to the Site to the RP and the NYSDEC and its agents for the purposes of performing activities required under the SMP and assuring compliance with the SMP.
5) The owner is responsible for assuring the security of the remedial components located on its property to the best of its ability. In the event that damage to the remedial components or vandalism is evident, the owner shall notify the Site's RP and the NYSDEC in accordance with the timeframes indicated in Section 1.3 - Notifications.
6) In the event some action or inaction by the owner adversely impacts the Site, the owner must notify the Site's RP, and the NYSDEC in accordance with the time frame indicated in Section 1.3 - Notifications and (ii) coordinate the performance of necessary corrective actions with the RP.
7) The owner must notify the RP and the NYSDEC of any change in ownership of the Site property (identifying the tax map numbers in any correspondence) and provide contact information for the new owner of the Site properties. 6 NYCRR Part contains notification requirements applicable to any construction or activity changes and changes in ownership. Among the notification requirements is the following: Sixty (60) days prior written notification must be made to the NYSDEC. Notification is to be submitted to the NYSDEC Division of Environmental Remediation's Site Control Section. Notification requirements for a change in use are detailed in Section 2.4 of the SMP. A 60-Day Advance Notification Form and Instructions are found at http://www.dec.ny.gov/chemical/76250.html.
8) The owner will comply with the Environmental Easements on behalf of the RP. The RP remains ultimately responsible for maintaining the engineering controls.
9) In accordance with the tenant notification law, within fifteen (15) days of receipt, the owner must supply a copy of any vapor intrusion data, that is produced with respect to structures and that exceeds NYSDOH or OSHA guidelines on the Site, whether produced by the NYSDEC, RP, or owner, to the tenants on the property. The owner must otherwise comply with the tenant and occupant notification provisions of Environmental Conservation Law Article 27, Title 24.

**REMEDIAL PARTY RESPONSIBILITIES**

1) The RP must follow the SMP provisions regarding any construction and/or excavation it undertakes at the Site.
2) The RP shall report to the NYSDEC all activities required for remediation, operation, maintenance, monitoring, and reporting. Such reporting includes, but is not limited to, periodic review reports and certifications, electronic data deliverables, corrective action work plans and reports, and updated SMPs.
3) Before accessing the Site property to undertake a specific activity, the RP shall provide the owner advance notification that shall include an explanation of the work expected to be completed. The RP shall provide to (i) the owner, upon the owner's request, (ii) the NYSDEC, and (iii) other entities, if required by the SMP, a copy of any data generated during the Site visit and/or any final report produced.
4) If the NYSDEC determines that an update of the SMP is necessary, the RP shall update the SMP and obtain final approval from the NYSDEC. Within five (5) business days after NYSDEC approval, the RP shall submit a copy of the approved SMP to the owner(s).

5) The RP shall notify the NYSDEC and the owner of any changes in RP ownership and/or control and of any changes in the party/entity responsible for the operation, maintenance, and monitoring of and reporting with respect to any remedial system (Engineering Controls). The RP shall provide contact information for the new party/entity. Such activity constitutes a Change of Use pursuant to 375-1.11(d) and requires sixty (60) days prior notice to the NYSDEC. A sixty (60) Day Advance Notification Form and Instructions are found at http://www.dec.ny.gov/chemical/76250.html.
6) The RP shall notify the NYSDEC of any damage to or modification of the cover systems as required under Section 1.3 - Notifications of the SMP.
7) Prior to a change in use that impacts the remedial system or requirements and/or responsibilities for implementing the SMP, the RP shall submit to the NYSDEC for approval an amended SMP.
8) Any change in use, change in ownership, change in Site classification (*e.g.*, delisting), reduction or expansion of remediation, and other significant changes related to the Site may result in a change in responsibilities and, therefore, necessitate an update to the SMP and/or updated legal documents. The RP shall contact the Department to discuss the need to update such documents.

Change in RP ownership and/or control and/or Site ownership does not affect the RP's obligations with respect to the Site unless a legally binding document executed by the NYSDEC releases the RP of its obligations.

Future Site owners and RPs and their successors and assigns are required to carry out the activities set forth above.

# APPENDIX D

## EXCAVATION WORK PLAN (EWP)

## [D]-1 NOTIFICATION

At least 15 days prior to the start of any activity that is anticipated to encounter remaining contamination, the Site owner or their representative will notify the NYSDEC. Table 1 includes contact information for the above notification. The information on this table will be updated as necessary to provide accurate contact information. A full listing of Site-related contact information is provided in Appendix B.

**Table 1: Notifications***

| | |
|---|---|
| Mr. Michael Hinton, Project Manager (NYSDEC) | Phone: (716) 851-7220<br>Email: Michael.hinton@dec.ny.gov |
| Ms. Abby Snyder, Region 9 Director, (NYSDEC) | Phone: (716)851-7201<br>Email: abby.snyder@dec.ny.gov |
| Matt Forcucci, Public Health Specialist (NYSDOH) | Phone: 716-847-4501<br>Email: matthew.forcucci@health.ny.gov |
| | |
| | |

* Note: Notifications are subject to change and will be updated as necessary.

This notification will include:

- A detailed description of the work to be performed, including the location and areal extent of excavation, plans/drawings for Site re-grading, intrusive elements or utilities to be installed below the soil cover, estimated volumes of contaminated soil to be excavated and any work that may impact an engineering control;
- A summary of environmental conditions anticipated to be encountered in the work areas, including the nature and concentration levels of contaminants of concern, potential presence of grossly contaminated media, and plans for any pre-construction sampling;
- A schedule for the work, detailing the start and completion of all intrusive work;
- A summary of the applicable components of this EWP;
- A statement that the work will be performed in compliance with this EWP and 29 CFR 1910.120;
- A copy of the contractor's health and safety plan (HASP), in electronic format, if it differs from the HASP provided in Appendix E of this SMP;
- Identification of disposal facilities for potential waste streams; and
- Identification of sources of any anticipated backfill, along with all required chemical testing results.

## D-2 SOIL SCREENING METHODS

Visual, olfactory and instrument-based (e.g. photoionization detector) soil screening will be performed by a qualified environmental professional during all excavations into known or potentially contaminated material (remaining contamination). Soil screening will be

performed when invasive work is done and will include all excavation and invasive work performed during development, such as excavations for foundations and utility work, after issuance of the COC.

Soils will be segregated based on previous environmental data and screening results into material that requires off-Site disposal and material that requires testing to determine if the material can be reused on-Site as soil beneath a cover or if the material can be used as cover soil. Further discussion of off-Site disposal of materials and on-Site reuse is provided in Section D-6 and D-7 of this Appendix.

## D-3 SOIL STAGING METHODS

Soil stockpiles will be continuously encircled with a berm and/or silt fence. Hay bales will be used as needed near catch basins, surface waters and other discharge points.

Stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced.

Stockpiles will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by the NYSDEC.

## D-4 MATERIALS EXCAVATION AND LOAD-OUT

A qualified environmental professional or person under their supervision will oversee all invasive work and the excavation and load-out of all excavated material.

The owner of the property and remedial party (if applicable) and its contractors are responsible for safe execution of all invasive and other work performed under this Plan.

The presence of utilities and easements on the Site will be investigated by the qualified environmental professional. It will be determined whether a risk or impediment to the planned work under this SMP is posed by utilities or easements on the Site.

Loaded vehicles leaving the Site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and NYSDOT requirements (and all other applicable transportation requirements).

A truck wash will be operated on-Site, as appropriate. The qualified environmental professional will be responsible for ensuring that all outbound trucks will be washed at the truck wash before leaving the Site until the activities performed under this section are complete Truck wash waters will be collected and disposed of off-Site in an appropriate manner.

Locations where vehicles enter or exit the Site shall be inspected daily for evidence of off-Site soil tracking.

The qualified environmental professional will be responsible for ensuring that all egress points for truck and equipment transport from the Site are clean of dirt and other materials derived from the Site during intrusive excavation activities. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to Site-derived materials.

### D-5 MATERIALS TRANSPORT OFF-SITE

All transport of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded.

Material transported by trucks exiting the Site will be secured with tight-fitting covers. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used.

Truck transport routes are as follows: All trucks loaded with Site materials will exit the vicinity of the Site using only these approved truck routes. This is the most appropriate route and takes into account: (a) limiting transport through residential areas and past sensitive Sites; (b) use of city mapped truck routes; (c) prohibiting off-Site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport.

Trucks will be prohibited from stopping and idling in the neighborhood outside the project Site.

Egress points for truck and equipment transport from the Site will be kept clean of dirt and other materials during Site remediation and development.

Queuing of trucks will be performed on-Site in order to minimize off-Site disturbance. Off-Site queuing will be prohibited.

## D-6 MATERIALS DISPOSAL OFF-SITE

All material excavated and removed from the Site will be treated as contaminated and regulated material and will be transported and disposed in accordance with all local, State (including 6NYCRR Part 360) and Federal regulations. If disposal of material from this Site is proposed for unregulated off-Site disposal (i.e. clean soil removed for development purposes), a formal request with an associated plan will be made to the NYSDEC. Unregulated off-Site management of materials from this Site will not occur without formal NYSDEC approval.

Off-Site disposal locations for excavated soils will be identified in the pre-excavation notification. This will include estimated quantities and a breakdown by class of disposal facility if appropriate, i.e. hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, C/D recycling facility, etc. Actual disposal quantities and associated documentation will be reported to the NYSDEC in the Periodic Review Report. This documentation will include: waste profiles, test results, facility acceptance letters, manifests, bills of lading, and facility receipts.

Non-hazardous historic fill and contaminated soils taken off-Site will be handled, at minimum, as a Municipal Solid Waste per 6NYCRR Part 360-1.2. Material that does not meet Unrestricted SCOs is prohibited from being taken to a New York State recycling facility (6NYCRR Part 360-16 Registration Facility).

## D-7 MATERIALS REUSE ON-SITE

The qualified environmental professional will ensure that procedures defined for materials reuse in this SMP are followed and that unacceptable material does not remain on-Site. Contaminated on-Site material, including historic fill and contaminated soil, that is acceptable for reuse on-Site will be placed below the demarcation layer or impervious surface, and will not be reused within a cover soil layer, within landscaping berms, or as backfill for subsurface utility lines.

Any demolition material proposed for reuse on-Site will be sampled for asbestos and the results will be reported to the NYSDEC for acceptance. Concrete crushing or processing on-Site will not be performed without prior NYSDEC approval. Organic matter (wood, roots, stumps, etc.) or other solid waste derived from clearing and grubbing of the Site will not be reused on-Site.

### D-8 FLUIDS MANAGEMENT

All liquids to be removed from the Site, including but not limited to, excavation dewatering, decontamination waters and groundwater monitoring well purge and development waters, will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations. Dewatering, purge, and development fluids will not be recharged back to the land surface or subsurface of the Site, and will be managed off-Site, unless prior approval is obtained from NYSDEC.

Discharge of water generated during large-scale construction activities to surface waters (i.e. a local pond, stream, or river) will be performed under a SPDES permit.

### D-9 COVER SYSTEM RESTORATION

After the completion of soil removal and any other invasive activities, the cover system will be restored in a manner that complies with the Record of Decision. Where required, the existing cover system is comprised of a minimum of 12 inches of clean soil and/or crushed stone. The demarcation layer, consisting of orange snow fencing material will be replaced to provide a visual reference to the top of the remaining contamination zone, the zone that requires adherence to special conditions for disturbance of remaining contaminated soils defined in this SMP. If the type of cover system changes from that which exists prior to the excavation (i.e., a soil cover is replaced by asphalt), this will constitute a modification of the cover element of the remedy and the upper surface of the remaining contamination. A figure showing the modified surface will be included in the subsequent Periodic Review Report and in an updated SMP.

### D-10 BACKFILL FROM OFF-SITE SOURCES

All materials proposed for import onto the Site will be approved by the qualified environmental professional and will be in compliance with provisions in this SMP prior to receipt at the Site. A Request to Import/Reuse Fill or Soil form, which can be found at

http://www.dec.ny.gov/regulations/67386.html, will be prepared and submitted to the NYSDEC project manager allowing a minimum of 5 business days for review.

Material from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated sites will not be imported to the Site.

All imported soils will meet the backfill and cover soil quality standards established in 6NYCRR 375-6.7(d). Based on an evaluation of the land use, protection of groundwater and protection of ecological resources criteria, the resulting soil quality standards are listed in Table 375-6.8(b) under Restricted Residential. Soils that meet 'exempt' fill requirements under 6 NYCRR Part 360, but do not meet backfill or cover soil objectives for this Site, will not be imported onto the Site without prior approval by NYSDEC. Solid waste will not be imported onto the Site.

Trucks entering the Site with imported soils will be securely covered with tight fitting covers. Imported soils will be stockpiled separately from excavated materials and covered to prevent dust releases.

**D-11 STORMWATER POLLUTION PREVENTION**

Barriers and hay bale checks will be installed and inspected once a week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by the NYSDEC. All necessary repairs shall be made immediately.

Accumulated sediments will be removed as required to keep the barrier and hay bale check functional.

All undercutting or erosion of the silt fence toe anchor shall be repaired immediately with appropriate backfill materials.

Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

Erosion and sediment control measures identified in the SMP shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they

shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.

Silt fencing or hay bales will be installed around the entire perimeter of the construction area.

### D-12 EXCAVATION CONTINGENCY PLAN

If underground tanks or other previously unidentified contaminant sources are found during post-remedial subsurface excavations or development related construction, excavation activities will be suspended until sufficient equipment is mobilized to address the condition.

Sampling will be performed on product, sediment and surrounding soils, etc. as necessary to determine the nature of the material and proper disposal method. Chemical analysis will be performed for TAL metals, and TCL semi-volatiles, and PCBs.

Identification of unknown or unexpected contaminated media identified by screening during invasive Site work will be promptly communicated by phone to NYSDEC's Project Manager. Reportable quantities of petroleum product will also be reported to the NYSDEC spills hotline. These findings will be also included in the Periodic Review Report.

### D-13 OTHER NUISANCES

A plan for rodent control will be developed and utilized by the contractor prior to and during Site clearing and Site grubbing, and during all remedial work.

A plan will be developed and utilized by the contractor for all remedial work to ensure compliance with local noise control ordinances.

# APPENDIX E

## HEALTH AND SAFETY PLAN

# Tract II
# Site Management Plan
# Sample Health and Safety Plan

3001 Highland Avenue

Niagara Falls, Niagara County, New York

Submitted by

***Ontario Specialty Contracting***

333 Ganson Street

Buffalo, NY 14203

September 8, 2015

(Revision 0)

SITE HEALTH AND SAFETY PLAN REVISIONS

| Revision | Date | Description of Change |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |

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# Authorization Signatures

This Site Health, Safety and Environment Plan (HASP) has been reviewed and approved by the individuals below. By their signatures, the undersigned certify that this HASP meets the requirements of 29 CFR 1910.120 and all other applicable regulations for the protection of all personnel entering the project site.

| | |
|---|---|
| **John Yensan** , President<br>***OSC*** | Date |
| **Alen Trpevski**, Senior Project Manager<br>***OSC*** | Date |
| **Ryan McCann,** Project Manager<br>***OSC*** | Date |
| **William Fleck**, Corporate HSE Director<br>***OSC*** | Date |
| **David Sweeney**, Site Health and Safety Officer<br>***OSC*** | Date |
| **Justin Romanow,** Senior Site Superintendent<br>***OSC*** | Date |
| | Date |
| | Date |
| | Date |

# Conformance Signatures

**All Individuals working on this Project, including subcontractors must read and sign.**

The following personnel have read and fully understand the contents of this Site Health, Safety and Environment Plan and further agree to all requirements contained herein.

| Name | Affiliation | Date | Signature |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

# Project Contact List

| PROJECT EMERGENCY CONTACTS | | |
|---|---|---|
| **Organization** | **Contact** | **Phone Number** |
| **In Emergency**<br>***FIRST CALL to 911***<br>***Then Site Safety*** | Site Emergencies<br>(Police, Fire, Hospital, Ambulance) | **911** |
| *Brightfields* | John Yensan<br>Corporate Vice President | 716-583-4400 |
| | William Fleck<br>Corporate HSE Director | 716-560-7542 |
| | Alen Trpevski<br>Senior Project Manager. | 716-818-3390 |
| | Ryan McCann<br>Project Manager | 716-200-9555 |
| | Site Health and Safety Officer<br>Dave Sweeney | 716-289-6115 |
| **(see pg. 4 Hospital Directions)** | **Niagara Falls Medical Center** | **716-278-4000** |

# Other Agency Contacts

| Agency | Contact | Phone Number |
|---|---|---|
| **All Site Emergencies** | **Police, Fire, Hospital, Ambulance** | **911** |
| Niagara County Soil & Water | Soil & Water | 716-434-4949 |
| Niagara County Public Works | Streets, Sidewalks & Lights | 716- 439-7242 |
| Poison Control | American Association of Poison Controls | 1-800-222-1222 |
| NYS DEC Region 9 | DEC Buffalo Office | 716-851-7226 |
| US EPA Release Report Number | National Response Center | 1-800-424-8802 |
| US Coast Guard Hazardous Materials Spills | National Response Center | 1-800-424-8802 |
| Chemical Emergency Center | CHEMTREC | 1-800-424-9300 |

**Directions to Niagara Falls Memorial Medical Center** (See Map - Hospital is 6 Minutes from site, 1.6 miles)

A From Job Site (Highland Ave & Beach Ave towards Jordan Gardens)

| | |
|---|---|
| **1.** Head South on Highland Ave toward Jordan Gardens | 0.3 mi |
| **2.** Continue on to 11th St | 0.8 mi |
| **3.** Turn left onto Portage Road | 0.5 mi |
| Destination will be on the right | |
| 4. Take the 3rd right onto Walnut Ave | 479 ft |

Niagara Falls Memorial Medical Center
B 621 10th Street, Niagara Falls, NY 14301
(716) 278 - 4000



# 1.0 INTRODUCTION

## 1.1 APPLICABILE REFERENCES

This Health and Safety Plan (HASP) has been developed in accordance with all Federal, State and Local regulations. All operations and equipment used in conjunction with this Contract shall as a minimum comply with the following:

- AMEC Remedial Design Work Plan Tract II Site
- AMEC Site-Specific Health and Safety Plan Tract II
- OSC Corporate Health, Safety and Environmental Manual
- Site Storm Water Pollution Prevention Plan (SWPPP)
- NYS DEC Approved Site Management Plan
- OSHA 29 CFR 1910: Occupational Safety and Health Standards – General Industry
- OSHA 29 CFR 1926: Safety and Health Regulations for Construction
- EPA 9285.1-03: Office of Emergency and Remedial Response – Standard Operating Safety Guides
- New York State Department of Environmental Conservation – Applicable Regulations
- NIOSH 85-115: Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities.
- New York State Applicable Right-to-Know Laws

All personnel involved in this project will:

- Receive site orientation training regarding the Project requirements contained in this HASP. Site orientation will be conducted by the Site Health and Safety Officer (SHSO) named in Section 2.0 of this HASP.
- Acknowledge in writing, on page 8 of this HASP (See "Conformance Signatures") that they have received the site specific orientation and; therefore, have been trained in and understand the contents of this HASP.

The health and safety protocol established in this HASP are based upon the known site conditions and/or conditions anticipated to be present from current site data. This HASP will be updated and/or revised as necessary to address changes to the actual site conditions encountered and/or as required by modifications to scope of work.

A copy of this approved HASP shall be maintained at the Project site for review.

## 1.2 DEFINITIONS

A. The Owner: BRIGHTFIELDS Inc.
B. The Contractor: *OSC* – The company retained or hired by the Owner to conduct the Project.
C. The Project: Niagara Tract II Demolition and Remediation
D. The Project Site: The area designated as the Contractor work area.
E. Contractor Work Area: An area of the Project site which includes the support zone, access road, staging area, contamination reduction zone and exclusion zone.

F. Project Personnel: Project personnel include, but are not limited to, the Owner, Owner's Onsite Representative, the Contractor, Contractor's employees and subcontractors; as well as Federal, State and Local authority that have jurisdictional Representative(s) working or having official business at the Project site.

G. Qualified Person: A person with a recognized degree, professional certificate or extensive knowledge and experience in the subject field who is capable of doing design, analysis, evaluation and specifications.

H. Competent Person: A person who is capable of identifying existing any predictable hazards in their surroundings/working conditions which are unsanitary, hazardous or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

I. Authorized Personnel: A person that is approved or assigned by their employer to perform a specific type of duty/duties, or to be at a specific location(s) at the Project site.

J. Stop Work Authority: HSE personnel, qualified and competent persons, Owner's Representatives and all employees **will have the authority to stop work in situations of imminent danger, in any situation deemed unsafe or un-healthful to those working on the Project site, or in any situation that poses a risk to the environment**. Work will remain stopped until the involved parties correct their impact or conditions as per the requirements of this HASP.

## 1.3 SITE VISTIOR REQUIREMENTS

A safe location, where all visitors can observe the site activity of interest, will be established by the SHSO. Anyone visiting the site will receive site-specific instructions from the SHSO. Visitor training will include, at a minimum:

- Hazard identification;
- PPE requirements;
- Decontamination procedures;
- Emergency procedures, and
- Any other site-specific information that the SHSO deems necessary.

Any visitor wishing to enter the contamination reduction zone (CRZ) or exclusion zone will be required to provide the SHSO with documentation of medical monitoring and training equivalent to the requirements of this HASP. Only authorized visitors with written proof that they have been medically certified and trained in accordance with OSHA 29 CFR 1910.120 will be permitted to enter the CRZ and/or exclusion area.

** Emergency personnel may enter the work area without fully complying with the requirements of this subsection. Emergency crews will be quickly briefed as to site conditions and hazards by the SHSO.

# 2.0 HEALTH and SAFETY ORGANIZATION

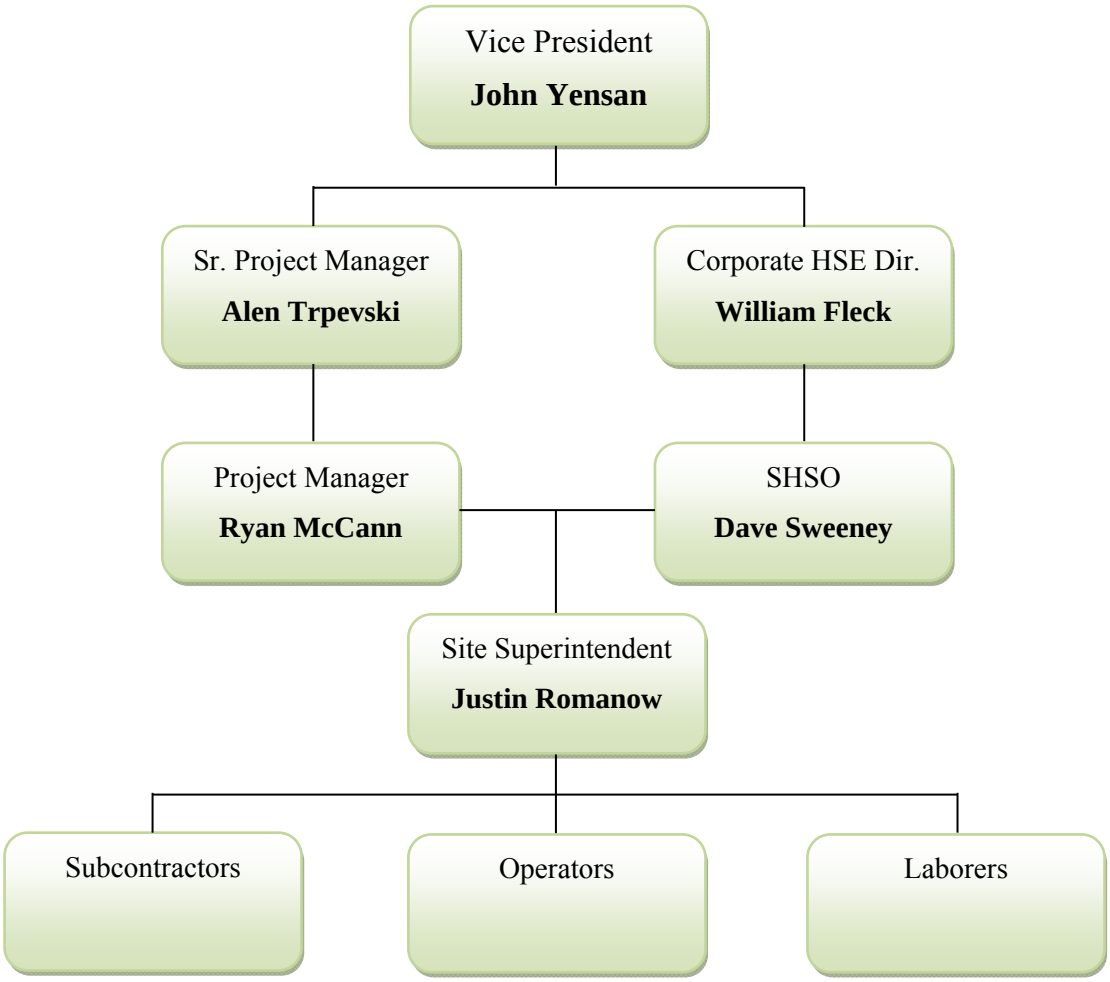
The following ***OSC*** management personnel will be assigned to this Project:

- Corporate Vice President – **John Yensan**
- Corporate HSE Director – **William Fleck**
- Senior Project Manager – **Alen Trpevski**
- Project Manager – **Ryan McCann**
- Site Superintendent – **Justin Romanow**
- Site HSE Officer – **Dave Sweeney**

In addition to the above listed management, ***OSC*** will provide the appropriate number of operators and laborers; as well as the required subcontractors for this project.

Any personnel assigned to this project will have been 40 hour HAZWOPER trained and medically monitored in accordance with OSHA 29 CFR 1910.120 as required in Sections 3.0 and 9.0 (Training and Orientation / Medical Surveillance) of this HASP. All documentation regarding personnel training, fit testing and medical monitoring will be maintained onsite site for review by the owner, owner's representative and/or oversight personnel.

## 2.1 ORGANIZATION CHART



## 2.2 PERSONNEL RESPONSIBILITIES

### 2.2.1 PROJECT MANAGERS AND SUPERINTENDENTS

The Project Manager will be responsible for the overall direction and completion of this contract. The Project Manager will report to the Senior Project Manager and will be responsible for managing and coordinating all project related activities; as well as serving as ***OSC***'s primary contact with the Owner and/or Owner's Representative. The Site Superintendent will be responsible for overseeing Contractor and subcontractor operations in the field. The Site Superintendent will report directly to the Project Manager.

Project Managers and Superintendents will be responsible for the following:

- Assure compliance with the Corporate HSE Manual and this HASP during the proposal and initial stages of this Project.
- Implement the procedures and guidelines outlines in this HASP throughout the duration of the Project.
- Perform accident investigations (***OSC*** employee injuries only). In cases where subcontractors are involved, the Site Superintendent will notify the Corporate HSE Director (CHSED) immediately. The CHSED will collect the appropriate injury and/or accident documentation with help from the Superintendent. If the CHSED is unavailable, the SHSO will conduct the accident investigation.
- Perform and support site safety audits and address all errors.
- Provide incentive and motivation for safe work practices; as well as discipline for unsafe work practices as per the OSC and CLIENT progressive disciplinary policies.
- Ensuring a copy of this HASP; as well as the Corporate HSE Manual is onsite at all times.
- Conduction, along with the SHSO, initial site orientation meetings.

### 2.2.2 SITE HEALTH AND SAFETY OFFICER (SHSO)

The SHSO will handle health and safety management on the project level and will report to the CHSED. Specific duties of the SHSO include:

- Overall implementation, enforcement and maintenance of this HASP.
- Act as a point of contact for all Project site health and safety concerns.
- Conduct initial training of the contents of this HASP; as well periodic training for when rules/regulations change, new equipment or procedures are introduced, additional skills are needed and new hazards are presented. Project initial training requirements include potential hazards, personal hygiene principles, PPE, respiratory protection equipment usage, fit testing and emergency procedures dealing with fire and medical situations.
- Conduct daily meetings regarding health and safety.

- Maintain separation of the exclusion zone (dirty) from the support zone (clean) areas.
- Supervising any additional HSE requirements that are required for this Project.
- The SHSO will monitor the jobsite health and safety via inspection at the start and completion of each day's work; as well as monitoring the jobsite for this purpose throughout the day. Any HSE violations will be promptly corrected and reported to the Project Manager. All observed violations will be explained to the perpetrator and reviewed at the following HSE meeting. Violations of the site HSE regulations will be grounds for disciplinary action, which could lead to termination of personnel and/or expulsion of vendor/subcontractor personnel from the site.

### 2.2.3 MEDICAL CONSULTANT

The Medical Consultant will be available to provide the required physicals and to conduct additional medical evaluations of ***OSC*** personnel, when necessary. OSC's Medical Consultant is:

**Company Health Medicine, PLLC**
**1173 Sheridan Drive**
**Tonawanda, NY 14150**
**Phone: 716-875-5495**
**Fax: 716-875-5498**

## 2.3 SUBCONTRACTORS

All subcontractors are required to obtain a copy of this HASP prior to site admittance and to follow its guidelines while on the job. Subcontractors can provide suggestions of changes and/or insertions to this HASP as necessary to adequately address their intended project operations. Subcontractors are responsible for health and safety as it pertains to their operations at the project site and shall provide the required OSC HSE documentation.

Subcontractors will be a part of the project's initial orientation and training based upon this HASP. Proof must be provided of the subcontractor's employees' training pertaining to the work they're contracted to perform. All subcontractors are responsible for providing their employees with the proper PPE required by this HASP; as well as ensuring that all equipment use is properly monitored and maintained. All subcontractors shall be required to develop an Activity Hazard Analysis (AHA) for every definable feature of work. Subcontractors work shall not begin until the AHA is approved by OSC and AMEC Safety. Likewise, AHA's shall be reviewed by all performing and affected workers prior to starting each task or as updated and warranted do to process changes, improvement measures and audit/incident findings. Subcontractors are responsible for ensuring that their employees conform to all applicable site HSE regulations.

# 3.0 TRAINING and ORIENTATION

## 3.1 SITE TRAINING

All personnel, including subcontractors, will be provided with the training required to comply with this HASP. All training documentation (training certificates and attendance rosters) will be stored and maintained onsite by the SHSO and will be made available for inspection upon request. Training documentation will be kept in an organized manner that shows that each individual worker has the proper training as required.

### 3.1.1 HSE TRAINING

Prior to performing field work the site. All personnel working onsite must have successfully completed initial 40 hour hazardous waste site training and if the initial 40 is more than 1 year old then an 8 hour HAZWOPER refresher training prior to performing field work at the Project site. In addition to HAZWOPER training all project core workers shall have successfully completed an OSHA 10 hour in Construction or equivalent within the last 5 years. Likewise, all Project Management personnel shall have successfully completed an OSHA 30 Hour in Construction or equivalent within the last 5 years. Personnel involved in the supervision of SWPPP installations, maintenance or repair shall have successfully completed 4 hours of DEC certified SWPPP training.

### 3.1.2 SITE SPECIFIC TRAINING

Documented site orientation training will be provided by the SHSO with the following topics being discussed:

- Identified potential job site hazards and protective measures which includes but is not limited to:
  - Review of this HASP
  - AHA & Personal STAC Card (Safety Task Analysis Card) review
  - Safe work procedures, including Decontamination Procedures
  - Dust, Erosion and Noise Control Measures
  - Controlled Work Zones, Material Segregation & Cross Contamination Prevention
  - Trenching, Excavating, Filling and Rolling
  - Loading, Tarping and Transporting
  - Hoisting and Rigging
  - Heavy Equipment & Industrial Forklift Operation
  - General House Keeping, Walking Working Surfaces - slips, trips, falls
  - Potential Respiratory Hazards (Dust, Silica, Lead)
  - Respirator use, maintenance and inspection (when required)
  - Struck by Hazards (Traffic, Heavy Equipment & Flying Debris)
  - Fall Protection (Barricades, Guards, Rails, PFAS and Nets)
  - Confined Space Entry Operations and Procedures (when required)
  - Electrical Safety Related Work Practices, Assured Grounding & GFCI's
  - Fire Protection and Flammable Storage
  - Hazard Communication (MSDS & Proper Container Labeling)

  - Material Handling, Ergonomics (Good Body Mechanics), Back Safety and CTD's.
  - Control of Hazardous Energy (Lockout/Tagout/Tryout)
  - Ladder Safety
  - PPE Use & Care (Eye, Face, Head, Hand, Foot and Hearing Protection as well as protective clothing)
  - Cold Stress/Heat Stress Monitoring
- Site layout/Location of; Controlled Work Zones, Porta-Jons, Washing Stations, Break Areas, Office/First Aid, Parking and Traffic Flow, Equipment/Truck Wash Station
- Site Security Requirements;
- Incident Reporting;
- Emergency Signals;
- Emergency response actions (evacuation, fire, medical, storm procedures)
- Available Emergency Services (Emergency Contact List, First Aid & CPR Trained Site Personnel)

## 3.2 MEETINGS

Attendance at all HSE meetings will be documented and filed onsite.

### 3.2.1 "Daily Safety Brief/Tool Box Talk" SAFETY MEETINGS

**Prior to the beginning of each day or work task**, **all** involved **workers will be required to attend a Daily Safety Brief HSE meeting** to review task-specific health and safety requirements.

### 3.2.2 WEEKLY HSE MEETINGS

**All onsite Supervisory personnel** will be required to **attend a weekly HSE meeting,** conducted by the SHSO, to review Project and/or task specific procedures. Topics to be discussed at these weekly meetings include, but are not limited to:

- STAC card (See STAC card Overview) and AHA development and review
- Necessary training requirements and site work rules;
- Changes in work practices and/or work conditions;
- Precautions and work practices related to scheduled site activities;
- New or modified site wide procedures or requirements;
- Incident alerts;
- Discussion of potential hazards or hazardous operations;
- Procedures on restricted areas;
- Equipment rules and requirements;
- Restrictions on the handling of materials;
- PPE requirements, and
- Delegation of responsibility (emergency backup personnel, competent persons, etc.).

## 4.0 PROJECT OVERVIEW (Site Location and Summary of Work)

The Tract II Site consists of approximately 19.25 acres of property located in the City of Niagara Falls, New York. The Site consists of approximately 19.251± acres located north of Beech Avenue, between Highland Avenue and a residential area on 17th Street. The Site extends north to the former Power City Warehouse (Tract I) property. The Site included a dilapidated building known as the "17th Street Warehouse", along the northern property boundary with the former Union Carbide plant and the remnants of a former Moore building known as the "Moore Parking Structure" located adjacent to Beech Avenue. Adjacent to the Tract II site to the East and South is the Tract I site, which is located at 3123 Highland Avenue.

*Scope of Work* – Tract II work may involve soil disturbance activities such as excavation of footers, utilities and other site appurtenances. In soil where lead exists in concentrations above the commercial standard of 1,000 milligrams per kilogram (mg/kg), or contaminants including metals or organic compounds exceed their respective applicable health based regulatory criteria, this HASP will be implemented to protect workers and the community from exposure.

### 4.1 PRE-MOBILIZATION

Pre-Mobilization Activities include all preparatory activities necessary for the execution of work. Preparatory activities may include, but are not limited to, the submittal of the Site Specific Plans, including a detailed execution plan, EH&S plan, permitting, regulatory notifications and UFPO notification (NY DIG Safety).

### 4.2 PROJECT ENVIRONMENTAL HEALTH and SAFETY PLAN

This HASP has been developed to advance policy and practices that are designed to provide all project personnel a work place free from recognized hazards that eliminates and controls exposure to physical and chemical hazards as well as protect the public and property from loss. Additionally, the plan provides for appropriate response to foreseeable site emergencies. The procedures found in this plan include:

- Activity Hazard Analysis;
- Medical Surveillance;
- Protective Equipment;
- Exposure Assessment;
- Decontamination Procedures;
- Training and Emergency Response

These procedures are used in conjunction with the Ontario Specialty Contracting, Inc. Corporate Health and Safety Procedures Manual and are intended to conform to All State and Local requirements. All asbestos abatement shall be performed according to NYS Code Rule 56. The Asbestos Abatement Plan shall be developed and submitted under separate cover.

## 4.3 Mobilization

Moving "Heavy Equipment" onsite, delineating parking areas for site personnel, setting up porta-jons, wash stations, delineating work areas, designating project access points and traffic flow.

### 4.3.2 PROJECT SUPPORT AREA[S]

OSC will require a project office for the duration of the project and a lay down area large enough to accommodate the proposed equipment for the project and tool storage. The space required for the storage of materials is anticipated to be relatively minimal. Since sanitary facilities are not available in the project work area, room for portable units will be required.

A site map indicating staging of office and decontamination trailers shall be developed and provided under separate cover.

### 4.3.3 ACCESS ROUTES and ROADS

A site map will be produced which defines the required truck routes through the site. Speed limit, exit, entry and traffic flow signs, will be posted along the routes. This plan will designate the available gates, times, path of travel to be used for all trucking and security requirements for site access and egress to controlled work areas. Note – the intent is to limit and control access to the site for safety and security as well as clearly define and delineate work areas in order to prevent equipment from accidentally crossing and contaminating other work areas.

### 4.3.4 UTILITIES

OSC will contact DIG Safety New York a minimum of 3 days prior to commencing any earth work (excavation, hammering and removal) to assure all known utilities are properly identified and marked. Likewise, an approved independent surveyor may need to be secured by OSC to identify any private utilities within the site. Marked utilities shall be maintained with the same color as originally marked until work is completed. The utilities identified and marked will include but not be limited to:

- Electric
- Gas
- Communications
- Water
- Sewer
- Process Lines

### 4.3.4 SURVEYS

In addition to the lead impacted soils "…several small surface target areas are present that exceed the SCO's for either metals or PAHs (polynuclear aromatic hydrocarbons); See AMEC Tract II Work Plan "Ecology and Environmental Site Investigation Reports".

An exposure assessment (initial and routine) shall be conducted to assure negative exposure below PEL for any activities which may have potential hazard exposure above the established PEL (Lead – PEL 50 ug/m3, TWA 8 hrs, PAH - 0.2 milligram/cubic meter ($mg/m^3$), PCB's 500 $\mu g/m^3$, arsenic PEL 10 $ug/m^3$, 1,1,1 TCA – PEL 55 mg/m3). Activity Hazard Analyses (AHAs)

and personal protective equipment (PPE) requirements shall be developed and modified based on exposure assessment results (See section 4.4, 6.1 and Attachment 10).

Prior to excavation, a competent person will conduct pre-work survey. The survey will include a review of available drawings and analytical data, a visual inspection of the work area and assessment of the site conditions to assure all hazards are identified and the necessary steps are developed to assure that an unplanned event does not occur. A formal report documenting the survey will be submitted to the client representative prior to the onset of work.

### 4.3.5 PROTECTION OF EXISTING ADJACENT STRUCTURES OR UTILITIES

It is OSC's responsibility to ensure that all adjacent, sidewalks, structures, pipe lines, and buried utilities not scheduled for removal or termination (see contract plans and specifications) are adequately protected during the progression of the work.

### 4.3.6 DUST CONTROL

Dust shall primarily be controlled by wet methods; pre-misting and active spray misting of the immediate work area utilizing a fire hose and spray nozzle or water truck. In some cases an oscillating water canon (mechanical dust buster) shall be used to create a wall of mist to control the dust. In every case when excessive visible emissions occurs or if dust monitoring the activity generating the dust shall be ceased until corrective measures are in place. OSC will make every reasonable effort to ensure that every employee works in a safe and clean environment. All of OSC's employees who notice or generate dust must report it to their Superintendent. OSC's Superintendent will take steps to control excessive amounts of dust by using water, and/or provide dust mask or respirators to workers for their protection.

OSC's objective is to reduce the amount of dust from demolition activities to acceptable levels.

### 4.3.7 PROCEDURES

The following are standard controls used in typical demolition and redevelopment projects; all options are available to the project manager and project superintendent for implementation to control fugitive dust at the project. They will base their decision to use one or any combination of these controls based on the daily weather conditions, work task being performed, and overall effectiveness of the chosen control.

- Each morning a weather report will be generated to determine the day's weather conditions, the humidity, wind speed and wind direction will be noted. These conditions will be communicated at the daily morning safety meetings prior to work beginning.
- All vehicles and equipment are to maintain a slow speed while driving on site, if there is dust generated from vehicle movement, speed must be reduced to minimum requirements to prevent dust being spread. Periodic wetting of roadways should keep this type of occurrence to a minimum.
- A water hose will be available to trucks to wet down the load prior to leaving the site. Each truck driver will inspect each load prior to leaving the site and can use the water to eliminate dust from the load at their discretion.
- The pre-wetting and misting of material prior to intrusive activities and crushing/processing operations.

### 4.3.8 SECURITY

OSC will take steps to secure the perimeter of the work area to prevent unauthorized persons from entering the work zone. Appropriate signage (Safety Signs) shall be installed.

### 4.3.9 INSPECTIONS

The Site Supervisor, H&S Officer, and Client representative will complete a pre-work inspection immediately prior to the start of activities. This inspection will identify any changes to the equipment, concrete, or piping since the completion of the initial survey, which could cause the equipment, concrete, or piping to be susceptible to premature collapse or create an unanticipated hazard. The inspection will also be used to verify that current hazardous materials abatement by others is complete. The Site Supervisor and the H&S Officer will perform an inspection prior to the commencement of work and routinely on a daily basis.

## 4.4 TASK/RISK ANALYSIS

A general assessment and analysis of the work task hazards associated with this project are provided in Table 1.0 of this section. More specific information relating to the potential chemical, physical, and biological hazards at this Project site shall be provided under separate cover as developed; See Attachment 10 Reserved for Site Initial Exposure Assessments (Lead, Silica, PHA's, PCB's, Asbestos, 1,1,1, TCA and Petroleum Residue Exposure Assessments and Associated AHA / Personal STAC Cards).

**TABLE 1.0**
**WORK TASK HAZARD ANALYSIS**

| Task | Potential Exposure to Risk |
|---|---|
| Mobilization/Demobilization | Low |
| Site Setup | Slight to Moderate |
| Clearing and Grubbing (If necessary) | Moderate to Moderately High |
| Hazardous Materials Removal [Ex: Universal Wastes, Liquids, Solids, etc.] | High |
| Concrete Removal | Moderate |
| Grading and Backfill | Moderate |
| General Site Cleanup/Work Area Restoration | Low |

**Anticipated Exposure Risk Definitions**:
Low: Non-intrusive work – No chance of exposure.
Slight: Non-intrusive work / Possible HSE hazards with tools. – Little to no chance of exposure.
Moderate: Non-intrusive work / Possible HSE hazards with powered tools, heavy equipment and/or working near or in water – Little to no chance of exposure to contaminants.
Moderately High: Intrusive work / Possible HSE hazards with equipment – Exposure to contaminants is possible.
High: Intrusive work / Possible HSE hazards with equipment – Exposure to contaminants is probable.

### 4.4.1 CHEMICAL HAZARDS

The use of chemicals onsite will be in compliance with the requirements set forth in OSHA 29 CFR 1910.1200 (OSHA's Hazard Communication Standard), all applicable Federal, State and Local regulations and the Project Containment Plan. The potential hazards associated with these products will be mitigated through site specific training, administrative controls (e.g. proper labeling and storage) and proper use of the prescribed PPE.

Material Safety Data Sheets (MSDS), for all chemicals brought onsite, will be available for review in ***OSC***'s field office at the Project site.

The following table provides exposure guidelines for common hazardous chemicals that may be brought to the site, if required, for use during this Project. The SHSO will be notified before any new chemicals (chemicals not listed on the below table) are brought onsite.

| HAZARD SUMMARY FOR SITE CHEMICALS ONSITE | | | | | |
|---|---|---|---|---|---|
| **Substance** | **Route of Entry** | **Exposure Symptoms** | **Treatment** | **8 Hour TWA** | **STEL and IDLH** |
| Diesel Fuel | •Skin contact<br>•Eye contact<br>•Inhalation<br>•Ingestion | •Harmful if comes in contact with or is absorbed throughout the skin.<br>•Contact may cause skin and eyes irritation.<br>•Prolonged or repeated exposure may cause liver or blood forming organ damage.<br>•May cause skin irritation or dermatitis. | •Eyes: Irrigate immediately.<br>•Skin: Flush with soap and water.<br>•Inhalation: Remove victim to fresh air and provide respiratory support if needed.<br>•Ingestion: Seek medical attention. | 300 ppm | STEL: 500 ppm |
| Grease, Oil and Hydraulic Fluids | •Skin contact<br>•Eye contact<br>•Inhalation<br>•Ingestion | •May be slightly irritating to skin and eyes.<br>•Inhalation may cause headaches.<br>•Ingestion could result in nausea and vomiting. | •Eyes: Irrigate immediately.<br>•Skin: Flush with soap and water.<br>•Inhalation: Remove victim to fresh air and provide respiratory support if needed.<br>•Ingestion: Seek medical attention. | N/A | N/A |
| Gasoline Petroleum Distillates | •Skin contact<br>•Eye contact<br>•Inhalation<br>•Ingestion | •Acute: Central nervous system effects. Chemical pneumonitis if aspirated into the lungs.<br>•Chronic: Benzene is a confirmed carcinogen. | •Eyes: Irrigate immediately.<br>•Skin: Flush with soap and water.<br>•Inhalation: Remove victim to fresh air and provide respiratory support if | | |

| | | | | | |
|---|---|---|---|---|---|
| | | Long term exposure caused kidney and liver cancer in rats/mice. | needed.<br>•Ingestion: Seek medical attention. | | |

### 4.4.2 HAZARDS and PROTECTIVE MEASURES

The following physical and ergonomic hazards may be associated with this project.

**1. Heavy Equipment Hazards and Protective Measures:**

Before use, any machinery or mechanized equipment will be tested be tested by a competent person and certified to be in safe operating condition. ***OSC*** will designate a competent person to be responsible for the inspection of all machinery and equipment, daily and during use, to ensure its safe operating condition.

**2. Excavation Hazards and Protective Measures:**

Per OSHA requirements, provide adequate sloping to both sides of the excavation. Inspect the excavations regularly for changing conditions. Ensure that the material from the excavations is being placed away from the edge, to prevent cave-ins and pit instability. Backfill the excavations as require by the Engineer approved Contract Drawings, to minimize the number of open excavations.

Any excavation deeper than four feet will be supervised by a competent person who shall determine when subsidence control measures are required, what those controls will be and how they will be implemented. The competent person will inspect the excavations and controls to ensure reinforced structures are barricaded or marked, with barricade tape or traffic cones, during active excavations. If an excavation must remain open prior to backfill, those excavations must be fenced or barricaded. Compliance with OSHA 29 CFR 1926 Subpart P will be maintained.

**3. Utility Hazards and Protective Measures** (Control of Hazardous Energy)**:**

Prior to commencing work request a utility mark out, notify DIG SAFETY of New York a minimum of three days prior to performing any excavation activities. Maintain utility mark out until work is completed (remark with same colors). Prior to work beginning, ensure and verify all affected utilities are de-energized (disconnected, air gapped, locked out).

**4. Confined Space Hazards** (Excavations, Manholes, Crawl Spaces, Vaults, Tanks):

Confined space entries can present many HSE hazards if not performed properly. ***OSC*** will comply with all OSHA requirements concerning confined spaces, including monitoring and supervising spaces. ***OSC***'s confined space entry program is provided in later Sections of this HASP (See OSC Confined Space Procedures).

5. **Noise, Sound/Hearing Hazards and Protective Measures:** Possible exposure to continuous sound pressure levels in excess of 85 dBA of continuous noise or 140 dBA impact or impulse noise (i.e. split-spoon hammer) during heavy equipment operation. Anytime that noise is determined a hazard by the SHSO, wear disposable earplugs or ear muffs with a NRR rating of 20 or greater. Adhere to ***OSC***'s Hearing Protection Standard Operating Procedures provided in section 6.3 of this HASP.

   In the absence of proper instrumentation, the appropriate rule of thumb is that hearing protection is required when normal conversation is difficult at a distance of two to three feet.

6. **Potential Hazard:** Uncontrolled release of hazardous energy (kinetic and/or potential)
   **Procedures to Mitigate Hazard:** The LOCKOUT/TAGOUT/TRYOUT procedure provided in this HASP will be followed when working on machines and equipment in which the unexpected energizing / start-up of the machines or equipment, or release of stored energy could cause injury to employees.

7. **Potential Hazard:** Slips, trips and falls
   **Procedures to Mitigate Hazard:** (1) Practice extreme caution in all work areas. (2) Watch your footing during equipment access/egress and when moving through the work area. (3) avoid stepping or standing on uneven or unsteady surfaces. (4) Clearly label open pits, wells and other fall hazards with caution tape. Securely cover these hazards as appropriate.

8. **Potential Hazard:** Lifting / Carrying
   **Procedures to Mitigate Hazard:** (1) Personnel will limit lifting to low weight. (2) Lift objects with your legs and not your back. (3) Utilize the forklift, drum cart or other appropriate equipment whenever it is possible. (4) Get assistance if it is needed.

9. **Potential Hazard:** Possible traffic hazards
   **Procedures to Mitigate Hazard:** Personnel will coordinate all site operations to avoid impeding, interfering with, or in any way restricting normal traffic flow. Flagmen, signs and other measure will be provided if deemed necessary.

10. **Potential Hazard:** Site maintenance
    **Procedures to Mitigate Hazard:** (1) Personnel will properly store all equipment. (2) Remove all scrap material from the work area.

11. **Potential Hazard:** Hazardous materials storage
    **Procedures to Mitigate Hazard:** (1) All flammable/combustible liquid will be segregated from the ignition source. (2) Store all hazardous materials in approved containers. (3) Keep all solvent wastes, oily rags and liquids in fire resistant containers.

12. **Potential Hazard:** Operation of hand and/or power tools
    **Procedures to Mitigate Hazard:** (1) Personnel will verify that guards and safety devices are in place before, during and after operation. (2) Tag and remove all defective tools from service. (3) Maintain and inspect the tools per the manufacturer's recommendations. (4) All personnel will utilize the proper eye protection.
13. **Potential Hazard:** Electrical

**Procedures to Mitigate Hazard:** (1) All personnel will use approved grounding and bonding procedures. (2) Guard and maintain all electrical lines/cords. (3) Tag and remove all damaged equipment from service.

All temporary electrical power used for this project will conform to NFPA 70 and ANSI C2. When possible, motorized vehicles will be grounded. Air monitoring and sampling equipment will be rated intrinsically safe for Class I, Division 1, Grounds A, B, C and D areas. All portable electrical equipment will be protected by ground fault circuit interrupters (GFCI). Clearances to adjacent overhead transmission and distribution electrical lines will be sufficient for the movement of vehicles and operation of equipment.

14. **Potential Hazard:** Exposure to extremely hot, humid and/or extremely cold, windy weather
**Procedures to Mitigate Hazard:** All personnel will adhere to the Heat and Cold Stress Monitoring Program provided in Section 16.0 of this HASP.

# 5.0 SITE SECURITY AND SITE CONTROL

## SITE SECURITY

***OSC*** will provide and maintain site security within the Project site, during all working hours from Project mobilization though substantial completion.

All onsite personnel and visitors will be required to sign-in and sign-out, at the Project support area, before entering or leaving the site. ***OSC*** will maintain, onsite, all records of site access and security incidents. Visitors will be required to read and conform to this HASP, prior to accessing controlled work zones. Vehicular traffic will be permitted in the designated parking areas within the Project support area; however, access to the exclusion and contamination zones is restricted to authorized vehicles only. Use of onsite parking areas will be restricted to the **Owner, Owner's representative**, ***OSC***, subcontractors; service vehicles related to the Project and authorized visitors.

## 5.1 SITE CONTROL

### 5.1.1 BUDDY SYSTEM

All field personnel will be assigned a buddy who will watch for hazards or problems his/her buddy might encounter. Communication between buddies must be maintained at all times. Buddies will pre-determine hand signals, or other means of emergency signals, for communication when respiratory protection or distance makes communication difficult. Visual contact must remain between the two buddies; they must remain in close proximity to each other in order to assist in case of an emergency.

### 5.1.2 SITE COMMUNICATIONS PLAN

In the event of an emergency situation, and cell phones or two-way radio communication is not available, oral/alarm (runner/intermittent air horn) and visual safety signals have been established to protect Project personnel. These signals will be made available to personnel for all phases of operation before going onsite. These safety signals will ensure quick communication during adverse or emergency situations. Examples of established signals, and their meanings, are provided below.

| Visual Signal | Indication |
|---|---|
| Hand gripping throat | Out of air; can't breathe |
| Wave hands over head from side to side | Attention: stand by for next signal |
| Swing hands from the direction of person receiving the signal to directly overhead and through a circle | Come here |
| Pointed finger with extended arm | Look in that direction |
| Grip partner's wrist with one or both hands | Leave the area immediately |
| Hand on top of head | Need assistance |
| Thumbs up | Ok, I'm alright, I understand |
| Thumbs down | No, negative |
| **Audio Signal** | **Indication** |
| Short blast of air or vehicle horn | Caution, look here |

5.1.3 SAFE WORK PRACTICES

Project personnel will observe the standard operating HSE procedures that are explained in this HASP. The standard HSE regulation notices are posted within the Project support area and at other locations onsite, as deemed appropriate.

## 5.2 WORK AREAS & CONTROLLED WORK ZONES

Where applicable as determined by field testing and lab sampling data, the project site will be divided into the following zones during site removal activities.

1. Exclusion Zone: The exclusion zone will encompass identified areas of concern; as well as any areas being utilized for the temporary storage of segregated waste materials. The minimum level of protection in the exclusion zone will be a modified Level D. Level C PPE will be available onsite, in the event an upgrade of protection is needed as determined by the exposure assessment.
2. Contamination Reduction Zone (CRZ): The CRZ will be the transitional area between the identified contaminated and clean areas. The CRZ will be provided for the transfer of equipment and materials to and from the exclusion zone; the decontamination of personnel and equipment existing in the exclusion zone; and the physical segregation of the clean and contaminated work areas. The CRZ will include an equipment decontamination pad and personnel decontamination station which will be located in a preapproved area.

   Personnel and equipment decontamination will be conducted in accordance with this approved HASP. Any disposable, single-use sampling equipment will be collected and properly disposed of in accordance with the transportation plan. Non-disposable sampling equipment (i.e. split-spoon samplers, trowels, augers, etc.) will be decontaminated at the portable decontamination stations that will be adjacent to the exclusion zone, or at the decontamination pad.

   Water for the decontamination operation will be supplied by local approved permitted and back flow protected city hydrant or imported from an approved source stored onsite. Water from the decontamination operations will be collected, filtered per the contract requirements and tested. Handling and deposal shall be dependent on test results.
3. Support Zone: Office and storage trailers that will be located in the Project support area, East end of the site where the current office trailer is located (Corner of East Tioga and Steuben).

   The SHSO will be responsible for establishing, delineating, maintaining and controlling access to the established work areas and support zones in accordance with this HASP.

# 6.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)

PPE will be selected based initial hazard and exposure assessment. PPE shall be used, maintained and stored in accordance with OSHA 29 CFR Subpart I, 29 CFR 1926 Subpart E and the manufacturer's recommendations. Engineering, administrative and/or work practice controls will be implemented where feasible, rather than relying exclusively on PPE.

## 6.1 MINIMUM LEVELS OF PROTECTION

Minimum personal protective equipment (i.e. general safety attire) that is to be worn at all times by Project personnel at the site includes:

- Safety glasses with permanently mounted side shields (mono-goggles in chemical areas);
- Approved footwear;
- Hardhat, and

High visibility traffic vest. *exceptions will be made on vests based on work activity*

The following table describes the minimum levels of protection that have been established for this project which includes initial exposure assessments.

| Minimum Site Specific PPE Levels | | |
|---|---|---|
| **Work Activity** | **Level of Protection See Attachment 10** | **Action Level for PPE Upgrade** |
| Mobilization/Site preparation and general site operations | Level D | Upgrade to Level C if sustained readings of ≥50% TWA are recorded or if an IDLH condition is probable. |
| Clearing and Grubbing | | |
| Initial Excavation, Demolition, Material Handling and Decontamination Activities. | Initial Exposure Assessment - Level D PPE to include work clothes, hardhat and safety glasses. | PPE downgrade is not permitted for initial exposure assessments unless similar historical data is available to justify downgrade. |
| Initial Intrusive Activities (Excavation and Demolition) | Level Dependent on initial exposure assessment | Minimum requirement is Modified Level D as long as exposure levels are known to be below any defined action levels. Level defined by conditions, activity and exposure assessment. |
| Material Handling - sorting, sizing, loading, placing & stabilizing. | Level Dependent on initial exposure assessment | |
| | | |
| Equipment Decontamination | Level Dependent on initial exposure assessment | |
| Backfill Installation | Level D / Modified Level D | Minimum requirement is Modified Level D as long as exposure levels are known to be below any defined action levels. Level defined by conditions, activity and exposure assessment. |
| Site Utility Removal | Level D PPE/Modified Level D | Minimum requirement is Modified Level D as long as exposure levels are known to be below any defined action levels. Level defined by conditions, activity and exposure assessment. |
| Cover & Stabilization | | |
| Site Restoration | | |
| Permit Required Confined Space Entry Operations (Not Anticipated) | Level dependent on initial exposure assessment | PPE downgrade is not permitted |
| Project Support Area Operations/Activities | Non-hazardous, general construction safety attire | Not applicable |

NOTES:

A. A sustained reading is defined as a consistent reading, on a real-time monitoring instrument, which does not vary substantially from a peak or a result which is averaged over a period of time (i.e. 5 minutes). This avoids down grading PPE based on a single "hit" or "miss" instead of the average concentration present. Unless a chemical has a ceiling value, the TWA and STEL values are averages for exposure over 8 hours or 15 minutes and not single peaks. The values for the above action levels are based on TWA and STEL values.
B. The levels of PPE identified have been assigned by task, known or anticipated chemical toxicity and potential exposure risks.
C. The SHSO will be responsible for determining the need for PPE upgrade or down grading based on actual conditions encountered in the field.
D. Specific requirements of protection levels (i.e. B, C, D, and Modified) are detailed below.

**The minimum levels of protection are to be considered preliminary and may change based upon the physical hazards and air monitoring information collected during Project work. **No changes to the specified level of protection will be made without the approval of the SHSO.**

## 6.2 DESCRIPTION OF PROTECTION LEVELS

PPE will be used when project and support activities involve known, or suspected, atmospheric contamination; when vapors, gases or particulates may be generated by Project site activities; or when direct contact with skin-affecting substances may occur. Full face piece respirators protect the lungs, gastrointestinal tract and eyes against airborne toxicants. Chemical resistant clothing protects skin from contact with skin destructive and absorbable chemicals.

The specific levels of protection and necessary components for each have been divided into four categories according to the degree of protection that is afforded.

A. **Level D**: Protection that will be provided when no airborne contaminant is present and job functions do not require the use of respiratory equipment or chemical resistive clothing. The equipment for this level of protection will include a minimum of the following:

- Safety Glasses
- Leather work gloves for general site work
- Steel-toe work boots
- Hardhat

B. **Level D Modified**: Protection that will be modified when airborne contaminants have been identified, which do not require the use of air purifying respiratory equipment but require the use of chemical resistive clothing. The PPE for this level of protection will include a minimum of the following:

- Disposable protective clothing, boot covers and gloves
- Safety Glasses
- Chemical resistant gloves with liners
- Steel toe work boots with chemical resistant over-boots (as needed)
- Hardhat

C. **Level C**: Protection that will be provided when airborne contaminants have been identified and which mandate the use of air purifying respiratory equipment and protective clothing. Equipment for this level of protection will include a minimum of the following:

- Half or full-face air purifying respirators with P-100/VOC combination cartridges (PAPR with initial exposure assessments)
- Chemical resistant protective clothing
- Chemical resistant gloves with liners
- Chemical resistant safety shoes or boot covers
- Hardhat or helmet
- Safety glasses

D. **Level B**: ***(not anticipated for this Project based on known hazards).*** Protection that will be provided when the highest level of respiratory equipment is needed with minimal need for body or skin protection. Equipment for this level of protection will include a minimum of the following:

- SCBA or airline respirator with 5 minute escape SCBA

- Chemical resistant protective clothing
- Hardhat or helmet
- Chemical resistant gloves with liners
- Chemical resistant safety shoes or boot covers

E. **Level A (*(not anticipated for this Project based on known hazards)***: Protection that will be provided when the highest level of skin, eye and respiratory protection is needed due to the high levels/potential high levels of vapors, gases or particulates; as well as when skin contact with harmful materials is expected. Equipment for Level A protection includes a minimum of the following:

- SCBA or airline respirator with escape SCBA
- Totally encapsulating chemical protective suit
- Hardhat or helmet
- Chemical resistant gloves with liners
- Chemical resistant safety shoes or boot covers
- Hearing protection

## 6.3 HEARING PROTECTION

The best method of hearing protection is to eliminate or reduce the potential hazard. Whenever it is not possible to reduce the noise levels or duration of exposure, to those specified below, Project personnel will be supplied with hearing protection.

| Duration per day (in hours) | Sound level dBA – Slow Response |
|---|---|
| 8 | 90 |
| 6 | 92 |
| 4 | 95 |
| 3 | 97 |
| 2 | 100 |
| 1.5 | 102 |
| 1 | 105 |
| .5 | 110 |
| .25 or less | 115 |

Hearing protection will be evaluated for attenuation according to OSHA 29 CFR 1910.95, Appendix B. The protection must attenuate personnel exposure to at least an eight (8) hour time weighted average (TWA) of 85 decibels, A-weighted average of 85 dBA for workers with known permanent hearing threshold shifts.

Numerous hearing protectors will be available, at the Project site, for employees exposed to an eight (8) hour TWA of 85 decibels, A-weighted or greater. Hearing protection may be obtained from the SHSO or any HSE staff. Each employee is responsible for bringing their hearing protector to the jobsite, and wearing it when required. Replacements may be obtained from the SHSO, if necessary. There are four types of hearing protection offered:

1. Formable Plugs should be rolled and compressed into a very thin cylinder. While compressed, insert the plug well into the ear canal. Reach around the head to pull the ear outward and upward during insertion. Keep formable plugs clean and free from

material that can irritate the ear canal. To clean, wash them in a mild detergent and warm water. Squeeze the excess water from the plugs and air dry. Discard the plugs if they harden, or do not return to their original size and shape.

2. Pre-molded Plugs should be inserted by reaching around the back of the head, to pull the ear outward and upward, while inserting the plug until it feels like it is sealed. To clean, wash them in a mild detergent and warm water. Squeeze the excess water from the plugs and air dry. Discard the plugs if they harden, or do not return to their original size and shape.
3. Earmuffs must fully enclose the ears to be sealed against the head. Adjust the headband so the cushions exert even pressure around the ears. Pull the hair back and out from beneath the cushions. Keep earmuff cushions clean and free from material that can irritate the ear canal. Earmuff cushions can be cleaned using mild detergent and warm water. Squeeze the excess water from them and let them dry. Earmuff cushions normally need replacing twice a year; as well as whenever they become stiff, cracked or no longer seal.
4. Fit earplugs can be checked for proper fit by pressing firmly cupped hands over your ears, while listening to a steady noise. With properly fitted plugs, the noise levels should be about the same whether or not the ears are covered.

## 6.4 RESPIRATORY PROTECTION

Project personnel will be required, when necessary, to use respiratory protection to reduce their exposure to airborne hazardous substances. The standard requirements that determine the selection and use of respirators depend on the hazards present. Respirators will always be made available, at the Project work area, if emergency use is needed.

Personnel must only use respirators that are approved by the Mine Safety and Health Administration (MSHA) and the National Institute for Occupation Safety and Health (NIOSH), and follow the regulatory requirements set forth by OSHA 29 CFR 1910.134 and OSHA 29 CFR 1926.103.

### 6.4.1 MEDICAL CLEARANCE / FIT TESTING

All Project personnel, which are assigned to tasks where a respirator is needed, must have prior medical clearance. Medical evaluations and fit testing will be provided by ***OSC***'s Medical Consultant, Company Health (716-875-5495). Fit test records and all Project personnel medical documentation will be filed and maintained onsite, by the SHSO.

Medical limitations and restrictions will be strictly enforced. No employee will be permitted to use a respirator if he/she has any facial abnormality or facial hair that may affect the fit or seal of their respirator.

### 6.4.2 TRAINING

All project personnel who are required to wear a respirator will receive training from the SHSO on the use, maintenance, proper care and inspection of their respirators. Attendance at all training will be documented. Attendance records will be maintained onsite by the SHSO and will be available for inspection upon request.

### 6.4.3 INSPECTION

All respirators to be used at the jobsite will be inspected for damage by the employee, prior to use. After they are trained, every employee will be responsible for inspection of their own respirator. The following elements will be inspected:

- Tightness of the connections
- Face piece
- Headbands
- Inhalation valve
- Cartridge or filter fittings
- Pliability of the rubber or elastic parts
- Signs of deterioration

Any malformation, distortion, missing parts, cracks, etc. in the respirator will cause the equipment to be deemed useless until a qualified technician can properly repair the respirator. If necessary, a new respirator will be issued.

### 6.4.4 TYPES OF RESPIRATORS

The type of respirator, and who is required to wear them, will be identified on a task specific level by the SHSO, in consultation with the CHSED, based on the type of work that will be performed and the potential for exposure to airborne contaminants. All Project personnel will be required to follow the strict instructions for their respirator use set forth in this HASP, or they will become ineligible to wear them.

### 6.4.5 STANDARD PROCEDURES FOR RESPIRATOR USE

All Project personnel will adhere to the following standard operating procedure for respirator use.

- Carefully inspect the respirator using the procedures, established in Section 6.4.3, prior to entering potentially contaminated work areas.
- Remove duct tape from cartridge, prior to entering potentially contaminated work areas (if applicable).
- Conduct positive and negative pressure leak tests each time the respirator is to be used. Positive Pressure Leak Test: Close off the exhalation valve with your hand. Breathe into the mask. The face-to-face piece seal is cleared for use if some pressure can be built up inside the mask, and sustained. Negative Pressure Leak Test: Close off the inlet opening of the cartridge with the palm of the hand. Gently inhale causing a vacuum to occur inside the mask. Hold the breath for 10 seconds. If the vacuum is sustained, and no inward leakage is detected, the respirator fits properly.
- Do not remove the respirator in contaminated work areas. In the event of a medical emergency, or if breathing becomes difficult, remove the respirator and immediately leave or remove the injured person from the contaminated work area.

- Wear a respirator with straps while working inside disposable garments. This will maintain respiratory protection during personnel decontamination/contaminated garment removal.

### 6.4.6 CLEANING and DISINFECTION

Any reusable respirator must be cleaned after each use by the employee assigned to use it. The steps required to clean a respirator after use includes:

- Remove the cartridges and headbands
- Disassemble all respirator parts
- Wash all respiratory parts, with the exception of the cartridges and headband, in a cleaner-disinfectant solution or use soap and hot water (100+ degrees)
- Rinse all parts completely in clean, warm water. This will remove all traces of detergent and disinfectant.
- Air dry in a clean, sanitary area
- Re-assemble the respirator
- Store the cleaned respirator in a sealed bag. This will provide protection against dust, sunlight, extreme temperatures, moisture and abrasives
- Apply the proper maintenance to your respirator.

### 6.4.7 STORAGE

Respirators will be stored in a sealed bag to protect against dust, sunlight, extreme temperature, moisture and abrasives. Inhalation holes will be covered with duct tape immediately after leaving a contaminated area. The tape will be left on until the respirator is donned for the next entry into a contaminated area. This tape will prevent any contaminants from being dislodged from the cartridge. Respirators should be stored so that the face piece and exhalation valve will rest in a normal position and function will not be impaired by the elastic setting in an abnormal position. The respirator should not be hung to store or air dried by its straps.

# 7.0 STANDARD OPERATING PROCEDURES (SOPs)

## 7.1 SOPs

**A.** Ensure that all safety equipment and protective clothing is kept clean and well maintained.

B. Ensure that all prescription eyeglasses in use on this Project are safety glasses and are compatible with respirators. No contact lenses are allowed at this Project site.

C. Ensure that all disposable or reusable gloves worn on the Project site are approved by the SHSO

D. Change respirator filters during periods of prolonged respirator usage in contaminated areas. Respirator filters will be changed daily.

E. Cover all footwear used onsite with rubber over boots or booties when entering or working in the exclusion zone area or the contamination reduction zone. Boots/booties shall be washed with water and detergent, to remove the dirt and contaminated sediment, before leaving the exclusion zone or contamination reduction zone.

F. At the end of each day, decontaminate or dispose of all PPE used onsite. The SHSO is responsible for ensuring decontamination before PPE reuse.

G. The SHSO will individually assign all respirators. The respirators will not be interchanged between workers without cleaning and sanitation. Any OSC personnel, subcontractor and/or service personnel unable to pass a fit test, as a result of facial hair or facial abnormality, will not enter or work in an area that require respiratory protection.

H. All Project personnel will have vision or corrected vision to at least 20/40 in one eye.

I. Onsite personnel that are found to be disregarding any provision of this HASP, at the request of the SHSO, will be barred from this Project.

J. Do not reuse disposable outerwear such as coveralls, gloves and boots. Used disposable outerwear will be removed upon leaving the exclusion zone and placed inside disposable containers that are provided for this sole purpose. The containers will be stored at the Project site, at the designated staging area, and ***OSC*** will be responsible for the proper disposal of these materials at the completion of the Project.

K. When working, immediately replace protective coveralls that have become torn or badly soiled.

L. There will be NO eating, drinking, smoking, chewing gum or tobacco in the exclusion zone or contamination reduction zone.

M. All Project personnel must thoroughly wash their hands, face and forearms prior to using the facilities, eating, drinking and smoking.

N. Personnel who have worked in the exclusion zone must shower at the end of the work day.

O. NO alcohol, drugs (without prescriptions) or firearms will be allowed onsite at any time.

P. All Project personnel who are on medication will report it to the SHSO, prior to work start-up, who will make the determination whether or not the individual will be allowed to work and in what capacity. The SHSO may require a letter from the individual's personal physician stating what limitations, if any; the medication may impose on the individual.

## 7.2 EXCAVATION SAFETY

***OSC*** maintains strict procedure for soil excavations. The safety of all employees during these operations depends on the soil structure and stability, weather conditions, buried utilities and structures and superimposed loads. All excavations are treated as type C for the purpose of cave in protection; shoring, benching and sloping. Note – Although possible, occupied excavations greater than 5 feet are not anticipated for this project.

If excavating within a wet, sandy area, or if the area has been backfilled at any time, it is likely to be very unstable. All personnel working in these conditions must be cautious and provide extra sloping, if possible. A change in weather conditions, such has heavy rain or snow, can loosen the soil and increase the risk of a collapse. If the area of excavation is prone to collapse precautions, such as covering the area, should be taken. Heavy equipment or materials should be kept as far away as possible from the excavation area because they can also increase the risk of collapse. All excavated soil should be removed from the rim of the area and contained if possible.

### 7.2.1 HIDDEN PRECAUTIONS

In order to eliminate the discovery of hidden pipelines or cables, before any excavation begins OSC personnel will notify all utility companies to locate their lines. If such a hazard exists, the lines will be carefully marked prior to the start of the excavation activities.

When deeper than five feet, to prevent collapsing soil the excavation must be sloped, shored or somehow contained before any Project personnel can enter. A ladder will be provided onsite, for employees who are working in depths for more than four feet. The ladder will not be removed from until all employees have exited the excavation site.

All excavation sites will be inspected daily for precautions. All activity will cease if the Site Superintendant, Project Manager and/or the SHSO label the site hazardous. A competent person will make daily inspections of any excavation employee's entrance.

### 7.2.2 EXTERIOR PRECAUTIONS

For the protection of all Project employees, ***OSC*** requires that all exterior structures (sidewalks, etc.) be protected and clear of excavated materials. Sidewalks will be shored to carry a load of at least 125 pounds/sf. Planks, which are being used for temporary walkways, will be laid parallel to the length of the walkway and will be fastened together. If possible, guard rails or fences will be erected to protect employees and vehicle traffic from the edge of excavation sites.

## 7.3 LOCKOUT/TAGOUT/TRYOUT POLICY

When excavation activity ceases, either for repairs or at the end of a shift/day, all equipment will be removed from service by being either locked out or tagged out. This procedure ensures the health and safety of all Project personnel by deactivating any movable, electrical or pressurized equipment. This policy applies to all machinery or equipment that can be moved either by the use of electrical power, hydraulic power,

compressed air, steam or energy stored in springs/suspension devices. Danger tags will be placed on all movable equipment and machinery.

Only Project personnel, or his/her supervisor, are authorized to lockout or tag out machinery/equipment. Every employee is responsible for his/her own equipment and nobody else is permitted to remove a lock or tag except the authorized employee or his/her supervisor. Any violation of this policy is cause for severe disciplinary action.

## 7.4 LOCKOUT/TAGOUT/TRYOUT PROCEDURES

Lockout and tag out devices are used to control stored energy prevent the accidental energizing of equipment.

De-energizing Circuits and Equipment: Disconnect the circuits and equipment, to be worked on, from all electrical sources and release stored energy that could accidentally re-energize equipment.

Application of Locks and Tags: Only authorized Project personnel are allowed to place a lock and tag on each disconnecting – means used to de-energize the circuits or equipment before the work begins. A lock prevents unauthorized personnel from re-energizing the equipment or circuits. A tag prohibits unauthorized operation of the disconnecting device. **LOCKS and TAGS WILL BE PLACED BY AUTHORIZED PERSONNEL ONLY**

Verification of De-energized Condition of Circuits/Equipment: Prior to work on equipment, OSC requires that a "qualified" employee verify that the equipment is de-energized and cannot be restarted.

Re-energizing Circuits and Equipment: Before circuits or equipment are re-energized, the following steps must be taken in the following order:

- A "qualified" employee conducts tests and verified that all tools and devices have been removed.
- All exposed employees are warned to stay clear of the circuits and equipment.
- Authorized personnel will remove their own locks and tags.
- The SHSO will conduct a visual inspection of the area to be sure all employees are clear of the circuits and equipment.

## 7.5 SYSTEM MAITENANCE & REPAIR

Only authorized and trained personnel may perform any repair or maintenance on electrical or pressurized equipment. Any work performed on this type of equipment may not be done until all lockout or tag out procedures has been completed to the satisfaction of the SHSO.

## 7.6 ELECTRICAL GROUNDING (Assured Grounding & GFCI's)

Only qualified Project personnel may work on or around electrical equipment. ***OSC*** follows the standards, set by OSHA and the National Electrical Code, for the purchase and maintenance of electrical equipment and systems.

The working space around all electrical equipment will be large enough to permit access to all parts of the equipment. The working space will never be used for the storage of other materials so that immediate access can be gained.

- Only authorized electrical tools may be used at the Project Site.

- A ground fault circuit interrupter (GFCI) shall be used with all 120 volt corded tools. GFCI plugged in at the source and tested before use for appropriate operation.
- Portable electrical tools must have grounding protection and be insulated against shock.
- Single phase electrical tools must be plugged into properly grounded receptacles.
- The use of extension cords traffic areas should be avoided. If required cords should be protected or guarded from damage. All extension cords shall be properly grounded.
- Any energized electrical equipment, operating at 50 volts or higher, must be protected by a cabinet or other approved enclosure with warning signs that are immediately visible.

# 8.0 INCIDENT PREVENTION PROCEDURES

## 8.1 HSE MEETINGS

Daily tailgate meetings will be conducted as stated in Section 3.2.1 of this HASP

## 8.2 FIRE PREVENTION and PROTECTION

The following guidelines apply when dealing with fire prevention and protection:

- The Emergency Response and Contingency Plan, provided in this HASP, will be in effect at all times throughout all phases of work. All firefighting equipment will be inspected on a regular basis, maintained in proper working condition and will be located in an accessible place, at the Project site, at all times.
- A fire extinguisher, rated 10 ABC or greater shall be located in the immediate work area. Adequate extinguisher coverage shall be provided for every 3,000 sf of occupied work area.

## 8.3 WALKING and WORKING SURFACES

The following guidelines apply:

- Concrete and blacktop pad openings will be covered or guarded on all exposed sides by a standard guard rail or appropriate continuous barricade.
- Stairs with 4 or more steps to concrete pads shall either properly railed for use or barricaded from entry
- All open excavations shall be properly barricaded (Soft barricades 6 back from edge, hard barricades 2 feet back from edge)

## 8.4 SITE HOUSEKEEPING

The following housekeeping guidelines apply at this Project site:

- All excess material and debris will be kept clear from all working areas.
- Combustible materials will be removed at regular intervals and all wastes will be properly disposed of at frequent intervals.
- Containers will be provided for the collection and separation of all discarded materials and refuse. Covers and identification will be provided for all containers used for flammable or harmful substances.

## 8.5 MECHANICAL EQUIPMENT

The following guidelines apply when dealing with the inspection and operation of all mechanical equipment.

- All vehicles and equipment, used on the Project site, must be checked at the beginning of each shift to assure that all parts that affect safe operation are in proper working condition and are free from defects.
- No Project personnel will be permitted to use any vehicle or equipment that has an obstructed view to the rear, unless there is a reverse signal alarm or a signal man is assigned to help.
- Employees will not work or walk under or between any equipment that had parts which are suspended or held aloft unless/until the parts are substantially blocked to prevent falling and/or shifting.

## 8.6 HIGH PRESSURE WASHERS

***OSC*** requires that only trained and authorized Project personnel operated high pressure washers onsite. This policy is intended to protect both ***OSC*** employees; as well as any property where the equipment will be used. The following guidelines apply at this Project site:

- The lance must always be pointed at the specific work area.
- All Project personnel will remain at least 25 feet away from the washer; as well as the structure being washed.
- Care should be taken to ensure the proper footing of the operator.
- The operator and his assistant will wear the following personal protective equipment: Hard hat with face shield, goggles, safety boots with metal foot and shin guards, hearing protection, PVC rain or acid suit and heavy gloves; as well as any additional equipment to protect against chemicals, as needed.
- ***OSC*** requires that all operators and assistants be trained in the emergency shutdown procedures and general equipment maintenance of high pressure washers.
- Under no circumstances will an operator be allowed to make modifications to a power washer while on a job.

## 8.7 VEHICLE and EQUIPMENT SAFETY

On ***OSC*** jobsites, only completely trained and qualified Project personnel may operated equipment and vehicles. This policy is intended to protect all employees and CLIENT properties. It is effect at all times. The guidelines for this policy are as follows:

- Each unit is to be inspected prior to its use on the Project site and then inspected periodically depending on the equipment involved and the manufacturer's specifications.
- No repair work, or refueling, will be done while the vehicles or equipment are in operation. The engine is to be turned off and all buckets, blades, gates or booms must be lowered to the ground, or a substantial support.
- Equipment backup alarms must be operational and audible over the surrounding noise levels. If this is not the case, an assistant must be assigned to the operator and he/she will be required to clear the way.
- Only authorized Project personnel are permitted to ride in company vehicles and equipment.
- Under no circumstances will an employee be permitted to get on or get off a moving vehicle.
- Operators must wear the following PPE: Sturdy Steel Toed Work Boots/Shoes, ear protection devices when the noise level is in excess of 90dBA, heavy work gloves and a hardhat.
- Any vehicle and equipment, which are not in use, will be parked off roads and major access routes with their wheels blocked. The vehicle will be turned off and the keys will be given to the Site Supervisor.
- The operator and assistant must wear seatbelts at all times, if the unit is equipped.

- To ensure the proper visibility all windshields, side windows, mirrors and lights will be cleaned as often as necessary.

### 8.7.1 TRUCKS

The following guidelines apply to the operators of ***OSC***'s trucks:

- A current driver's license must be carried at all times.
- The driver will check the loaded material to ensure against material loss or shifting during transit.
- All DOT regulations will be followed.
- When towing trailers, safety chains must be in use.

### 8.7.2 HEAVY EQUIPMENT

***OSC*** has the following guidelines for the operation of front end loaders, scrapers, dozers and tractors:

- Prior to their use onsite, the equipment's brakes, cables and hoses must be checked and in good working order.
- When the equipment is moving, all blades, buckets and bowls will be carried close to the ground but high enough to avoid any obstacles on the ground. If not in motion, they must be lowered to the ground or to a substantial support.
- No employees are permitted to ride on a boom, bucket, bowl or any other heavy equipment extension.
- All safety equipment must be properly installed, and in good working condition, before a piece of equipment will be used on this Project.

## 8.8 SANITATION

With the exception of mobile crews having transportation readily available, all work sites will have toilets provided that adhere to the following requirements: One toilet for 20 or less employees; one toilet seat and one urinal per 40 employees; if there are 200+ employees, on toilet seat and one urinal per 50 workers.

Adequate washing facilities will be provided on the Project site where there are harmful substances, and they will be in close proximity to the site. An acceptable supply of portable water will be provided onsite, and it will be clearly marked as such. Portable water containers will have tightly sealed tops and a tap.

## 8.9 DAILY INSPECTIONS

The SHSO will monitor jobsite HSE through inspections at the start and completion of each work day. Results of these daily inspections will be recorded on a daily safety Audit form (see Attachment 1).

Any safety violations will be recorded and corrected by the Project Manager. All observed safety violations will be immediately corrected, explained to the person responsible, and reviewed at the next safety meeting. If an employee has excessive violations of the site safety rules, it will be grounds for disciplinary action which could lead to termination if ***OSC*** personnel or expulsion if an onsite subcontractor personnel.

## 8.10 INCIDENT REPORTING

- ***OSC*** will maintain an OSHA 300 Form of all recordable occupational injuries and illnesses. The annual OSHA 300 and 300A logs will be posted onsite from February 1st until May 1st every year.
- All records and OSHA forms will be maintained by ***OSC*** for at least five years, following the end of the year to which they relate. These Logs will be made available upon request to authorized personnel.
- **All Incidents, accidents, near misses must be reported to the Project Manager or his/her designee immediately.**
  **Likewis an immediate call to the OSC Corporate Health, Safety and Environmental Manager shall also be made (Bill Fleck, 716 560 7542).**
- Any occupational incident, which results in the death of one or more employees or the hospitalization of five or more employees, will be reported by ***OSC*** to the nearest OSHA Area Director within 8 hours of its occurrence.

# 9.0 MEDICAL SURVEILLANCE

Medical monitoring is required by OSHA as a means of monitoring worker exposure to certain toxic substances under OSHA 29 CFR 1910.120(f), OSHA's Hazardous Waste Operations and Emergency Response Standard.

## 9.1 MEDICAL EXAMINATIONS

All ***OSC*** field personnel will be provided with a thorough, initial medical examination to assess fitness for the Project and to provide baseline health data for subsequent reference. Examinations will be repeated every other year, unless abnormal test results, annual "questionnaire" answers or other problems dictate more frequent observation. A Medical Authorization Form is provided in Attachment 1. A copy of the physician's statement certifying each employee's ability to work at task specific operations will be maintained in the Project filed by the SHSO.

During the medical examination employees will be evaluated for their ability to wear respiratory protection, and other protective equipment, such as extensive clothing ensembles. This evaluation will include, at a minimum, an examination of the cardiopulmonary system; including forced vital capacity (FVC) and forced expiratory volume C 1 second (FEV 1.0). When indicated by the physician, other tests of the respiratory and cardiovascular systems will be performed on the basis of an individual's past history, findings of the above below evaluation, and/or the type of equipment the individual may be required to use.

The following protocol is an example of a baseline yearly medical examination:

| Medical Monitoring Protocol | | | | |
|---|---|---|---|---|
| **Exam Components** | **Baseline[1]** | **Annual[2]** | **Interim** | **Exit** |
| Blood and Urine Specimen | Yes | Yes | Yes | Yes |
| Vital Signs | Yes | Yes | Yes | Yes |
| Vision Screening (Includes Peripheral and Color) | Yes | Yes | Yes | Yes |
| Dipstick Urine Analysis | Yes | Yes | Yes | Yes |
| Audiometer | Yes | Yes | No | Yes |
| Spirometry | Yes | Yes | Yes | Yes |
| EKG | 3 | 3 | No | 3 |
| Chest X-Ray | Yes | 3 | No | 3 |
| Review of History | Yes | Yes | Yes | Yes |
| Physical Exam | Yes | Yes | Yes | Yes |
| **Notes:**<br>1. Only do an X-ray if not done within the last 12 months<br>2. Only do an X-ray if not done within the last 3 years<br>3. For medical indications only | | | | |

Medical examinations will be performed on each individual who will enter the contaminated reduction zone or exclusion zone or are performing work that requires respiratory protection:

- At least once every 12 months.

- At the termination of employment or reassignment to an area where the individual would not be covered if that individual has not had an examination within the last six months.
- As soon as possible upon notification by an individual having developed signs or symptoms indicating possible overexposure to any hazardous material, health hazards, or that the individual has been injured or extensively exposed above the PEL (published exposure levels) in an emergency situation. NOTE: Any employee who develops a lost time injury or illness, during the period of his contract, as a result of work in the exclusion zone will be evaluated by the Medical Consultant. The Project Supervisor will be provided with a written statement that indicated the employee's fitness and ability to return to work, signed by the Medical Consultant prior to allowing the employee to re-enter the exclusion zone.
- At more frequent intervals if the examining physician determines that an increase frequency of examinations is required.

## 9.2 NON-CONTRACTOR PERSONNEL MEDICAL MONITORING

Onsite personnel entering the contaminated reduction zone or exclusion zone, and not employed by OSC, will be required to provide documentation that he/she meets the medical surveillance requirements of this HASP; has been certified fit to enter contaminated area; has the require PPE for this project; and has received their 40 hour OSHA training pursuant to OSHA 29 CFR 1926.65. Documentation will be submitted to the SHSO and maintained onsite. Truck drivers for the off-site transportation subcontractors are exempt from this requirement, but will be required to maintain in their cabs at all times when not in support zones.

# 10.0 AIR MONITORING PROCEDURES

The purpose of this air monitoring program is to:

- Identify and quantify airborne contaminants (lead, silica) and total dust particles in order to determine initial exposure assessment as well as verify that established engineering controls and protective measures are effective.
- Document that the level of worker protection is adequate; and
- Access the migration of contaminants to offsite receptors, as a result of site work.

The air monitoring program incorporates both real-time and documentation air monitoring. Real-time air monitoring will be conducted to determine if an upgrade, or an upgrade, of PPE is required while performing onsite work; as well as to implement engineering controls, protocols or emergency procedures if the established action levels are encountered. Documentation from monitoring will be used to ensure that controls are adequate including PPE used is appropriate; as well as assure there is no migration of contamination off site.

The levels of protection site action levels, for each task and operation, are defined in Section 6.1 (Minimum Levels of Protection) of this HASP. If the minimum action levels, defined in this HASP, are exceeded at half the distance to the work zone perimeter location, work must be suspended and engineering controls will be implemented to bring concentrations back down to acceptable levels.

The SHSO will be responsible for implementing this air monitoring program. He/she will have the authority to determine when and if operations should be shut down.

## 10.1 SAMPLING EQUIPMENT

***OSC*** will provide all the necessary sampling devices, pumps, collection media and support equipment to perform the sampling program. The sampling devices and pumps used will be approved for use in combustible and/or flammable atmospheres. Air monitoring equipment will be operated only by Project personnel that are trained in the use of the specific equipment provided and will be under the control of the SHSO.

***OSC*** will utilize the following (or similar) air monitoring equipment, in support of this air monitoring program:

- Particulate monitor (PDR 1000 or Equivalent) for total particulates
- Photo ionization detector (PID) for organic vapor levels
- A 4-gas meter (Co, O2, LEL, and H2S) will be used if a confined space entry if required.

## 10.2 METEROLOGICAL STATION

If necessary a meteorological station will be installed onsite in a location selected by the SHSO and approved by the Owner or Owner's Representative. The meteorological station will be capable of recording, at a minimum, outside air temperatures, wind velocity and wind direction.

## 10.3 CALIBRATION

The calibration methods to be used will follow the manufacturer's recommendations. All calibration data will be recorded on the Air Monitoring Report Form (see Attachment 1).

Any monitoring equipment that is failing to take the proper calibration, or failing to hold a calibration, will be replaced. Work will not be allowed until the malfunctioning piece of equipment has been replaced.

At a minimum, the portable monitors and PID will be calibrated at the beginning of each workday, in accordance with the manufacturer's recommendations. The units will be programmed to measure levels over a 15 minute average time. The monitor will then be carried to each sampling location, in turn, according to the predetermined schedule. Likewise fixed data recording dust monitors shall be placed around the perimeter of the site (upwind, cross and downwind). At each location the unit will be activated to measure a 15 minute average time. The value obtained from the digital read-out will be recorded on the Air Monitoring Report Form.

## 10.4 SAMPLING PARAMETERS and ACTION LEVELS

### 10.4.1 REAL-TIME AIR MONITORING

Sampling at the worksite will be conducted at required. Real-time air monitoring will be conducted during excavation of contaminated soils or sediments, during abatement activities and during other intrusive activities that have the potential to generate dust. Monitor the air, using the same equipment for 10-15 minutes upwind of the work to establish a background level.

Real-time monitoring for airborne dust is deemed appropriate; it will be performed using a PDR 1000 or equivalent meter. Monitoring will be conducted in or near the breathing zones of project personnel, at the perimeter of the work zone and at the perimeter of the property (North South, based on airborne dust concentrations exceeding work zone perimeter action limits. Dust monitoring surveys outside of the work zone will be conducted as necessary during the initial phase of excavation, if visible dust is present and after that, at a frequency based on site conditions.

- During the progress of active remedial work, the air monitoring technician will monitor the quality of the air in and around each active hazardous operation with real-time instrumentation, prior to personnel entering these areas and while work is ongoing.
- Any departures, from the established background level, will be reported to the SHSO prior to entering the area, if initiating work.
- Real-time monitoring will also be conducted at site perimeter locations, including upwind (background level), and three downwind locations. Downwind readings, at the perimeter, will be made when the established action levels have been exceeded at the work zone or at a minimum of twice a day.

The action levels for PPE upgrades are:

- < 1mg/$m^3$ dust – Level D
- > 1mg/$m^3$ dust* sustained for one minute – Level C
- > 2mg/$m^3$ dust sustained for one minute – Stop work, apply water to that materials being handled and/or hauled or haul roads. When the dust levels

drop below the action level, re-start work and continuously monitor for 30 minutes. If the dust levels remain below 2mg/$m^3$, monitoring frequency and dust control methods will return to normal.

The action levels for the work zone perimeter are:

- < 1mg/$m^3$ dust – Continue routine application of the dust control methods.
- > 2mg/$m^3$ dust sustained for one minute – **Stop work and apply water to the materials being handled and/or the haul roads**. Move to the project perimeter and make measurements upwind and downwind. Continue monitoring the Project perimeter until the dust levels have fallen below 1mg/$m^3$ and then return to the work zone perimeter. **When dust levels drop below the action level of 1mg/$m^3$at the work zone perimeter, re-start work and continuously monitor for 30 minutes.** If the dust levels remain below 1mg/$m^3$, monitoring frequency and dust control methods will return to normal. **If it is discovered that the work zone perimeter action limit does not protect against dust excursions at the Project perimeter, reduce the work zone action limit by 25%.**

**NOTE:** Construction activities generate dust which could potentially transport contaminants offsite. There may be situations when visible dust is being generated and leaving the Project site and the monitoring equipment does not measure $PM_{10}$ at or above the action level. Therefore, if the dust is observed leaving the Project site, ***OSC*** will employ additional dust suppression techniques as required.

10.4.2 **AIR MONITORING DOCUMENTATION** (see air monitoring program to be submitted under separate cover)

Air monitoring will be conducted as required by OSHA 29 CFR 1910, at the perimeter, at a minimum of four locations (one upwind, cross wind and downwind). Documentation monitoring will be conducted only during intrusive activities; excavation, consolidation, staging, removal, loading, placing and or any activity which could produce visible emissions.

The four locations will be chosen by the SHSO, according to site activities and the expected wind direction. The perimeter locations will be established and marked with high visibility paint or flagging at approximately equidistant points around the Project site. Samples will be collected daily at regularly scheduled intervals and at the initiation of a new phase of onsite work. Samples will be collected during normal working hours when activities are occurring onsite. At the end of the week, meteorological data will be reviewed; one upwind sample and two downwind samples will be chosen an analyzed.

In addition to perimeter monitoring, documentation samples will be collected to assess worker exposure. Samples will be collected by choosing high risk workers to wear appropriate collection media for pesticides, metals and particulates. High risk workers are those workers who are most likely to encounter contamination on

a particular task. At a minimum, two high risk workers will be chosen to wear collection media for a particular day each week. The media will be analyzed with the documentation air monitoring samples.

## CONFINED SPACE ENTRY AIR MONITORING

If required, confined space entry air monitoring will be conducted as specified in Section11.0 of this HASP.

## REPORTING and RECORD KEEPING

The SHSO will maintain a daily sampling record as part of the air monitoring program (personal, work and perimeter air monitoring). This sample will be recorded on the Air Monitoring Report Form (Attachment 1 of this HASP). Copies of the Air Monitoring Report will be made available upon request.

A written copy of real-time air monitoring results will be submitted at the beginning of the week for the previous week. These results will include an appropriately scaled map of the work area depicting sample location, wind direction and other relevant meteorological data; date, time, analytical results, applicable standards and implemented engineering controls (if necessary).

Documentation samples, chosen for analysis, will be submitted to the laboratory at the end of each work week. Within seven days of shipment, the SHSO will submit a written copy of the documentation air monitoring results for the previous week. These results will include an appropriately scaled map of the work area depicting sample locations, wind direction and any other relevant meteorological data; date, time, and analytical results. The documentation sampling results that are submitted will identify the high risk workers that were chose to wear the appropriate collection media for contaminants, what data media was worn, the task involved, analytical results and any applicable standards.

***OSC*** will retain all Project personnel exposure sampling results in accordance with the requirements set forth in OSHA, Subpart C of 29 CFR 1910.20.

# 11.0 CONFINED SPACE ENTRY PROCEDURES

The following guidelines outline the minimum acceptable criteria that will be utilized by ***OSC*** Project personnel for all confined space entry operations. Note – project permit required confined space work is not anticipated but is included in this HASP if it is encountered.

Project specific confined space entries will be thoroughly reviewed by the SHSO. Personnel entering and working in confined spaces will be required to adhere to the OSHA Permit-Required Confined Space Standard 29 CFR 1910.146 (Publications 58-FR-4549 and 58-FR-34845); the OSHA Construction Standard 1926.21 (B)(6); and the OSHA General Duty Clause. Project personnel are instructed in these OSHA regulations as part of the employee training program, outline in Section 3.0 of this HASP.
The SHSO will be responsible for reviewing the applicable OSHA Protocol will the field team, prior to confined space entry.

## 11.1 DEFINITIONS

### 11.1.1 CONFINED SPACE

OSHA defined a confined space as having the following characteristics:

- The space is large enough that a body can enter it;
- The space has restricted means of entry and exit, and
- The space is not designed for continuous occupancy.

Examples of confined spaces include tanks, underground vaults and excavations that are greater than four feet deep.

There are two types of confined spaces: permit required and non-permit required. The "PRCS Evaluation Procedures and Decision Flow Chart", provided in Figure 2 of this HASP, will be used to evaluate the potential for permit require confined space.

### 11.1.2 PERMIT REQUIRED CONFINED SPACE (PRCS)

OSHA defines a permit required confined space (PRCS) as having one or more of the following hazards:

- The space contains, or has the potential to contain, a hazardous atmosphere. A hazardous atmosphere is defined as any space where the oxygen is below 19.5% or above 23.5%, combustible vapors are above 10% LEL, or high toxic concentrations are present which may cause death, incapacitation or an impaired ability to self rescue.
- The space contains a material that may engulf an entrant.
- The space has an internal configuration that may trap or asphyxiate entrants.
- The space contains any other serious heal, safety or environmental hazard.

All PRCS areas will be identified with a sign reading:

**DANGER**
**PERMIT-REQUIRED CONFINED SPACE**
**DO NOT ENTER**

The above sign will be prominently posted onsite by the SHSO in the immediate vicinity of the PRCS, to inform all Project personnel of the existence, location and the danger posed by the PRCS.

Personnel who will enter a PRCS will have specialized training and a confined space entry permit.

### 11.1.3 NON-PERMIT REQUIRED CONFINED SPACES

OSHA defined a non-permit required confined space as a PRCS in which all serious hazards have been eliminated. Non-permit required confined spaces will be re-evaluated by the SHSO using the "PRCS Evaluation Procedure and Decision Flow Chart" (Figure 2) whenever they or their characteristics change in a way that could lead to reclassification as a PRCS.

## 11.2 PERSONNEL RESPONSIBILITIES

### 11.2.1 ENTRY SUPERVISORS

***OSC*** will designate an entry supervisor to oversee the confined space entry and ensure that personnel engaged in PRCS entry operations will comply with this procedure. Entry supervisors will:

- Verify that all tests, specified by the permit, have been conducted and that all procedure and equipment specified by the permit are in place before endorsing the permit and allowing the entry to begin.
- Terminate the entry and cancel the permit when the entry operations covered by the entry permit have been completed, or whenever a condition that is not allowed under the entry permit arises in or near the PRCS.
- Verify that rescue services are available and that the means for summoning them are operable.
- Remove all unauthorized individuals who enter, or attempt to enter, the PRCS during entry operations.
- Determine that the entry operations are consistent with the terms of the entry permit and that acceptable entry conditions are maintained.

### 11.2.2 ATTENDANTS

The entry supervisor will designate a qualified attendant for each PRCS operation. To be qualified, an attendant must know the hazards that authorized entrants may encounter during an entry (including information on the mode, signs and symptoms, and consequences of exposure) and must be aware of the behavioral symptoms of hazard exposure. Attendants will

- Remain outside the PRCS during entry operations until relieved by another attendant.
- Warn all unauthorized entrants that they must stay clear of the PRCS, or that they must immediately exit if they have entered the PRCS.
- Inform authorized persons, and the entry supervisor, if unauthorized personnel have entered the PRCS.

- Continuously maintain an accurate count of entrants in the PRCS and ensure that the means used to identify authorized entrants accurately identifies the entrants.
- Communicate with authorized entrants, as necessary, to monitor entrant status and to alert entrants of the need to evacuate the PRCS.
- Monitor the activities both inside and outside the PRCS, to determine if it is safe for entrants to remain in the PRCS.
- Immediately order evacuation of the PRCS if a prohibited condition is detected, the behavioral effects of hazard exposure in an authorized entrant are observed, or a situation outside the PRCS is found that could endanger the authorized entrants; or if the attendant cannot effectively and safely perform his/her duties and responsibilities.
- Perform non-entry rescues, as specified by the Confined Space Entry Permit; summon rescue and other emergency services as soon as it is determined that authorized entrants may need assistance to escape from PRCS hazards.

Attendants will NOT, under any circumstances:

- Monitor more than one occupied PRCS at any given time;
- Perform any duty that might interfere with their primary duty to monitor and protect the authorized entrant; or
- Enter the PRCS for rescue purposes.

### 11.2.3 AUTHORIZED ENTRANTS

Authorized PRCS entrants will be identified on each Confined Space Entry Permit. Authorized entrants will:

- Know the hazards, including information on the mode, signs or symptoms, and consequences of exposure.
- Properly use the PPE provided for the PRCS entry.
- Communicate with the attendant, as necessary, so the attendant can monitor entrant status and alert entrants of any need to evacuate the PRCS.
- Evacuate the PRCS and alert the attendant whenever they recognize any warning signs or symptoms of exposure to a dangerous situation; or they detect a prohibited condition; or whenever the attendant or entry supervisor orders the evacuation; or when an evacuation alarm is activated.

## 11.3 TRAINING

All Project personnel will be instructed not to enter PRCSs without the proper permit and without following the procedure and practices outline in this SOP and in the Confined Space Entry Permit. Personnel, who are required to enter a PRCS, or act as an attendant or entry supervisor, will be trained to acquire the understanding, knowledge and skills necessary for the safe performance of their assigned responsibilities and duties. These employees must also be familiar with the kinds of hazards that they may face during an entry and understand the modes, signs, symptoms and consequences of exposure.

Entrants will receive training on:

- The means and methods used to communicate with attendants; as well as the means attendants will use to notify them of emergencies.
- The operation of any specialized equipment that is expected to be used, including monitoring and rescue equipment.
- Evacuation signals and procedures; as well as the need for entrants to notify the attendant and evacuate the PRCS if they detect any dangerous conditions.

Attendants will receive training on:

- The procedures for monitoring inside and outside the PRCS and recognizing the conditions that might be hazardous to entrants;
- Procedures for communicating with entrants;
- Procedures for evacuating entrants from the PRCS and under what conditions evacuation is required;
- Procedures for controlling access to the PRCS and to warn unauthorized people away from the space;
- Their responsibility to remain outside the PRCS during entry, unless they are relieved by another attendant, and
- Non-entry rescue procedures.

Entry Supervisors will receive training on:

- Verifying that the Confined Space Entry Permit has been completed properly;
- Procedures for verifying that all tests specified by the Permit have been conducted;
- Requirements for verifying that all the procedures and equipment specified by the Permit are in place before allowing entry to begin;
- Procedures for determining if conditions are acceptable for entry;
- Authorizing entry operations, and
- Terminating entry.

The above training will be conducted:

- Before the employee is first assigned confined space duties (initial training);
- Before a change in assigned duties;
- Whenever there is a change in permit space operations that presents a hazard about which employee has not previously been trained, and
- Whenever project management, involved regulatory officials, or the project engineer has reason to believe that there are inadequacies in the knowledge or use of these procedures.

When complete, training will be certified by the instructor. The certification will list the names of the personnel presenting and receiving training and the dates of training. Training certification documentation will be maintained as part of the Project file kept at the Project site and in the individual's personnel files in the home office.

## 11.4 PRCS ENTRY PROCEDURE

### 11.4.1 ATMOSPHERIC TESTING

Before any employee enters any confined space, the entry supervisor will test the internal atmosphere with a calibrated, direct reading instrument to determine if acceptable entry conditions exist for the following conditions, in the given order:

| | Condition | Acceptable Parameter(s) |
|---|---|---|
| A. | Oxygen Content | Above 19.5% and Below 23.5% |
| B. | Flammable Gases and Vapors | Less than 10% LEL |
| C. | Potential Toxic Air Contaminants | Below Action Levels for Selected PPE |

Continuous systems which cannot be isolated (i.e. sewers) or activities which generate significant airborne contaminants (i.e. welding) will be continuously monitored during entry, unless forced mechanical ventilation is used and has been shown to maintain an acceptable atmosphere.

### 11.4.2 PRCS ENTRY

The SHSO will use the "PRCS Evaluation Procedures and Decision Flow Chart" (Figure 2) to verify the presence of a PRCS. If it is determined that a PRCS does exist, the SHSO will review the confined space entry procedures with entry personnel; post OSHA required danger signs at the entrances to the PRCS and notify Project personnel of the PRCS location(s); notify offsite emergency response services of the PRCS; and prepare a Confined Space Entry Permit.

#### 11.4.2.1 HAZARD ELIMINATION and CONTROL

The SHSO will determine if hazards can be controlled with continuous forced mechanical ventilation or eliminated through removing potential sources of air contaminants, using proper shoring or sloping, installing guardrails, locking out electrical systems, etc. If potential hazards can be eliminated, then the PRCS will be reclassified as a non-permit confined space. If potential hazards are controlled with continuous forced mechanical ventilation, the non-PRCS entry procedure provided in Section 11.5 of this HASP will be used.

#### 11.4.2.2 CONFINED SPACE ENTRY PERMIT

The entry supervisor will be responsible for completing the Confined Space Entry Permit (sample provided in Attachment 1). All items on the Permit must be completed. The entry supervisor will verify that all entry personnel are aware of the specific hazards that are associated with the PRCS; that all necessary safety equipment and materials are in place; that all emergency response procedures are in place; and that the pre-entry air monitoring results indicate acceptable entry conditions, before signing the permit.

**NOTE**: Only one permit at a time can be used for PRCS Entry.

#### 11.4.2.3 PRE-ENTRY BRIEFING

The entry supervisor will conduct a pre-entry briefing with the attendants and authorized entrants to discuss the requirements of the Permit and to ensure that all involved personnel understand their responsibilities and the specific hazards associated with the PRCS. A pre-entry briefing will be conducted, for each attendant and authorized entrant, prior to entry and whenever new hazards are identified.

#### 11.4.2.4 ENTRY AUTHORIZATION

The entry supervisor will sign the Confined Space Entry Permit after the Permit has been completed, all safety equipment is in place, air monitoring results are acceptable, the pre-entry briefing has been conducted and the rescue procedures have been established. Once the permit has been signed:

- Entrants will wear all necessary safety and rescue equipment;
- The Permit will be posted at , or near, the PRCS entrance, and
- Entry procedures will begin.

#### 11.4.2.5 PERMIT EXPIRATION and CANCELLATION

Each Entry Permit will be valid for one shift only. Expired and canceled Permits will be returned to the Site Superintendant who will file them with the Project documents. Permits will be canceled if:

- A new hazard is identified or encountered;
- An entrant is seriously injured and requires evacuation and/or rescue; or if
- A change in the scope of work required new activities which may create previously unanticipated hazards that could cause serious death or injury.

### 11.5 NON-PRCS ENTRY PROCEDURE

The following procedure may be utilized only if the following conditions have been met:

- The only serious hazard that cannot be eliminated is an actual or potential hazardous atmosphere;
- Continuous forced ventilation is sufficient to prevent a hazardous atmosphere, and
- Monitoring data is available to support the adequacy of ventilation.

If the above conditions of this non-PRCS can be met, then the Entry Permit, attendant and rescue procedures specified in this Section are not required. However, it is still necessary to complete a Confined Space Entry Permit, prior to entry. The Permit will document that the space has been classified as a non-PRCS. **Air monitoring is required during non-PRCS entry**.

All non-PRCS entrants will be required to have completed PRCS training comply with all other applicable HSE regulations and adhere to the procedure below.

- Prior to removing the entrance cover, eliminate the conditions that are making it unsafe to remove an entrance cover (i.e. use non-sparking tools).
- Setup barriers around the opening, to prevent adjacent work activities from endangering the entrants.
- Conduct pre-entry air monitoring, per Section 11.4.1 of this HASP.

- If a hazardous atmosphere is encountered or anticipated, setup force ventilation. Continue the ventilation for as long as the entrants are in the space.
- Evacuate the entrants if a hazardous atmosphere develops and implement corrective actions to prevent reoccurrence.
- Check the non-PRCS box of the Confined Space Entry Permit and document the following data: date of entry, location of the space, description of the work to be conducted within the space and pre-entry monitoring results. The person authorizing the non-PRCS procedure will sign the Permit in the space provided.

## 11.6 RESCUE/EMERGENCY RESPONSE

### 11.6.1 ONSITE RESCUE/EMERGENCY RESPONSE TEAMS

Each member of the onsite rescue/emergency response teams will be provided with, and trained in the proper use of, PPE and the equipment necessary for making rescues from PRCSs. Each member of the onsite rescue/emergency response team will receive the same level of training as the authorized entrants and will be trained in basic first aid and CPR. A provision will be made whenever the team is on call; at least two members of the team will have current certification in first aid and CPR.

At least once every 12 months, personnel on the rescue team will practice making PRCS rescues. Practice drills will simulate emergencies and rescue operations; as well as involve the removal of dummies, manikins or people from the simulated PRCSs. The simulated PRCS will mock the configuration and hazards of the PRCS from which the rescue is to be performed.

### 11.6.2 OFFSITE RESCUE and EMERGENCY SERVICES

Offsite rescue and emergency service personnel will be informed by the SHSO of the hazards they may confront when called to the jobsite to perform services. The rescue/emergency service personnel will be provided access to all Permit spaces from which the rescue may be necessary, so that the emergency responders can develop appropriate rescue plans and conduct rescue operations.

### 11.6.3 NON-ENTRY PROCEDURES

For facility non-entry rescues, retrieval systems or methods will be used whenever an authorized entrant enters a PRCS, unless the retrieval equipment would increase the overall risk of entry or would not contribute to the rescue of the entrant.

Each authorized entrant will use a chest or full body harness, with a retrieval line attached at the center of the entrant's back near shoulder level or above the entrant's head. Retrieval lines will be attached to a mechanical device or a fixed point outside the Permit space, in such a manner that rescues can begin as soon as the rescuer becomes aware of the necessity. The mechanical device will be ready to retrieve personnel from vertical PRCSs more than five feet deep.

## 12.0 DECONTAMINATION PROCEDURES (As required for indentified regulated areas)

As required, decontamination of equipment and personnel will be performed to limit the potential migration of contaminants outside the Project limits (the estimated waste/excavation boundary). All equipment and personnel will be decontaminated before leaving the property.

Personnel and equipment decontamination procedures to be employed when exiting contaminated work areas at this Project site are detailed in the following subsections.

### 12.1 PERSONNEL HYGENE and DECONTAMINATION

All Project personnel will minimize contact with contaminants in order to minimize the need for extensive decontamination. All personnel will be made aware of any personal habit that may allow contaminants into or onto their body. All personnel will check that regularly worn PPE (i.e. hardhats and liners, eye protection, etc.) is clean and in good condition. Any products used for personal consumption are prohibited in any work area. Break areas will be limited to specific areas where eating, drinking, smoking, etc. and the storage of these materials will be allowed.

No PPE will be removed from the designated contaminated work area without proper decontamination or disposal. All personnel leaving the contaminated work area will pass through a contamination reduction zoned where they will remove their PPE and thoroughly wash/rinse any exposed skin with water and biodegradable soap before leaving the Project site. A personnel decontamination trailer will be provided for use by al, Project personnel exiting the exclusion zone.

Personnel decontamination equipment consists of two wash tubs (boot wash), trash cans with liners (for disposable PPE), 5 gallon buckets (glove wash/rinse and respirator wash/sanitize/rinse), brushes, water supply and detergent. Boot, glove and respirator cleaning and rinsing solutions will be changed at least daily.

A standard, typical personnel decontamination sequence is presented below.

Step 1: Scrape the gross contamination from boots and outer gloves. Wash them using soap in a water solution and rinse with water into a designated container in the contamination reduction zone.
Step 2: Remove the tap from and around boots an outer gloves and deposit in a collection drum (if disposable) or store on a rack (if reusable). Remove the over boots and outer gloves and place in a collection drum (if disposable) or wash and place on a rack (if reusable).
Step 3: Remove respiratory cartridges and place in a collection drum.
Step 4: Remove disposable coveralls and place in a collection drum. Remove boots and store in an appropriate location. Remove disposable inner gloves and dispose of them in a collection drum.
Step 5: Remove hardhat and safety glasses: Decontaminate as necessary (wash with sanitizing solution [MSA sanitizing solution or equivalent], rinse with potable water and allow to dry at the end of each day).

Step 6: Remove respirator, if used, and deposit in a plastic liner. Avoid touching face with fingers. Respirators will be washed in a sanitizing solution (MSA sanitizer or equivalent), rinsed with portable water and allowed to air dry at the end of each day.
Step 7: Thoroughly wash and rinse any exposed skin with water and biodegradable soap using bucket 1. Rinse in bucket 2. Re-rinse in bucket 3. Shower and launder all personal clothing as soon as possible upon completing daily activities.

Personnel hygiene, hand and face washing, following decontamination will take place in the Project support area.

## 12.2 EQUIPMENT DECONTAMINATION

The SHSO will be responsible for inspecting decontaminated vehicles, equipment and material contaminated work areas, to ensure proper decontamination. The SHSO will certify in writing that each piece of equipment utilized in the exclusion zone has been properly decontaminated.

Decontamination personnel will be required to use Modified Level D PPE as specified in Section of this HASP. The standard operating procedure for the use of high pressure washers, proved in Section of this HASP, will be strictly followed to prevent injury.

### 12.2.1 HEAVY EQUIPMENT DECONTAMINATION

As a general practice, equipment, such as excavators, bulldozers, etc. will remain within the Project controlled work zones for the duration of the excavation activities. This ensures the minimization of the potential cross contamination or migration of contaminants outside the Project limits. In addition, the sequence of excavation has been designed to avoid the movement of machinery and personnel over areas within the work zones that have been excavated.

Generally heavy equipment, and large materials used in potentially contaminated areas equipment, will be contaminated as outlined below.

- Conduct gross removal of solids at point use.
- Degrease as necessary.
- Move to the equipment decontamination pad for decontamination via pressure washing.
- Collect and handle resultant liquids/solids.

### 12.2.2 TOOLS and SMALL EQUIPMENT DECONTAMINATION

Tools and smaller equipment that may have come in contact with potentially contaminated materials will be decontaminated using the procedures outlined below.

- Flush and wipe components to remove debris and other gross contamination.
- Clean with potable water and non-phosphate detergent using a brush or high pressure washer, as necessary, to remove particulate matter and surface films.
- Rinse thoroughly with potable water.
- Allow to air dry for as long as possible.

### 12.2.3 NON-DISPOSABLE SAMPLING EQUIPMENT

Non-disposable sampling equipment that may have come into contact with potentially contaminated materials will be decontaminated prior to collecting each sample, according to the procedures listed below.

- Clean with potable water and non-phosphate detergent using a brush, if necessary, to remove all visible foreign matter.
- Rinse thoroughly with potable water.
- Rinse thoroughly with de-ionized water.
- Visually inspect the openings and treads for solid materials.
- Allow to air dry as long as possible on a clean polyethylene sheet or aluminum foil.
- Wrap in clean polyethylene sheet or aluminum foil until needed.

## 12.3 DISPOSITION of DECONTAMINATION WASTES

All equipment and wash used for decontamination will be decontaminated or disposed of properly. All aqueous liquids generated in the personnel and equipment decontamination process will be collected, characterized and appropriately disposed of. All disposable PPR will be containerized in drums and properly disposed of.

## 12.4 MANAGEMENT of DECONTAMINATION WATERS

Wash water will be contained, collected, filtered (per contract specifications) and tested. Handling, reuse and disposal of filtered water is dependent on test results. Likewise, mud/sediment/debris from the wash pad and will be collected tested and characterized for handling.

# 13.0 EMERGENCY EQUIPMENT and FIRST AID REQUIREMENTS

Emergency and first aid equipment to be maintained onsite will include the items listed below.

- The active work area will be provided with approved, portable, emergency eye wash and shower units in accordance with ANSI Standard Z358.1 and a minimum rating of 2A-10 B:C type dry chemical fire extinguishers.
- At least one industrial first aid kit and stretcher will be provided and maintained fully stocked at an easily accessible, uncontaminated location chosen by the SHSO onsite. Additional first aid kits will be provided in the event active work areas are very isolated or separated, therefore making the use of one first aid kit impractical.
- At least one commercial snakebite kit will be provided and maintained in an easily accessible, uncontaminated location onsite, to be determined by the SHSO.
- First aid and CPR kit locations will be specifically marked by the SHSO and stocked with adequate water and other supplies necessary to cleanse and decontaminate burns, wounds or lesions. First aid stations will also be supplied with a buffer solution for testing acid and caustic burns.
- At least two first aid technicians, certified by the American Red Cross or another approved agency, will be onsite at all times.
- 2A-10 B:C type dry chemical fire extinguishers will be provided at all Project site locations where flammable materials present a fire risk.

Agencies and medical facilities that need to be contacted in the event of an onsite emergency, as well as directions to the nearest hospital, are identified in Contact Information portion of this HASP. The tables stating the emergency contact information and hospital location should be posted in a prominent location(s) onsite.

If a site worker becomes injured or ill, Red Cross first aid procedures will be followed. First aid, or other appropriate initial reactions, will be provided by the certified first aid technician that is closest to the incident.

NOTE: When protective clothing has been grossly contaminated during an incident, contaminants may be transferred to the treatment personnel or the wearer and cause injuries. Unless severe medical problems have occurred simultaneously with splashes, protective clothing should be washed off as quickly as possible and removed. If the worker can be moved, he/she will be taken to the personnel decontamination station where decontamination procedures, additional first aid or preparation for transport to the hospital will be accomplished. In the event that the victim could not be decontaminated, the rescue service provider must be notified of the situation.

If the injury to the worker is of a chemical nature, the procedures listed below are to be followed.

- Eye Exposure: If contaminated solids or liquids get into the eyes, wash eyes immediately at the emergency eyewash station using large amounts of water while lifting the lower and upper eyelids occasionally. Wash for at least 15 minutes. Obtain medical attention.
- Skin Exposure: If contaminated solids or liquids get on the skin, promptly wash the contaminated skin using soap and water. Immediately obtain medical attention when exposed to concentrated solids or liquids.

- Respiratory Exposure: Immediately move the victim to fresh air and begin CPR. Obtain immediate medical attention.
- Ingestion Exposure: Identify what contaminant was swallowed. Follow the appropriate procedure and obtain medical attention as soon as possible.

**NOTE**: Any person who is transported to the hospital for treatment related to an exposure injury will take with them the appropriate information (i.e. MSDSs) on the chemical(s) to which he/she has been exposed. MSDSs for chemicals known or suspected to exist onsite will be stored in ***OSC***'s Project field office and maintained by the SHSO.

# 14.0 EMERGENCY RESPONSE and CONTINGENCY PLAN

The following Emergency Response and Contingency Plan considers and recommends the following:

- Preventative measures;
- Personnel training and regular HSE meetings conducted to reduce the likelihood of incidents;
- The measures mitigated to limit the scope of any incident, and
- Contingency actions to respond to and remedy the effects of incidents.

## 14.1 TYPES of EMERGENCIES

A. Controllable: Minor fire, mechanical problem or any disturbance from normal operation that affects the immediate area.

B. Minor: A condition that could endanger life and property on the Project site that required outside help for correction or control, but generally can be maintained.

C. Major: Any condition deemed at the time uncontrollable, that could endanger life and property on the Project site; as well as adjacent properties. This emergency requires considerable outside help from any source.

## 14.2 REPORTING AN EMERGENCY

A. Controllable: No need to report this type of an emergency. Project personnel will notify the SHSO of the incident.

B. Minor: The SHSO will immediately notify the Site Superintendant and state the following:

- Name
- Location of emergency
- Describe problem
- State whether fire department is needed
- State whether emergency personnel are needed.

The Site Superintendant will react as follows:

- Call the fire department if required
- Call personnel from the emergency phone list.

C. Major: The SHSO will immediately notify the Site Superintendant stating the same points that are listed under a minor emergency. However, with a major emergency the SHSO must state that this is a major emergency. The Site Superintendant will react as follows:

- Call fire department
- Call rescue personnel
- Call police
- Call contracted emergency response coordinator
- Call ***OSC***'s Corporate HSE Director

## 14.1 PRE-PLANNING

All work will be coordinated with the Owner or Owner's representative. Arrangements for emergency services will be made prior to initiating onsite operations. Emergency response procedures will be covered as part of the Project personnel's training. This training will include, but not be limited to:

- Emergency chain of command;
- Communication methods and signals;
- Location of phones and emergency numbers;
- Use of emergency equipment;
- Evacuation and emergency procedures;
- Offsite support;
- Site-specific hazards;
- Decontamination procedures;
- Standard operating procedures, and
- Location and use of the first aid equipment.

## 14.3 EMERGENCY CHAIN OF COMMAND

In the event of emergency personnel will immediately notify the SHSO, using available communications (see Section 14.3). The SHSO will make a rapid assessment of the situation and take appropriate action which can include (depending on the circumstances) notifying the Project Manager, Site Supervisor, Corporate HSE Director and Owner/Owner's representative of the situation; initiating engineering controls (i.e. dust suppression, ventilation, etc.); ceasing all work; ordering evacuation of the work zone; implementing emergency altering and response procedures; requesting emergency medical treatment; and/or administering first aid.

### 14.3.1 EMERGENCY RESPONSE TEAMS

The emergency response team will consist of individuals with the following titles or responsibilities:

- Initial Incident Coordinator
- Project coordinator
- HSE officer

## 14.2 FUNCTIONS of EMERGENCY REPONSE TEAM MEMBERS

The Initial Incident Commanders' responsibilities are comprised of the below tasks. This position will be occupied by the Site Superintendant.

- Coordinate response activities with the appropriate personnel.
- Responsible for the overall direction of the emergency staff.
- Arrange for notification of the appropriate individuals, in the case of an emergency.
- Act in an advisory capacity on policy matters.
- Inform the appropriate local government officials of the safety aspects of the remedial program, prior to Project startup.
- Act as the liaison with governmental officials, during an emergency.

- Minimize all public contact.
- Depending on the wind conditions, coordinate the notification of neighboring businesses and residents with local authorities.
- Ascertain the extent of air and sewage contamination and notify the proper authorities.

The Project Coordinator position will be occupied by the Project Foreman and will be require the below responsibilities.

- Coordinate with the police authorities, with respect to notification of neighbors.
- Arrange and provide for the equipment and materials needed to cope with emergency conditions. This equipment will include showers, eye wash stations, firefighting equipment capable of extinguishing chemical fires, first aid supplies and construction equipment.
- Direct onsite questions from the public to the appropriate individuals.
- Notify the contracting officer of any scheduled meetings with local government officials.

The Site HSE Officer position will be filled by the SHSO and will be comprised of the below responsibilities.

- Responsible for the safety of Project personnel at the emergency scene.
- Recommend the proper PPE and equipment; as well as the proper firefighting techniques.
- Test areas for levels of chemicals.
- Maintain contact with the Project field office.
- Establish and maintain crowd control around the scene, until local authorities arrive.
- Have a current inventory of PPE that is available at the Project site. Manufacturer's specification sheets will be in the Project field office for the various types of protective clothing and equipment available at the Project site, for emergencies.

### 14.3 SHSO's ROLE IN EMERGENCIES

In the event of a spill or release, the SHSO will determine whether there has been any human exposure to either the Project personnel or others. He will also attempt to determine the levels of exposure, when feasible.

The SHSO will consult with the physician to determine if any health effects are to be expected. If appropriate, medical treatments will be recommended.

### 14.4 COMMUNICATION METHODS and SIGNALS

For a detailed Site Communication Plan, please see Section 5.2 of this HASP, titles Site Control.

## 14.5 EVACUATION

Emergency escape routes will be designated by the SHSO for use in situations where rapid egress from the exclusion zone is required. Project personnel will be notified of the specific evacuation routes and re-assembly areas during the daily toolbox HSE meetings.

An emergency evacuation alarm (air or vehicle horn) will be kept onsite at all times. The audible evacuation signal will be short bursts on the horn (one second burst followed by one second interval) and will be repeated until the site is evacuated. After the work area is cleared, Project personnel will meet at an upwind re-assembly facility area that the SHSO will designate. The emergency alarm will be sounded in the event of any serious problems or emergency (fire, medical) that requires the assistance of Project personnel or the evacuation of the construction team. In situations where an onsite emergency results in evacuation, personnel will not be permitted to re-enter until:

- The conditions resulting in the emergency have been corrected;
- The hazards have been reassessed;
- The HASP has been reviewed, and
- Project personnel have been briefed on any changes in the HASP.

## 14.6 EMERGENCY SERVICES and EMERGENCY VEHICLE ACCESS

The emergency telephone numbers, listed in the Contact Information section of this HASP, will be posted at each project site telephone. Directions to the hospital will also be posted at this location.

In the event that emergency service vehicles need access to a location that is blocked by onsite operations, those operations (equipment, materials, etc.) will be immediately moved to allow vehicle access. The emergency crews will be quickly briefed as to the site conditions and hazards by the SHSO. All vehicles and personnel will be decontaminated prior to leaving the site.

## 14.7 WEATHER

In the event of severe weather (lightning, high winds, etc.), the SHSO will notify the Project personnel. As the storm approaches, all work will stop, loose object will be secured and Project personnel will take shelter at a location pre-arranged by the SHSO. After the severe weather has passed, and prior to work startup, the SHSO will inspect the site for hazards.

## 14.8 SPILL CONTAINMENT

A site specific Spill Containment Plan is provided as an attachment to this HASP.

## 14.9 PERSONNEL INJURIES

In the event of personal injuries the below procedures will be enacted, in the given order.

A. Initial Alarm and First Aid: Once an injury is observed, Project employees will rapidly get the attention of nearby workers; immediately act to protect the injured person, if a life threatening situation; render the appropriate first aid; and warn unsuspecting people of the potential hazard.

B. Notify the SHSO and Corporate HSE Director: Using the available personal radio communications, or other rapid communication methods, the SHSO and Corporate HSE Director will be notified of the situation, the identity of the person, the type of injury and the Project site location where the injury occurred.

C. Emergency Services: The SHSO will immediately assess the situation and, if necessary, contact the designated hospital, and any necessary emergency services, of the situation.

D. Follow-Up: The SHSO will determine why the injury occurred and will take the appropriate steps to prevent a similar occurrence. The events associated with the injury will be recorded in the Project site logbook.

#### 14.9.1 PERSONNEL INJURY IN THE EXCLUSION ZONE

Upon notification of an injury in the exclusion zone, the designated emergency signal will be sounded. All Project personnel will assemble at a pre-arranged location. A rescue team, comprised of the SHSO and other Project personnel who have received the proper training, will enter the exclusion zone (if required) to remove the injured person to the boundary of the zone. The SHSO will evaluate the extent of the injury and the person will be decontaminated to the extent possible, prior to movement to the support zone. The appropriate first aid will be administered and the ambulance and designated medical facility will be contacted, if required. Nobody will re-enter the exclusion zone until the cause of the injury or symptoms of the illness have been determined.

#### 14.9.2 PERSONNEL INJURIES IN THE SUPPORT ZONE

The SHSO, upon notification of the injury, will assess the severity of the situation. Operations will continue if the cause of the injury, or the loss of the injured person, does not affect the performance of Project personnel. The appropriate first aid will be administered, as needed. If the injury increases the risk to other personnel, the designated emergency signals will be used and all Project personnel will move to a pre-designated location for further instructions. Activities onsite will cease until the added risk is removed or minimized.

### 14.10 PPE FAILURE

While in the exclusion zone, if a site worker experiences a failure or alteration of protective equipment that affects its protection factor, the person and his buddy will immediately leave the exclusion zone and notify the SHSO. Re-entry will not be permitted until the PPE has been replaced or repaired and the affected areas of the person's body have been decontaminated (if applicable).

### 14.11 FIRE/EXPLOSION

The following contingency plan will be implemented in the event of a fire at the Project site.

A. Initial Alarm: Upon observation of an onsite fire, personnel will immediately notify the SHSO, or his designated alternate. No attempt will be made to extinguish the fire, prior to sounding the alarm.
B. Control and/or Extinguish Small Fires: Most small fires can be easily and promptly suppressed with available onsite equipment. Without risking personal injury, an attempt will be made to control or extinguish small fire(s), utilizing ABC-type fire extinguishers. Do not use water, unless is wood or paper files.
C. Notify Local Fire Company: The SHSO will immediately assess the situation and, if deemed necessary, notify the local fire company (by calling 911) of the location and type of fire/explosion.
D. Follow-Up: The SHSO will determine why the fire or explosion occurred and will take the appropriate steps to prevent a similar reoccurrence. The events associated with the fire/explosion will be recorded in the Project site logbook.

An Incident Report Form (sample provided in Attachment 1 of this HASP) will be completed by the SHSO and submitted to the Project Manager and Corporate HSE Director within 24 hours of the fire/explosion. The Owner will receive a copy of the Incident Report Form within 48 hours of the fire.

## 14.12 EQUIPMENT FAILURE

The SHSO will be notified if any onsite equipment, other than PPE, fails to operate. The SHSO will determine the effect of this failure on the continuing operations of the site. If the failure affects the Project personnel or prevents the completion of work tasks, then all personnel will leave the exclusion zone until the situation is evaluated and all appropriate actions are taken.

## 15.0 HEAT and COLD STRESS MONITORING

The SHSO will visually monitor the Project personnel for signs of heat or cold overexposure. The SHSO will be responsible for implementing the following program when the ambient air temperature exceeds 75°F (heat stress monitoring) or drops below 32°F (cold stress monitoring).

### 15.1 SYMPTOMS OF HEAT and COLD OVEREXPOSURE

A. Heat – Weakness, dizziness, fainting, nausea, headaches, cool and clammy skin, profuse sweating, slurred speech, weak pulse and dilated pupils.

B. Cold – Shivering, apathy, decreased muscle function, decreased level of consciousness, glassy stare, frostbite and decreased vital signs.

### 15.2 HEAT STRESS MONITORING

Project personnel who wear PPE allow their body heat to be accumulated with and elevation of the body temperature. Heat cramps, heat exhaustion and heat stroke can be experienced which, if not remedied, can threaten health and life. A current edition of the American Red Cross Standard First Aid book or equivalent will be maintained onsite at all times so that the SHSO and all Project personnel will be able to recognize the symptoms of heat emergencies and be capable of controlling them.

When PPE is worn (especially levels A, B and C) the suggested guidelines for ambient temperature and maximum wear time per excursion are as follows:

| Ambient Temperature (°F) | Maximum Wear Time Per Excursion (Minutes) |
|---|---|
| Above 90 | 15 |
| 85 – 90 | 30 |
| 80 – 85 | 60 |
| 70 – 80 | 90 |
| 60 – 70 | 120 |
| 50 - 60 | 180 |

On method for measuring the effectiveness of employees' rest-recovery regime is by monitoring their heart as follows:

A. During a 3 minute period, count the pulse rate for the last 30 seconds of the first minute, the last 30 seconds of the second minute and the last 30 seconds of the third minute.

B. Double that count.

C. If the recovery rate during the last 30 seconds of the first minute is at 110 beats/minute or less and the deceleration between the first, second and third minute is at least 10 beats/minute, the work recovery regime is acceptable. If the employee's rate is above the specified, a longer rest period is required, and accompanied by and increased intake of fluids.

In the instance of cramps or heat exhaustion, Gatorade, or its equivalent, is suggested as part of the treatment regime. The reason for this type of refreshment is such that they replenish the much needed electrolytes to the body. Without these electrolytes, the bodies systems cannot function properly, thereby increasing the hazard.

Liquid refreshments will be stored, in plastic squeeze bottles, in a cooler at the edge of the decontamination zone. Each bottle will be marked with an individual's name. Disposable cups with lids and straws may be used in place of the bottles. Prior to drinking within the decontamination zone, the Project personnel will follow the decontamination procedures outline below.

- Wash and rinse outer gloves and remove them.
- Remove hardhats and respirators and place on a table.
- Remove inner gloves and place on a table.
- Wash and rinse hands and face.
- Carefully remove the properly labeled bottle or cup from the cooler ensuring that outer clothes do not touch any bottles, cups, etc.
- Used bottles or cups will not be returned to the cooler, but will be replaced in a receptacle or container to be cleaned or disposed of.
- Put back on respirators and hardhats and don a new pair of disposable inner gloves prior to re-entering the hazardous zone.

When personnel are working in situations where the ambient temperatures and humidity are high and especially in situations where protection Levels A, B and C are required, the SHSO must assure that all employees drink plenty of fluids (Gatorade or its equivalent); assure that frequent breaks are scheduled, so overheating does not occur; and revise work schedules, when necessary, to take advantage of the cooler parts of the day (i.e. 5:00am – 1:00pm, and 6:00pm – nightfall).

## 15.3 COLD STRESS MONITORING

Whole body protection will be provided to all Project personnel who will have prolonged exposure to cold air. The appropriate PPE will be provided onsite, and provided to Project personnel, to prevent cold stress. The SHSO will use the equivalent chill temperature when determining the combined cooling effect of wind and low temperatures on exposed skin or when determining the proper clothing insulation requirements. The following dry clothing will be provided, as deemed necessary, by the SHSO.

- Appropriate underclothing (wool or other)
- Outer coats that repel wind and moisture
- Face, head and ear coverings
- Extra pairs of socks
- Insulated safety boots
- Wool glove liners or wind and water repellant gloves

Project personnel who are working in continuous cold weather are required to warm themselves on a regular basis in the onsite hygiene facility. Warm, sweet drinks will be provided to Project personnel to prevent dehydration. The SHSO will follow the work practices and recommendations for cold stress threshold limit values as stated by the current edition of the Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices by the American Conference of Governmental Industrial Hygienists, or use equivalent cold stress prevention methods.

# 16 LOGS, REPORTS and RECORDKEEPING

The following reports will be prepared and submitted as indicated below. Copies of the field logs, permits and forms required for this Project are provided in Attachment 1.

| Type | Frequency |
|---|---|
| Daily HSE Report | Daily |
| Employee Meeting Record | As needed; one per Safety meeting |
| Site Log | Daily |
| Security Log | Per Work Plan |
| Confined Space Entry Permit | As needed; one per entry |
| Air Monitoring Report | Daily for Previous day's monitoring events |
| Incident Report | As needed; within 24 hours |
| Spill Report | As needed; within 24 hours |

The above logs and reports will be prepared by the SHSO, or his designated representative, at the frequency noted above. Completed logs and reports will be maintained in the Project filed onsite during construction.

# 17 "WHAT NEXT" PROGRAM and SAFETY TASK ANALYSIS CARD PROCESS

## 17.1 OVERVIEW

The "What Next" Program and Safety Task Analysis Card (STAC) processes are required components of all ***OSC*** projects.

The "What Next" Program is a proactive program intended to identify the most likely scenarios for incidents; identify corrective actions; and incorporated observations on the STAC.

The STAC is a pre-printed, tri-fold card that must be completed by each employee prior to every work shift. The completed card will be used by the employee as a reference tool throughout their work shift. The STAC card will be updated as needed throughout the Project, to address new work tasks and/or potential hazards.

## 17.2 "WHAT NEXT" PROGRAM

The "What Next" Program is designed to identify and correct hazards before they become a problem. Before work begins:

- Review the Project requirements and the intended outcome;
- Tour the Project site with the goal of identifying hazards;
- Identify the 3 or 4 most likely areas where incidents could occur;
- Identify corrective actions and/or corrective behaviors;
- Train Project personnel on the use if the STAC cards ;
- Incorporate prioritized hazards and corrective actions/behaviors onto the STAC card;
- Measure progress and report at the HSE tailgate meetings, and
- Report progress and prioritize opportunities monthly.

When observed behaviors become habits or all corrective actions are complete, replace the issue or hazard with the next highest priority issue and update the STAC cards. Repeat this process as necessary.

## 17.3 SAFETY TASK ANALYSIS CARD (STAC) PROCESS

The STAC will be used by OSC employees and subcontractors at the Project site to identify obvious or potential hazards. STAC's will be used in addition to Safe Work Permits and/or approved work procedures. The STAC is designed to be an ongoing learning tool. By breaking jobs into small parts, workers can identify hazards and eliminate or control them.

The STAC must be completed by each employee prior to every work shift. This is a zero tolerance issue. Project personnel found to be working on a task without a properly completed STAC will be instructed to leave the site.

Project supervisors and/or the SHSO will review the scheduled work tasks with employees at the tailgate safety meetings and will assist Project personnel in the preparation of daily STAC's.

## 17.4 INSTRUCTIONS FOR COMPLETING THE STAC

### FRONT of CARD – PANEL 1

Instructions for completing this section of the STAC (front of card – panel 1) are listed below.

- Enter the date and time you complete this card.
- Write your name.
- Write the name of the Owner's site representative.
- Identify the location of where you will be working.
- Have you been trained in this area? Work cannot proceed until the "Yes" box has been checked.
- What are you doing today? List your planned work tasks.
- Check the appropriate boxes if permits are required.
- Was there a pre-job meeting held? Check the appropriate box.
- Did you turn in the require permits? Check the appropriate box.
- LOPC = Loss of Primary Contaminant (spill).



**ONTARIO SPECIALTY CONTRACTING, INC.**

**CURRENT PROJECTS**
**Zero Injuries, Incidents and LOPCs**

**SAFETY TASK ANALYSIS CARD**

Date: _____ Time: _____
Name: _____
Owner Rep: _____
Location: _____

Have you been trained for this area? ☐Yes ☐No ☐N/A

Job Description: _____
_____
_____

Permits
1. Safe Work? ☐Yes ☐No ☐N/A
2. Confined Space? ☐Yes ☐No ☐N/A
3. Hot Work? ☐Yes ☐No ☐N/A
4. Other? _____
_____

Pre-Job Meeting Held? ☐Yes ☐No ☐N/A
Permits Turned In? ☐Yes ☐No ☐N/A

**Be Alert for Slip, Trip and Fall Hazards**
***Make At Least One Observation Today***

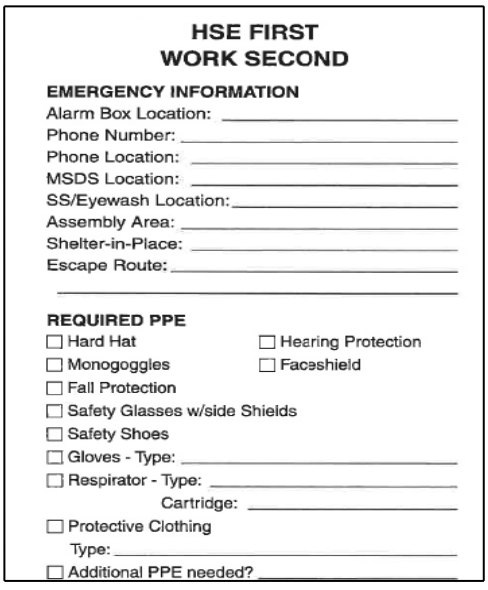
### FRONT of CAR – PANEL 2

Instructions for completing this section of the STAC (front of card – panel 2) are listed below.

- Insert all of the required emergency information.
- Check your required PPE. Indicate the type of equipment where it is required, or insert N/A if not applicable.

***DO NOT LEAVE BLANK SPACES ON THE CARD.**

**Write "N/A" if something I not applicable for this project.**



**HSE FIRST**
**WORK SECOND**

**EMERGENCY INFORMATION**
Alarm Box Location: _____
Phone Number: _____
Phone Location: _____
MSDS Location: _____
SS/Eyewash Location: _____
Assembly Area: _____
Shelter-in-Place: _____
Escape Route: _____
_____

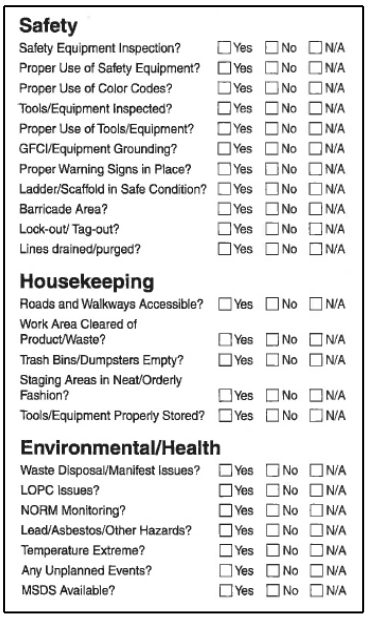
**REQUIRED PPE**
☐ Hard Hat ☐ Hearing Protection
☐ Monogoggles ☐ Faceshield
☐ Fall Protection
☐ Safety Glasses w/side Shields
☐ Safety Shoes
☐ Gloves - Type: _____
☐ Respirator - Type: _____
Cartridge: _____
☐ Protective Clothing
Type: _____
☐ Additional PPE needed? _____
_____

**It's All About You**

## Front of Card – Panel 3

Instructions for completing this section of the STAC (front of card – panel 3) are listed below.

- Check the box for each line item that is listed. Work activities cannot proceed until all boxes have been checked "Yes" or "N/A".
- GFCI = Ground Fault Circuit Indicator
- LOPC = Loss of Primary Control (spill)
- MSDS = Material Safety Data Sheet
- NORM = Naturally Occurring Radioactive Material



**Safety**

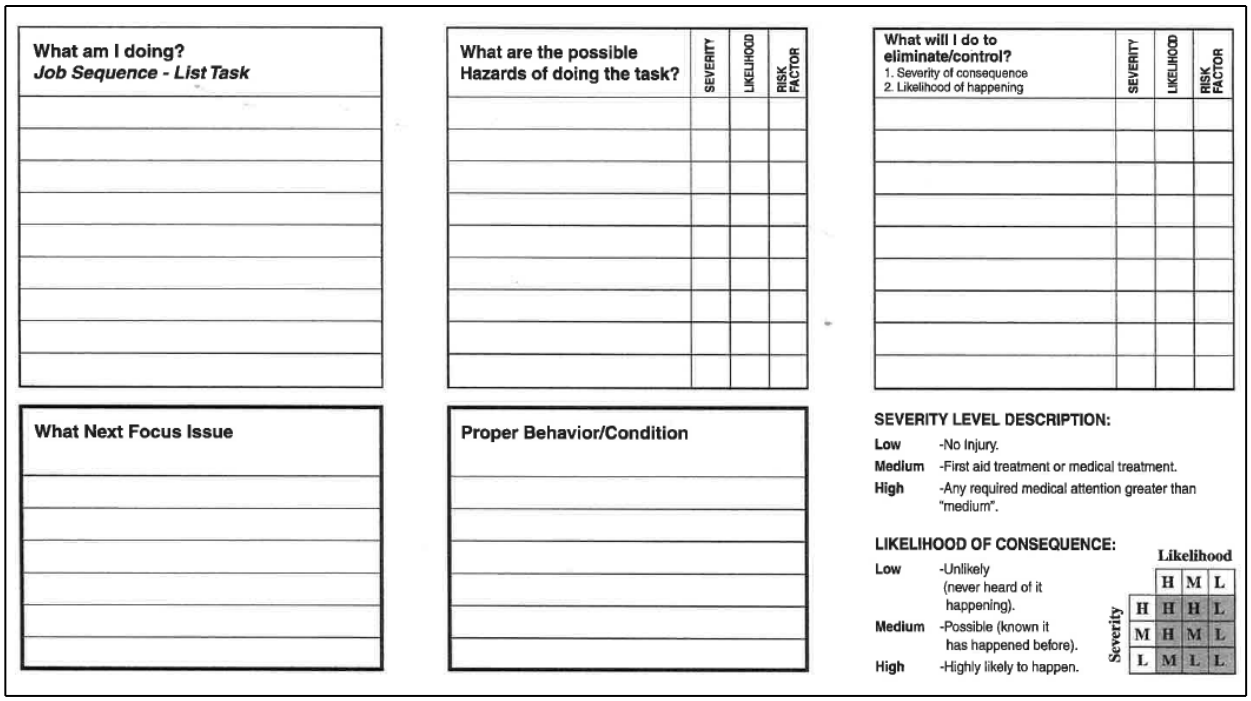
| | | | |
|---|---|---|---|
| Safety Equipment Inspection? | ☐ Yes | ☐ No | ☐ N/A |
| Proper Use of Safety Equipment? | ☐ Yes | ☐ No | ☐ N/A |
| Proper Use of Color Codes? | ☐ Yes | ☐ No | ☐ N/A |
| Tools/Equipment Inspected? | ☐ Yes | ☐ No | ☐ N/A |
| Proper Use of Tools/Equipment? | ☐ Yes | ☐ No | ☐ N/A |
| GFCI/Equipment Grounding? | ☐ Yes | ☐ No | ☐ N/A |
| Proper Warning Signs in Place? | ☐ Yes | ☐ No | ☐ N/A |
| Ladder/Scaffold in Safe Condition? | ☐ Yes | ☐ No | ☐ N/A |
| Barricade Area? | ☐ Yes | ☐ No | ☐ N/A |
| Lock-out/ Tag-out? | ☐ Yes | ☐ No | ☐ N/A |
| Lines drained/purged? | ☐ Yes | ☐ No | ☐ N/A |

**Housekeeping**

| | | | |
|---|---|---|---|
| Roads and Walkways Accessible? | ☐ Yes | ☐ No | ☐ N/A |
| Work Area Cleared of Product/Waste? | ☐ Yes | ☐ No | ☐ N/A |
| Trash Bins/Dumpsters Empty? | ☐ Yes | ☐ No | ☐ N/A |
| Staging Areas in Neat/Orderly Fashion? | ☐ Yes | ☐ No | ☐ N/A |
| Tools/Equipment Properly Stored? | ☐ Yes | ☐ No | ☐ N/A |

**Environmental/Health**

| | | | |
|---|---|---|---|
| Waste Disposal/Manifest Issues? | ☐ Yes | ☐ No | ☐ N/A |
| LOPC Issues? | ☐ Yes | ☐ No | ☐ N/A |
| NORM Monitoring? | ☐ Yes | ☐ No | ☐ N/A |
| Lead/Asbestos/Other Hazards? | ☐ Yes | ☐ No | ☐ N/A |
| Temperature Extreme? | ☐ Yes | ☐ No | ☐ N/A |
| Any Unplanned Events? | ☐ Yes | ☐ No | ☐ N/A |
| MSDS Available? | ☐ Yes | ☐ No | ☐ N/A |



| What am I doing? *Job Sequence - List Task* |
|---|
| |

| What are the possible Hazards of doing the task? | SEVERITY | LIKELIHOOD | RISK FACTOR |
|---|---|---|---|
| | | | |

| What will I do to eliminate/control? 1. Severity of consequence 2. Likelihood of happening | SEVERITY | LIKELIHOOD | RISK FACTOR |
|---|---|---|---|
| | | | |

| What Next Focus Issue |
|---|
| |

| Proper Behavior/Condition |
|---|
| |

**SEVERITY LEVEL DESCRIPTION:**

**Low** -No Injury.
**Medium** -First aid treatment or medical treatment.
**High** -Any required medical attention greater than "medium".

**LIKELIHOOD OF CONSEQUENCE:**

**Low** -Unlikely (never heard of it happening).
**Medium** -Possible (known it has happened before).
**High** -Highly likely to happen.

| Severity \ Likelihood | H | M | L |
|---|---|---|---|
| H | H | H | L |
| M | H | M | L |
| L | M | L | L |

## Back of Card – Panels 1 and 2

Instructions for completing these sections of the STAC are listed below.

- *What am I Doing?* List the work tasks that you will perform today.

- *What Next Focus Issue:* At the initial site safety meeting, Project personnel will be asked to identify the three or four most likely areas for incidents to occur (focus issues).
- *Proper Behavior/Condition:* Identify the corrective actions/behaviors that will prevent the focus issues from becoming a problem.
- The focus issues and corrective actions will remain on the STAC until the observed behaviors become habits or all corrective actions that are associated with the focus issues are complete.
- These sections of the STAC (back of card - panels 1 and 2) will be updated, as needed, to incorporate new focus issues. This process will continue until the Project is complete.

**Back of Card – Panels 2 and 3**

Instructions for completing these sections of the STAC are listed below.

- *What are the possible hazards of doing the task?* Identify the hazards that may be associated with the planned work tasks.
- *What will I do to eliminate/control?* Identify the methods in which the hazards identified in Panel 2 can be mitigated.
- Use the "Severity Level" and "Likelihood of Consequence" descriptions on Panel 3 to determine if response should be "L" (low), "M" (medium) or "H" (high).
- Calculate the risk factor using the "Likelihood of Consequence" key, located at the bottom of Panel 3.

**NOTE**: You cannot work on a task with a risk factor above "L". Tasks with a risk factor greater than "L" must be mitigate before work on the task can proceed.

**_OSC_ STAC Process Training Verification**

Project/Location: _____ ***OSC*** Job No. _____

| Name of Attendee | Last 4 Digits of SSN | Signature | Date |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

SHSO Name (Print): _____ Date: _____

SHSO Signature: _____

**Attachment 1**

# HSE Report Forms

| Project Name: | Project Location: |
|---|---|
| Inspected by: | Date of Inspection: |

# OSC JOB SITE CHECKLIST

CHECK THE APPROPRIATE RESPONSE . IF THE ITEM DOES NOT APPLY WRITE NA

| **Manual Material Handling** | Yes | No |
|---|---|---|
| Are mechanical devices being used in place of manual handling of material? | | |
| Are ropes, slings, chains, hook, cables, and chokers in good condition? | | |
| Proper staging of materials to minimize lifting and carrying? | | |
| Rigging equipment inspected regularly and in good condition? | | |
| Is the handling of bagged material limited to 50 lbs? | | |
| Are carrying handles being used when a single worker is carrying sheeted materials? | | |

**Person Responsible for correction of any Noted Hazards**:_____

**Date corrected**:_____

COMMENTS: _____

_____

_____

_____

| **Housekeeping: Slips, Trips and Falls** | Yes | No |
|---|---|---|
| Are walking and working surfaces clear and free of debris? | | |
| Are waste and trash containers provided, and used? | | |
| Is there regular removal of waste and trash from the containers? | | |
| Does each trade clean up after themselves? | | |
| Is adequate temporary lighting provided? | | |
| Is temporary storage of materials and supplies done in an organized fashion? | | |

**Person Responsible for correction of any Noted Hazards**:_____

**Date Corrected**:_____

| **Fire Protection and Prevention** | Yes | No |
|---|---|---|
| Are all flammable liquid containers clearly identified? | | |

| | | |
|---|---|---|
| Are all flammable liquid containers UL of FM listed? | | |
| Have proper storage practices for flammables been observed? | | |
| Are extinguishers readily accessible and serviced regularly? | | |
| Are hydrants clear and accessible for fire department personnel? | | |
| Have gas cylinders been chained upright with valve caps securely fastened? | | |
| Has there been proper segregation between flammable gasses? | | |
| Proper labeling of full and empty cylinders? | | |
| Are temporary heaters located at a safe distance from combustibles? | | |
| Is ventilation adequate for temporary heaters? | | |

**Person Responsible for correction of any Noted Hazards**:_____

**Date Corrected**:_____

COMMENTS:_____

_____

_____

_____

| **Electrical** | Yes | No |
|---|---|---|
| Are all switch gear, panels, and devices that are energized marked and/or guarded? | | |
| Lockout devices available/used on circuits that could become energized while being worked? | | |
| Are all temporary circuits properly guarded and grounded? | | |
| Are extension cords in continuous lengths without splice? | | |
| Are GFCI's and/or Assured Equipment Grounding Conductor Program being used? | | |
| If temporary lighting is provided, are bulbs protected against accidental breakage? | | |
| Are working surfaces clear of cords so as not to create a tripping hazard? | | |
| Are there a sufficient number of temporary outlets on the job site? | | |
| Any visual signs of outlet overloading? | | |

**Person Responsible for correction of any Noted Hazards**:_____

**Date Corrected**:_____

COMMENTS:_____

_____

_____

_____

| **Hazard Communication** Does the Program include: | Yes | No |
|---|---|---|
| A list of hazardous chemicals. | | |

| | | |
|---|---|---|
| Container labeling. | | |
| Material Safety Data Sheets (MSDS) | | |
| Employee training. | | |
| Informing other contractors. | | |
| Posting. | | |

**Person Responsible for correction of any Noted Hazards**:_____

**Date Corrected**:_____

COMMENTS:_____

_____

| **Excavation/Trenching** | Yes | No |
|---|---|---|
| Have utility companies been notified of proposed excavation work? | | |
| Are all tools, equipment, and shoring materials readily available prior to job startup? | | |
| Are overhead utility lines noted and precautions taken to avoid contact with equipment? | | |
| Is the spoil pile at least two feet from the edge of the excavation? | | |
| Is the excavation inspected daily or more frequently when conditions could affect the soil? | | |
| If needed, are barricades, stop logs, properly placed? | | |
| Has soil classification been made by a competent person? | | |
| Are excavations five feet or deeper correctly sloped, benched, shored or is a trench box used? | | |
| Is a ladder or other means of egress provided in trenches or excavations six feet or deeper? | | |
| When ladders are used, do they extend three feet above the surface and are they secured? | | |
| Are shoring and shielding systems inspected daily by a competent person? | | |
| Is the trench backfilled as soon a work is completed? | | |

**Person Responsible for correction of any Noted Hazards**:_____

**Date Corrected**:_____

COMMENTS:_____

_____

_____

_____

| | Yes | No |
|---|---|---|
| **Barricading** | | |
| Are floor openings planked and secured or barricaded? | | |

| | | |
|---|---|---|
| Are direction signs used to inform the public of upcoming construction work? | | |
| Is the sidewalk protection effective? | | |
| Is a flag person provided to direct traffic when needed? | | |
| Has the person been trained on how to direct traffic and the public? | | |
| Are open excavation, road drop offs, manholes, uneven surfaces barricaded? | | |

**Person Responsible for correction of any Noted Hazards**:_____

**Date Corrected**:_____

COMMENTS:_____

_____

_____

_____

_____

| **Ladders** | Yes | No |
|---|---|---|
| Is the proper ladder for the job being used? | | |
| Are ladders in good condition (no missing or broken rungs)? | | |
| Are there safety shoes/cleats on the bottom of ladders? Are they needed? | | |
| Are non-conductive ladders available for use around live wiring? | | |
| Are ladders tied-off at top or otherwise secured? | | |
| Do side rails extend 36 inches above top of landing? | | |
| Rungs or cleats uniformly spaced 10 – 14 inches apart? | | |
| Are step ladders fully open when in use? | | |

**Person Responsible for correction of any Noted Hazards**:

_____

**Date Corrected**:_____

COMMENTS:_____

_____

_____

_____

| **Scaffolding** | Yes | No |
|---|---|---|
| Are scaffold components visibly free of any physical damage? (no bent supports or bracing) | | |
| Is scaffold properly erected with all pins and braces in place and locked? | | |
| Are rolling scaffolds equipped with locking wheels? | | |
| Are wheels locked when scaffold is in use? | | |
| Is scaffold erected on a firm and substantial surface? | | |
| Is planking of a scaffold grade? | | |

| | | |
|---|---|---|
| Planking in good condition and properly installed? | | |
| Are toe boards and guardrails in place on scaffolds over 10 feet? | | |
| Are workers on scaffolding protected from falling objects if overhead hazards exist? | | |
| Ladder provided for access to scaffold work platform? | | |

**Person Responsible for correction of any Noted Hazards**:_____

**Date Corrected**:_____

COMMENTS:_____

_____

_____

_____

| **Personal Protective Equipment** | Yes | No |
|---|---|---|
| Is hearing protection available for personnel that may be exposed to noisy conditions? | | |
| Is respiratory protection available to personnel and being used when conditions require them? | | |
| Are safety harnesses, lifelines and shock absorbing lanyards available and being used? | | |
| Are personnel using gloves when handling sharp or rough material? | | |
| Where required, rubber gloves with protectors-insulators being used? | | |
| Is life saving equipment available for work over or near water? | | |

**Person Responsible for correction of any Noted Hazards**:_____

**Date Corrected**:_____

COMMENTS:_____

_____

_____

_____

_____

| **Medical** | Yes | No |
|---|---|---|
| Are first-aid kits available and properly stocked? | | |
| Are all emergency phone numbers posted? | | |
| Are employees aware of the address of the site/ capable of giving directions to emergency crew? | | |
| Is anyone trained in first aid and CPR? | | |

| **Hoist, Cranes and Derricks** | Yes | No |
|---|---|---|
| Are cables and sheaves checked? | | |

**Person Responsible for correction of any Noted Hazards**:
**Date Corrected**:_____

COMMENTS:

| **Tools: Hand and Power** | Yes | No |
|---|---|---|
| Are tools free of any obvious physical damage? | | |
| Are tools inspected for frayed or damaged cords? | | |
| Are tools and cords properly grounded (ground pins are in good condition? | | |
| Are double insulated tools in use and in good condition? | | |
| Are the handles on all tools in good condition (not bent, splintered or broken)? | | |
| Are all hoses on air or hydraulic tools in good condition? | | |
| Are all shields and guards in place on the tools and in good condition? | | |
| Operator qualified and instructed to use powder actuated tools? | | |

**Person Responsible for correction of any Noted Hazards**:
**Date Corrected**:_____

COMMENTS:

| **Welding and Cutting** | Yes | No |
|---|---|---|
| Are non-combustible enclosures, (screens/shields) provided and used when welding? | | |
| Welding goggles, gloves, and clothing being used by welder? | | |
| Inspection for fire hazards after welding stops? | | |
| Are gas cylinder, hoses, regulators, torches, torch tips and welding carts, in good condition? | | |
| Welding and ground cables properly insulated, sized and located to avoid tripping hazards? | | |
| Natural or mechanical ventilation adequate? | | |
| Surrounding areas free of flammables and combustibles? | | |
| Proper storage of gas cylinders? | | |

COMMENTS:

| | | |
|---|---|---|
| Are slings, hooks, eyelets, chokes inspected? | _____ | _____ |
| Are load capacities posted in cab? | _____ | _____ |
| Are power lines at a safe distance [10 feet minimum]? | _____ | _____ |
| Do cranes have proper barricades around swing radius? | _____ | _____ |
| Are crane inspection logs/certifications with crane? | _____ | _____ |

**Person Responsible for correction of any Noted Hazards**:_____

**Date Corrected**:_____

COMMENTS:_____

_____

_____

_____

| **Floor, Wall Openings, Stairways** | Yes | No |
|---|---|---|
| Floor and roof openings guarded by guardrails and toe boards or a secured cover? | _____ | _____ |
| Open-sided floors/platforms six feet or higher guarded with railing, toe boards or equivalent? | _____ | _____ |
| Are stairs with four or more risers equipped with standard hand rail protection? | _____ | _____ |
| Runways four feet or more above ground properly guarded? | _____ | _____ |
| Anchor posts and framing capable of withstanding 200lb load in any direction? | _____ | _____ |

**Person Responsible for correction of any Noted Hazards**:_____

**Date Corrected**:_____

COMMENTS:_____

_____

_____

_____

_____

_____

| **Powder Activated Tools** | Yes | No |
|---|---|---|
| . Operators properly trained and authorized? | _____ | _____ |
| Operators use eye, face, hearing and hand protection? | _____ | _____ |
| Tools inspected and tested daily before use to assure safety devices operational? | _____ | _____ |
| Anchors and charges comply with tool manufacturer's specs? | _____ | _____ |
| Anchorage limited to recommended materials? | _____ | _____ |

| | | |
|---|---|---|
| Tools loaded immediately prior to use? | | |
| Other employees warned to expect loud noise and possible airborne debris? | | |
| Employees who may be in harm's way relocated? | | |
| Unattended and stored tools always rendered unloaded and secure? | | |

**Person Responsible for correction of any Noted Hazards**:

**Date Corrected**:_____

COMMENTS:_____

_____

_____

_____

| **Concrete** | Yes | No |
|---|---|---|
| . Employees working with concrete properly clothed to protect skin? | | |
| PPE (gloves, boots, hard hats, eye/face protection) used where required? | | |
| Employees trained to avoid hazards of cement burns and inhalation? | | |
| Form work designed, fabricated, erected, supported, braced and maintained to support vertical and lateral loads? | | |
| Shoring inspected prior to, during and after concrete placement? | | |
| Scaffolding or platforms used by employees properly designed and constructed to support load? | | |
| Scaffold platforms equipped with standard guard rails? | | |
| Raising or lowering of concrete buckets over heads of people prohibited? | | |
| Employees forbidden from riding concrete buckets? | | |
| Safe access provided for equipment and vehicles? | | |
| Safe shoring and form removal procedures established? | | |
| Vertical reinforcing steel protected from impalement hazards? | | |
| Lift slab operations designed and planned by a PE with all employees trained? | | |
| Required distances maintained between overhead electrical power lines and concrete placement equipment? | | |

**Person Responsible for correction of any Noted Hazards**:_____

**Date Corrected**:_____

COMMENTS:_____

_____

_____

_____

| **Masonry** | Yes | No |
|---|---|---|
| Limited access zone established on the un-scaffold side of the wall? | | |
| Walls properly supported to prevent overturn or collapse? | | |

| | | |
|---|---|---|
| Dust protection used during sawing, mortar mixing, or other dust generating activities? | | |

**Person Responsible for correction of any Noted Hazards**:_____

**Date Corrected**:_____

COMMENTS:_____

_____

_____

_____

---

| **Structural Steel** | Yes | No |
|---|---|---|
| Permanent and/or temporary flooring requirements been met? | | |
| Temporary planking sized and installed correctly? | | |
| Employees using the required fall protection equipment? | | |
| Company approved fall protection program in place? | | |
| Danger zone beneath the steel erection designated to limit unauthorized employee? | | |
| Hoisting equipment and accessories inspected as required? | | |
| Tag lines used to control loads? | | |
| Proper erection bolting and bracing procedures followed? | | |
| Floor, roof and wall openings protected immediately as they appear? | | |
| Ladders, stairways, approved personnel lifts or other safe means or access? | | |

**Person Responsible for correction of any Noted Hazards**:_____

**Date Corrected**:_____

COMMENTS:_____

_____

_____

_____

| **Heavy Equipment** | Yes | No |
|---|---|---|
| Operators properly trained and authorized? | | |
| Inspection and maintenance performed on a regular schedule? | | |
| Bi-directional machines have operational signal horns? | | |
| Back-up alarms operational? | | |
| Roll over protection provided as required and with seat belts? | | |
| Equipment clean and free of grease, oil, mud, fluids and other slipping hazards? | | |

| | | |
|---|---|---|
| Moving parts protected by guards? | | |
| Engines shut off during refueling? | | |
| Glass free of defects and rated as safety glass or equivalent? | | |
| Lights, reflectors, wipers, defrosters, brakes, tires, etc. in good condition? | | |
| Employees prohibited from riding on heavy equipment without a proper seat? | | |
| Are haul roads properly maintained? | | |

**Person Responsible for correction of any Noted Hazards**:

**Date Corrected**:

COMMENTS:

| **Aerial Lifts** | Yes | No |
|---|---|---|
| Employees using aerial lifts are trained and authorized? | | |
| Manufacture's operation and safety rules obeyed? | | |
| Unit safety inspected and all controls tested prior to each days use? | | |
| Unit positioned on solid, level ground? | | |
| Boom and basket load limits within manufacture's specs? | | |
| Everyone in lift basket standing firmly on the floor, wearing fall prevention or protection equipment? | | |
| Brakes set and outriggers positioned as required? | | |

**Person Responsible for correction of any Noted Hazards**:

**Date Corrected**:

COMMENTS:

OVERALL SITE IMPRESSIONS and COMMENTS:

# ACTIVITY HAZARD ANALYSIS

| | | |
|---|---|---|
| **Location:** | **Contract No.** | **Project:** |
| **Phase (Division):** | **Prime Contractor:**<br>***OSC*** | **Subcontractor:** |
| **Task** | **Potential Safety Hazard** | **Safe Procedure & Recommended Controls** |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| Equipment to be Used | Inspection Requirements | Training Requirements |
| | | |
| | | |
| | | |

# Vehicles and Heavy Equipment Checklist

Date Prepared: _____ By: _____

Project Name/No.: _____Location: _____

.

- Check the box if statement is true.

## HAZARD IDENTIFICATION AND WORKER TRAINING

- All drivers are properly licensed and have been trained in the proper and safe operation of vehicles and equipment. YES _____ NO ____

## INSPECTION AND SAFETY EQUIPMENT

- All vehicles and heavy equipment are visually inspected at the beginning of each workday for any malfunctions that could affect safe operation. All defects are corrected before the equipment is placed in service. Damage equipment is repaired, red tagged, or removed from the site. YES _____ NO _____

- Where required, every vehicle and piece of equipment has a working back-up alarm. YES _____ NO _____

- Seat belts that are in good working order are provided on all vehicles and heavy equipment. YES _____ NO _____

- Where required, roll-over protection structures (ROPS) are provided on vehicles and heavy equipment (including scrapers, tractors, loaders, bulldozers, carryalls, trucks, etc.). YES ____ NO ____

- Every vehicle and piece of heavy equipment with a cab has an intact windshield and powered windshield wipers. YES ____ NO ____

- Equipment and accessories installed on haulage vehicles do not impair the driver's vision to the front or sides. YES ____ NO ____

- Every vehicle and piece of heavy equipment has two operating headlights and two operating taillights if operated at night or where visibility is poor. YES ____ NO ____

- Every vehicle and piece of heavy equipment has working brake lights. YES ____ NO ____

- Dump trucks that tilt to release their load have a visible or audible warning when the elevating mechanism is activated. YES ____ NO ____

- Loads on vehicles are secured against displacement. YES ____ NO ____

- Drivers operating loaders have adequate visibility, and the equipment is stable. YES ____ NO ____

- On "H, Pipe and Sheet" pile drivers, safety chains on compression hose fittings are in place and in working order so as to prevent thrashing if the connection is broken. YES ____ NO ____

- Subcontract equipment operators are aware of inspection, back-up alarm, and seat belt requirements, and are ordered to remove defective equipment from the site. YES ____ NO ____

- All unattended loaders and industrial trucks have the bucket or boxes lowered to the ground. YES ____ NO ____

.

- When power equipment is being repaired, moving parts such as blades, beds, or gates are lowered to the ground, or securely blocked in an inoperative position. Controls are kept in a neutral position, with the engines stopped and brakes set (unless the repair work requires otherwise). YES ____ NO _____

- There are signs in plain view of the operator on all cranes, derricks, power shovels, pile drivers, and similar machinery reading: YES ____ NO ____

    ◊ "Unlawful to operate this equipment within 10 feet of high voltage lines of 50,000 volts or less." (in large print)
    ◊ "For minimum clearances of high voltage lines in excess of 50,000 volts, see appropriate regulations at 29 CFR 1910 or 29 CFR 1926. "

## TRAFFIC CONTROL

- Workers are warned not to take short cuts across areas where vehicles or heavy equipment are working or moving. YES ____ NO ____

- Flagmen are posted wherever barricades and warning signs cannot control the moving traffic. YES ____ NO ____

## PRIVATE ROADWAYS AND OFF-HIGHWAY CONDITIONS

- Private roads are maintained free from holes and ruts that may affect the safe operation of vehicles and equipment. YES ____ NO ____

- Dust levels are minimized to ensure adequate visibility for drivers. Vehicle and equipment operators use adequate respiratory protection in dusty operations. YES ____ NO ____

## FUELING

- Fueling of vehicles and heavy equipment is done with the engine off. YES ____ NO ____

- No smoking is permitted at or near the fuel storage or refueling area. A sign is posted stating: NO SMOKING WITHIN 25 FEET. YES ____ NO ____

- No sources of ignition are present at or near fuel storage or refueling area. YES ____ NO ____

- A dry chemical or carbon dioxide fire extinguisher (rated 6: BC or larger) is located accessible to the fueling area. YES ____ NO ____

# AIR MONITORING LOG

**Date:**

**Type of Monitor:**

**Serial Number:**

| Tested By | Time | PID reading PPM | Type of Activities /Location |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

ZERO MONITOR AT START OF SHIFT IN CLEAN AIR AND “BUMP CALIBRATE”

BACKGROUND READING:_____PPM LOCATION:_____

TIME:_____

| SAFETY INSPECTION FOR MISCELLANEOUS EQUIPMENT | | Date of Inspection: |
|---|---|---|
| Contractor or Unit | Contract No. Or Activity | |
| Inspected by (Signature) | Witness (Signature) | |

| | **CRANE/DERRICK INSPECTION CHECKLIST**. | Yes | No | N/A |
|---|---|---|---|---|
| 1 | Are the following documents with the crane at all times? | | | |
| 1a | Operating manual from the manufacturer for the specific crane being inspected. | | | |
| | (1) Any operator aids for which the crane is equipped? | | | |
| 1b | Load rating chart for the crane which shall include: | | | |
| | (1) The crane make and model, serial number, and year of manufacturer | | | |
| | (2) Load ratings for all crane operating configurations: including optional equipment | | | |
| | (3) Wire rope type, size, and reeving; line pull, line speed and drum capacity | | | |
| | (4) Operating limits in windy or cold conditions | | | |
| 1c | Crane log book that shows operating hours, inspections, tests, maintenance & repair. **Note 1:** Has log been updated daily when crane is used and is it signed by operator & supervisor? **Note 2:** Mechanics shall sign after conducting maintenance or repairs. | | | |
| 2 | Does operator have certification that he meets operator qualification and training | | | |
| 3 | Has a hazard analysis been completed for set-up procedures (mobilization, assembly, dismantling, etc.)? | | | |
| 4 | Are adequate clearances provided from electrical sources, fixed objects, and swing radius? | | | |
| 5 | Is communication provided as required? | | | |
| 6 | Has inspection been performed? | | | |
| 7 | Have performance load tests been in accordance with? | | | |
| 8 | Are tag lines used to control loads? | | | |

| | | | | |
|---|---|---|---|---|
| 9 | Is critical lift plan required? | | | |
| 10 | Are all environmental considerations being met? | | | |
| 11 | Is crane equipped with boom angle indicator, load-indicating device, means to visually determine levelness, and anti-two block devices? | | | |
| 12 | Are cable-supported booms equipped with boom stops? | | | |
| 13 | Are booms lowered to ground or secured when not in use? | | | |
| 14 | Do all floating cranes and derricks meet the ANSI requirements? | | | |
| 15 | Are all moving parts (gears, drums, shafts, belts, etc.) and all hot surfaces (exhaust lines, pipes, etc.) guarded? | | | |
| 16 | Does the unit have a suitable fire extinguisher? **Note:** Minimum 5 BC | | | |

| **CRANE/DERRICK INSPECTION CHECKLIST** | Yes | No | N/A |
|---|---|---|---|
| 17 Is the floating crane secured to the barge and tethered? | | | |
| 18 Is the crane clear of objects that can slide or roll in the operators cab! | | | |
| 19 If installed from the factory, are seat belts in working order and being worn by the operator. | | | |
| _____ | | | |

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# Near Miss, Unsafe Condition/Act Report

Rev. D Revision Date: 8/17/10 Document NoNMUC-08

## Purpose

Purpose of this form is to identify near-misses and unsafe conditions/acts in the workplace and to assure corrective action is completed in a timely manner.

## Scope

This document applies to all OSC operations and includes OSC employees, contractors, tenants or visitors.

## Definitions

A near miss is an event that could have caused a serious injury or illness, property damage or a release to the environment but didn't.

For example:

- Someone spills liquid on the floor and does not clean it up. Someone slips but does not fall.
- A forklift operator takes a turn too quickly and drops the load which almost hits a nearby worker.
- While transporting a 55 gallon drum of petroleum product on the work-site, it tips over but does not spill.

An unsafe condition or act is a condition or act that could cause an incident or, an incident waiting to happen.

For example:

- Water or other material(s) on the floor that could cause a slip or fall.
- A frayed electrical cord on a piece of equipment.
- Lack of fall protection on a leading edge.

| Job Name: | Job Number: |
|---|---|
| Where did the near miss take place or where is/was the unsafe condition? | |
| Location (building/parking lot/shop/etc.) | |
| Name of Supervisor/Site HSE Officer: | |
| Reporting Employee: | |
| When did the near miss happen or when did you discover the unsafe condition?<br>Date: Time: | |
| What personnel/equipment/etc. were involved or impacted in the near miss or unsafe condition? | |
| Was the near miss/unsafe act or condition reported to site supervision/HSE personnel Yes No | |
| Describe the near miss or unsafe act or condition in detail. Include the potential danger to employees, equipment and/or property. Attach additional information, photos, etc. if necessary: | |

Check all that apply:

| Unsafe Acts | Unsafe Conditions |
|---|---|
| Improper use of equipment | Poor housekeeping |
| Using faulty/defective equipment | Sharps (glass, needles etc) |
| Removing safety devices or making them inoperative | Insufficient guards/barriers |
| Under the influence of alcohol and/or drugs | Defective tools, equipment or materials |
| Failure to wear personal protective equipment (PPE) | Insufficient or improper protective equipment |
| Horseplay | Insufficient lighting |
| Incorrect lifting techniques | Insufficient ventilation |
| Incorrect loading/stacking | Exposure to excessive noise |
| Operation of equipment without authority | Insufficient warning signs |
| Failure to warn or to secure | Compliance with standards |
| Compliance with standards | Animal (bite etc) |
| Other - | Other - |
| **Human Factors** | **Job Factors** |
| Physical incapacity | Inadequate leadership/supervision |
| Mental incapacity | Inadequate engineering |
| Lack of knowledge | Inadequate purchasing |
| Lack of skill | Inadequate maintenance |
| Stress | Inadequate tools/equipment |
| Improper motivation | Inadequate materials |
| Distraction | Inadequate work standards/procedures |
| Attitude | Inadequate standards |
| Motivation | Other - |
| Compliance with standards (e.g. training) | |
| Other - | |
| Estimate risk for potential future incident; Circle One: Low 1 2 3 4 5 High | |
| Explain Why: | |
| Please note what corrective action you were able to take or what other corrective action you recommend. | |
| To be completed by HSE Personnel: | |
| Reviewed by; | Date Received by HSE: |
| OSC HSE Tracking Number | |
| Comments | |

**ATTACHMENT #2**

# MSDS

Part Number/Trade Name: **REGULAR UNLEADED GASOLINE**

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General Information

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Company's Name: AMERADA HESS CORP
Company's Street: 1 HESS PLAZA
Company's City: WOODBRIDGE
Company's State: NJ
Company's Country: US
Company's Zip Code: 07095
Company's Emergency Ph #: 800-424-9300(CHEMTREC)
Company's Info Ph #: 201-750-6000
Date MSDS Prepared: 13JAN89
Safety Data Review Date: 08JAN92
MSDS Serial Number: BLZXH
Hazard Characteristic Code: F2

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Ingredients/Identity Information

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Proprietary: NO
Ingredient: GASOLINE
Ingredient Sequence Number: 01
Percent: 100
NIOSH (RTECS) Number: LX3300000
CAS Number: 8006-61-9
OSHA PEL: 300 PPM; 500 PPM STEL
ACGIH TLV: 300 PPM; 500 PPM STEL

Proprietary: NO
Ingredient: TERT-AMYL METHYL ETHER (BLEND OF ING 2&3 FOR A TOTAL OF 15% OF PRODUCT)
Ingredient Sequence Number: 02
Percent: MIX
NIOSH (RTECS) Number: 1007422 AM
CAS Number: 994-05-8
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE
Proprietary: NO
Ingredient: ETHER, TERT-BUTYL METHYL; (METHYL TERT-BUTYL ETHER)
Ingredient Sequence Number: 03
Percent: MIX
NIOSH (RTECS) Number: KNS525000
CAS Number: 1634-04-4
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE

Proprietary: NO
Ingredient: TOLUENE
Ingredient Sequence Number: 04

Percent: 6-<3015
NIOSH (RTECS) Number: XS5250000
CAS Number: 108-88-3
OSHA PEL: 200 PPM/150 STEL
ACGIH TLV: 50 PPM; 9293

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Proprietary: NO
Ingredient: XYLENE
Ingredient Sequence Number: 05
Percent: 8.5-<15
NIOSH (RTECS) Number: ZE2100000
CAS Number: 1330-20-7
OSHA PEL: 100 PPM; 150 PPM STEL
ACGIH TLV: 100 PPM; 150 PPM STE

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Proprietary: NO
Ingredient: BENZENE
Ingredient Sequence Number: 06
Percent: 0.1-<5
NIOSH (RTECS) Number: CY1400000
CAS Number: 71-43-2
OSHA PEL: 1 PPM; 5 STEL (MFR)
ACGIH TLV: 10 PPM

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Proprietary: NO
Ingredient: BENZENE, ETHYL; (ETHYL BENZENE)
Ingredient Sequence Number: 07
Percent: <3
NIOSH (RTECS) Number: DA0700000
CAS Number: 100-41-4
OSHA PEL: 100 PPM; 125 PPM STEL
ACGIH TLV: 100 PPM; 125 PPM STEL

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Proprietary: NO
Ingredient: BENZENE, 1, 2, 4-TRIMETHYL-; (1, 2, 4-TRIMETHYLBENZENE)
Ingredient Sequence Number: 08
NIOSH (RTECS) Number: DC3325000
CAS Number: 95-63-6
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE

---

Proprietary: NO
Ingredient: SUPPORT DATA: IN AIR. HEAVIER/AIR VAPOR CAN FLOW ALONG SURFACES TO DISTANT SOURCES OF IGNITION AND FLASHBACK. FLOW GASOLINE CAN BE (ING 10)
Ingredient Sequence Number: 09
NIOSH (RTECS) Number: 9999999ZZ
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE

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Proprietary: NO
Ingredient: ING 9: IGNITED BY SELF-GENERATED STATIC ELECTRICITY RUNOFF TO SEWERS MAY CREATE FIRE &/OR EXPLOSION HAZARD
Ingredient Sequence Number: 10

NIOSH (RTECS) Number: 9999999ZZ
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE

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Proprietary: NO
Ingredient: EFFECTS OF OVEREXPOSURE: WILL FATIGUE OLFACTORY SENSES. IMMEDIATELY DANGEROUS TO HEALTH/LIFE IS REPRESENTED BY 2 THOUSANDS (2000)PPM. (ING 12)
Ingredient Sequence Number: 11
NIOSH (RTECS) Number: 9999999ZZ
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE

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Proprietary: NO
Ingredient: ING 11: INGESTION/INHALATION OF LIQUID &/OR EXCESS VAPOR CAN HAVE AN ANESTHETIZING EFFECT, CAUSING VERTIGO, BLURRED VISION, VOMIT & (ING 13)
Ingredient Sequence Number: 12
NIOSH (RTECS) Number: 9999999ZZ
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE

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Proprietary: NO
Ingredient: ING 12: CYANOSIS. OVEREXPOSURE MAY CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION.
Ingredient Sequence Number: 13
NIOSH (RTECS) Number: 9999999ZZ
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE

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Proprietary: NO
Ingredient: SPILL PROCEDURES: ACQUATIC LIFE. CAUTION-EVACUATE ALL NON-ESSENTIAL PERSONNEL SPILLED MATERIAL MAY CAUSE SLIPPERY CONDITION. OPEN (ING 15)
Ingredient Sequence Number: 14
NIOSH (RTECS) Number: 9999999ZZ
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE

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Proprietary: NO
Ingredient: ING 14: SPILLS MAY EMIT FLAMMABLE VAPOR APPROACH FROM UPWIND IF POSSIBLE. AVOID BREATHING EMITTED VAPOR WEAR SCBA IF REQUIRED TO PREVENT(ING 16)
Ingredient Sequence Number: 15
NIOSH (RTECS) Number: 9999999ZZ
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE

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Proprietary: NO
Ingredient: ING 15: INHAL OF VAPORS.
Ingredient Sequence Number: 16
NIOSH (RTECS) Number: 9999999ZZ
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE

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Proprietary: NO

Ingredient: WASTE DISPOSAL METHOD: FLAMMABLE, VAPORS.
Ingredient Sequence Number: 17
NIOSH (RTECS) Number: 9999999ZZ
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE

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Proprietary: NO
Ingredient: HANDLING/STORAGE PRECAUTIONS: BONDED/GROUNDED TO PREVENT POTENTIAL ACCUMULATION OF STATIC ELECTRICITY. NO SMOKING IN AREAS OF HANDLING/STORAGE (ING 19)

OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE

---

Proprietary: NO
Ingredient: ING 18: STORAGE SHOULD BE TIGHTLY CLOSED CONTAINER IN COOL/DRY/ISOLATED & WELL VENTED AREA AWAY FROM POTENTIAL SOURCES OF IGNITION.
Ingredient Sequence Number: 19
NIOSH (RTECS) Number: 9999999ZZ
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE

---

Proprietary: NO
Ingredient: OTHER PRECAUTIONS: REGULAR/FREQUENT BASIS. VENTALATION MUST BE SUFFICIENT TO PREVENT ACCUMULATION OF TOXIC/FLAMMABLE CONCENTRATION OF VAPOR IN AIR. (ING 21)
Ingredient Sequence Number: 20
NIOSH (RTECS) Number: 9999999ZZ
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE

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Proprietary: NO
Ingredient: ING 20: EMPTY CONTAINER MAY CONTAIN TOXIC/FLAM/MABLE COMBUSTION RESIDUE/VAPOR. DO NOT CUT/GRIND/DRILL/WELD OR REUSE CONTAINER UNLESS ADEQUATE (ING 22)
Ingredient Sequence Number: 21
NIOSH (RTECS) Number: 9999999ZZ
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE

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Proprietary: NO
Ingredient: ING 21: PRECAUTIONS AGAINST THESE HAZARDS ARE TAKEN.
Ingredient Sequence Number: 22
NIOSH (RTECS) Number: 9999999ZZ
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE

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Proprietary: NO
Ingredient: HYGIENE PRACTICES: UPPWIND OF VAPOR OR MIST RELEASE, SPILL OR LEAK.
Ingredient Sequence Number: 23

NIOSH (RTECS) Number: 9999999ZZ
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE
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Physical/Chemical Characteristics
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Appearance and Odor: CLEAR LIQUID W/STRONG AROMATIC HYDROCARBON ODOR. MAY BE DYED CHARACTERISTIC (SUPDAT)
Boiling Point: 85.0F, 29.4C
Vapor Pressure (MM Hg/70 F): SUPP DATA
Vapor Density (Air=1): 3.0-4.0
Specific Gravity: 0.76
Evaporation Rate and Ref: 10-11(BUTYL ACETATE=1)
Solubility in Water: SLIGHT
Percent Volatiles by Volume: 100
==========
Fire and Explosion Hazard Data
==========
Flash Point: -40F,-40C
Flash Point Method: TCC
Lower Explosive Limit: 1.4%
Upper Explosive Limit: 7.4%
Extinguishing Media: ANY APPROVED EXTINGUISHING AGENT FOR CLASS B FIRES/DRY CHEM/FOAM/CO*2 OR HALON. H*2O IS NOT ORDINARILY EFFECTIVE HOWEVER, H*2O FOG(SUPP DATA)
Special Fire Fighting Proc: NIOSH/MSHA APPRVD SCBA & FULL PROTECTION EQUIPMENT (FPN). AVOID INHALATION OF VAPOR. H*2O SHOULD BE USED TO KEEP EXPOSURE CONTROL COOL. APPROACH FROM UPWIND IF POSSIBLE.
Unusual Fire and Explosive Hazards: CLASS 1A FLAMMABLE LIQUID. KEEP AWAY FROM HEAT/SOURCES OF IGNITION/OXIDIZERS. BURN MAY CAUSE EMISSION OF TOXIC PRODUCTION OF COMBUSTION.
EMPTY PRODUCT CONTROL/VESSELS MAY CONTAIN (SUPP DATA)
==========
Reactivity Data
==========
Stability: YES
Conditions to Avoid (Stability): AVOID HANDLING OR STORING NEAR HEAT, SPARKS OR OPEN FLAME.
Materials to Avoid: OXIDIZING AGENTS. COMBUSTION OF NITRIC AND SULFURIC ACIDS.
Hazardous Decomp. Products: CONTACT W/NITRIC & SULFURIC ACIDS WILL FORM NITROCRESOLS THAT CAN DECOMPOSE VIOLENTLY.
Hazardous Poly Occur: NO
Conditions To Avoid (Poly): NOT RELEVANT.
==========
Health Hazard Data
==========
LD50-LC50 Mixture: LD50:ORAL (RBT)5 ML/KG

Route of Entry - Inhalation: YES
Route of Entry - Skin: NO
Route of Entry - Ingestion: YES
Health Haz. Acute And Chronic: ACUTE/CHRONIC: HARMFUL/FATAL IF SWALLOW/ ASPIRATED. LONG TERM EXPOS TO VAP HAS CAUSED CANCER IN SOME LAB ANIMALS. INGEST MAY CAUSE GI DISTURB. ASPIR INTO LUNGS MAY CAUSE PNEUMONIA PROLONGED CONTACT W/SKIN MAY RESULT IN DEFAT/RED/ITCH/INFLAM/CRACK & POSS SECONDARY INFECTION.
HAS LOW ORDER OF ACUTE ORAL TOXICITY IF (EFFECTS OF OVEREXPOSURE)
Carcinogenicity - NTP: YES
Carcinogenicity - IARC: YES
Carcinogenicity - OSHA: YES
Explanation Carcinogenicity: GASOLINE - IARC 2B; BENZENE, A CONSTITUENT OF GASOLINE: OSHA REGULATED, GROUP 1 (IARC, NTP).
Signs/Symptoms of Overexposure: HEALTH HAZARD: INGESTED, BUT MINIMUM AMOUNT ASPIR DURING SUCH INGEST MAY CAUSE DEATH. HIGH PRESS SKIN INJECTIONS ARE SERIOUS MEDICAL EMERGENCY REPEATED/PROLONGED EXPOSURE TO VAPOR CONTAIN HIGH CONCENTRATION OF BENZENE MAY CAUSE ANEMIA &
OTHER BLOOD DISEASES, INCLUDING LEUKEMIA. INHALATION TO 100PPM MAY CAUSE SLIGHT DROWSINESS/HEADACHE. 100-200PPM MAY CAUSE FATIGUE/NAUSEA/ITCH & (ING 11)
Medical Conditions Aggravated By Exposure: OPEN WOUNDS, SKIN DISORDERS, CHRONIC RESPIRATORY DISEASE OR PRE-EXISTING CENTRAL NERVOUS SYSTEM DISEASE.
Emergency/First Aid Proc: INHALATION: REMOVE TO FRESH AIR, PROVIDE O*2 THERAPY &/OR RESUSCITATION AS INDICATED. SKIN: REMOVE CONTAMINATED CLOTHING AND FLUSH WITH SOAP AND WATER. EYE: FLUSH WITH WATER FOR AT LEAST 15 MINUTES. INGEST: RINSE MOUTH WITH WATER. KEEP CALM AND WARM. DO NOT INDUCE VOMIT! ASPIRATION OF MATERIAL INTO LUNGS MAY CAUSE CHEMICAL PNEUMONIA. CALL PHYSICIAN IMMEDIATELY

Precautions for Safe Handling and Use

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Steps If Material Released/Spilled: CONTAIN ALL SPILLS. ABSORB ALL FREE LIQUID. REMOVE ALL IGNITION SOURCES/SAFELY STOP FLOW OF SPILL. PREVENT FROM ENTER ALL BODIES OF H*2O. COMPLY WITH ALL APPLICABLE LAWS/REGS. ABSORBENT MATERIAL/PADS/SAND/EARTH MAY BE USED. CONTAMINATED H*2O/SOIL MAY BE HAZARD TO ANIMAL/ (ING 14)
Neutralizing Agent: NONE SPECIFIED BY MANUFACTURER.
Waste Disposal Method: DISPOSE OF PRODUCT/CONTAMINATED MATERIAL AS EPA "IGNITABLE HAZARDOUS WASTE". USE ONLY APPROVED TREATMENT TRANSPORTERS & DISPOSAL SITES IN COMPLIANCE W/ALL APPLICABLE FEDERAL/STATE/LOCAL REGULATIONS MAINTAIN SURVEILLANCE OF ABSORBED MATERIAL UNTIL FINAL DISPOSAL TO OBSERVE FOR EMISSION OF VOLATILE, (ING 17)
Precautions-Handling/Storing: KEEP AWAY FROM HEAT/SPARKS/OPEN FLAME. AVOID BREATHING VAPOR/MIST. AVOID SKIN/EYE CONTACT. KEEP CONTAINER CLOSED & PLAINLY LABELED.
TRANSFER LINES MUST BE (ING 17)
Other Precautions: USE ONLY AS MOTOR FUEL. HANDLE/TRANSPORT/STORE IN ACCORDANCE W/APPLICABLE LAWS/REGULAITONS. ELECTRICAL EQUIPMENT SHOULD BE APPROVED FOR

CLASSIFIED AREA. REMOVE SOILED CLTHG/LAUNDER BEFORE RE-USE. DISCARD OIL SOAKED SHOES. WEAR FULL
LENGTH CLOTHING/LAUNDER ON (ING 18)

Control Measures

Respiratory Protection: USE NIOSH/MSHA APPROVED SCBA IN CONFINED SPACES OR WHEN EXPOSED TO HEAVY MIST.
Ventilation: LOCAL EXHAUST: GENERALLY NOT REQUIRED. MECHANICAL (GENERAL): EXPLOSION PROOF(APPROVED FOR CLASSIFIED AREA).
Protective Gloves: IMERVIOUS GLOVES.
Eye Protection: CHEMICAL WORKERS GOGGLES (FP N).
Other Protective Equipment: IMPERVIOUS CLOTHING, EYEWASH/BATH.
Work Hygienic Practices: WASH SKIN THOROUGHLY W/SOAP/H*2O BEFORE EAT/DRINK/SMOKING. VENTILATION MAY BE USED TO CONTROL/REDUCE AIRBORNE CONCENTRATIONS STAND (ING 23)
Suppl. Safety & Health Data: VP: 275-475@68F. APPEAR/ODOR: COLOR FOR IDENTIFICATION (CLEAR RED/BRONZE/YELLOW ARE TYPICAL). EXTINGUISHING MEDIA: MAY BE USED BY EXPERIENCED FIRE FIGHTER FOR INTENSITY CONTROL/TO COOL EXPOSED AREAS.
EXPLOSION HAZARD: EXPLOSIVE VAPOR DO NOT PRESSURIZE/CUT/HEAT/WELD/EXPOSE SUCH CONTROL OR VESSELS TO SOURCES OF IGNITION. VAPOR CAN READILY FORM EXPLOSIVE MIXTURE(ING 9)

Transportation Data

Trans Data Review Date: 92072
DOT PSN Code: GTN
DOT Proper Shipping Name: GASOLINE
DOT Class: 3
DOT ID Number: UN1203
DOT Pack Group: II
DOT Label: FLAMMABLE LIQUID

Label Data

Label Required: YES
Label Status: G
Common Name: REGULAR UNLEADED GASOLINE
Special Hazard Precautions: ACUTE/CHRONIC:HARMFUL/FATAL IF SWALLOW/ ASPIRATED, LONG TERM EXPOSURE TO VAPOR HAS CAUSED CANCER IN SOME LAB ANIMALS. INGESTION MAY CAUSE GI DISTURBANCE. ASPIRATE INTO LUNGS MAY CAUSE PNEUMONIA PROLONG CONTACT W/SKIN MAY RESULT IN DEFAT/RED/ITCH/INFLAM/CRACK & POSSIBLY SECONDARY INFECTION.
HAS LOW ORDER OF ACUTE ORAL TOXICITY IF (EFFECTS OF OVEREXPOSURE) HEALTH HAZARD: INGESTED, BUT MINIMUM AMOUNT ASPIRATED DURING SUCH INGEST MAY CAUSE DEATH. HIGH PRESS SKIN INJECTIONS ARE SERIOUS MEDICAL EMERGENCOES REPEATED/PROLONGED EXPOSURE TO VAPOR CONTAINING HIGH CONCENTRATION OF BENZENE MAY CAUSE ANEMIA & OTHER BLOOD DISEASES, INCLUDING LEUKEMIA.

INHALATION TO 100PPM MAY CAUSE SLIGHT DROWSINESS/HEADACHE. 100-200PPM MAY CAUSE FATIGUE/NAUSEA/ ITCH & (ING 11)

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Item Name: **DIESEL FUEL**
Company's Name: AMOCO INTERNATIONAL OILCO
Company's Street: 200 E RANDOLPH DR
Company's P. O. Box: 5910-A
Company's City: CHICAGO
Company's State: IL
Company's Country: US
Company's Zip Code: 60680
Company's Emergency Ph #: 800-447-8735
Company's Info Ph #: 312-856-3907
Distributor/Vendor # 1: AMOCO INTERNATIONAL OILCO
Status: SE
Date MSDS Prepared: 25JUL89
Safety Data Review Date: 07MAR91
Supply Item Manager: KY
MSDS Preparer's Name: R. G. FARMER
MSDS Serial Number: BGWFD
Specification Number: VV-F-800
Spec Type, Grade, Class: DF-2
Hazard Characteristic Code: F4

Ingredients/Identity Information

Proprietary: NO
Ingredient: ALIPHATIC PETROLEUM DISTILLATES
Ingredient Sequence Number: 01
NIOSH (RTECS) Number: 1003049AP
CAS Number: 68476-30-2
OSHA PEL: NOT ESTABLISHED
ACGIH TLV: NOT ESTABLISHED
Other Recommended Limit: NONE SPECIFIED

Physical/Chemical Characteristics

Appearance and Odor: CLEAR, BRIGHT LIQUID
Boiling Point: 340F, 171C
Specific Gravity: 0.88
Decomposition Temperature: UNKNOWN
Solubility in Water: NEGLIGIBLE
Viscosity: 1.8 CS @100F
Corrosion Rate (IPY): UNKNOWN

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Fire and Explosion Hazard Data
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Flash Point: 120F, 49C
Flash Point Method: TCC
Lower Explosive Limit: 0.6
Upper Explosive Limit: 7.5
Extinguishing Media: USE WATER FOG, CARBON DIOXIDE, FOAM OR DRY CHEMICAL. (EXTINGUISHINGING AGENTS APPROVED FOR CLASS B HAZARDS)
Special Fire Fighting Proc: FIRE FIGHTERS SHOULD USE NIOSH APPROVED SCBA & FULL PROTECTIVE EQUIPMENT WHEN FIGHTING CHEMICAL FIRE. USE WATER SPRAY TO COOL NEARBY CONTAINERS EXPOSED TO FIRE.
Unusual Fire and Explosive Hazards: FIRE OR EXCESSIVE HEAT MAY CAUSE PRODUCTION OF HAZARDOUS DECOMPOSITION PRODUCTS.
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Reactivity Data
==========
Stability: YES
Conditions to Avoid (Stability): HIGH TEMPERATURES, SPARKS, AND OPEN FLAMES
Materials to Avoid: STRONG OXIDIZING AGENTS
Hazardous Decomp. Products: BY FIRE: CARBON MONOXIDE, CARBON DIOXIDE
Hazardous Poly Occur: NO
Conditions to Avoid (Poly): NOT APPLICABLE
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Health Hazard Data
==========
LD50-LC50 Mixture: LD50 (ORAL RAT) IS EXPECTED > 5G/KG
Route of Entry - Inhalation: YES
Route of Entry - Skin: YES
Route of Entry - Ingestion: YES
Health Hazards Acute and Chronic: EYE: IRRITATION. SKIN: MILDLY IRRITATING. RESPIRATORY SYSTEM IRRITATION AND LIGHT HEADEDNESS. MAY CAUSE NAUSEA, HEADACHE, DROWSINESS, VOMITING. INGESTION: SOLVENT ASPIRATION INTO LUNGS AS A RESULT OF VOMITING MAY CAUSE LUNG AND DIGESTIVE SYSTEM DAMAGE
Carcinogenicity - NTP: NO
Carcinogenicity - IARC: NO
Carcinogenicity - OSHA: NO
Explanation Carcinogenicity: NONE OF THE COMPOUNDS IN THIS PRODUCT IS LISTED BY IARC, NTP, OR OSHA AS A CARCINOGEN. (DIESEL EXHAUST IS POTENTIAL)
Signs/Symptoms of Overexposure: VAPORS IN HIGH CONCENTRATION ARE ANESTHETIC. OVEREXPOSURE MAY RESULT IN FATIGUE, WEAKNESS, CONFUSION EUPHORIA, DIZZINESS, HEADACHE, DILATED PUPILS, LACRIMATION, NERVOUSNESS, MUSCLE FATIGUE, INSOMNIA, PARESTHESIA, DERMATITIS, AND PHOTOPHOBIA. CAN CAUSE TEARING, REDNESS OF EYES AND BLURRED VISION. IRRITATION OF SKIN.
Med Cond Aggravated By Exp: PERSONS WITH A HISTORY OF AILMENTS OR WITH A PRE-EXISTING DISEASE INVOLVING THE EYES, SKIN, RESPIRATORY TRACT OR NERVOUS SYSTEM MAY BE AT INCREASED RISK FROM EXPOSURE. DRYING/CRACKING OF SKIN.
Emergency/First Aid Proc: EYES: FLUSH WITH RUNNING WATER FOR 15 MINUTES

WHILE HOLDING EYELID. GET MEDICAL ATTENTION IMMEDIATELY. SKIN: WASH WITH REMOVE TO FRESH AIR. GIVE MOUTH-TO-MOUTH RESUSCITATION IF NOT BREATHING. GET MEDICAL ATTENTION. INGESTION: DO NOT INDUCE VOMITING. GIVE NOTHING BY MOUTH IF UNCONSCIOUS. GET MEDICAL ATTENTION IMMEDIATELY.

Precautions for Safe Handling and Use

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Steps If Material Released/Spill: REMOVE ALL SOURCES OF IGNITION. VENTILATE AND REMOVE WITH INERT ABSORBENT. USE NON-SPARKING TOOLS.
Neutralizing Agent: NOT APPLICABLE
Waste Disposal Method: WASTE MATERIAL MAY BE A HAZARDOUS WASTE (CODE D001) WHICH MUST BE DISPOSED OF ACCORDINGLY. DO NOT INCINERATE CLOSED CONTAINER. DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.
Precautions-Handling/Storing: CONTENTS ARE FLAMMABLE. KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAME. DURING USE AND UNTIL ALL VAPORS ARE GONE: KEEP AREA VENTILATED-DO NOT SMOKE.
Other Precautions: AVOID BREATHING OF VAPORS. LABORATORY TESTS ON ANIMALS HAVE SHOWN THAT EXPOSURE CAN CAUSE SKIN TUMORS. ALWAYS PROMPTLY WASH OFF ANY EXPOSED SKIN.

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Control Measures

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Respiratory Protection: WEAR A NIOSH/MSHA APPROVED RESPIRATOR IF VENTILATION DOES NOT MAINTAIN INHALATION EXPOSURES BELOW PEL/TLV. WEAR SELF-CONTAINED BREATHING APPARATUS IF REQUIRED FOR HIGH LEVELS OF CONTAMINATES.
Ventilation: LOCAL EXHAUST PREFERABLE. GENERAL EXHAUST ACCEPTABLE IF THE EXPOSURE IS MAINTAINED BELOW APPLICABLE EXPOSURE LIMITS.
Protective Gloves: NEOPRENE OR NATURAL RUBBER GLOVES
Eye Protection: PAINT GOGGLES/SAFETY GLASSES AS REQUIRED
Other Protective Equipment: INDUSTRIAL-TYPE WORK CLOTHING, HAT AND APRON AS REQUIRED. AN EYE WASH AND DRENCH SHOWER FACILITY SHOULD BE AVAILABLE.
Work Hygienic Practices: USE WITH ADEQUATE VENTILATION. AVOID BREATHING VAPOR/SPRAY MIST. AVOID CONTACT WITH SKIN/EYES. WASH HANDS/SKIN AFTER USE
Suppl. Safety & Health Data: KEEP CONTAINER CLOSED WHEN NOT IN USE. TRANSFER ONLY TO APPROVED CONTAINERS WITH COMPLETE AND APPROPRIATE LABELING. DO NOT TAKE INTERNALLY.

Transportation Data

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Trans Data Review Date: 91066
DOT PSN Code: LKZ
DOT Proper Shipping Name: PETROLEUM DISTILLATES, N.O.S. OR PETROLEUM PRODUCTS, N.O.S.
DOT Class: 3
DOT ID Number: UN1268
DOT Pack Group: III
DOT Label: FLAMMABLE LIQUID
AFI Prop. Shipping Name: PETROLEUM DISTILLATES, N.O.S.

N.O.S. Shipping Name: CONTAINS PETROLEUM DISTILLATE.
Additional Trans Data: MSDS GIVES FLASH POINT RANGE 120F-180F, BOILING POINT RANGE 340F-675F.

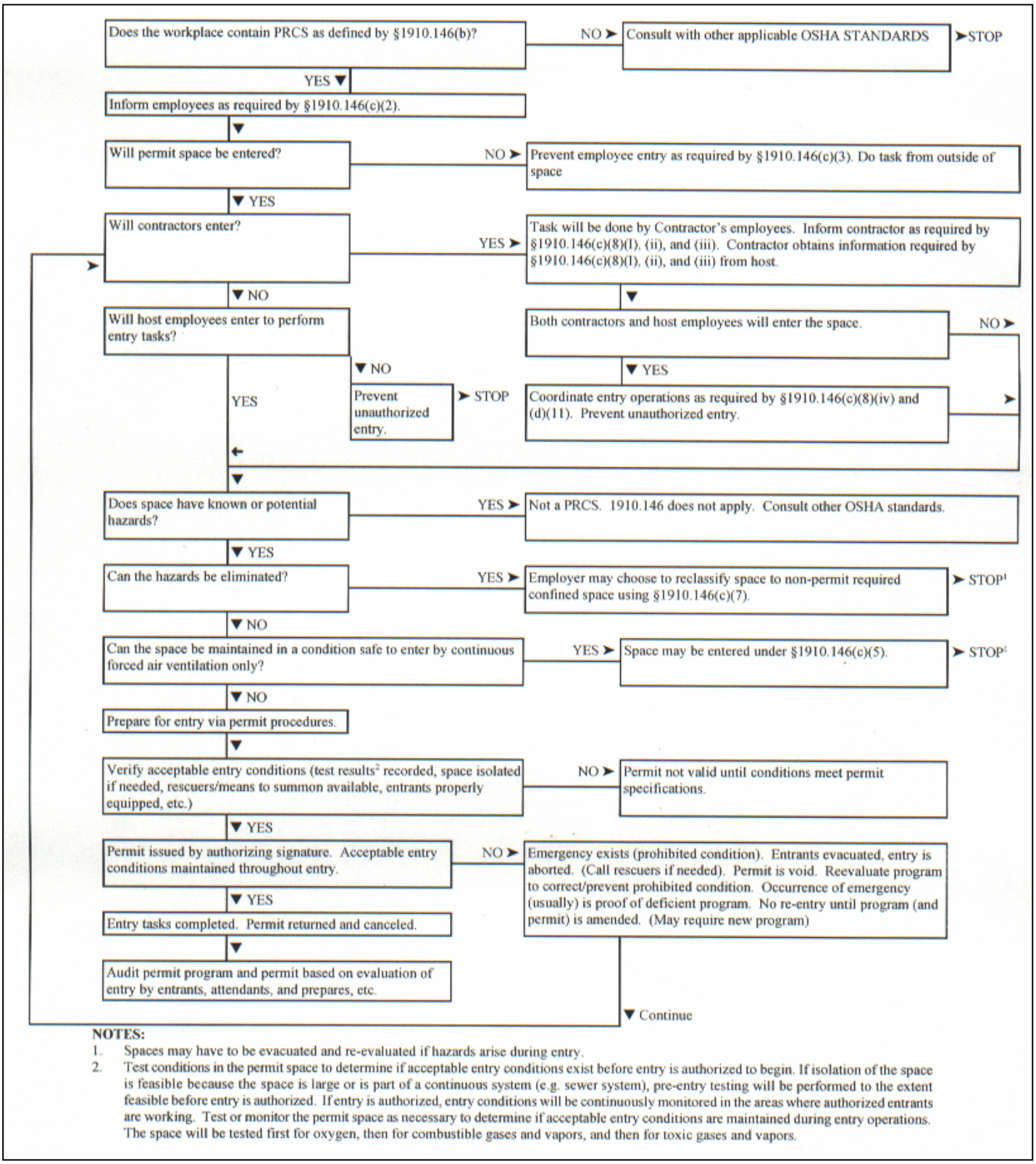
Label Data

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Label Required: YES
Technical Review Date: 07MAR91
Label Status: F
Common Name: AMOFUEL NO. 2 DIESEL
Chronic Hazard: NO
Signal Word: WARNING!
Acute Health Hazard-Slight: X
Contact Hazard-Slight: X
Fire Hazard-Moderate: X
Reactivity Hazard-None: X
Special Hazard Precautions: EYE: IRRITATION. SKIN: MILDLY IRRITATING. RESPIRATORY SYSTEM IRRITATION AND LIGHT HEADEDNESS. MAY CAUSE NAUSEA, HEADACHE, DROWSINESS, VOMITING. INGESTION: SOLVENT ASPIRATION INTO LUNGS AS A RESULT OF VOMITING MAY CAUSE LUNG AND DIGESTIVE SYSTEM DAMAGE REMOVE ALL SOURCES OF IGNITION. VENTILATE AND REMOVE WITH INERT ABSORBENT. USE NON-SPARKING TOOLS. CONTENTS ARE FLAMMABLE. KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAME. DURING USE AND UNTIL ALL VAPORS ARE GONE: KEEP AREA VENTILATED-DO NOT SMOKE.

**ATTACHMENT #3**
PRCS Decision Flow Chart

# PRCS Decision Flow Chart




**NOTES:**

1. Spaces may have to be evacuated and re-evaluated if hazards arise during entry.
2. Test conditions in the permit space to determine if acceptable entry conditions exist before entry is authorized to begin. If isolation of the space is feasible because the space is large or is part of a continuous system (e.g. sewer system), pre-entry testing will be performed to the extent feasible before entry is authorized. If entry is authorized, entry conditions will be continuously monitored in the areas where authorized entrants are working. Test or monitor the permit space as necessary to determine if acceptable entry conditions are maintained during entry operations. The space will be tested first for oxygen, then for combustible gases and vapors, and then for toxic gases and vapors.

## ATTACHMENT #4

# SPILL RESPONSE

# Spills & Site Contingencies

The purpose of this Emergency Response and Contingency Plan is to provide an organized group to take fast, efficient action in any emergency situation. The objectives are as follows:

1. Safeguard project personnel and property;
2. Protect general public and neighboring areas; and
3. Resume normal operations as soon as possible.

In the event of a fire or sudden release of contaminants, OSC personnel will quickly evacuate the work area. In the event of an injury or if OSC observes an emergency unrelated to the field work the procedures identified in this Emergency Response and Contingency Plan will be followed.

The SHSEO will identify and arrange for emergency services. The location, telephone number, and transportation capabilities of the nearest emergency medical facilities will be posted by in the project job trailer and employee break area project. For particularly hazardous operations, on-site medical assistance should be considered or the nearest medical facility alerted.

In the event of any emergency associated with the project, OSC will, without delay, alert the client representative and institute whatever measures that might be necessary to prevent any repetition of the conditions or actions leading to, or resulting in, the emergency.

In the event of an accident resulting in a spill on public roadways or travel ways, First Call shall be made to SHSE to request emergency services cleanup. OSC will be liable for all costs associated with the cleanup of spills. OSC will coordinate and assist response cleanup as necessary.

In the event of an injury or illness among the site personnel, the on-site, certified first aid practitioner (SHSEO) will take control. The injured or ill person will be transferred to the nearest medical facility.

When an evacuation is necessary, all field team members will go to the reassembly point for the project. Reassembly points for contractor personnel will be identified by the SHSEO in tool-box safety meetings and reviewed with workers daily as part of the STAC process.

For emergency situations, oral or hand safety signals must be established by the SHSEO. The signals will be developed, reviewed, and made available to personnel for all phases of operation before going on-site. This will ensure quick communications for use during adverse or emergency situations. Safety signals to be used in support of this project are defined in Section 11.10.

If an emergency develops at the site, the discoverer will take the following course of action:

1. Call 911for proper emergency service response (fire, police, ambulance, etc).
2. Notify other affected personnel at the site.
3. Contact the client representative to inform them of the incident as soon as possible.
4. Prepare a summary report of the incident for the CLIENT representative.

Emergency Equipment Required On-Site

OSC will provide appropriate emergency equipment, including; environmental field spill response kit (see attached Spill Response Guidance Summary Site Available Equipment) industrial-type first aid kit that is approved by its consulting physician for injuries and illnesses which may occur on site. A 20-pound ABC-rated fire extinguisher shall be maintained in each work area of the site. Emergency retrieval equipment will be provided for any confined space entry.

# SPILL RESPONSE SUMMARY

**(Confining and Containing Releases)**

Spill Response Summary:

1. *Do not* place yourself in a hazardous situation in order to confine or contain a release.

2. Although considered as the initial cleanup phase of an incident, confining and containing releases are often dangerous operations and should be performed cautiously, as if they were emergency response actions.

3. Unless the identity of the substance is known, treat any substance as a hazardous material until the identity of the substance becomes known.

4. Wear appropriate body and respiratory protection when working near released petroleum or hazardous materials; Respirators, Poly Coated Tyvek Disposable Suits, Rubber Boots, Gloves and appropriate eye/face protection (goggles, glasses, face shield) is onsite and located in the storage trailer.

5. All initial response activities shall be coordinated through site safety (Fire Dept, Haz Team, Ambulance and Private Contractors) as necessary.

6. **Your first priority is to confine free product in order to minimize the area of impact utilizing site available absorbent boom socks, pads and poly berms. Your second priority is to contain the leak, if applicable, at its source as well as stop the leak …"turn it off or plug it up." Confinement and containment actions, however, will often take place simultaneously.**

7. Keep in mind that during confinement/containment operations, site conditions may deteriorate -- thus creating new hazards or causing the recurrence of hazards (e.g., fire, intensified leak, etc.) that had been under control -- which, in turn, would trigger the need for emergency response actions.

8. Although quick actions are often needed in order to limit the spread of contaminants, always attempt to evaluate response options and to choose the one(s) that will likely be the most effective, safe, and feasible.

On Site Spill Response Equipment:

2 – 95 gallon DOT over pack spill kit drums

Contents per drum: (110) - 15" x 19" Pads (12) - 3" x 4' SOCs (8) - 3" x 12' SOCs (8) - 17" x 19" Pillows (1) - Pair Nitrile Gloves (10) - Disposal Bags, 10 Goggles, 10 Disposable coveralls and boots.

# APPENDIX F

## COMMUNITY AIR MONITORING PLAN

# SAMPLE
# COMMUNITY AIR MONITORING PLAN

TRACT II SITE MANAGEMENT PLAN
NIAGARA FALLS, NIAGARA COUNTY, NEW YORK
NYSDEC SITE ID NUMBER: C932136

SUBMITTED TO:

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

*Prepared for:*

BRIGHTFIELDS, Inc.
333 Ganson Street
Buffalo, New York 14203

*Prepared by*

Amec Foster Wheeler
800 North Bell Avenue, Suite 200
oc427064003" 6.006

Project 3410151051

**September 8, 2015**

# SAMPLE
# COMMUNITY AIR MONITORING PLAN

## TRACT II SITE SOIL MANAGEMENT PLAN
## NIAGARA FALLS, NIAGARA COUNTY, NEW YORK
## NYSDEC SITE ID NUMBERS: 932136

*Prepared for:*
BRIGHTFIELDS, Inc.
333 Ganson Street
Buffalo, New York 14203

*Prepared by:*

**Robert E. Crowley**
**Senior Principal Scientist**
**(Amec Foster Wheeler, Inc.)**

Project No. 3410151051

**SEPTEMBER 8, 2015**

## TABLE OF CONTENTS

**1.0 INTRODUCTION ..... 1-1**
1.1 PURPOSE ..... 1-1
1.2 HAZARD ANALYSIS ..... 1-2
**2.0 REMEDIATION SCOPE OF WORK ..... 2-1**
**3.0 AIR QUALITY MONITORING ..... 3-1**
**4.0 PRE-REMEDIATION BASELINE PARTICULATE MONITORING ..... 4-1**
**5.0 DATA QUALITY ASSURANCE ..... 5-1**
5.1 CALIBRATION ..... 5-1
5.2 OPERATION ..... 5-1
5.3 RECORD KEEPING ..... 5-1

## FIGURES

**Figure 1** Site Location Map
**Figure 2** Tract I Site Plan

## LIST OF ACRONYMS

| | |
|---|---|
| Amec FW | AMEC Foster Wheeler |
| Brightfields | Brightfields, Inc. |
| CAMP | Community Air Monitoring Plan |
| COPCs | Constituents of Potential Concern |
| HASP | Health and Safety Plan |
| JHAs | Job Hazard Analyses |
| NYSDEC | New York State Department of Environmental Conservation |
| NYSDOH | New York State Department of Health |
| PM-10 | particulate matter smaller than 10 microns |
| PAHs | Polynuclear Aromatic Hydrocarbons |
| Site | Tract I and Tract II Sites, Niagara Falls, NY |
| $\mu g/m^3$ | micrograms per cubic meter |
| VOCs | Volatile Organic Compounds |

# 1.0 INTRODUCTION

Amec Foster Wheeler (Amec FW) has prepared this Sample Community Air Monitoring Plan (CAMP) on behalf of Brightfields, Inc. (Brightfields) for the Tract II Site Management Plan (SMP). The Tract I Site is located at 3001 Highland Avenue, south of the Tract I site in the City of Niagara Falls, New York (referred to herein as the "Site"). The New York State Department of Environmental Conservation (NYSDEC) registry number for Tract II is 932136. Figure 1 shows the location of the Site on a United States Geological Survey 7.5-minute topographic map and Figure 2 shows a plan view of the Site layout.

This CAMP outlines the air quality monitoring procedures that will be implemented during future excavation work in support of Site redevelopment. This CAMP fulfills the general requirements set forth by the New York State Department of Health (NYSDOH) "Generic Community Air Monitoring Plan" and the "Fugitive Dust and Particulate Monitoring" procedures contained in the NYSDEC document "DER-10, Technical Guidance for Site Investigation and Remediation", dated May 2010.

## 1.1 Purpose

The purpose of this CAMP is to provide a measure of protection for the downwind community (i.e., off-Site receptors and on-Site workers not directly involved with the subject work activities) from potential airborne contaminant releases resulting from remedial work activities to be conducted at the Site. Additionally, the CAMP provides data to confirm that remedial work activities have not spread contamination offsite via airborne emissions.

According to the NYSDOH guidance document, the CAMP requires real-time air monitoring for volatile organic compounds (VOCs), if present, and airborne particulates (i.e., dust) at the downwind perimeter of each designated work area during certain activities at contaminated Sites, and establishes action levels that trigger emission control actions. The action levels specified herein require increased monitoring, corrective measures to abate emissions, and/or shutdown of work activities. This CAMP is not intended for use in establishing action levels for worker protection; for such information, refer to the Sample Health and Safety Plan (HASP) included as an appendix in the SMP.

## 1.2 Hazard Analysis

As identified in previous investigations, the primary constituents of potential concern (COPCs) at the Site include metals (mainly lead) and polynuclear aromatic hydrocarbons (PAHs).

During future (post-remedial) activities that disturb Site media impacted with the above mentioned COPCs, the primary transport mechanism for these COPCs is dispersion of particulates (dust) in air. As such, this CAMP will address real-time monitoring for these COPCs via downwind perimeter particulate monitoring and through visual observations.

Since VOCs have not been identified at the Site at levels of concern, air monitoring for VOCs will not be conducted and are not included as part of this CAMP. Should these compounds be identified within the work area, the CAMP will be revised to address them.

## 2.0 SOIL MANAGEMENT PLAN SCOPE OF WORK

In general, the future scope of work for the Site may include the excavation or disturbance of soil containing lead and PAHs that meet the restricted Commercial Soil Cleanup Objectives published in 6 NYCRR Pare 375. These activities may be subject to the requirement for a CAMP, and should be evaluated as part of future project planning.

During execution of the above mentioned scope of work, reliance on this CAMP will not preclude reasonable fugitive dust suppression measures to maintain dust at a minimum in and around the work areas. The following dust suppression techniques should be considered during remedial activities:

- Applying water to roads and areas of the Site used by vehicles,
- Restricting vehicle speeds to 10 mph or less,
- Wetting building debris/materials to be removed,
- Spraying water on buildings during demolition,
- Wetting equipment and excavation faces,
- Spraying water on buckets during excavation and dumping,
- Hauling materials in properly covered containers,
- Covering excavated areas and material after excavation activities cease, and
- Reducing the excavation size and/or number of excavations.

During the use of water to suppress dust, care must be taken not to use excess water, which can create unacceptably wet conditions. The use of atomizing sprays will prevent overly wet conditions, will conserve water, and will offer and effective means of suppressing fugitive dust. Additional details regarding the specific dust suppression measures to be employed during Site remediation activities are identified in the above mentioned Interim Remedial Measures Work Plan and Remedial Design Work Plan.

## 3.0 AIR QUALITY MONITORING

Protection of air quality for the downwind community is the objective of the air quality monitoring program. This will be confirmed by continuously monitoring the airborne particulate concentrations at various locations at the perimeter of the Site during demolition and remediation activities. The particulate concentration information obtained will be used by project personnel to ensure that dust levels are maintained below acceptable threshold levels, as defined below. Air quality monitoring will not be required during the grading or placement of clean fill.

Based upon the primary COPCs identified at the Site, air quality monitoring will consist of real-time air monitoring for particulates. All air monitoring will be conducted from four to five feet above the ground surface in the breathing zone. A description of the air monitoring activities to be performed is presented below.

**Real-Time Particulate Air Quality Monitoring**

Real-time air monitoring for particulates (i.e., dust) will be performed continuously during excavation of soils that may contain constituents of concern. Monitoring will include both air testing equipment and through visual observations. Real-time particulate monitoring equipment shall be capable of measuring particulate matter smaller than 10 microns (PM-10), capable of averaging over periods of 15 minutes or less for evaluation against the action level, and include an alarm system to signify an exceedance of the action level.

Monitoring will be conducted at one upwind location to establish background concentrations and at select downwind locations around the perimeter of the Site and/or work area. The locations of the downwind particulate monitoring stations will be immediately downwind of the work area or at the downwind perimeter of the Site. In all, up to six particulate monitoring locations will be utilized. The monitoring equipment will be equipped with an audible alarm that will be activated in the event of an alert/action level exceedance.

During excavation activities, the following alert/action levels will be used for the perimeter dust monitoring:

- If the average downwind PM-10 particulate level is 100 $\mu g/m^3$ greater than background (upwind level) over a 15-minute period, or if airborne dust is observed leaving the work area,

then dust suppression techniques will be employed. Work will continue with dust suppression techniques as long as the downwind PM-10 particulate levels do not exceed 150 µg/$m^3$ above the background level, and provided that no visible dust is migrating from the work area. (Note that dust suppression techniques will also be applied in other circumstances as described in the HASP and/or the remedial design plans).

- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 µg/$m^3$ above the background level, work activities will be halted in the area of concern until corrective measures are identified and implemented to reduce levels to less than 150 µg/$m^3$ above the background level and to prevent visible dust migration.
- If the action level of 150 µg/$m^3$ continues to be exceeded, work activities must be halted and the NYSDEC must be notified. The notification must include a description of the measures implemented to prevent further exceedances of the action level.

All real-time particulate readings will be recorded and will be available for review by NYSDEC, NYSDOH and County Heath personnel. In addition, at the end of each work day, the particulate and weather data (discussed below) recorded by the monitoring system will be retrieved and stored. This data will be posted and reviewable at the jobsite.

**Weather Monitoring Station**

In addition to particulate monitoring, one weather station will be located onsite during excavation activities. The weather station will measure and transmit meteorological data. Wind direction and speed will be reviewed during each workday to ensure that the particulate monitoring equipment is appropriately located and adjusted as needed. Periodic measurements of wind direction at the Site will also be conducted to distinguish which particulate monitoring stations are downwind.

## 4.0 PRE-REMEDIATION BASELINE PARTICULATE MONITORING

Prior to excavation activities, monitoring will be conducted to document ambient particulate concentrations in the vicinity of the work site. During the baseline monitoring, it will not be necessary to provide or monitor for real-time alert/action levels. At the end of all baseline monitoring, a results summary will be prepared and will be available for review at the jobsite.

# 5.0 DATA QUALITY ASSURANCE

## 5.1 Calibration

Instrumentation and equipment used to generate air quality data will be calibrated and zeroed per the manufacture's recommendations. If an instrument does not properly zero, it will be removed from service and will be replaced with a working one.

## 5.2 Operation

All instruments shall be operated in accordance with the manufacture's specifications by individuals trained in the proper use of the equipment. If an instrument malfunctions during operation, it will be removed from service and exchanged for a properly working one. Manufacture's literature, including the operations manual for each piece of monitoring equipment, will be maintained onsite for reference. All instruments and equipment used in air quality monitoring will be maintained in proper working order and properly stored when not in use.

## 5.3 Record Keeping

All air monitoring data, monitoring results, wind speed and direction, as well as the locations of monitoring equipment will be recorded electronically or in the daily field log and will be available for review by NYSDEC, NYSDOH, and applicable local agencies. In addition, as discussed previously, daily particulate and weather data will be reviewable by the public at the jobsite.

**FIGURES**

# APPENDIX G

## SITE MANAGEMENT FORMS

Site Inspection Form

Site Name: _____ Weather: _____

Project Number: _____ Assessment By: _____

Date: _____

| Yes | No | N/A | |
|---|---|---|---|
| | | | A. Site Use |
| ☐ | ☐ | ☐ | 1. Evidence for Change in Property Usage? |
| ☐ | ☐ | ☐ | 2. Evidence of Groundwater Use? |
| ☐ | ☐ | ☐ | 3. Evidence of vegetable gardening/farming? |
| ☐ | ☐ | ☐ | 2. Day Care or Other Non-Permitted Use Present? |
| ☐ | ☐ | ☐ | 3. Evidence of Excavation? |
| ☐ | ☐ | ☐ | 4. Proper Notification for Excavation Made? |
| ☐ | ☐ | ☐ | 5. CAMP and/or HASP Revised for Excavation |
| | | | B. Security |
| ☐ | ☐ | ☐ | 1. Signs of Trespassers/Vandalism? |
| ☐ | ☐ | ☐ | 2. Other |
| | | | C. General Site Conditions |
| ☐ | ☐ | ☐ | 1. Vegetation Stress? |
| ☐ | ☐ | ☐ | 2. Mowing Required? |
| ☐ | ☐ | ☐ | 3. Access Road Drivable? |
| ☐ | ☐ | ☐ | 4. Odors? |
| ☐ | ☐ | ☐ | 5. Other |
| | | | D. Soil Inspection |
| ☐ | ☐ | ☐ | 1. Exposed Waste? |
| ☐ | ☐ | ☐ | 2. Side Slope Stable? |
| ☐ | ☐ | ☐ | 3. Erosion? |
| ☐ | ☐ | ☐ | 4. Leachate Seeps (Discolored Vegetation)? |
| ☐ | ☐ | ☐ | 5. Bare Spots? |
| ☐ | ☐ | ☐ | 6. Presence of Burrowing Animals? |
| ☐ | ☐ | ☐ | 7. Deep Rooted Vegetation? |
| ☐ | ☐ | ☐ | 8. Cracking? |
| ☐ | ☐ | ☐ | 9. Other |
| | | | E. Surface Water |
| ☐ | ☐ | ☐ | 1. Obstruction of Flow Ditches? |
| ☐ | ☐ | ☐ | 2. Erosion of Ditches? |
| ☐ | ☐ | ☐ | 3. Silt & Erosion Control? |
| ☐ | ☐ | ☐ | 4. Culverts in Good Condition? |
| ☐ | ☐ | ☐ | 5. Evidence of Overflow or Uncontrollable Flow? |
| ☐ | ☐ | ☐ | 6. Outfalls in Good Condition? |
| ☐ | ☐ | ☐ | 7. Other |

**Green Remediation Implementation:**

Energy Usage:_____

_____

Solid Waste Generation:_____

_____

Transportation and Shipping:_____

_____

Water Usage:_____

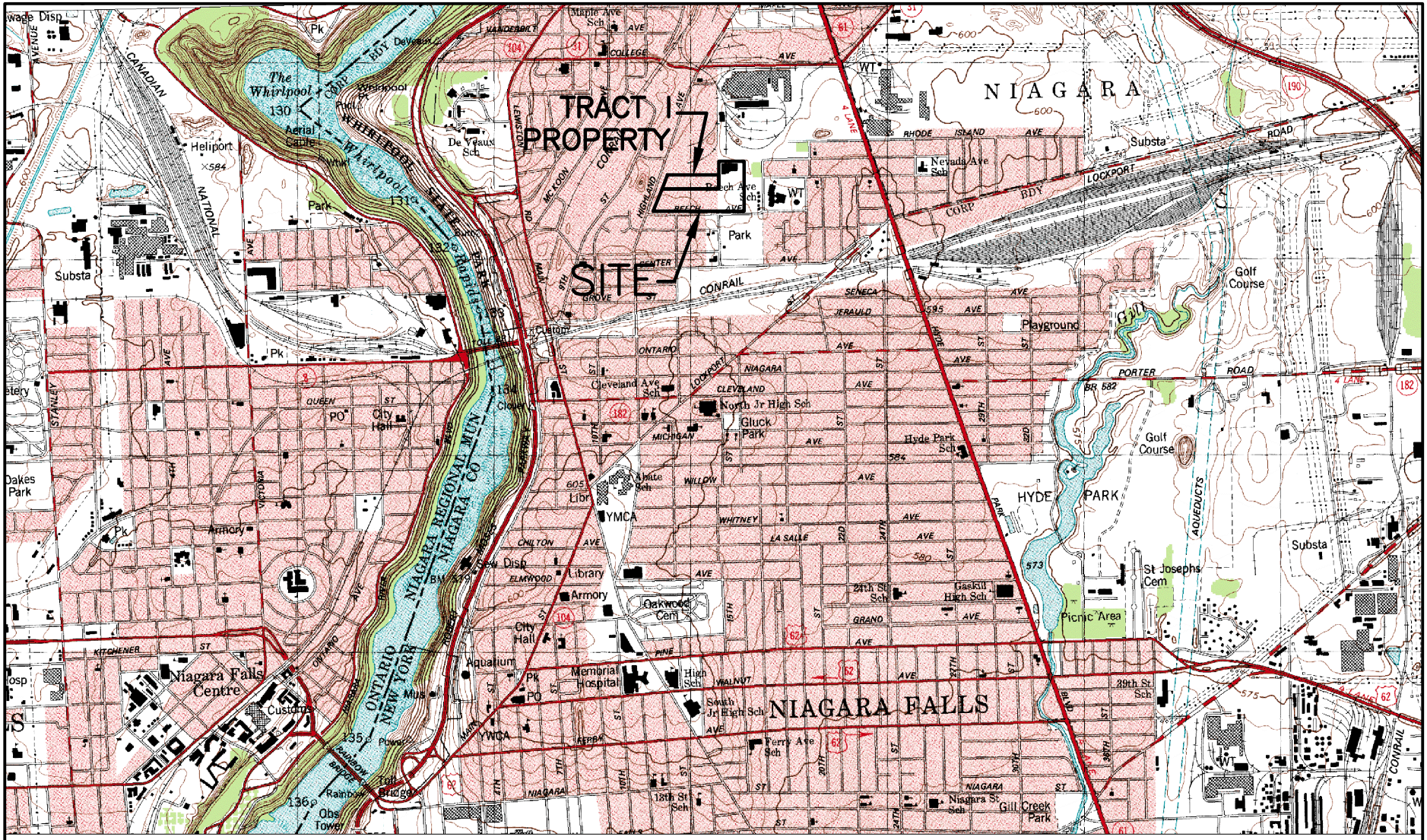
_____

Other Comments:
_____

_____

# FIGURES

DRAWN BY: SLD 03-15-2016 APPROVED BY: REC


TRACT I PROPERTY
SITE
NIAGARA
NIAGARA FALLS
The Whirlpool
Whirlpool
Heliport
Park
Golf Course
Playground
Gluck Park
Hyde Park Sch
HYDE PARK
Picnic Area
St Josephs Cem
Oakwood Cem
Niagara Falls Centre
Aquarium
Memorial Hospital
Library
Armory
City Hall
Custom
Rainbow Bridge
Obs Tower
Falls
Substa
Cleveland Ave Sch
North Jr High Sch
Maple Ave Sch
Nevada Ave Sch
Beech Ave Sch
De Veaux Sch
Ferry Ave Sch
South Jr High Sch
High Sch
24th St Sch
29th St Sch
18th St Sch
Niagara St Sch
Gaskill High Sch
Lockport
Niagara
Cleveland
Michigan
Willow
Whitney
La Salle
Grand
Pine
Walnut
Elmwood
Chilton
Ontario
Seneca
Jerauld
Porter
Rhode Island
Conrail
Niagara Regional Mun
Ontario New York
Niagara River
Canadian
National
Aqueducts
Gill Creek Park
Dakes Park
Stanley
Victoria
Kitchener
Queen
Lewiston
Vanderbilt
College
Mackoon
Highland
Main
Cayuga
Whirlpool
Seneca
Jerauld
Porter
Rhode Island
Lockport
Bdy
Corp
Conrail
Aqueducts
Park
Hyde
Boulevard
Pk
PO
Mus
Tower
Bridge
Creek
Gill
Ave
St
Rd
Blvd
Road
Dr
Ln
Pl
Sch
Cem
Libr
Hosp
Obsta
Clover
Dispo
Disp
Power
Aerial Cable
Ferry
Footbridge
Footbridge
Footbridge

DRAWN BY: SLD 03-18-2016 APPROVED BY: REC

LEGEND

TRACT II PROPERTY BOUNDARY

FORMER STRUCTURE

FORMER UNION CARBIDE PROPERTY

TULIP PROPERTY

DILAPIDATED BUILDING

TRACT II BRIGHTFIELDS II

TRACT I BRIGHTFIELDS

NATIONAL GRID PROPERTY

RESIDENTIAL PROPERTIES

VIRGINIA AVENUE 66' WIDE (NOT OPENED)

S 89°40'00" E 672.76'

135.93'

S 88°58'03" E 774.56'

N 89°40'00" E

N 00°04'11" W 274.56'

S 00°04'11" E 274.56'

N 88°58'03" W 874.39'

N 88°58'03" W

CAROLINA AVENUE 60' WIDE (NOT OPENED)

CAROLINA AVENUE 60' WIDE (NOT OPENED)

FIFTEENTH STREET 60' WIDE (NOT OPENED)

TWELFTH STREET 60' WIDE (NOT OPENED)

MOORE PARKING STRUCTURE

HIGHLAND AVENUE 75' WIDE

OHW

SEVENTEENTH STREET

THIRTEENTH STREET 60' WIDE

BEECH AVENUE 60' WIDE

BEECH AVENUE 60' WIDE

FIFTEENTH STREET 60' WIDE

LOT 318
LOT 317
LOT 316
LOT 315
LOT 314
LOT 313
LOT 312
LOT 311
LOT 310
LOT 309
LOT 308
LOT 307
LOT 306
LOT 305
LOT 304
LOT 303
LOT 302
LOT 301

150 0 150

SCALE: 1"=150'

HONEYWELL INTERNATIONAL, INC.
TRACT II SITE
NIAGARA FALLS, NEW YORK

Project No.: 3410161071

MACTEC Engineering & Consulting P.C.
Environment and Infrastructure - Pittsburgh
800 North Bell Ave.
Suite 200
Carnegie, PA 15106

amec foster wheeler

SITE PLAN

Figure: 2

2

C:\Users\stephanie.downs\Desktop\Figure 2 – Site Plan.dwg Fri, 06 May 2016 – 2:03pm stephanie.downs

DRAWN BY: SLD 04-01-2016 APPROVED BY: REC

## LEGEND

- TRACT II PROPERTY BOUNDARY
- FORMER STRUCTURE
- WESTERN COMMERCIAL AREA
- FUTURE CITY OF NIAGARA FALLS PARK AREA
- NATIONAL GRID PROPERTY
- EASTERN COMMERCIAL AREA

VIRGINIA AVENUE
66' WIDE (NOT OPENED)

S 88°40'00" E
672.76'

135.93'

DILAPIDATED BUILDING

8b
0.788 ac

S 88°58'03" E 774.56'

N 00°54'11" E 134.06'

135.93'
S 88°58'03" E

OHW

N 00°54'11" E 134.06'

S 00°54'11" W

FIFTEENTH STREET
60' WIDE (NOT OPENED)

9
11.070 ac

SEVENTEENTH STREET

0.065 ac

N 88°58'03" W 874.39'

N 88°58'03" W

S 20°12'22" W

CAROLINA AVENUE
60' WIDE (NOT OPENED)

6

7 0.530 ac

CAROLINA AVENUE
60' WIDE (NOT OPENED)

HIGHLAND AVENUE
75' WIDE

OHW

2 1.988 ac

3

0.334 ac

1
2.255 ac

THIRTEENTH STREET
60' WIDE (NOT OPENED)

MOORE PARKING STRUCTURE

4
0.574 ac

5
1.313 ac

FORMER PARKING AREA

8a
0.406 ac

GRANITE CURBING

STREET BOUNDARY

BEECH AVENUE
60' WIDE

THIRTEENTH STREET
60' WIDE

FIFTEENTH STREET
60' WIDE

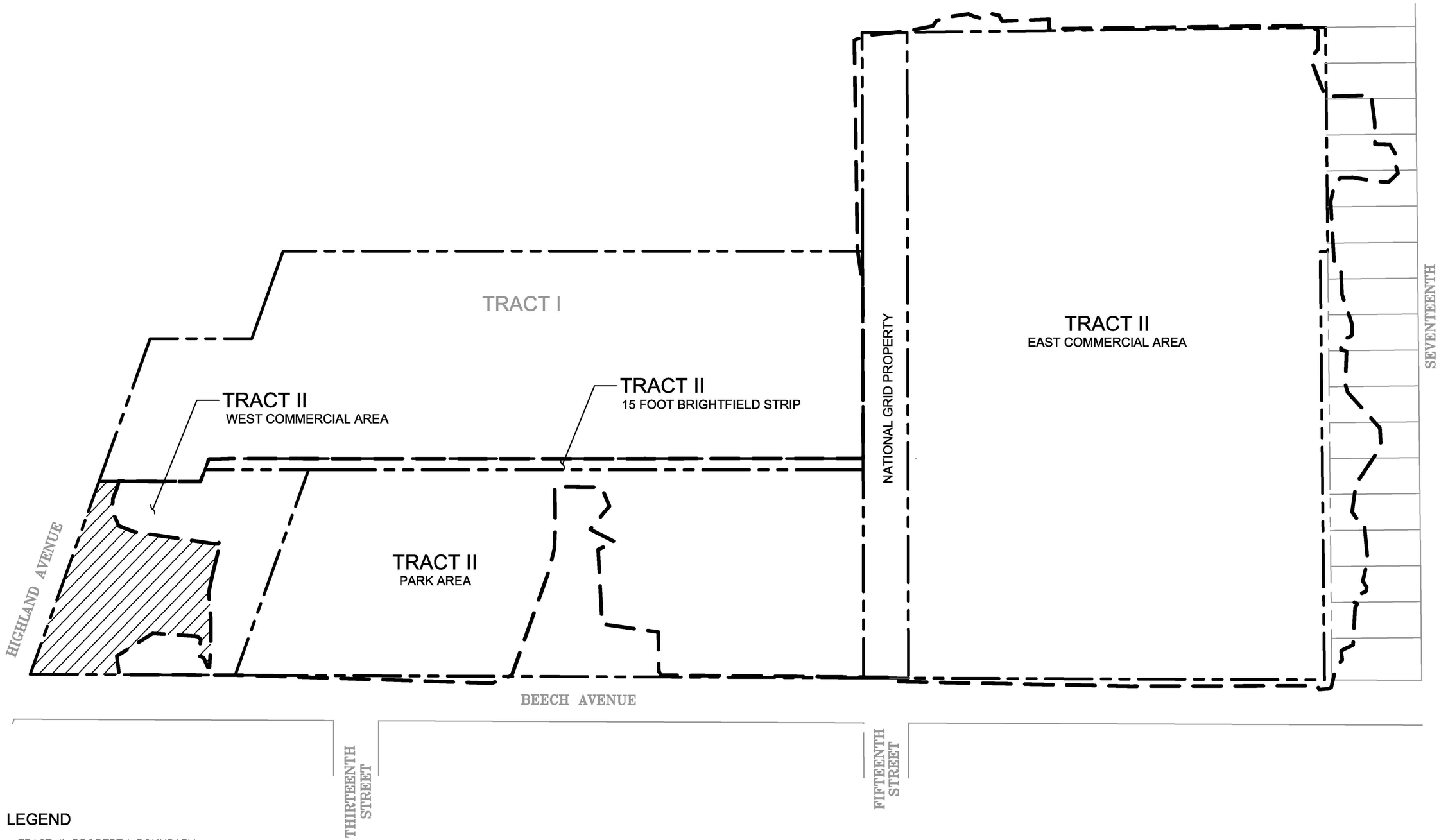
BEECH AVENUE
60' WIDE

150 0 150
SCALE: 1"=150'

| | | | |
|---|---|---|---|
| HONEYWELL INTERNATIONAL, INC.<br>TRACT II SITE<br>NIAGARA FALLS, NEW YORK<br>Project No.: 3410161071 | MACTEC Engineering & Consulting P.C.<br>Environment and Infrastructure - Pittsburgh<br>800 North Bell Ave.<br>Suite 200<br>Carnegie, PA 15106<br>amec foster wheeler | SITE MANAGEMENT PARCELS<br>Figure: 3 | 3 |

C:\Users\stephanie.downs\Desktop\Figure 3 - Site Management Parcels.dwg Fri, 06 May 2016 - 2:11pm stephanie.downs

DRAWN BY: SLD 04-05-16 REVISED BY: TDD 06-22-17




LEGEND

- TRACT II PROPERTY BOUNDARY
- TRACT II EXCAVATION LIMITS
- TRACT I PROPERTY BOUNDARY
- AREA EXCAVATED AND GRADED TO ACCOMMODATE 1 FOOT CLEAN COVER SOIL ABOVE DEMARCATION LAYER

130 0 130

SCALE: 1"=130'

HONEYWELL INTERNATIONAL, INC.
TRACT II SITE
NIAGARA FALLS, NEW YORK

Project No.: 3410161071

MACTEC Engineering & Consulting P.C.
Environment and Infrastructure - Pittsburgh
800 North Bell Ave.
Suite 200
Carnegie, PA 15106

amec foster wheeler

EXCAVATION LIMITS

Figure: 4

4

C:\Donovan\Niagra Falls\Issued for Construction\Tract II Final Engineering Report\Figure 5 - Limit of excavations -2017.dwg Thu, 22 Jun 2017 - 1:45pm tony.donovan

DRAWN BY: SLD 03-18-2016 REVISED BY: TDD 06-22-2017

## LEGEND

- Property Boundary
- Demolished Structure
- Existing Structure
- Excavation Limits
- Area Excavated and Graded to Accommodate 1 Foot Clean Cover Soil Above Demarcation Layer
- T2–W1 — Western Commercial Excavation Area Confirmatory Sample Location
- T2–SW11 — Park Excavation Area Confirmatory Sample Location
- NG–7 — Eastern Commercial Excavation Area Confirmatory Sample Location
- 3200–SW1 — Eastern Residential Excavation Area Confirmatory Sample Location

Soil Boring Sample Results Box

| | | |
|---|---|---|
| T2-CB53 | 4/23/2014 | Sample Name and Date |
| Lead | 76.6 | Soil Boring Sample Results |
| Lead | >1000 | Concentration exceeds respective Restricted Commercial Soil Cleanup Objective. |
| Lead | >400 | Concentration exceeds respective Restricted Residential Soil Cleanup Objective. |
| Lead | >63 | Concentration exceeds respective Unrestricted Soil Cleanup Objective. |

J Denotes estimated concentration

B Denotes that compound was also detected in method blank.

NOTE

Lead results reported in mg/kg.

TRACT I

TRACT II WEST COMMERCIAL AREA

TRACT II PARK AREA

TRACT II EAST COMMERCIAL AREA

NATIONAL GRID

HIGHLAND AVENUE

THIRTEENTH STREET

FIFTEENTH STREET

SEVENTEENTH STREET

* SAMPLES T2–WP–CB1, TP–WP–CB2, AND T2–WP–CB3 SAMPLED ON 4/13/15 DUPLICATED PREVIOUSLY USED SAMPLE ID'S. THESE SAMPLES ARE SHOWN CORRECTLY ON THIS FIGURE.

SCALE: 1"=130'

| | | |
|---|---|---|
| HONEYWELL INTERNATIONAL, INC.<br>TRACT II SITE<br>NIAGARA FALLS, NEW YORK<br>Project No.: 3410161071 | MACTEC Engineering & Consulting, P.C.<br>Environment and Infrastructure - Pittsburgh<br>600 North Bell Ave.<br>Suite 200<br>Carnegie, PA 15106<br>amec foster wheeler | LEAD CONDITIONS AT COMPLETION<br>Figure: 5 | 5 |

C:\Donovan\Wagra Falls\leased for Construction\Tract II Final Engineering Report\Figure 10 – Current Lead Conditions – 2017.dwg Thu, 22 Jun 2017 – 1:58pm tony.donovan

DRAWN BY: SLD 03-18-2016 REVISED BY: TDD 06-22-2017

## LEGEND

- Property Boundary
- Demolished Structure
- Existing Structure
- Excavation Limits
- Area Excavated and Graded to Accommodate 1 Foot Clean Cover Soil Above Demarcation Layer
- T2-W1 — Western Commercial Excavation Area Confirmatory Sample Location
- T2-SW11 — Park Excavation Area Confirmatory Sample Location
- NG-7 — Eastern Commercial Excavation Area Confirmatory Sample Location
- 3200-SW1 — Eastern Residential Excavation Area Confirmatory Sample Location

Soil Boring Sample Results Box

| | |
|---|---|
| T2-CB67 | 6/3/2014 — Sample Name and Date |
| Chromium | 17.7 — Soil Boring Sample Results |
| Chromium | Concentration exceeds respective Restricted Commercial Soil Cleanup Objective. |
| Chromium | Concentration exceeds respective Restricted Residential Soil Cleanup Objective. |
| Chromium | Concentration exceeds respective Unrestricted Soil Cleanup Objective. |

J — Denotes estimated concentration

NOTE

Metal results reported in mg/kg.

T2-CB21 10/22/2013 — Manganese 2,240 J; Nickel 34.6
T2-CB19 10/9/2013 — Nickel 33.8
T2-CB17 9/9/2013 — Copper 51.6
T2-CB23 10/31/2013 — Hexavalent Chromium 2.4
T2-CB8 8/16/2013 — Chromium 17.8
3200-CB3 11/3/2014 — Chromium 27.6; Nickel 30.9
T2-NG-SW3 10/10/2014 — Chromium 11.1
T2-NG-SW4 10/10/2014 — Chromium 13.4
T2-NG-SW6 12/15/2014 — Chromium 15.2; Zinc 733; Mercury 0.23
T2-NG-SW5 12/15/2014 — Arsenic 22.2; Chromium 47.2; Copper 282; Zinc 618; Mercury 1.2
T2-CB866 6/3/2014 — Chromium 18.4
T2-CB867 6/3/2014 — Chromium 17.7
T2-CB862 5/28/2014 — Zinc 188
T2-CB865 5/28/2014 — Zinc 238
T2-CB844 3/21/2014 — Chromium 15.1
T2-CB839 2/14/2014 — Zinc 328
T2-CB843 3/21/2014 — Chromium 15.5; Zinc 145 J
T2-CB845 3/25/2014 — Zinc 219
T2-CB850 4/22/2014 — Zinc 111
T2-CB849 3/25/2014 — Zinc 144
T2-CB837 1/31/2014 — Zinc 169 J
T2-CB852 4/23/2014 — Zinc 144
3200-SW1 10/30/2014 — Barium 367; Chromium 34.1; Copper 85.7; Nickel 39; Zinc 230; Mercury 0.39
T2-CB879 8/14/2014 — Zinc 116
3200-CB1 10/30/2014 — Chromium 15.8
3031-SW2 10/28/2014 — Chromium (trivalent) 36.88; Nickel 36.2; Zinc 235; Mercury 0.48
3031-CB1 10/28/2014 — Zinc 379
3031-SW1 10/28/2014 — Chromium (trivalent) 147.49; Copper 52.1; Zinc 406; Mercury 1.9
T2-CB48 3/25/2014 — Zinc 486
T2-AL-CB5 6/27/2014 — Chromium 18.1; Zinc 151
3027-SW1 10/23/2014 — Mercury 0.42
2014-ET1-3-4 5/28/2014 — Chromium 7.9
T2-AL-CB4 6/27/2014 — Chromium 17.0
3021-CB1 10/21/2014 — Chromium 20.3
3021-SW1 10/21/2014 — Chromium 23.1
3017-SW1 10/22/2014 — Chromium 20.7; Mercury 0.23
T2-AL-CB1 6/26/2014 — Chromium 23.5
3017-CB1 10/22/2014 — Chromium 19.3; Copper 65.5; Zinc 274
3011-CB1 10/22/2014 — Chromium 21.3
TE10-N 9/13/2013 — Mercury 0.42
TE10-W 9/13/2013 — Mercury 0.30
TE10-E 9/13/2013 — Mercury 0.19
3011-SW1 10/22/2014 — Chromium 22.3; Zinc 155; Mercury 0.28
T2-AL-CB2 6/26/2014 — Chromium 15.4
3007-SW1 10/24/2014 — Chromium 20.1; Mercury 0.28
3003-SW1 10/29/2014 — Chromium 20.0; Mercury 0.49
3003-CB1 10/29/2014 — Chromium 21.4
T2-AL-CB3 6/26/2014 — Chromium 18.5; Nickel 30.4
T2-BS-SW1 7/10/2014 — Chromium 23.4; Zinc 238; Mercury 1.1
T2-BS-CB3 7/11/2014 — Chromium 17.6; Zinc 143
3007-CB1 10/24/2014 — Chromium 20.7
T2-BS-SW4 7/11/2014 — Chromium 17.3; Zinc 122; Mercury 2.6
T2-BS-SW3 7/10/2014 — Chromium 21.0; Mercury 0.93
T2-BS-CB2 7/10/2014 — Chromium 23.8; Nickel 33.3; Zinc 1070
T2-BS-SW2 7/10/2014 — Chromium 22.3; Zinc 174; Mercury 3.1
T2-BS-CB1 7/10/2014 — Chromium 17.1
T2-BS-SW5 7/14/2014 — Chromium 20.7; Zinc 216; Mercury 9.8
T2-BS-CB4 7/14/2014 — Chromium 15.4; Zinc 648
T2-BS-SW6 7/15/2014 — Arsenic 81.1; Chromium 30.2; Copper 248; Silver 9.4; Zinc 209; Mercury 923
T2-BS-CB5 7/15/2014 — Chromium 15.7; Zinc 574
T2-BS-SW7 7/16/2014 — Chromium 18.0; Mercury 1.6
T2-BS-CB6 7/16/2014 — Chromium 15.9; Zinc 548; Mercury 0.65
T2-BS-SW8 7/16/2014 — Chromium 4.1
T2-EP-PM2-4 3/17/2015 — Chromium 22.8; Nickel 40.5
T2-EP-PM2-2 2/25/2015 — Chromium 22.2; Nickel 32.9; Zinc 1,260
T2-EP-PM5-2 3/17/2015 — Chromium 18.0; Zinc 377
T2-WC-CB2 5/19/2015 — Chromium 19.5
T2-E13-2 4/6/2015 — Cadmium 3.1; Chromium 19.0; Zinc 638
T2-EP-PM3-2 3/17/2015 — Chromium 21.5; Nickel 33.4; Zinc 1,520
T2-EP-PM15-2 3/25/2015 — Chromium 23.0
T2-EP-PM11-2 3/9/2015 — Cadmium 2.9; Chromium 22.0; Zinc 1,070
T2-EP-PM13-2 2/19/2015 — Cadmium 3.0; Chromium 23.3; Nickel 30.3; Zinc 271
T2-WC-SW4 10/23/2014 — Chromium 30.6; Zinc 231; Mercury 0.26
WC-TP7 5/19/2015 — Cadmium 3.0; Chromium 41.8; Zinc 711
WC-TP6 5/19/2015 — Barium 733; Cadmium 4.3; Chromium 33.9; Zinc 806; Mercury 0.357
WC-TP4 5/19/2015 — Barium 727; Chromium 20.0; Copper 185; Zinc 404; Mercury 0.20 J
WC-TP5 5/19/2015 — Arsenic 21.0; Barium 1,550; Cadmium 6.4; Chromium 31.4; Zinc 960; Mercury 0.54 J
WC-TP2 5/19/2015 — Arsenic 7.45; Barium 649; Chromium 11.3; Zinc 338
WC-TP3 5/19/2015 — Chromium 9.2; Zinc 170

T2-W1-F, T2-WP-CB3*, T2-WP-CB2*, T2-WP-CB1*, T2-WP-CB4, T2-WP-CB5, T2-WP-CB6, T2-WP-CB1, T2-WC-CB2, T2-WC-SW4, T2-PS-UST4N, T2-PS-UST4W, T2-PS-UST4F, T2-PS-UST4E, T2-PS-UST4S, TE9-F, TE2-F, TE1-N, TE1-W, TE1-E, TE1-S, WC-TP1-N3, WC-TP1-E, WC-TP1-B, WC-TP1-W3, WC-TP1, WC-TP2, WC-TP3, WC-TP4, WC-TP5, WC-TP6, WC-TP7, T2-W1, T2-E2, T2-E3, T2-E6, T2-E7, T2-E8, T2-E9, T2-E10, T2-E11, T2-E13-2, T2-E15, T2-E16, T2-SW11, T2-SW16-1.0-1.5, T2-SW19-1.0-1.5, T2-SW22, T2-EP-PM1, T2-EP-PM2-2, T2-EP-PM3-2, T2-EP-PM4-2, T2-EP-PM5-2, T2-EP-PM6-1, T2-EP-PM7, T2-EP-PM8, T2-EP-PM9-1, T2-EP-PM10, T2-EP-PM11-2, T2-EP-PM12, T2-EP-PM13-2, T2-EP-PM14-1, T2-EP-PM15-2, T2-EP-PM16, T2-CB1, T2-CB2, T2-CB3, T2-CB4, T2-CB5, T2-CB6, T2-CB7, T2-CB8, T2-CB12, T2-CB16, T2-CB17, T2-CB19, T2-CB20, T2-CB22, T2-CB23, T2-CB24, T2-CB25, T2-CB26, T2-CB27, T2-CB30, T2-CB31, T2-CB32, T2-CB33, T2-CB35, T2-CB36, T2-CB37, T2-CB38, T2-CB39, T2-CB41, T2-CB42, T2-CB43, T2-CB44, T2-CB45, T2-CB46, T2-CB47, T2-CB48, T2-CB49, T2-CB50, T2-CB51, T2-CB52, T2-CB53, T2-CB54, T2-CB55, T2-CB56, T2-CB57, T2-CB59, T2-CB60, T2-CB61, T2-CB62, T2-CB63, T2-CB64, T2-CB65, T2-CB66, T2-CB68, T2-CB69, T2-CB70, T2-CB71, T2-CB72, T2-CB73, T2-CB75, T2-CB76, T2-CB77, T2-CB78, T2-CB79, T2-SW1, T2-SW2, T2-SW3, T2-SW4, T2-SW5, T2-SW6, T2-SW20, T2-SW21, T2-SW52, T2-SW53, T2-SW54, T2-NP-CB1, T2-NP-CB2, T2-NP-CB3, T2-NP-SW1, T2-NP-SW3, T2-NP-SW4, T2-NP-SW5, T2-NG-CB1, T2-NG-CB2, T2-NG-CB3, T2-NG-CB4, T2-NG-SW3, T2-NG-SW4, T2-NG-SW5, T2-NG-SW6, T2-BS-CB1, T2-BS-CB2, T2-BS-CB3, T2-BS-CB4, T2-BS-CB5, T2-BS-CB6, T2-BS-SW1, T2-BS-SW2, T2-BS-SW3, T2-BS-SW4, T2-BS-SW5, T2-BS-SW6, T2-BS-SW7, T2-BS-SW8, T2-AL-CB1, T2-AL-CB2, T2-AL-CB3, T2-AL-CB4, T2-AL-CB5, 3200-CB1, 3200-CB2, 3200-CB3, 3200-SW1, 3200-SW2, 3200-SW3, 3200-SW4, 3200-SW5, 3200-SW5A, KOG-CB1, KOG-CB2, KOG-SW1, KOG-SW2, KOG-SW3, KOG-SW4, 3031-CB1, 3031-SW1, 3031-SW2, 3027-CB1, 3027-SW1, 3021-CB1, 3021-SW1, 3017-CB1, 3017-SW1, 3011-CB1, 3011-SW1, 3007-CB1, 3007-SW1, 3003-CB1, 3003-SW1, 2014-ET1-3-4, NG-5, NG-6, NG-7, NG-8, NG-9

HUNTLEY AVENUE

BEECH AVENUE

THIRTEENTH STREET

FOURTEENTH STREET

SEVENTEENTH STREET

LOT 218, LOT 217, LOT 216, LOT 215, LOT 214, LOT 213, LOT 212, LOT 211, LOT 210, LOT 209, LOT 208, LOT 207, LOT 206, LOT 205, LOT 204, LOT 203, LOT 202, LOT 201

* SAMPLES T2-WP-CB1, TP-WP-CB2, AND T2-WP-CB3 SAMPLED ON 4/13/15 DUPLICATED PREVIOUSLY USED SAMPLE ID'S. THESE SAMPLES ARE SHOWN CORRECTLY ON THIS FIGURE.

SCALE: 1"=75' (75 0 75)

HONEYWELL INTERNATIONAL, INC.
TRACT II SITE
NIAGARA FALLS, NEW YORK
Project No.: 3410161071

MACTEC Engineering & Consulting P.C.
Environment and Infrastructure - Pittsburgh
800 North Bell Ave, Suite 200
Carnegie, PA 15106
amec foster wheeler

NON-LEAD METAL CONDITIONS AT COMPLETION
Figure: 6

6

C:\Donovan\Niagra Falls\Issued for Construction\Tract II Final Engineering Report\Figure 11 - Non-Lead Metals Current Conditions - 2017.dwg Thu, 22 Jun 2017 - 2:19pm tony.donovan

DRAWN BY: SLD 03-18-2016 REVISED BY: TDD 06-22-2017

## LEGEND

- Property Boundary
- Demolished Structure
- Existing Structure
- Excavation Limits
- Area Excavated and Graded to Accommodate 1 Foot Clean Cover Soil Above Demarcation Layer
- T2-W1 — Western Commercial Excavation Area Confirmatory Sample Location
- T2-SW11 — Park Excavation Area Confirmatory Sample Location
- NG-7 — Eastern Commercial Excavation Area Confirmatory Sample Location
- 3200-SW1 — Eastern Residential Excavation Area Confirmatory Sample Location

Soil Boring Sample Results Box

| WC-TP5 | 5/19/2015 | Sample Name and Date |
|---|---|---|
| Benzo(a)anthracene | 21,000 | Soil Boring Sample Results |

- Benzo(a)anthracene — Concentration exceeds respective Restricted Commercial Soil Cleanup Objective.
- Benzo(a)anthracene — Concentration exceeds respective Restricted Residential Soil Cleanup Objective.
- Benzo(a)anthracene — Concentration exceeds respective Unrestricted Soil Cleanup Objective.

J Denotes estimated concentration

NOTE

Results reported in µg/kg.

| WC-TP5 | 5/19/2015 |
|---|---|
| Acenaphthene | 41,000 J |
| Anthracene | 120,000 |
| Benzo(a)anthracene | 180,000 |
| Benzo(a)pyrene | 130,000 |
| Benzo(b)fluoranthene | 180,000 |
| Benzo(k)fluoranthene | 73,000 J |
| Chrysene | 180,000 |
| Dibenz(a,h)anthracene | 28,000 J |
| Dibenzofuran | 67,000 J |
| Fluoranthene | 490,000 |
| Fluorene | 55,000 J |
| Indeno(1,2,3-cd)pyrene | 70,000 J |
| Naphthalene | 24,000 J |
| Phenanthrene | 410,000 |
| Pyrene | 340,000 |

| WC-TP7 | 5/19/2015 |
|---|---|
| Benzo(a)anthracene | 42,000 |
| Benzo(a)pyrene | 33,000 |
| Benzo(b)fluoranthene | 48,000 |
| Benzo(k)fluoranthene | 18,000 |
| Chrysene | 43,000 |
| Dibenz(a,h)anthracene | 6,500 J |
| Dibenzofuran | 3,900 J |
| Indeno(1,2,3-cd)pyrene | 18,000 |

| T2-WC-SW4 | 10/23/2014 |
|---|---|
| Benzo(a)pyrene | 1,200 J |
| Benzo(b)fluoranthene | 1,700 J |
| Chrysene | 1,100 J |
| Indeno(1,2,3-cd)pyrene | 750 J |

| TE1-W | 10/10/2012 |
|---|---|
| Benzo(a)anthracene | 1,200 |
| Benzo(b)fluoranthene | 1,200 |
| Chrysene | 1,100 |

| WC-TP2 | 5/19/2015 |
|---|---|
| Benzo(a)anthracene | 21,000 |
| Benzo(a)pyrene | 17,000 |
| Benzo(b)fluoranthene | 21,000 |
| Benzo(k)fluoranthene | 10,000 |
| Chrysene | 22,000 |
| Indeno(1,2,3-cd)pyrene | 11,000 |

| WC-TP3 | 5/19/2015 |
|---|---|
| Benzo(a)anthracene | 54,000 |
| Benzo(a)pyrene | 42,000 |
| Benzo(b)fluoranthene | 55,000 |
| Benzo(k)fluoranthene | 21,000 |
| Chrysene | 54,000 |
| Dibenz(a,h)anthracene | 9,400 |
| Dibenzofuran | 8,500 |
| Fluoranthene | 120,000 |
| Indeno(1,2,3-cd)pyrene | 25,000 |
| Phenanthrene | 110,000 |
| Pyrene | 120,000 |

| WC-TP2 | 5/19/2015 |
|---|---|
| Acenaphthene | 38,000 J |
| Benzo(a)anthracene | 120,000 |
| Benzo(a)pyrene | 94,000 |
| Benzo(b)fluoranthene | 80,000 |
| Benzo(k)fluoranthene | 32,000 J |
| Chrysene | 110,000 |
| Dibenzofuran | 27,000 J |
| Fluoranthene | 220,000 |
| Fluorene | 46,000 J |
| Indeno(1,2,3-cd)pyrene | 56,000 J |
| Naphthalene | 17,000 J |
| Phenanthrene | 300,000 |
| Pyrene | 240,000 |

| WC-TP1-B | 5/19/2015 |
|---|---|
| Benzo(a)anthracene | 5,100 |
| Benzo(a)pyrene | 3,800 J |
| Benzo(b)fluoranthene | 4,800 |
| Benzo(k)fluoranthene | 2,100 J |
| Chrysene | 4,000 |
| Indeno(1,2,3-cd)pyrene | 2,300 J |

| T2-NG-CB3 | 10/10/2014 |
|---|---|
| Benzo(a)anthracene | 1,300 J |
| Benzo(k)fluoranthene | 840 J |
| Chrysene | 1,300 J |

| T2-NG-SW5 | 12/15/2014 |
|---|---|
| Benzo(a)anthracene | 4,800 |
| Benzo(a)pyrene | 4,700 |
| Benzo(b)fluoranthene | 5,900 |
| Benzo(k)fluoranthene | 3,000 J |
| Chrysene | 4,600 |
| Dibenz(a,h)anthracene | 480 J |
| Indeno(1,2,3-cd)pyrene | 1,600 J |

| T2-BS-SW3 | 7/10/2014 |
|---|---|
| Benzo(a)anthracene | 1,300 |
| Benzo(a)pyrene | 1,100 |
| Benzo(b)fluoranthene | 1,400 |
| Chrysene | 1,200 |
| Indeno(1,2,3-cd)pyrene | 600 |

| T2-BS-SW2 | 7/10/2014 |
|---|---|
| Benzo(b)fluoranthene | 1,200 |

| 3200-SW3 | 11/3/2014 |
|---|---|
| Benzo(a)anthracene | 14,000 |
| Benzo(a)pyrene | 10,000 |
| Benzo(b)fluoranthene | 21,000 |
| Benzo(k)fluoranthene | 7,000 |
| Chrysene | 21,000 |
| Dibenz(a,h)anthracene | 1,900 J |
| Indeno(1,2,3-cd)pyrene | 4,900 J |

| 3200-SW2 | 11/3/2014 |
|---|---|
| Benzo(a)anthracene | 3,100 J |
| Benzo(a)pyrene | 2,500 J |
| Benzo(b)fluoranthene | 4,800 |
| Benzo(k)fluoranthene | 1,900 J |
| Chrysene | 4,000 J |
| Dibenz(a,h)anthracene | 510 J |
| Indeno(1,2,3-cd)pyrene | 1,200 J |

| 3200-SW1 | 10/30/2014 |
|---|---|
| Benzo(a)anthracene | 1,400 |
| Benzo(a)pyrene | 1,400 |
| Benzo(b)fluoranthene | 2,000 |
| Chrysene | 1,600 |
| Indeno(1,2,3-cd)pyrene | 1,100 |

| 20-4-ET-1-3-4 | 5/28/2014 |
|---|---|
| Benzo(a)anthracene | 2,600 |
| Benzo(a)pyrene | 2,500 |
| Benzo(b)fluoranthene | 2,800 |
| Benzo(k)fluoranthene | 1,700 |
| Chrysene | 2,700 |
| Dibenz(a,h)anthracene | 560 J |
| Indeno(1,2,3-cd)pyrene | 1,400 |

| 3031-SW1 | 10/28/2014 |
|---|---|
| Benzo(a)anthracene | 3,600 J |
| Benzo(a)pyrene | 2,700 J |
| Benzo(b)fluoranthene | 2,800 J |
| Benzo(k)fluoranthene | 1,900 J |
| Chrysene | 3,800 J |
| Indeno(1,2,3-cd)pyrene | 1,000 J |

| 3021-SW1 | 10/21/2014 |
|---|---|
| Benzo(a)anthracene | 1,600 J |
| Benzo(a)pyrene | 1,200 J |
| Benzo(b)fluoranthene | 1,900 J |
| Chrysene | 1,500 J |
| Indeno(1,2,3-cd)pyrene | 830 J |

| 3017-SW1 | 10/22/2014 |
|---|---|
| Benzo(a)anthracene | 2,400 J |
| Benzo(a)pyrene | 1,900 J |
| Benzo(b)fluoranthene | 2,300 J |
| Benzo(k)fluoranthene | 930 J |
| Chrysene | 2,200 J |
| Indeno(1,2,3-cd)pyrene | 890 J |

| 3007-SW1 | 10/24/2014 |
|---|---|
| Chrysene | 1,400 J |

HOLLAND AVENUE

BEECH AVENUE

THIRTEENTH STREET

FIFTEENTH STREET

* SAMPLES T2-WP-CB1, TP-WP-CB2, AND T2-WP-CB3 SAMPLED ON 4/13/15 DUPLICATED PREVIOUSLY USED SAMPLE ID'S. THESE SAMPLES ARE SHOWN CORRECTLY ON THIS FIGURE.

75 0 75
SCALE: 1"=75'

HONEYWELL INTERNATIONAL, INC.
TRACT II SITE
NIAGARA FALLS, NEW YORK
Project No.: 3410161071

MACTEC Engineering & Consulting P.C.
Environment and Infrastructure - Pittsburgh
800 North Bell Ave.
Suite 200
Carnegie, PA 15106

amec foster wheeler

PAH CONDITIONS AT COMPLETION
Figure: 7

7

C:\Donovan\Niagara Falls\Issued for Construction\Tract II Final Engineering Report\Figure 12 - Current PAH Conditions - 2017.dwg Thu, 22 Jun 2017 - 2:31pm tony.donovan

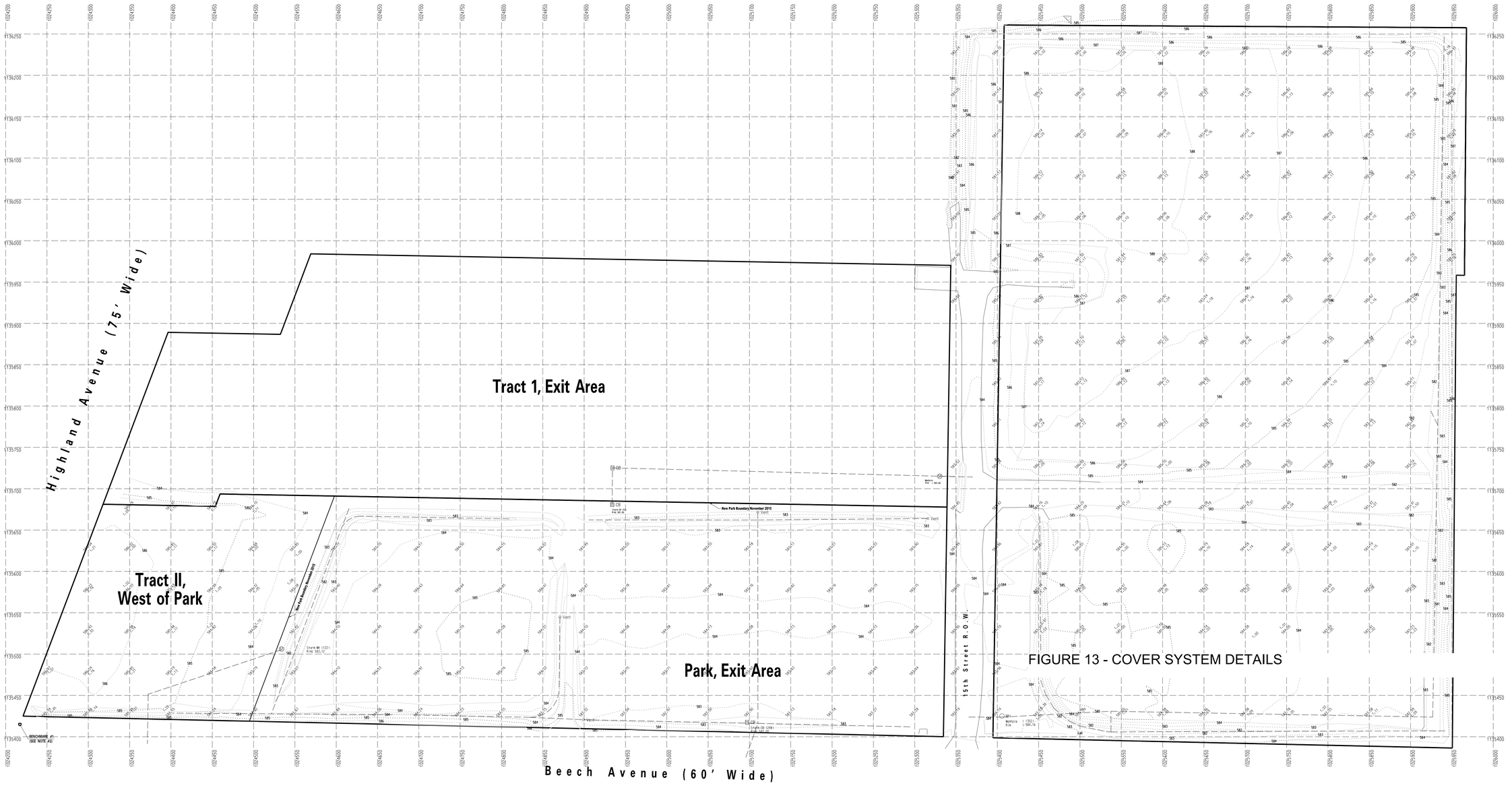



FIGURE 13 - COVER SYSTEM DETAILS

Field Observed Storm Manhole
Field Observed Catch Basin
Field Observed Storm Structure
Design Location Underdrain
Field Observed Breakline
Minor Contour
Major Contour
Boundary Line
State Plane Grid Reference
Elevation Final Cover
Thickness Above Subgrade

Notes:

1) North as Shown on this Map is True North at 78°35' Meridian of West Longitude, as based on the New York State Plane Coordinate System NAD 83, West Zone 3103 as established by GPS Static Survey by Niagara Boundary & Mapping.

2) Elevations as shown on this Map are based NAVD 88.
Site Benchmark: "X" Cut on Eastern bonnet bolt of the fire hydrant at the intersections of Beech Avenue and Highland Avenue. Elevation: 587.62

3) Utilities as shown on this map are plotted from field locations of viable structures and information provided by others. Niagara Boundary & Mapping Services, along with the undersigned Land Surveyor assumes no responsibility as to the accuracy of underground utilities. Contractor must call UFPO three working days prior to any excavation construction activities.

4) Contour interval is 1.0' Foot

FIGURE 8 - TOPOGRAPHIC SURVEY OF FINAL COVER SYSTEM

**Map Showing Topographic Survey of Final Cover System Tract II Highland Avenue**


Niagara Boundary
And Mapping Services
761 Cayuga Street
Lewiston, NY 14092
(716) 297-6554
FAX (716) 297-9586
E-MAIL KLSNBMS@ROL.COM


UNAUTHORIZED ALTERATION OR ADDITION TO THIS SURVEY MAP IS A VIOLATION OF SECTION 7209,PROVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF AN ABSTRACT OF TITLE AND IS SUBJECT TO ANY STATE OF FACTS THAT MAY BE REVEALED BY AN EXAMINATION OF SUCH.

| LOT | SECTION | TOWNSHIP | RANGE |
|---|---|---|---|
| City | Niagara Falls | | |
| COUNTY | Niagara | | |
| STATE | New York | | |
| DATE | November 23, 2016 | | |
| SCALE | 1" = 50' | | |
| JOB NO. | 7928106 11-23-2016 | | |
| REVISIONS | | | |

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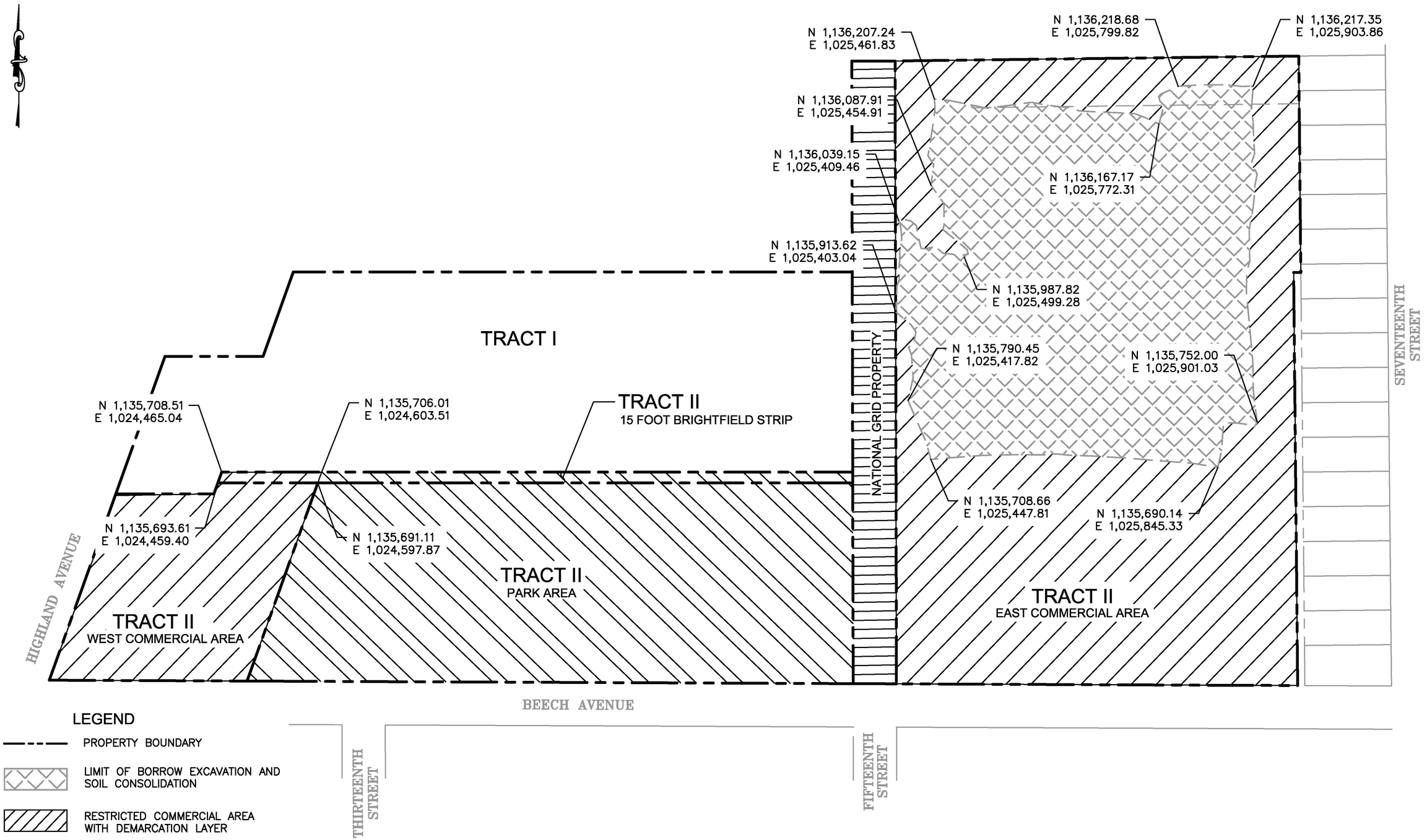
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DRAWN BY: TDD 06-22-2017




LEGEND

- PROPERTY BOUNDARY
- LIMIT OF BORROW EXCAVATION AND SOIL CONSOLIDATION
- RESTRICTED COMMERCIAL AREA WITH DEMARCATION LAYER
- RESTRICTED COMMERCIAL AREA WITHOUT DEMARCATION LAYER
- RESTRICTED RESIDENTIAL AREA

130 0 130
SCALE: 1"=130'

HONEYWELL INTERNATIONAL, INC.
TRACT II SITE
NIAGARA FALLS, NEW YORK

Project No.: 3410161071


MACTEC Engineering & Consulting P.C.
Environment and Infrastructure - Pittsburgh
800 North Bell Ave.
Suite 200
Carnegie, PA 15106
amec foster wheeler


INSTITUTIONAL CONTROL BOUNDARIES

Figure: 9

9

C:\Donovan\Niagra Falls\Issued for Construction\Tract II Final Engineering Report\SMP Figure 9 - Institutional Control Boundaries.dwg Fri, 23 Jun 2017 - 5:05pm tony.donovan

# TABLES

**Table 1: Notifications***

| Name | Contact Information |
|---|---|
| Mr. Michael Hinton, Project Manager<br>(NYSDEC) | Phone: (716) 851-7220<br>Email: Michael.hinton@dec.ny.gov |
| Ms. Abby Snyder, Region 9 Director,<br>(NYSDEC) | Phone: (716)851-7201<br>Email: abby.snyder@dec.ny.gov |
| Matt Forcucci, Public Health Specialist<br>(NYSDOH) | Phone: 716-847-4501<br>Email: matthew.forcucci@health.ny.gov |
| | |
| | |

* Note: Notifications are subject to change and will be updated as necessary.

**Table 2**
**Confirmatory Samples Eastern Portion of Site**
**Detections Only**

| Parameter | Units | Unrestricted Use Soil Cleanup Objectives[1] | Restricted Use Soil Cleanup Objectives - Restricted Residential Standard[1] | Restricted Use Soil Cleanup Objectives - Commercial Standard[1] | Sample ID: | T2-SW19-W2 | | T2-SW2 | | T2-SW6 | | T2-SW20 | | T2-SW21 | | T2-SW52 | | T2-SW53 | | T2-SW54 | | T2-CB1 | | T2-CB5 | | T2-CB6 | | T2-CB7 | | T2-CB8 | | T2-CB16 | | T2-CB16 | | T2-CB17 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Sample Depth (feet): | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | Sample Date: | 4/3/2014 | | 5/22/2013 | | 5/22/2013 | | 8/16/2013 | | 8/16/2013 | | 8/8/2014 | | 8/8/2014 | | 8/8/2014 | | 5/22/2013 | | 8/16/2013 | | 8/16/2013 | | 8/16/2013 | | 8/16/2013 | | 9/9/2013 | | 9/24/2013 | | 9/9/2013 | |
| | | | | | | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acetone | µg/Kg[2] | 50 | 100,000 | 500,000 | | NA[3] | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 34 | U | 24 | U | NA | | 20 | U |
| Dichlorodifluoromethane | µg/Kg | NS[4] | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 6.9 | U | 4.8 | U | NA | | 4.0 | U |
| Isopropylbenzene (Cumene) | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 6.9 | U | 4.8 | U | NA | | 4.0 | U |
| Methyl Acetate | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 6.9 | U | 4.8 | U | NA | | 4.0 | U |
| Methylcyclohexane | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 6.9 | U | 4.8 | U | NA | | 4.0 | U |
| Methylene Chloride | µg/Kg | 50 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 6.9 | U | 4.8 | U | NA | | 4.0 | U |
| **Semivolatile Organic Compounds (SVOCs)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1-Biphenyl | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 2,4-Dimethylphenol | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 180 | U | 200 | U | NA | | 200 | U |
| 2,4-Dinitrotoluene | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 180 | U | 200 | U | NA | | 200 | U |
| 2,6-Dintrotoluene | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 180 | U | 200 | U | NA | | 200 | U |
| 2-Methylnaphthalene | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 180 | U | 200 | U | NA | | 200 | U |
| 2-Methylphenol (O-Cresol) | µg/Kg | 330 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 180 | U | 200 | U | NA | | 200 | U |
| 3&4-Methylphenol (m+p Cresol) | µg/Kg | 330[5] | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 4-Methylphenol (p-Cresol) | µg/Kg | 330 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 340 | U | 390 | U | NA | | 380 | U |
| Acenaphthene | µg/Kg | 20,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 180 | U | 200 | U | NA | | 200 | U |
| Acenaphthylene | µg/Kg | 100,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 180 | U | 200 | U | NA | | 200 | U |
| Anthracene | µg/Kg | 100,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 180 | U | 200 | U | NA | | 200 | U |
| Benzaldehyde | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 180 | U | 200 | U | NA | | 200 | U |
| Benzo(a)anthracene | µg/Kg | 1,000 | 1,000 | 5,600 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 180 | U | 200 | U | NA | | 200 | U |
| Benzo(a)pyrene | µg/Kg | 1,000 | 1,000 | 1,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 180 | U | 200 | U | NA | | 200 | U |
| Benzo(b)fluoranthene | µg/Kg | 1,000 | 1,000 | 5,600 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **15** | **J** | 200 | U | NA | | 200 | U |
| Benzo(g,h,i)perylene | µg/Kg | 100,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 180 | U | 200 | U | NA | | 200 | U |
| Benzo(K)fluoranthene | µg/Kg | 800 | 3,900 | 56,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **8.6** | **J** | 200 | U | NA | | 200 | U |
| Benzyl Butyl Phthalate | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 180 | U | 200 | U | NA | | 200 | U |
| Biphenyl (Diphenyl, 1,1'-Biphenyl) | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 180 | U | 200 | U | NA | | 200 | U |
| Bis(2-ethyhexyl) Phthalate | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 180 | U | 200 | U | NA | | 200 | U |
| Caprolactam | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 180 | U | 200 | U | NA | | 200 | U |
| Carbazole | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 180 | U | 200 | U | NA | | 200 | U |
| Chrysene | µg/Kg | 1,000 | 3,900 | 56,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 180 | U | 200 | U | NA | | 200 | U |
| Dibenz(a,h)anthracene | µg/Kg | 330 | 330 | 560 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 180 | U | 200 | U | NA | | 200 | U |
| Dibenzofuran | µg/Kg | 7,000 | 59,000 | 350,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 180 | U | 200 | U | NA | | 200 | U |
| Diethyl Phthalate | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 180 | U | 200 | U | NA | | 200 | U |
| Dimethyl Phthalate | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 180 | U | 200 | U | NA | | 200 | U |
| Di-n-Butyl Phthalate | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 180 | U | 200 | U | NA | | 200 | U |
| Fluoranthene | µg/Kg | 100,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **5.3** | **J** | **18** | **J** | NA | | 200 | U |
| Fluorene | µg/Kg | 30,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 180 | U | 200 | U | NA | | 200 | U |
| Indeno(1,2,3-cd)pyrene | µg/Kg | 500 | 500 | 5,600 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 180 | U | 200 | U | NA | | 200 | U |
| Isophrone | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 180 | U | 200 | U | NA | | 200 | U |
| Naphthalene | µg/Kg | 12,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 180 | U | 200 | U | NA | | 200 | U |
| N-Nitrosodiphenylamine | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 180 | U | 200 | U | NA | | 200 | U |
| Phenanthrene | µg/Kg | 100,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 180 | U | **9.7** | **J** | NA | | 200 | U |
| Phenol | µg/Kg | 330 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 180 | U | 200 | U | NA | | 200 | U |
| Pyrene | µg/Kg | 100,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 180 | U | **12** | **J** | NA | | 200 | U |
| **Target Compound List (TCL) Pesticides** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| alpha-BHC (alpha Hexachlorocyclohexane) | µg/Kg | 20 | 480 | 3,400 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 20 | U | NA | | 2.0 | U |
| beta-BHC (beta Hexachlorocyclohexane) | µg/Kg | 36 | 360 | 3,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 20 | U | NA | | 2.0 | U |
| delta-BHC (delta Hexachlorocyclohexane) | µg/Kg | 40 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 20 | U | NA | | 2.0 | U |
| Dieldrin | µg/Kg | 5 | 200 | 1,400 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 20 | U | NA | | 2.0 | U |
| Endrin Ketone | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 20 | U | NA | | 2.0 | U |
| Gamma BHC (Lindane) | µg/Kg | 100 | 1,300 | 9,200 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 20 | U | NA | | 2.0 | U |
| Methoxychlor | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 20 | U | NA | | 2.0 | U |
| 4,4'-DDD (p,p'-DDD) | µg/Kg | 3.3 | 13,000 | 92,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 20 | U | NA | | 2.0 | U |
| 4,4'-DDE (p,p'-DDE) | µg/Kg | 3.3 | 8,900 | 62,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 20 | U | NA | | 2.0 | U |
| 4,4'-DDT (p,p'-DDT) | µg/Kg | 3.3 | 7,900 | 47,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 20 | U | NA | | 2.0 | U |
| **Target Compound List (TCL) Polychlorinated Biphenyls (PCBs)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Target Analyte List (TAL) Metals (Total)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | mg/Kg[12] | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **14,100** | | **15,700** | | NA | | **12,800** | |
| Antimony | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 17.3 | U | 17.1 | U | NA | | 17.4 | U |
| Arsenic | mg/Kg | 13 | 16 | 16 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **3.1** | | **6.1** | | NA | | **5.2** | |
| Barium | mg/Kg | 350 | 400 | 400 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **94.3** | | **99.0** | | NA | | **61.6** | |
| Beryllium | mg/Kg | 7.2 | 72 | 590 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **0.62** | | **0.91** | | NA | | **0.85** | |
| Cadmium | mg/Kg | 2.5 | 4.3 | 9.3 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 0.23 | U | 0.23 | U | NA | | 0.23 | U |
| Calcium | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **2,580** | | **6,370** | | NA | | **7,060** | |
| Chromium | mg/Kg | 1 | 110 | 400 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **17.8** | | **19.3** | [31] | NA | | **19.4** | |
| Chromium (trivalent)[12] | mg/Kg | 30 | 180 | 1,500 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **17.0** | | NA | |
| Hexavalent Chromium | mg/Kg | 1 | 110 | 400 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 2.3 | U | NA | |
| Cobalt | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **12.0** | | **11.7** | | NA | | **7.5** | |
| Copper | mg/Kg | 50 | 270 | 270 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **15.2** | | **28.2** | | NA | | **51.6** | |
| Iron | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **17,900** | | **25,300** | | NA | | **21,000** | |
| Lead | mg/Kg | 63 | 400 | 1,000 | | **172** | | NA | | NA | | **172** | | **253** | | **249** | | **362** | | **69.0** | | **643** | | **271** | | **11.5** | | **11.5** | | **6.0** | | **258** | | NA | | **3.7** | |
| Magnesium | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **4,160** | | **4,810** | | NA | | **4,490** | |
| Manganese | mg/Kg | 1,600 | 2,000 | 10,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **793** | | **572** | | NA | | **158** | |
| Nickel | mg/Kg | 30 | 310 | 310 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **26.0** | | **25.4** | | NA | | **19.4** | |
| Potassium | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **1,320** | | **1,460** | | NA | | **1,160** | |
| Selenium | mg/Kg | 3.9 | 180 | 1,500 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 4.6 | U | 4.6 | U | NA | | 4.6 | U |
| Silver | mg/Kg | 2 | 180 | 1,500 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 0.58 | U | 0.57 | U | NA | | 0.58 | U |
| Sodium | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 161 | U | 160 | U | NA | | 162 | U |
| Thallium | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 6.9 | U | 6.9 | U | NA | | 6.9 | U |
| Tin | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Vanadium | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **21.5** | | **27.4** | | NA | | **31.6** | |
| Zinc | mg/Kg | 109 | 10,000 | 10,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **41.1** | | **49.5** | | NA | | **43.8** | |
| Mercury | mg/Kg | 0.18 | 0.81 | 2.8 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **0.039** | | **0.027** | | NA | | 0.024 | U |
| **General Chemistry** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sulfate | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Toxicity Characteristic Leaching Procedure (TCLP) Metals** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lead | mg/L[14] | NS | NS | NS | | 0.50 | U | **1.2** | | **3.9** | | **0.23** | | **0.099** | | 0.50 | U | 0.50 | U | 0.50 | U | **0.75** | | **1.5** | | **0.0069** | | **0.012** | | 0.0050 | U | NA | | NA | | NA | |
| **Physical Parameters** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Percent Solids | Percent | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |

**Table 2**
**Confirmatory Samples Eastern Portion of Site**
**Detections Only**

| Parameter | Units | Unrestricted Use Soil Cleanup Objectives[1] | | Restricted Use Soil Cleanup Objectives - Restricted Residential Standard[1] | | Restricted Use Soil Cleanup Objectives - Commercial Standard[1] | | Sample ID: | | T2-CB17 | | T2-CB19 | | T2-CB20 | | T2-CB22 | | T2-CB23 | | T2-CB24 | | T2-CB25 | | T2-CB26 | | T2-CB27 | | T2-CB29 | | T2-CB30 | | T2-CB31 | | T2-CB32 | | T2-CB33 | | T2-CB35 | | T2-CB36 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Sample Depth (feet): | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | Sample Date: | | 9/24/2013 | | 10/9/2013 | | 10/22/2013 | | 10/22/2013 | | 10/31/2013 | | 10/31/2013 | | 11/21/2013 | | 11/21/2013 | | 11/21/2013 | | 12/6/2013 | | 12/6/2013 | | 12/9/2013 | | 12/19/2013 | | 12/19/2013 | | 12/19/2013 | | 1/2/2014 | |
| | | | | | | | | | | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acetone | µg/Kg[2] | 50 | | 100,000 | | 500,000 | | | | NA | | **50** | | **18** | **J** | 22 | U | 23 | U | 22 | U | 20 | U | **46** | | NA | | NA | | NA | | NA | | NA | | NA | | 28 | U |
| Dichlorodifluoromethane | µg/Kg | NS | [6] | NS | | NS | | | | NA | | 4.4 | U | 4.6 | U | 4.3 | U | 4.6 | U | 4.3 | U | 4.0 | U | 4.2 | U | NA | | NA | | NA | | NA | | NA | | NA | | 5.6 | U |
| Isopropylbenzene (Cumene) | µg/Kg | NS | | NS | | NS | | | | NA | | 4.4 | U | 4.6 | U | 4.3 | U | 4.6 | U | 4.3 | U | 4.0 | U | **80** | | NA | | NA | | NA | | NA | | NA | | NA | | 5.6 | U |
| Methyl Acetate | µg/Kg | NS | | NS | | NS | | | | NA | | 4.4 | U | 4.6 | U | 4.3 | U | 4.6 | U | 4.3 | U | 4.0 | U | 4.2 | U | NA | | NA | | NA | | NA | | NA | | NA | | 5.6 | U |
| Methylcyclohexane | µg/Kg | NS | | NS | | NS | | | | NA | | 4.4 | U | 4.6 | U | 4.3 | U | 4.6 | U | 4.3 | U | 4.0 | U | **20** | | NA | | NA | | NA | | NA | | NA | | NA | | 5.6 | U |
| Methylene Chloride | µg/Kg | 50 | | 100,000 | | 500,000 | | | | NA | | 4.4 | U | 4.6 | U | 4.3 | U | 4.6 | U | 4.3 | U | 4.0 | U | 4.2 | U | NA | | NA | | NA | | NA | | NA | | NA | | 5.6 | U |
| **Semivolatile Organic Compounds (SVOCs)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1-Biphenyl | µg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 2,4-Dimethylphenol | µg/Kg | NS | | NS | | NS | | | | NA | | 200 | U | 210 | U | 210 | U | NA | | NA | | 180 | U | 180 | U | NA | | NA | | NA | | NA | | NA | | NA | | 210 | U |
| 2,4-Dinitrotoluene | µg/Kg | NS | | NS | | NS | | | | NA | | 200 | U | 210 | U | 210 | U | NA | | NA | | 180 | U | **450** | | NA | | NA | | NA | | NA | | NA | | NA | | 210 | U |
| 2,6-Dintrotoluene | µg/Kg | NS | | NS | | NS | | | | NA | | 200 | U | 210 | U | 210 | U | NA | | NA | | 180 | U | **250** | | NA | | NA | | NA | | NA | | NA | | NA | | 210 | U |
| 2-Methylnaphthalene | µg/Kg | NS | | NS | | NS | | | | NA | | 200 | U | **18** | **J** | 210 | U | NA | | NA | | 180 | U | **3,000** | | NA | | NA | | NA | | NA | | NA | | NA | | 210 | U |
| 2-Methylphenol (O-Cresol) | µg/Kg | 330 | | 100,000 | | 500,000 | | | | NA | | 200 | U | 210 | U | 210 | U | NA | | NA | | 180 | U | 180 | U | NA | | NA | | NA | | NA | | NA | | NA | | 210 | U |
| 3&4-Methylphenol (m+p Cresol) | µg/Kg | 330 | [5] | 100,000 | | 500,000 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 4-Methylphenol (p-Cresol) | µg/Kg | 330 | | 100,000 | | 500,000 | | | | NA | | 380 | U | 410 | U | 410 | U | NA | | NA | | 360 | U | 360 | U | NA | | NA | | NA | | NA | | NA | | NA | | 400 | U |
| Acenaphthene | µg/Kg | 20,000 | | 100,000 | | 500,000 | | | | NA | | 200 | U | 210 | U | 210 | U | 180 | U | 180 | U | 180 | U | **120** | **J** | NA | | NA | | NA | | NA | | NA | | NA | | 210 | U |
| Acenaphthylene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | | | NA | | 200 | U | 210 | U | 210 | U | 180 | U | 180 | U | 180 | U | **67** | **J** | NA | | NA | | NA | | NA | | NA | | NA | | 210 | U |
| Anthracene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | | | NA | | **5.8** | **J** | **25** | **J** | 210 | U | 180 | U | 180 | U | 180 | U | **43** | **J** | NA | | NA | | NA | | NA | | NA | | NA | | 210 | U |
| Benzaldehyde | µg/Kg | NS | | NS | | NS | | | | NA | | 200 | U | 210 | U | 210 | U | NA | | NA | | 180 | U | 180 | U | NA | | NA | | NA | | NA | | NA | | NA | | 210 | U |
| Benzo(a)anthracene | µg/Kg | 1,000 | | 1,000 | | 5,600 | | | | NA | | 200 | U | **100** | **J** | 210 | U | 180 | U | 180 | U | 180 | U | 180 | U | NA | | NA | | NA | | NA | | NA | | NA | | 210 | U |
| Benzo(a)pyrene | µg/Kg | 1,000 | | 1,000 | | 1,000 | | | | NA | | **16** | **J** | **100** | **J** | 210 | U | 180 | U | **9.5** | **J** | 180 | U | 180 | U | NA | | NA | | NA | | NA | | NA | | NA | | 210 | U |
| Benzo(b)fluoranthene | µg/Kg | 1,000 | | 1,000 | | 5,600 | | | | NA | | **20** | **J** | **130** | **J** | 210 | U | **18** | **J** | **20** | **J** | 180 | U | 180 | U | NA | | NA | | NA | | NA | | NA | | NA | | 210 | U |
| Benzo(g,h,i)perylene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | | | NA | | **20** | **J** | **58** | **J** | 210 | U | 180 | U | 180 | U | 180 | U | 180 | U | NA | | NA | | NA | | NA | | NA | | NA | | 210 | U |
| Benzo(K)fluoranthene | µg/Kg | 800 | | 3,900 | | 56,000 | | | | NA | | **15** | **J** | **66** | **J** | 210 | U | 180 | U | 180 | U | 180 | U | 180 | U | NA | | NA | | NA | | NA | | NA | | NA | | 210 | U |
| Benzyl Butyl Phthalate | µg/Kg | NS | | NS | | NS | | | | NA | | 200 | U | 210 | U | 210 | U | NA | | NA | | 180 | U | 180 | U | NA | | NA | | NA | | NA | | NA | | NA | | 210 | U |
| Biphenyl (Diphenyl, 1,1'-Biphenyl) | µg/Kg | NS | | NS | | NS | | | | NA | | 200 | U | 210 | U | 210 | U | NA | | NA | | 180 | U | 180 | U | NA | | NA | | NA | | NA | | NA | | NA | | 210 | U |
| Bis(2-ethyhexyl) Phthalate | µg/Kg | NS | | NS | | NS | | | | NA | | **79** | **J** | 210 | U | 210 | U | NA | | NA | | 180 | U | 180 | U | NA | | NA | | NA | | NA | | NA | | NA | | 210 | U |
| Caprolactam | µg/Kg | NS | | NS | | NS | | | | NA | | 200 | U | 210 | U | 210 | U | NA | | NA | | 180 | U | **1,700** | | NA | | NA | | NA | | NA | | NA | | NA | | 210 | U |
| Carbazole | µg/Kg | NS | | NS | | NS | | | | NA | | 200 | U | **15** | **J** | 210 | U | NA | | NA | | 180 | U | **33** | **J** | NA | | NA | | NA | | NA | | NA | | NA | | 210 | U |
| Chrysene | µg/Kg | 1,000 | | 3,900 | | 56,000 | | | | NA | | **22** | **J** | **95** | **J** | 210 | U | 180 | U | 180 | U | 180 | U | 180 | U | NA | | NA | | NA | | NA | | NA | | NA | | 210 | U |
| Dibenz(a,h)anthracene | µg/Kg | 330 | | 330 | | 560 | | | | NA | | **13** | **J** | 210 | U | 210 | U | 180 | U | 180 | U | 180 | U | 180 | U | NA | | NA | | NA | | NA | | NA | | NA | | 210 | U |
| Dibenzofuran | µg/Kg | 7,000 | | 59,000 | | 350,000 | | | | NA | | 200 | U | 210 | U | 210 | U | NA | | NA | | 180 | U | **270** | | NA | | NA | | NA | | NA | | NA | | NA | | 210 | U |
| Diethyl Phthalate | µg/Kg | NS | | NS | | NS | | | | NA | | 200 | U | 210 | U | 210 | U | NA | | NA | | 180 | U | 180 | U | NA | | NA | | NA | | NA | | NA | | NA | | 210 | U |
| Dimethyl Phthalate | µg/Kg | NS | | NS | | NS | | | | NA | | 200 | U | 210 | U | 210 | U | NA | | NA | | 180 | U | 180 | U | NA | | NA | | NA | | NA | | NA | | NA | | 210 | U |
| Di-n-Butyl Phthalate | µg/Kg | NS | | NS | | NS | | | | NA | | 200 | U | 210 | U | 210 | U | NA | | NA | | 180 | U | 180 | U | NA | | NA | | NA | | NA | | NA | | NA | | 210 | U |
| Fluoranthene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | | | NA | | **21** | **J** | **180** | **J** | 210 | U | 180 | U | **17** | **J** | 180 | U | **7.5** | **J** | NA | | NA | | NA | | NA | | NA | | NA | | 210 | U |
| Fluorene | µg/Kg | 30,000 | | 100,000 | | 500,000 | | | | NA | | 200 | U | 210 | U | 210 | U | 180 | U | 180 | U | 180 | U | **540** | | NA | | NA | | NA | | NA | | NA | | NA | | 210 | U |
| Indeno(1,2,3-cd)pyrene | µg/Kg | 500 | | 500 | | 5,600 | | | | NA | | **16** | **J** | **49** | **J** | 210 | U | 180 | U | 180 | U | 180 | U | 180 | U | NA | | NA | | NA | | NA | | NA | | NA | | 210 | U |
| Isophrone | µg/Kg | NS | | NS | | NS | | | | NA | | 200 | U | 210 | U | 210 | U | NA | | NA | | 180 | U | **300** | | NA | | NA | | NA | | NA | | NA | | NA | | 210 | U |
| Naphthalene | µg/Kg | 12,000 | | 100,000 | | 500,000 | | | | NA | | 200 | U | 210 | U | 210 | U | 180 | U | 180 | U | 180 | U | 180 | U | NA | | NA | | NA | | NA | | NA | | NA | | 210 | U |
| N-Nitrosodiphenylamine | µg/Kg | NS | | NS | | NS | | | | NA | | 200 | U | 210 | U | 210 | U | NA | | NA | | 180 | U | **940** | | NA | | NA | | NA | | NA | | NA | | NA | | 210 | U |
| Phenanthrene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | | | NA | | **12** | **J** | **81** | **J** | 210 | U | **9.8** | **J** | **11** | **J** | 180 | U | **800** | | NA | | NA | | NA | | NA | | NA | | NA | | 210 | U |
| Phenol | µg/Kg | 330 | | 100,000 | | 500,000 | | | | NA | | 200 | U | 210 | U | 210 | U | NA | | NA | | 180 | U | 180 | U | NA | | NA | | NA | | NA | | NA | | NA | | 210 | U |
| Pyrene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | | | NA | | **22** | **J** | **170** | **J** | 210 | U | 180 | U | **17** | **J** | 180 | U | **25** | **J** | NA | | NA | | NA | | NA | | NA | | NA | | 210 | U |
| **Target Compound List (TCL) Pesticides** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| alpha-BHC (alpha Hexachlorocyclohexane) | µg/Kg | 20 | | 480 | | 3,400 | | | | NA | | 1.9 | U | 100 | U | 10 | U | 1.8 | U | 1.7 | U | 1.8 | U | 1.8 | U | NA | | NA | | NA | | NA | | NA | | NA | | 2.0 | U |
| beta-BHC (beta Hexachlorocyclohexane) | µg/Kg | 36 | | 360 | | 3,000 | | | | NA | | 1.9 | U | 100 | U | 10 | U | 1.8 | U | **0.85** | **J** | 1.8 | U | 1.8 | U | NA | | NA | | NA | | NA | | NA | | NA | | **0.54** | **J** |
| delta-BHC (delta Hexachlorocyclohexane) | µg/Kg | 40 | | 100,000 | | 500,000 | | | | NA | | **0.49** | **J,B**[16] | 100 | U | 10 | U | **0.39** | **J** | 1.7 | U | **0.44** | **J,B** | 1.8 | U | NA | | NA | | NA | | NA | | NA | | NA | | 2.0 | U |
| Dieldrin | µg/Kg | 5 | | 200 | | 1,400 | | | | NA | | 1.9 | U | 100 | U | 10 | U | 1.8 | U | 1.7 | U | 1.8 | U | 1.8 | U | NA | | NA | | NA | | NA | | NA | | NA | | 2.0 | U |
| Endrin Ketone | µg/Kg | NS | | NS | | NS | | | | NA | | 1.9 | U | 100 | U | 10 | U | 1.8 | U | **0.47** | **J** | 1.8 | U | 1.8 | U | NA | | NA | | NA | | NA | | NA | | NA | | 2.0 | U |
| Gamma BHC (Lindane) | µg/Kg | 100 | | 1,300 | | 9,200 | | | | NA | | 1.9 | U | 100 | U | 10 | U | **0.32** | **J** | 1.7 | U | 1.8 | U | **0.33** | **J** | NA | | NA | | NA | | NA | | NA | | NA | | 2.0 | U |
| Methoxychlor | µg/Kg | NS | | NS | | NS | | | | NA | | 1.9 | U | 100 | U | 10 | U | **0.75** | **J** | **0.51** | **J** | 1.8 | U | 1.8 | U | NA | | NA | | NA | | NA | | NA | | NA | | 2.0 | U |
| 4,4'-DDD (p,p'-DDD) | µg/Kg | 3.3 | | 13,000 | | 92,000 | | | | NA | | 1.9 | U | 100 | U | 10 | U | 1.8 | U | 1.7 | U | 1.8 | U | 1.8 | U | NA | | NA | | NA | | NA | | NA | | NA | | 2.0 | U |
| 4,4'-DDE (p,p'-DDE) | µg/Kg | 3.3 | | 8,900 | | 62,000 | | | | NA | | **0.33** | **J,B** | 100 | U | 10 | U | 1.8 | U | **0.41** | **J** | 1.8 | U | **0.47** | **J** | NA | | NA | | NA | | NA | | NA | | NA | | 2.0 | U |
| 4,4'-DDT (p,p'-DDT) | µg/Kg | 3.3 | | 7,900 | | 47,000 | | | | NA | | **0.35** | **J,B** | 100 | U | 10 | U | **0.77** | **J** | 1.7 | U | 1.8 | U | **0.31** | **J** | NA | | NA | | NA | | NA | | NA | | NA | | **0.93** | **J** |
| **Target Compound List (TCL) Polychlorinated Biphenyls (PCBs)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Target Analyte List (TAL) Metals (Total)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | mg/Kg[12] | NS | | NS | | NS | | | | NA | | **15,600** | | **17,300** | | **13,200** | | **11,400** | | **15,900** | | **10,900** | | **15,300** | | NA | | NA | | NA | | NA | | NA | | NA | | **16,200** | |
| Antimony | mg/Kg | NS | | NS | | NS | | | | NA | | 19.0 | U | 20.2 | U | 18.4 | U | 16.4 | U | 15.6 | U | 1.1 | U | 1.0 | U | NA | | NA | | NA | | NA | | NA | | NA | | 5.9 | U |
| Arsenic | mg/Kg | 13 | | 16 | | 16 | | | | NA | | **5.1** | | **4.2** | | **4.0** | | **3.6** | | **5.0** | | **1.2** | | **3.9** | | NA | | NA | | NA | | NA | | NA | | NA | | **8.4** | **J** |
| Barium | mg/Kg | 350 | | 400 | | 400 | | | | NA | | **113** | | **123** | | **112** | | **76.9** | | **82.9** | | **65.9** | | **139** | | NA | | NA | | NA | | NA | | NA | | NA | | **171** | |
| Beryllium | mg/Kg | 7.2 | | 72 | | 590 | | | | NA | | **0.73** | | **0.90** | | **0.65** | | **0.59** | | **0.88** | | **0.56** | | **0.78** | | NA | | NA | | NA | | NA | | NA | | NA | | **0.76** | |
| Cadmium | mg/Kg | 2.5 | | 4.3 | | 9.3 | | | | NA | | 0.25 | U | 0.27 | U | 0.25 | U | 0.22 | U | 0.21 | U | 0.55 | U | 0.52 | U | NA | | NA | | NA | | NA | | NA | | NA | | 0.59 | U |
| Calcium | mg/Kg | NS | | NS | | NS | | | | NA | | **3,080** | | **2,940** | | **68,400** | | **58,300** | | **5,150** | | **3,090** | | **3,200** | | NA | | NA | | NA | | NA | | NA | | NA | | **4,020** | |
| Chromium | mg/Kg | 1 | | 110 | | 400 | | | | NA | | **21.9** | | **22.4** | | **18.3** | | **16.6** | | **21.0** | | **15.8** | | **21.8** | | NA | | NA | | NA | | NA | | NA | | NA | | **21.8** | |
| Chromium (trivalent)[13] | mg/Kg | 30 | | 180 | | 1,500 | | | | **16.9** | | **21.42** | | **19.9** | | **17.8** | | **14.2** | | **20.58** | | **15.37** | | **21.37** | | NA | | NA | | NA | | NA | | NA | | NA | | **21.8** | |
| Hexavalent Chromium | mg/Kg | 1 | | 110 | | 400 | | | | 2.5 | U | 0.48 | U | 0.50 | U | 0.50 | U | 2.4 | | 0.42 | U | 0.43 | U | 0.43 | U | NA | | NA | | NA | | NA | | NA | | NA | | 0.49 | U |
| Cobalt | mg/Kg | NS | | NS | | NS | | | | NA | | **13.5** | | **13.8** | | **10.9** | | **10.6** | | **11.8** | | **7.6** | | **11.0** | | NA | | NA | | NA | | NA | | NA | | NA | | **12.8** | |
| Copper | mg/Kg | 50 | | 270 | | 270 | | | | NA | | **24.4** | | **17.7** | | **20.4** | | **18.2** | | **21.2** | | **8.6** | | **17.3** | | NA | | NA | | NA | | NA | | NA | | NA | | **19.8** | |
| Iron | mg/Kg | NS | | NS | | NS | | | | NA | | **27,000** | | **27,400** | | **20,700** | | **17,300** | | **26,700** | | **15,500** | | **29,200** | | NA | | NA | | NA | | NA | | NA | | NA | | **28,000** | |
| Lead | mg/Kg | 63 | | 400 | | 1,000 | | | | NA | | **13.0** | | **69.1** | | **8.1** | | **13.4** | | **29.3** | | **5.3** | | **8.2** | | NA | | **10.2** | | **26.1** | | NA | | **7.9** | | **18.9** | | **13.6** | | **10.2** | |
| Magnesium | mg/Kg | NS | | NS | | NS | | | | NA | | **5,810** | | **5,640** | | **10,300** | | **8,150** | | **4,700** | | **4,390** | | **5,740** | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **7,170** | |
| Manganese | mg/Kg | 1,600 | | 2,000 | | 10,000 | | | | NA | | **868** | | **763** | | **587** | | **1,150** | | **318** | | **365** | | **580** | | **758** | | NA | | NA | | NA | | NA | | NA | | **673** | |
| Nickel | mg/Kg | 30 | | 310 | | 310 | | | | NA | | **33.8** | | **28.3** | | **25.9** | | **23.8** | | **26.9** | | **18.1** | | **25.7** | | NA | | NA | | NA | | NA | | NA | | NA | | **29.1** | |
| Potassium | mg/Kg | NS | | NS | | NS | | | | NA | | **1,850** | | **1,330** | | **1,750** | | **1,500** | | **1,460** | | **828** | | **1,490** | | NA | | NA | | NA | | NA | | NA | | NA | | **1,660** | |
| Selenium | mg/Kg | 3.9 | | 180 | | 1,500 | | | | NA | | 5.1 | U | 5.4 | U | 4.9 | U | 4.4 | U | 4.2 | U | 1.1 | U | 1.0 | U | NA | | NA | | NA | | NA | | NA | | NA | | 1.2 | U |
| Silver | mg/Kg | 2 | | 180 | | 1,500 | | | | NA | | 0.63 | U | 0.67 | U | 0.61 | U | 0.55 | U | 0.52 | U | 0.55 | U | 0.52 | U | NA | | NA | | NA | | NA | | NA | | NA | | 0.59 | U |
| Sodium | mg/Kg | NS | | NS | | NS | | | | NA | | 177 | U | 189 | U | **178** | | 153 | U | 145 | U | 548 | U | 522 | U | NA | | NA | | NA | | NA | | NA | | NA | | 593 | U |
| Thallium | mg/Kg | NS | | NS | | NS | | | | NA | | 7.6 | U | 8.1 | U | 7.4 | U | 6.6 | U | 6.2 | U | 2.2 | U | 2.1 | U | NA | | NA | | NA | | NA | | NA | | NA | | **2.4** | |
| Tin | mg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Vanadium | mg/Kg | NS | | NS | | NS | | | | NA | | **30.7** | | **29.4** | | **25.8** | | **21.6** | | **29.7** | | **16.5** | | **27.2** | | NA | | NA | | NA | | NA | | NA | | NA | | **29.9** | |
| Zinc | mg/Kg | 109 | | 10,000 | | 10,000 | | | | NA | | **52.2** | | **87.9** | | **47.6** | | **41.4** | | **53.0** | | **49.7** | | **64.6** | | NA | | NA | | NA | | NA | | NA | | NA | | **59.9** | |
| Mercury | mg/Kg | 0.18 | | 0.81 | | 2.8 | | | | NA | | 0.022 | U | **0.047** | | 0.024 | U | 0.021 | U | 0.021 | U | 0.032 | U | 0.036 | U | NA | | NA | | NA | | NA | | NA | | NA | | **0.042** | |
| **General Chemistry** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sulfate | mg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Toxicity Characteristic Leaching Procedure (TCLP) Metals** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lead | mg/L[14] | NS | | NS | | NS | | | | NA | | **0.29** | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Physical Parameters** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Percent Solids | Percent | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |

**Table 2**
**Confirmatory Samples Eastern Portion of Site**
**Detections Only**

| Parameter | Units | Unrestricted Use Soil Cleanup Objectives[1] | Restricted Use Soil Cleanup Objectives - Restricted Residential Standard[1] | Restricted Use Soil Cleanup Objectives - Commercial Standard[1] | Sample ID: | T2-CB37 | | T2-CB38 | | T2-CB39 | | T2-CB41 | | T2-CB42 | | T2-CB43 | | T2-CB44 | | T2-CB45 | | T2-CB46 | | T2-CB47 | | T2-CB48 | | T2-CB49 | | T2-CB50 | | T2-CB51 | | T2-CB52 | | T2-CB53 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Sample Depth (feet): | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | Sample Date: | 1/31/2014 | | 2/14/2014 | | 2/14/2014 | | 3/6/2014 | | 3/6/2014 | | 3/21/2014 | | 3/21/2014 | | 3/25/2014 | | 3/25/2014 | | 3/25/2014 | | 3/25/2014 | | 3/25/2014 | | 4/22/2014 | | 4/23/2014 | | 4/23/2014 | | 4/23/2014 | |
| | | | | | | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acetone | µg/Kg[2] | 50 | 100,000 | 500,000 | | 21 | U | 23 | U | 22 | U | 23 | U | **9.5** | **J** | **4.6** | **J** | 23 | U | 23 | U | NA | | NA | | 15 | U | 24 | U | 21 | U | NA | | 24 | U | NA | |
| Dichlorodifluoromethane | µg/Kg | NS[6] | NS | NS | | 4.3 | U | 4.6 | U | 4.5 | U | **0.69** | **J** | **1.4** | **J** | 4.6 | U | 4.6 | U | 4.7 | U | NA | | NA | | 3.1 | U | 4.7 | U | 4.2 | U | NA | | 4.8 | U | NA | |
| Isopropylbenzene (Cumene) | µg/Kg | NS | NS | NS | | 4.3 | U | 4.6 | U | 4.5 | U | 4.6 | U | 4.8 | U | 4.6 | U | 4.6 | U | 4.7 | U | NA | | NA | | 3.1 | U | 4.7 | U | 4.2 | U | NA | | 4.8 | U | NA | |
| Methyl Acetate | µg/Kg | NS | NS | NS | | 4.3 | U | 4.6 | U | 4.5 | U | 4.6 | U | 4.8 | U | 4.6 | U | 4.6 | U | 4.7 | U | NA | | NA | | 3.1 | U | 4.7 | U | 4.2 | U | NA | | 4.8 | U | NA | |
| Methylcyclohexane | µg/Kg | NS | NS | NS | | 4.3 | U | 4.6 | U | 4.5 | U | 4.6 | U | 4.8 | U | 4.6 | U | 4.6 | U | 4.7 | U | NA | | NA | | 3.1 | U | 4.7 | U | 4.2 | U | NA | | 4.8 | U | NA | |
| Methylene Chloride | µg/Kg | 50 | 100,000 | 500,000 | | 4.3 | U | 4.6 | U | 4.5 | U | 4.6 | U | 4.8 | U | 4.6 | U | 4.6 | U | 4.7 | U | NA | | NA | | 3.1 | U | 4.7 | U | 4.2 | U | NA | | 4.8 | U | NA | |
| **Semivolatile Organic Compounds (SVOCs)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1-Biphenyl | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 2,4-Dimethylphenol | µg/Kg | NS | NS | NS | | 190 | U | 190 | U | 190 | U | 200 | U | 190 | U | 210 | U | 200 | U | 210 | U | NA | | NA | | 220 | U | 210 | U | 180 | U | NA | | 200 | U | NA | |
| 2,4-Dinitrotoluene | µg/Kg | NS | NS | NS | | 190 | U | 190 | U | 190 | U | 200 | U | 190 | U | 210 | U | 200 | U | 210 | U | NA | | NA | | 220 | U | 210 | U | 180 | U | NA | | 200 | U | NA | |
| 2,6-Dintrotoluene | µg/Kg | NS | NS | NS | | 190 | U | 190 | U | 190 | U | 200 | U | 190 | U | 210 | U | 200 | U | 210 | U | NA | | NA | | 220 | U | 210 | U | 180 | U | NA | | 200 | U | NA | |
| 2-Methylnaphthalene | µg/Kg | NS | NS | NS | | 190 | U | 190 | U | 190 | U | **9.2** | **J** | 190 | U | 210 | U | 200 | U | 210 | U | NA | | NA | | 220 | U | 210 | U | 180 | U | NA | | 200 | U | NA | |
| 2-Methylphenol (O-Cresol) | µg/Kg | 330 | 100,000 | 500,000 | | 190 | U | 190 | U | 190 | U | 200 | U | 190 | U | 210 | U | 200 | U | 210 | U | NA | | NA | | 220 | U | 210 | U | 180 | U | NA | | 200 | U | NA | |
| 3&4-Methylphenol (m+p Cresol) | µg/Kg | 330[5] | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 4-Methylphenol (p-Cresol) | µg/Kg | 330 | 100,000 | 500,000 | | 370 | U | 370 | U | 370 | U | 400 | U | 380 | U | 400 | U | 400 | U | 400 | U | NA | | NA | | 440 | U | 410 | U | 350 | U | NA | | 390 | U | NA | |
| Acenaphthene | µg/Kg | 20,000 | 100,000 | 500,000 | | 190 | U | 190 | U | 190 | U | **10** | **J** | 190 | U | 210 | U | 200 | U | 210 | U | NA | | NA | | 220 | U | 210 | U | 180 | U | NA | | 200 | U | NA | |
| Acenaphthylene | µg/Kg | 100,000 | 100,000 | 500,000 | | 190 | U | 190 | U | 190 | U | 200 | U | 190 | U | 210 | U | 200 | U | 210 | U | NA | | NA | | 220 | U | 210 | U | 180 | U | NA | | 200 | U | NA | |
| Anthracene | µg/Kg | 100,000 | 100,000 | 500,000 | | **13** | **J** | 190 | U | 190 | U | **21** | **J** | 190 | U | 210 | U | 200 | U | 210 | U | NA | | NA | | 220 | U | 210 | U | 180 | U | NA | | 200 | U | NA | |
| Benzaldehyde | µg/Kg | NS | NS | NS | | **190** | **R**[15] | 190 | U | 190 | U | 200 | U | 190 | U | 210 | U | 200 | U | 210 | U | NA | | NA | | 220 | U | 210 | U | 180 | U | NA | | 200 | U | NA | |
| Benzo(a)anthracene | µg/Kg | 1,000 | 1,000 | 5,600 | | **300** | | 190 | U | 190 | U | **56** | **J** | 190 | U | 210 | U | 200 | U | 210 | UJ | NA | | NA | | 220 | UJ | 210 | UJ | 180 | U | NA | | 200 | U | NA | |
| Benzo(a)pyrene | µg/Kg | 1,000 | 1,000 | 1,000 | | **360** | | 190 | U | 190 | U | **57** | **J** | 190 | U | **6.5** | **J** | **13** | **J** | 210 | UJ | NA | | NA | | 220 | UJ | 210 | UJ | 180 | U | NA | | **11** | **J** | NA | |
| Benzo(b)fluoranthene | µg/Kg | 1,000 | 1,000 | 5,600 | | **420** | | 190 | U | 190 | U | **59** | **J** | 190 | U | **7.0** | **J** | **17** | **J** | 210 | UJ | NA | | NA | | 220 | UJ | 210 | UJ | 180 | U | NA | | 200 | U | NA | |
| Benzo(g,h,i)perylene | µg/Kg | 100,000 | 100,000 | 500,000 | | **280** | | 190 | U | 190 | U | 200 | UJ | 190 | UJ | 210 | U | **7.9** | **J** | 210 | UJ | NA | | NA | | 220 | UJ | 210 | UJ | 180 | U | NA | | 200 | U | NA | |
| Benzo(K)fluoranthene | µg/Kg | 800 | 3,900 | 56,000 | | **170** | **J** | 190 | U | 190 | U | **39** | **J** | 190 | U | 210 | U | 200 | U | 210 | UJ | NA | | NA | | 220 | UJ | 210 | UJ | 180 | U | NA | | 200 | U | NA | |
| Benzyl Butyl Phthalate | µg/Kg | NS | NS | NS | | 190 | U | 190 | U | 190 | U | 200 | U | 190 | U | 210 | U | 200 | U | 210 | UJ | NA | | NA | | 220 | UJ | 210 | UJ | 180 | U | NA | | 200 | U | NA | |
| Biphenyl (Diphenyl, 1,1'-Biphenyl) | µg/Kg | NS | NS | NS | | 190 | U | 190 | U | 190 | U | 200 | U | 190 | U | 210 | U | 200 | U | 210 | U | NA | | NA | | 220 | U | 210 | U | 180 | U | NA | | 200 | U | NA | |
| Bis(2-ethyhexyl) Phthalate | µg/Kg | NS | NS | NS | | 190 | U | 190 | U | 190 | U | 200 | U | 190 | U | 210 | U | 200 | U | 210 | UJ | NA | | NA | | 220 | UJ | 210 | UJ | 180 | U | NA | | 200 | U | NA | |
| Caprolactam | µg/Kg | NS | NS | NS | | 190 | U | 190 | U | 190 | U | 200 | U | 190 | U | 210 | U | 200 | U | 210 | U | NA | | NA | | 220 | U * | 210 | U | 180 | U | NA | | 200 | U | NA | |
| Carbazole | µg/Kg | NS | NS | NS | | **16** | **J** | 190 | U | 190 | U | **10** | **J** | 190 | U | 210 | U | 200 | U | 210 | U | NA | | NA | | 220 | U | 210 | U | 180 | U | NA | | 200 | U | NA | |
| Chrysene | µg/Kg | 1,000 | 3,900 | 56,000 | | **350** | | 190 | U | 190 | U | **54** | **J** | 190 | U | 210 | U | **16** | **J B** | 210 | UJ | NA | | NA | | 220 | UJ | 210 | UJ | 180 | U | NA | | **8.4** | **J** | NA | |
| Dibenz(a,h)anthracene | µg/Kg | 330 | 330 | 560 | | **100** | **J** | 190 | U | 190 | U | 200 | U | 190 | U | 210 | U | 200 | U | 210 | UJ | NA | | NA | | 220 | UJ | 210 | UJ | 180 | U | NA | | 200 | U | NA | |
| Dibenzofuran | µg/Kg | 7,000 | 59,000 | 350,000 | | 190 | U | 190 | U | 190 | U | **9.1** | **J** | 190 | U | 210 | U | 200 | U | 210 | U | NA | | NA | | 220 | U | 210 | U | 180 | U | NA | | 200 | U | NA | |
| Diethyl Phthalate | µg/Kg | NS | NS | NS | | 190 | U | 190 | U | 190 | U | 200 | U | 190 | U | 210 | U | 200 | U | 210 | U | NA | | NA | | 220 | U | 210 | U | 180 | U | NA | | 200 | U | NA | |
| Dimethyl Phthalate | µg/Kg | NS | NS | NS | | 190 | U | 190 | U | 190 | U | 200 | U | 190 | U | 210 | U | 200 | U | 210 | U | NA | | NA | | 220 | U | 210 | U | 180 | U | NA | | 200 | U | NA | |
| Di-n-Butyl Phthalate | µg/Kg | NS | NS | NS | | 190 | U | 190 | U | 190 | U | 200 | U | 190 | U | 210 | U | 200 | U | 210 | U | NA | | NA | | 220 | U | 210 | U | 180 | U | NA | | 200 | U | NA | |
| Fluoranthene | µg/Kg | 100,000 | 100,000 | 500,000 | | **250** | | 190 | U | 190 | U | **76** | **J** | 190 | U | **7.2** | **J** | **16** | **J** | 210 | U | NA | | NA | | 220 | U | 210 | U | 180 | U | NA | | 200 | U | NA | |
| Fluorene | µg/Kg | 30,000 | 100,000 | 500,000 | | 190 | U | 190 | U | 190 | U | **9.5** | **J** | 190 | U | 210 | U | 200 | U | 210 | U | NA | | NA | | 220 | U | 210 | U | 180 | U | NA | | 200 | U | NA | |
| Indeno(1,2,3-cd)pyrene | µg/Kg | 500 | 500 | 5,600 | | **220** | | 190 | U | 190 | U | 200 | U | 190 | U | 210 | U | **8.2** | **J** | 210 | UJ | NA | | NA | | 220 | UJ | 210 | UJ | 180 | U | NA | | 200 | U | NA | |
| Isophrone | µg/Kg | NS | NS | NS | | 190 | U | 190 | U | 190 | U | 200 | U | 190 | U | 210 | U | 200 | U | 210 | U | NA | | NA | | 220 | U | 210 | U | 180 | U | NA | | 200 | U | NA | |
| Naphthalene | µg/Kg | 12,000 | 100,000 | 500,000 | | 190 | U | 190 | U | 190 | U | **14** | **J** | 190 | U | 210 | U | **4.3** | **J** | 210 | U | NA | | NA | | 220 | U | 210 | U | 180 | U | NA | | 200 | U | NA | |
| N-Nitrosodiphenylamine | µg/Kg | NS | NS | NS | | 190 | U | 190 | U | 190 | U | 200 | U | 190 | U | 210 | U | 200 | U | 210 | U | NA | | NA | | 220 | U | 210 | U | 180 | U | NA | | 200 | U | NA | |
| Phenanthrene | µg/Kg | 100,000 | 100,000 | 500,000 | | **66** | **J** | 190 | U | 190 | U | **68** | **J** | 190 | U | **4.6** | **J** | **8.1** | **J** | 210 | U | NA | | NA | | 220 | U | 210 | U | 180 | U | NA | | 200 | U | NA | |
| Phenol | µg/Kg | 330 | 100,000 | 500,000 | | 190 | U | 190 | U | 190 | U | 200 | U | 190 | U | 210 | U | 200 | U | 210 | U | NA | | NA | | 220 | U | 210 | U | 180 | U | NA | | 200 | U | NA | |
| Pyrene | µg/Kg | 100,000 | 100,000 | 500,000 | | **350** | | 190 | U | 190 | U | **78** | **J** | 190 | U | 210 | U | **14** | **J** | 210 | UJ | NA | | NA | | 220 | UJ | 210 | UJ | 180 | U | NA | | 200 | U | NA | |
| **Target Compound List (TCL) Pesticides** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| alpha-BHC (alpha Hexachlorocyclohexane) | µg/Kg | 20 | 480 | 3,400 | | **0.46** | **J** | 1.9 | U | 1.9 | U | 2.0 | U | 1.9 | U | 2.0 | U | 2.0 | U | 2.0 | U | NA | | NA | | 2.2 | U | 2.0 | U | 1.8 | U | NA | | 2.0 | U | NA | |
| beta-BHC (beta Hexachlorocyclohexane) | µg/Kg | 36 | 360 | 3,000 | | 1.9 | U | 1.9 | U | 1.9 | U | **0.93** | **J** | 1.9 | U | 2.0 | U | 2.0 | U | 2.0 | U | NA | | NA | | 2.2 | U | 2.0 | U | 1.8 | U | NA | | 2.0 | U | NA | |
| delta-BHC (delta Hexachlorocyclohexane) | µg/Kg | 40 | 100,000 | 500,000 | | 1.9 | U | 1.9 | U | 1.9 | U | **0.45** | **J** | 1.9 | U | 2.0 | U | 2.0 | U | 2.0 | U | NA | | NA | | 2.2 | U | 2.0 | U | 1.8 | U | NA | | **0.68** | **J** | NA | |
| Dieldrin | µg/Kg | 5 | 200 | 1,400 | | 1.9 | U | 1.9 | U | 1.9 | U | 2.0 | U | 1.9 | U | 2.0 | U | 2.0 | U | 2.0 | U | NA | | NA | | 2.2 | U | 2.0 | U | 1.8 | U | NA | | 2.0 | U | NA | |
| Endrin Ketone | µg/Kg | NS | NS | NS | | 1.9 | U | 1.9 | U | 1.9 | U | **0.53** | **J** | 1.9 | U | 2.0 | U | 2.0 | U | **0.51** | **J** | NA | | NA | | 2.2 | U | 2.0 | U | 1.8 | U | NA | | 2.0 | U | NA | |
| Gamma BHC (Lindane) | µg/Kg | 100 | 1,300 | 9,200 | | 1.9 | U | **0.31** | **J, B** | **0.45** | **J, B** | 2.0 | U | 1.9 | U | 2.0 | U | 2.0 | U | 2.0 | U | NA | | NA | | 2.2 | U | 2.0 | U | 1.8 | U | NA | | 2.0 | U | NA | |
| Methoxychlor | µg/Kg | NS | NS | NS | | 1.9 | U | 1.9 | U | 1.9 | U | 2.0 | U | 1.9 | U | 2.0 | U | 2.0 | U | 2.0 | U | NA | | NA | | 2.2 | U | 2.0 | U | 1.8 | U | NA | | 2.0 | U | NA | |
| 4,4'-DDD (p,p'-DDD) | µg/Kg | 3.3 | 13,000 | 92,000 | | **0.62** | **J** | **0.41** | **J** | 1.9 | U | **0.56** | **J** | 1.9 | U | 2.0 | U | 2.0 | U | 2.0 | U | NA | | NA | | 2.2 | U | 2.0 | U | 1.8 | U | NA | | 2.0 | U | NA | |
| 4,4'-DDE (p,p'-DDE) | µg/Kg | 3.3 | 8,900 | 62,000 | | 1.9 | U | 1.9 | U | 1.9 | U | 2.0 | U | 1.9 | U | 2.0 | U | 2.0 | U | 2.0 | U | NA | | NA | | 2.2 | U | 2.0 | U | 1.8 | U | NA | | **0.56** | **J** | NA | |
| 4,4'-DDT (p,p'-DDT) | µg/Kg | 3.3 | 7,900 | 47,000 | | **0.93** | **J** | 1.9 | U | 1.9 | U | **0.88** | **J** | 1.9 | U | 2.0 | U | **0.89** | **J** | **0.84** | **J** | NA | | NA | | 2.2 | U | 2.0 | U | **0.89** | **J** | NA | | **1.0** | **J** | NA | |
| **Target Compound List (TCL) Polychlorinated Biphenyls (PCBs)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Target Analyte List (TAL) Metals (Total)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | mg/Kg[12] | NS | NS | NS | | **13,500** | | **13,600** | | **10,600** | | **11,500** | | **9,230** | | **11,800** | | **10,700** | | **9,710** | | NA | | NA | | **19,900** | | **9,300** | | **11,100** | | NA | | **13,100** | | NA | |
| Antimony | mg/Kg | NS | NS | NS | | 5.0 | UJ | 5.7 | UJ | 5.8 | U | 5.9 | U | 5.7 | U | **1.4** | **J** | 1.2 | U | 1.2 | U | NA | | NA | | 2.6 | U | 1.2 | U | 1.1 | UJ | NA | | 1.1 | U | NA | |
| Arsenic | mg/Kg | 13 | 16 | 16 | | **6.7** | | **8.1** | | **6.4** | | **7.8** | | **6.0** | | **4.9** | | **5.6** | | **5.4** | | NA | | NA | | **4.7** | | **4.3** | | **6.2** | | NA | | **4.7** | | NA | |
| Barium | mg/Kg | 350 | 400 | 400 | | **134** | | **151** | | **108** | | **146** | | **90.7** | | **79.3** | | **105** | | **95.5** | | NA | | NA | | **180** | | **80.5** | | **108** | | NA | | **114** | | NA | |
| Beryllium | mg/Kg | 7.2 | 72 | 590 | | **0.63** | | **0.68** | | **0.55** | | **0.60** | | 0.45 | U | **0.67** | | **0.55** | | **0.52** | | NA | | NA | | 1.1 | U | **0.50** | | **0.57** | | NA | | **0.62** | | NA | |
| Cadmium | mg/Kg | 2.5 | 4.3 | 9.3 | | 0.50 | UJ | 0.57 | U | **0.59** | | 0.59 | U | 0.57 | U | 0.62 | U | 0.60 | U | **0.95** | | NA | | NA | | 1.3 | U | 0.61 | U | 0.53 | U | NA | | 0.57 | U | NA | |
| Calcium | mg/Kg | NS | NS | NS | | **3,160** | | **3,480** | | **3,200** | | **3,000** | | **2,560** | | **3,300** | | **3,070** | | **3,070** | | NA | | NA | | **5,930** | | **2,800** | | **2,840** | | NA | | **3,440** | | NA | |
| Chromium | mg/Kg | 1 | 110 | 400 | | **18.4** | | **19.6** | | **16.6** | | **15.8** | | **14.1** | | **15.5** | | **15.1** | | **14.4** | | NA | | NA | | **22.2** | | **14.6** | | **15.8** | | NA | | **17.6** | | NA | |
| Chromium (trivalent)[13] | mg/Kg | 30 | 180 | 1,500 | | **18.4** | | **19.6** | | **16.6** | | **15.8** | | **14.1** | | NA | | NA | | **14.4** | | NA | | NA | | **22.2** | | **14.6** | | **15.8** | | NA | | **17.6** | | NA | |
| Hexavalent Chromium | mg/Kg | 1 | 110 | 400 | | 0.46 | U | 0.45 | U | 0.47 | U | 0.49 | U | 0.47 | U | NA | | NA | | 0.49 | U | NA | | NA | | 0.53 | U | 0.50 | U | 0.43 | U | NA | | 0.48 | U | NA | |
| Cobalt | mg/Kg | NS | NS | NS | | **11.4** | | **13.4** | | **12.2** | | **12.5** | | **10.0** | | **8.3** | | **11.4** | | **10.3** | | NA | | NA | | **8.2** | | **7.5** | | **12.0** | | NA | | **8.0** | | NA | |
| Copper | mg/Kg | 50 | 270 | 270 | | **9.0** | | **14.6** | | **17.5** | | **13.2** | | **15.3** | | **17.1** | | **13.8** | | **7.7** | | NA | | NA | | **10.6** | | **8.7** | | **10.7** | | NA | | **12.3** | | NA | |
| Iron | mg/Kg | NS | NS | NS | | **26,400** | | **25,600** | | **21,300** | | **24,600** | | **19,700** | | **18,200** | | **20,100** | | **20,400** | | NA | | NA | | **21,800** | | **18,700** | | **21,600** | | NA | | **21,500** | | NA | |
| Lead | mg/Kg | 63 | 400 | 1,000 | | **11.8** | **J** | **11.4** | | **13.4** | | **21.3** | | **9.1** | | **14.7** | **J** | **10.4** | | **7.3** | | **6.0** | | **19.9** | | **18.6** | | **6.4** | | **11.2** | | **56.8** | | **8.4** | | **76.6** | |
| Magnesium | mg/Kg | NS | NS | NS | | **4,740** | | **5,490** | | **4,590** | | **3,980** | | **4,210** | | **4,040** | | **3,690** | | **3,280** | | NA | | NA | | **4,210** | | **3,100** | | **4,220** | | NA | | **4,370** | | NA | |
| Manganese | mg/Kg | 1,600 | 2,000 | 10,000 | | **1,090** | | **1,030** | | **768** | | **1,400** | | **504** | | **285** | | **973** | | **808** | | NA | | NA | | **428** | | **338** | | **665** | | NA | | **307** | | NA | |
| Nickel | mg/Kg | 30 | 310 | 310 | | **23.2** | | **28.1** | | **25.7** | | **25.4** | | **20.3** | | **20.9** | | **23.1** | | **18.6** | | NA | | NA | | **24.1** | | **15.8** | | **22.3** | | NA | | **20.8** | | NA | |
| Potassium | mg/Kg | NS | NS | NS | | **1,670** | | **1,270** | | **1,350** | | **1,620** | | **2,020** | | **1,310** | | **1,660** | | **932** | | NA | | NA | | **1,400** | | **1,220** | | **1,420** | | NA | | **1,400** | | NA | |
| Selenium | mg/Kg | 3.9 | 180 | 1,500 | | 1.0 | U | 1.1 | U | 1.2 | U | 1.2 | U | 1.1 | U | 1.2 | U | 1.2 | U | 1.2 | U | NA | | NA | | 2.6 | U | 1.2 | U | 1.1 | U | NA | | 1.1 | U | NA | |
| Silver | mg/Kg | 2 | 180 | 1,500 | | 0.50 | U | 0.57 | U | 0.58 | U | 0.59 | U | 0.57 | U | 0.62 | U | 0.60 | U | 0.60 | U | NA | | NA | | 1.3 | U | 0.61 | U | 0.53 | U | NA | | 0.57 | U | NA | |
| Sodium | mg/Kg | NS | NS | NS | | 503 | U | 566 | U | 582 | U | 588 | U | 569 | U | 616 | U | 601 | U | 595 | U | NA | | NA | | 1320 | U | 611 | U | 528 | U | NA | | 574 | U | NA | |
| Thallium | mg/Kg | NS | NS | NS | | 10.1 | U | 2.3 | U | 2.3 | U | 2.4 | U | 2.3 | U | 2.5 | U | 2.4 | U | 2.4 | U | NA | | NA | | 2.6 | U | 2.4 | U | 2.1 | U | NA | | 2.3 | U | NA | |
| Tin | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Vanadium | mg/Kg | NS | NS | NS | | **27.6** | | **25.1** | | **23.0** | | **26.6** | | **20.0** | | **22.7** | | **23.8** | | **19.5** | | NA | | NA | | **18.2** | | **19.1** | | **23.2** | | NA | | **24.7** | | NA | |
| Zinc | mg/Kg | 109 | 10,000 | 10,000 | | **169** | **J** | **63.1** | | **328** | | **80.5** | | **74.9** | | **145** | **J** | **77.4** | | **219** | | NA | | NA | | **486** | | **144** | | **111** | | NA | | **144** | | NA | |
| Mercury | mg/Kg | 0.18 | 0.81 | 2.8 | | **0.021** | **J** | 0.037 | U | **0.054** | | **0.046** | | 0.036 | U | **0.074** | | 0.039 | U | 0.040 | U | NA | | NA | | **0.17** | | 0.041 | U | 0.036 | U | NA | | **0.041** | | NA | |
| **General Chemistry** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sulfate | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 0.50 | U | 0.50 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| **Toxicity Characteristic Leaching Procedure (TCLP) Metals** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lead | mg/L[14] | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 0.50 | U | NA | | 0.50 | U |
| **Physical Parameters** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Percent Solids | Percent | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |

**Table 2**
**Confirmatory Samples Eastern Portion of Site Detections Only**

| Parameter | Units | Unrestricted Use Soil Cleanup Objectives[1] | Restricted Use Soil Cleanup Objectives - Restricted Residential Standard[1] | Restricted Use Soil Cleanup Objectives - Commercial Standard[1] | Sample ID: | T2-CB54 | | T2-CB55 | | T2-CB56 | | T2-CB57 | | T2-CB58 | | T2-CB59 | | T2-CB60 | | T2-CB61 | | T2-CB62 | | T2-CB63 | | T2-CB64 | | T2-CB65 | | T2-CB66 | | T2-CB67 | | T2-CB68 | | T2-CB69 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Sample Depth (feet): | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | Sample Date: | 4/23/2014 | | 4/23/2014 | | 4/23/2014 | | 4/23/2014 | | 5/6/2014 | | 5/6/2014 | | 5/28/2014 | | 5/28/2014 | | 5/28/2014 | | 5/28/2014 | | 5/28/2014 | | 5/28/2014 | | 6/3/2014 | | 6/3/2014 | | 6/20/2014 | | 6/20/2014 | |
| | | | | | | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acetone | µg/Kg[2] | 50 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 22 | U | 23 | U | 24 | U | 23 | U | 21 | U | 22 | U | 22 | U | 21 | U |
| Dichlorodifluoromethane | µg/Kg | NS[6] | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 4.5 | U | 4.6 | U | 4.8 | U | 4.5 | U | 4.2 | U | 4.3 | U | 4.5 | U | 4.1 | U |
| Isopropylbenzene (Cumene) | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 4.5 | U | 4.6 | U | 4.8 | U | 4.5 | U | 4.2 | U | 4.3 | U | 4.5 | U | 4.1 | U |
| Methyl Acetate | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 4.5 | U | 4.6 | U | 4.8 | U | 4.5 | U | 4.2 | U | 4.3 | U | 4.5 | U | 4.1 | U |
| Methylcyclohexane | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 4.5 | U | 4.6 | U | 4.8 | U | 4.5 | U | 4.2 | U | 4.3 | U | 4.5 | U | 4.1 | U |
| Methylene Chloride | µg/Kg | 50 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 4.5 | U | 4.6 | U | 4.8 | U | 4.5 | U | 4.2 | U | 4.3 | U | 4.5 | U | 4.1 | U |
| **Semivolatile Organic Compounds (SVOCs)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1-Biphenyl | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 2,4-Dimethylphenol | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | 180 | U | 180 | U | 200 | U | 200 | U |
| 2,4-Dinitrotoluene | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | 180 | U | 180 | U | 200 | U | 200 | U |
| 2,6-Dintrotoluene | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | 180 | U | 180 | U | 200 | U | 200 | U |
| 2-Methylnaphthalene | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | 180 | U | 180 | U | 200 | U | 200 | U |
| 2-Methylphenol (O-Cresol) | µg/Kg | 330 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | 180 | U | 180 | U | 200 | U | 200 | U |
| 3&4-Methylphenol (m+p Cresol) | µg/Kg | 330[6] | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 4-Methylphenol (p-Cresol) | µg/Kg | 330 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 390 | U | 400 | U | 400 | U | 390 | U | 350 | U | 350 | U | 390 | U | 380 | U |
| Acenaphthene | µg/Kg | 20,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | 180 | U | 180 | U | 200 | U | 200 | U |
| Acenaphthylene | µg/Kg | 100,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | 180 | U | 180 | U | 200 | U | 200 | U |
| Anthracene | µg/Kg | 100,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | 180 | U | 180 | U | 200 | U | 200 | U |
| Benzaldehyde | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | 180 | U | 180 | U | 200 | U | 200 | U |
| Benzo(a)anthracene | µg/Kg | 1,000 | 1,000 | 5,600 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | 180 | U | 180 | U | 200 | U | 200 | U |
| Benzo(a)pyrene | µg/Kg | 1,000 | 1,000 | 1,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | **9.5** | **J** | 200 | U | 180 | U | 180 | U | 200 | U | 200 | U |
| Benzo(b)fluoranthene | µg/Kg | 1,000 | 1,000 | 5,600 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | **11** | **J** | 200 | U | 180 | U | 180 | U | 200 | U | 200 | U |
| Benzo(g,h,i)perylene | µg/Kg | 100,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | 180 | U | 180 | U | 200 | U | 200 | U |
| Benzo(K)fluoranthene | µg/Kg | 800 | 3,900 | 56,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | **7.7** | **J** | 200 | U | 180 | U | 180 | U | 200 | U | 200 | U |
| Benzyl Butyl Phthalate | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | 180 | U | 180 | U | 200 | U | 200 | U |
| Biphenyl (Diphenyl, 1,1'-Biphenyl) | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | 180 | U | 180 | U | 200 | U | 200 | U |
| Bis(2-ethyhexyl) Phthalate | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | 180 | U | 180 | U | 200 | U | 200 | U |
| Caprolactam | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | 180 | U | 180 | U | 200 | U | 200 | U |
| Carbazole | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | 180 | U | 180 | U | 200 | U | 200 | U |
| Chrysene | µg/Kg | 1,000 | 3,900 | 56,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | **15** | **J** | 200 | U | 180 | U | 180 | U | 200 | U | 200 | U |
| Dibenz(a,h)anthracene | µg/Kg | 330 | 330 | 560 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | **3.6** | **J** | 200 | U | 180 | U | 180 | U | 200 | U | 200 | U |
| Dibenzofuran | µg/Kg | 7,000 | 59,000 | 350,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | 180 | U | 180 | U | 200 | U | 200 | U |
| Diethyl Phthalate | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | 180 | U | 180 | U | 200 | U | 200 | U |
| Dimethyl Phthalate | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | 180 | U | 180 | U | 200 | U | 200 | U |
| Di-n-Butyl Phthalate | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | 180 | U | 180 | U | 200 | U | 200 | U |
| Fluoranthene | µg/Kg | 100,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | **24** | **J** | 200 | U | 180 | U | 180 | U | 200 | U | 200 | U |
| Fluorene | µg/Kg | 30,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | 180 | U | 180 | U | 200 | U | 200 | U |
| Indeno(1,2,3-cd)pyrene | µg/Kg | 500 | 500 | 5,600 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | **9.0** | **J** | 200 | U | 180 | U | 180 | U | 200 | U | 200 | U |
| Isophrone | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | 180 | U | 180 | U | 200 | U | 200 | U |
| Naphthalene | µg/Kg | 12,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | 180 | U | 180 | U | 200 | U | 200 | U |
| N-Nitrosodiphenylamine | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | 180 | U | 180 | U | 200 | U | 200 | U |
| Phenanthrene | µg/Kg | 100,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | **21** | **J** | 200 | U | 180 | U | 180 | U | 200 | U | 200 | U |
| Phenol | µg/Kg | 330 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | 180 | U | 180 | U | 200 | U | 200 | U |
| Pyrene | µg/Kg | 100,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | **18** | **J B** | 200 | U | 180 | U | 180 | U | 200 | U | 200 | U |
| **Target Compound List (TCL) Pesticides** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| alpha-BHC (alpha Hexachlorocyclohexane) | µg/Kg | 20 | 480 | 3,400 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 2.0 | U | 2.0 | U | 2.0 | U | 2.0 | U | 8.8 | U | 1.8 | U | 2.0 | U | 1.9 | U |
| beta-BHC (beta Hexachlorocyclohexane) | µg/Kg | 36 | 360 | 3,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 2.0 | U | 2.0 | U | 2.0 | U | 2.0 | U | 8.8 | U | 1.8 | U | 2.0 | U | 1.9 | U |
| delta-BHC (delta Hexachlorocyclohexane) | µg/Kg | 40 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **3.0** | **NJ**[4,7] | **2.5** | NJ | **2.6** | **NJ** | **2.5** | **NJ** | 8.8 | U | **0.41** | **J** | **0.60** | **J** | 1.9 | U |
| Dieldrin | µg/Kg | 5 | 200 | 1,400 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **0.55** | **J** | 2.0 | U | 2.0 | U | 2.0 | U | 8.8 | U | 1.8 | U | 2.0 | U | 1.9 | U |
| Endrin Ketone | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 2.0 | U | 2.0 | U | 2.0 | U | **0.74** | **J** | 8.8 | U | 1.8 | U | 2.0 | U | 1.9 | U |
| Gamma BHC (Lindane) | µg/Kg | 100 | 1,300 | 9,200 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **0.48** | **J** | **0.41** | **J** | **0.47** | **J** | 2.0 | U | 8.8 | U | 1.8 | U | 2.0 | U | 1.9 | U |
| Methoxychlor | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 2.0 | U | 2.0 | U | 2.0 | U | 2.0 | U | 8.8 | U | 1.8 | U | 2.0 | U | 1.9 | U |
| 4,4'-DDD (p,p'-DDD) | µg/Kg | 3.3 | 13,000 | 92,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 2.0 | U | 2.0 | U | 2.0 | U | 2.0 | U | 8.8 | U | 1.8 | U | 2.0 | U | **0.41** | **J** |
| 4,4'-DDE (p,p'-DDE) | µg/Kg | 3.3 | 8,900 | 62,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 2.0 | U | 2.0 | U | 2.0 | U | 2.0 | U | 8.8 | U | 1.8 | U | 2.0 | U | 1.9 | U |
| 4,4'-DDT (p,p'-DDT) | µg/Kg | 3.3 | 7,900 | 47,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 2.0 | U | 2.0 | U | 2.0 | U | 2.0 | U | 8.8 | U | 1.8 | U | 2.0 | U | 1.9 | U |
| **Target Compound List (TCL) Polychlorinated Biphenyls (PCBs)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Target Analyte List (TAL) Metals (Total)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | mg/Kg[12] | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **11,300** | | **11,200** | | **11,500** | | **11,900** | | **14,300** | | **13,100** | | **11,600** | | **13,400** | |
| Antimony | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 1.1 | U | 1.3 | U | 1.2 | U | 1.2 | U | 1.1 | U | 1.2 | U | 1.1 | UJ | 1.1 | U |
| Arsenic | mg/Kg | 13 | 16 | 16 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **4.0** | | **5.5** | | **2.4** | | **6.8** | | **5.8** | | **5.6** | | **2.9** | | **4.7** | |
| Barium | mg/Kg | 350 | 400 | 400 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **81.6** | | **114** | | **77.2** | | **118** | | **117** | | **161** | | **78.8** | | **101** | |
| Beryllium | mg/Kg | 7.2 | 72 | 590 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **0.51** | | **0.51** | | **0.49** | | **0.66** | | **0.71** | | **0.64** | | **0.48** | | **0.60** | |
| Cadmium | mg/Kg | 2.5 | 4.3 | 9.3 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 0.54 | U | 0.63 | U | 0.60 | U | 0.58 | U | 0.54 | U | 0.58 | U | 0.57 | U | 0.56 | U |
| Calcium | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **4,320** | | **3,170** | | **3,920** | | **2,780** | | **3,410** | | **3,180** | | **3,370** | | **3,240** | |
| Chromium | mg/Kg | 1 | 110 | 400 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **14.7** | | **15.5** | | **14.5** | | **16.4** | | **18.4** | | **17.7** | | **15.8** | | **19.5** | |
| Chromium (trivalent)[12] | mg/Kg | 30 | 180 | 1,500 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **14.7** | | **15.5** | | **14.5** | | **16.4** | | NA | | NA | | **15.8** | | **19.5** | |
| Hexavalent Chromium | mg/Kg | 1 | 110 | 400 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 0.49 | U | 0.48 | U | 0.49 | U | 0.48 | U | NA | | NA | | 0.47 | U | 0.47 | U |
| Cobalt | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **7.4** | | **13.8** | | 6.0 | U | **15.6** | | **16.0** | | **9.5** | | **6.2** | | **9.7** | |
| Copper | mg/Kg | 50 | 270 | 270 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **8.2** | | **9.8** | | **6.6** | | **13.1** | | **13.5** | | **11.0** | | **9.7** | | **15.1** | |
| Iron | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **16,700** | | **24,500** | | **14,400** | | **23,900** | | **25,800** | | **25,600** | | **15,900** | | **22,600** | |
| Lead | mg/Kg | 63 | 400 | 1,000 | | **9.2** | | **380** | | **61.1** | | **21.8** | | **58.8** | | **11.2** | | **88.2** | | **65.4** | | **13.0** | | **7.2** | | **15.1** | | **9.7** | | **9.5** | | **7.1** | | **5.7** | | **7.9** | |
| Magnesium | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **3,410** | | **3,850** | | **3,460** | | **4,310** | | **4,590** | | **4,310** | | **3,830** | | **5,020** | |
| Manganese | mg/Kg | 1,600 | 2,000 | 10,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **254** | | **514** | | **118** | | **912** | | **883** | | **263** | | **132** | **J** | **421** | |
| Nickel | mg/Kg | 30 | 310 | 310 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **17.8** | | **19.6** | | **15.1** | | **21.6** | | **25.8** | | **20.9** | | **17.5** | | **24.3** | |
| Potassium | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **1,490** | | **1,480** | | **1,020** | | **1,400** | | **1,850** | | **1,570** | | **1,300** | | **1,980** | |
| Selenium | mg/Kg | 3.9 | 180 | 1,500 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 1.1 | U | 1.3 | U | 1.2 | U | 1.2 | U | 1.1 | U | 1.2 | U | 1.1 | U | 1.1 | U |
| Silver | mg/Kg | 2 | 180 | 1,500 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 0.54 | U | 0.63 | U | 0.60 | U | 0.58 | U | 0.54 | U | 0.58 | U | 0.57 | U | 0.56 | U |
| Sodium | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 538 | U | 625 | U | 600 | U | 581 | U | 539 | U | 580 | U | 568 | U | 559 | U |
| Thallium | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 2.2 | U | 2.5 | U | 2.4 | U | 2.3 | U | 2.2 | U | 2.3 | U | 2.3 | U | 2.2 | U |
| Tin | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Vanadium | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **19.1** | | **21.8** | | **16.5** | | **25.9** | | **28.8** | | **27.6** | | **17.3** | | **23.2** | |
| Zinc | mg/Kg | 109 | 10,000 | 10,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **188** | | **107** | | **101** | | **238** | | **93.3** | | **75.7** | | **55.7** | **J** | **58.2** | **B** |
| Mercury | mg/Kg | 0.18 | 0.81 | 2.8 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 0.039 | U | **0.042** | | **0.059** | | 0.038 | U | 0.032 | U | 0.034 | U | 0.038 | U | 0.038 | U |
| **General Chemistry** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sulfate | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Toxicity Characteristic Leaching Procedure (TCLP) Metals** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lead | mg/L[14] | NS | NS | NS | | 0.50 | U | 0.50 | U | 0.50 | U | 0.50 | U | 0.50 | U | 0.50 | U | **0.75** | | 0.50 | U | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Physical Parameters** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Percent Solids | Percent | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |

**Table 2**
**Confirmatory Samples Eastern Portion of Site**
**Detections Only**

| Parameter | Units | Unrestricted Use Soil Cleanup Objectives[1] | | Restricted Use Soil Cleanup Objectives - Restricted Residential Standard[1] | | Restricted Use Soil Cleanup Objectives - Commercial Standard[1] | | Sample ID: | | T2-CB70 | | T2-CB71 | | T2-CB72 | | T2-CB73 | | T2-CB75 | | T2-CB76 | | T2-CB77 | | T2-CB78 | | T2-CB79 | | T2-CB82 | | TE10-E | | TE10-F | | TE10-N | | TE10-S | | TE10-W | | T2-NP-CB2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Sample Depth (feet): | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | Sample Date: | | 7/21/2014 | | 7/21/2014 | | 7/21/2014 | | 7/21/2014 | | 7/24/2014 | | 8/4/2014 | | 8/4/2014 | | 8/7/2014 | | 8/14/2014 | | 9/19/2014 | | 9/13/2013 | | 9/13/2013 | | 9/13/2013 | | 9/13/2013 | | 9/13/2013 | | 8/14/2014 | |
| | | | | | | | | | | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acetone | µg/Kg[2] | 50 | | 100,000 | | 500,000 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **36** | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Dichlorodifluoromethane | µg/Kg | NS | [3] | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 6.9 | U | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Isopropylbenzene (Cumene) | µg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 6.9 | U | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Methyl Acetate | µg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 6.9 | U | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Methylcyclohexane | µg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 6.9 | U | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Methylene Chloride | µg/Kg | 50 | | 100,000 | | 500,000 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 6.9 | U | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Semivolatile Organic Compounds (SVOCs)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1-Biphenyl | µg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 2,4-Dimethylphenol | µg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 400 | U | 390 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| 2,4-Dinitrotoluene | µg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 80 | U | 390 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| 2,6-Dintrotoluene | µg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 80 | U | 390 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| 2-Methylnaphthalene | µg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 400 | U | 390 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| 2-Methylphenol (O-Cresol) | µg/Kg | 330 | | 100,000 | | 500,000 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 400 | U | 390 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| 3&4-Methylphenol (m+p Cresol) | µg/Kg | 330 | [5] | 100,000 | | 500,000 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 780 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| 4-Methylphenol (p-Cresol) | µg/Kg | 330 | | 100,000 | | 500,000 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 400 | U | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Acenaphthene | µg/Kg | 20,000 | | 100,000 | | 500,000 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 400 | U | 390 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Acenaphthylene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 400 | U | 390 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Anthracene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 400 | U | 390 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Benzaldehyde | µg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 400 | U | 390 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Benzo(a)anthracene | µg/Kg | 1,000 | | 1,000 | | 5,600 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **41** | | 390 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Benzo(a)pyrene | µg/Kg | 1,000 | | 1,000 | | 1,000 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **38** | J | 390 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Benzo(b)fluoranthene | µg/Kg | 1,000 | | 1,000 | | 5,600 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **49** | | 390 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Benzo(g,h,i)perylene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **32** | J | 390 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Benzo(K)fluoranthene | µg/Kg | 800 | | 3,900 | | 56,000 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **22** | J | 390 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Benzyl Butyl Phthalate | µg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 400 | U | 390 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Biphenyl (Diphenyl, 1,1'-Biphenyl) | µg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 400 | U | 390 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Bis(2-ethyhexyl) Phthalate | µg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 400 | U | 390 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Caprolactam | µg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 400 | U | 390 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Carbazole | µg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 400 | U | 390 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Chrysene | µg/Kg | 1,000 | | 3,900 | | 56,000 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 400 | U | 390 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Dibenz(a,h)anthracene | µg/Kg | 330 | | 330 | | 560 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 40 | U | 390 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Dibenzofuran | µg/Kg | 7,000 | | 59,000 | | 350,000 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 400 | U | 390 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Diethyl Phthalate | µg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 400 | U | 390 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Dimethyl Phthalate | µg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 400 | U | 390 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Di-n-Butyl Phthalate | µg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 400 | U | 390 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Fluoranthene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 400 | U | 390 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Fluorene | µg/Kg | 30,000 | | 100,000 | | 500,000 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 400 | U | 390 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Indeno(1,2,3-cd)pyrene | µg/Kg | 500 | | 500 | | 5,600 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **29** | J | 390 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Isophrone | µg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 400 | U | 390 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Naphthalene | µg/Kg | 12,000 | | 100,000 | | 500,000 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 400 | U | 390 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| N-Nitrosodiphenylamine | µg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 400 | U | 390 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Phenanthrene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 400 | U | 390 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Phenol | µg/Kg | 330 | | 100,000 | | 500,000 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 400 | U | 390 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Pyrene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **46** | J | 390 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| **Target Compound List (TCL) Pesticides** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| alpha-BHC (alpha Hexachlorocyclohexane) | µg/Kg | 20 | | 480 | | 3,400 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 9.8 | U | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| beta-BHC (beta Hexachlorocyclohexane) | µg/Kg | 36 | | 360 | | 3,000 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 9.8 | U | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| delta-BHC (delta Hexachlorocyclohexane) | µg/Kg | 40 | | 100,000 | | 500,000 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 9.8 | U | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Dieldrin | µg/Kg | 5 | | 200 | | 1,400 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 9.8 | U | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Endrin Ketone | µg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 9.8 | U | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Gamma BHC (Lindane) | µg/Kg | 100 | | 1,300 | | 9,200 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 9.8 | U | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Methoxychlor | µg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 9.8 | U | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 4,4'-DDD (p,p'-DDD) | µg/Kg | 3.3 | | 13,000 | | 92,000 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 9.8 | U | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 4,4'-DDE (p,p'-DDE) | µg/Kg | 3.3 | | 8,900 | | 62,000 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 9.8 | U | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 4,4'-DDT (p,p'-DDT) | µg/Kg | 3.3 | | 7,900 | | 47,000 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 9.8 | U | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Target Compound List (TCL) Polychlorinated Biphenyls (PCBs)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Target Analyte List (TAL) Metals (Total)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | mg/Kg[12] | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **19,800** | | **10,200** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Antimony | mg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 1.2 | U | 1.3 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Arsenic | mg/Kg | 13 | | 16 | | 16 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **7.9** | | **6.0** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Barium | mg/Kg | 350 | | 400 | | 400 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **102** | | **152** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Beryllium | mg/Kg | 7.2 | | 72 | | 590 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **1.0** | | **0.54** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Cadmium | mg/Kg | 2.5 | | 4.3 | | 9.3 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 0.59 | U | 0.67 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Calcium | mg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **2,370** | | **2,790** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Chromium | mg/Kg | 1 | | 110 | | 400 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **24.0** | | **14.5** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Chromium (trivalent)[13] | mg/Kg | 30 | | 180 | | 1,500 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **24.0** | | **14.5** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Hexavalent Chromium | mg/Kg | 1 | | 110 | | 400 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 0.49 | U | 0.47 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Cobalt | mg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **13.2** | | **10.5** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Copper | mg/Kg | 50 | | 270 | | 270 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **14.1** | | **9.9** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Iron | mg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **32,800** | | **20,400** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Lead | mg/Kg | 63 | | 400 | | 1,000 | | | | **15.4** | | **78.7** | | **16.8** | | **17.7** | | **228** | | **12.8** | | **6.9** | | **26.8** | | **9.5** | | **7.4** | | NA | | NA | | NA | | NA | | **65.6** | |
| Magnesium | mg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **5,790** | | **3,580** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Manganese | mg/Kg | 1,600 | | 2,000 | | 10,000 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **729** | | **529** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Nickel | mg/Kg | 30 | | 310 | | 310 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **25.1** | | **17.9** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Potassium | mg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **2,160** | | **1,020** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Selenium | mg/Kg | 3.9 | | 180 | | 1,500 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 1.2 | U | 1.3 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Silver | mg/Kg | 2 | | 180 | | 1,500 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 0.59 | U | 0.67 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Sodium | mg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 588 | U | 665 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Thallium | mg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 2.4 | U | 2.7 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Tin | mg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 13.3 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Vanadium | mg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **40.0** | | **24.1** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Zinc | mg/Kg | 109 | | 10,000 | | 10,000 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **61.7** | | **116** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Mercury | mg/Kg | 0.18 | | 0.81 | | 2.8 | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 0.038 | U | 0.038 | U | NA | | **0.19** | | **0.025** | | **0.42** | | **0.14** | | **0.30** | | NA | |
| **General Chemistry** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sulfate | mg/Kg | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **2.4** | B | NA | | NA | | NA | | NA | | NA | | NA | |
| **Toxicity Characteristic Leaching Procedure (TCLP) Metals** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lead | mg/L[14] | NS | | NS | | NS | | | | 0.50 | U | 0.50 | U | 0.50 | U | 0.50 | U | **2.0** | | 0.50 | U | 0.50 | U | NA | | NA | | 0.50 | U | NA | | NA | | NA | | NA | | NA | | 0.50 | U |
| **Physical Parameters** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Percent Solids | Percent | NS | | NS | | NS | | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |

**Table 2**
**Confirmatory Samples Eastern Portion of Site**
**Detections Only**

| Parameter | Units | Unrestricted Use Soil Cleanup Objectives[1] | Restricted Use Soil Cleanup Objectives - Restricted Residential Standard[1] | Restricted Use Soil Cleanup Objectives - Commercial Standard[1] | Sample ID: | T2-NP-CB3 | | T2-NP-SW1 | | T2-NP-SW3 | | T2-NP-SW4 | | T2-NP-SW5 | | T2-BS-CB1 | | T2-BS-CB2 | | T2-BS-CB3 | | T2-BS-CB4 | | T2-BS-CB5 | | T2-BS-CB6 | | T2-BS-SW1 | | T2-BS-SW2 | | T2-BS-SW3 | | T2-BS-SW4 | | T2-BS-SW5 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Sample Depth (feet): | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | Sample Date: | 8/21/2014 | | 8/14/2014 | | 8/14/2014 | | 8/14/2014 | | 8/21/2014 | | 7/10/2014 | | 7/10/2014 | | 7/11/2014 | | 7/14/2014 | | 7/15/2014 | | 7/16/2014 | | 7/10/2014 | | 7/10/2014 | | 7/10/2014 | | 7/11/2014 | | 7/14/2014 | |
| | | | | | | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acetone | µg/Kg[2] | 50 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Dichlorodifluoromethane | µg/Kg | NS[5] | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Isopropylbenzene (Cumene) | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Methyl Acetate | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Methylcyclohexane | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Methylene Chloride | µg/Kg | 50 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Semivolatile Organic Compounds (SVOCs)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1-Biphenyl | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 2,4-Dimethylphenol | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | 410 | U | 460 | U | 410 | U | 430 | U | 440 | U | 480 | U | 430 | U | 440 | U | 480 | U | 490 | U | 380 | U |
| 2,4-Dinitrotoluene | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | 410 | U | 460 | U | 410 | U | 430 | U | 440 | U | 480 | U | 430 | U | 440 | U | 480 | U | 490 | U | 380 | U |
| 2,6-Dinitrotoluene | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | 410 | U | 460 | U | 410 | U | 430 | U | 440 | U | 480 | U | 430 | U | 440 | U | 480 | U | 490 | U | 380 | U |
| 2-Methylnaphthalene | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | 82 | U | 92 | U | 83 | U | 87 | U | 88 | U | 98 | U | 86 | U | **110** | | **500** | | 98 | U | 76 | U |
| 2-Methylphenol (O-Cresol) | µg/Kg | 330 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | 410 | U | 460 | U | 410 | U | 430 | U | 440 | U | 480 | U | 430 | U | 440 | U | 480 | U | 490 | U | 380 | U |
| 3&4-Methylphenol (m+p Cresol) | µg/Kg | 330[5] | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | 410 | U | 460 | U | 410 | U | NA | | NA | | NA | | 430 | U | 440 | U | 480 | U | 490 | U | NA | |
| 4-Methylphenol (p-Cresol) | µg/Kg | 330 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Acenaphthene | µg/Kg | 20,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | 82 | U | 92 | U | 83 | U | 87 | U | 88 | U | 98 | U | 86 | U | **97** | | **97** | | 98 | U | 76 | U |
| Acenaphthylene | µg/Kg | 100,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | 82 | U | 92 | U | 83 | U | 87 | U | 88 | U | 98 | U | 86 | U | 89 | U | **100** | | 98 | U | 76 | U |
| Anthracene | µg/Kg | 100,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | 82 | U | 92 | U | 83 | U | 87 | U | 88 | U | 98 | U | 86 | U | **310** | | **490** | | 98 | U | 76 | U |
| Benzaldehyde | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | 2000 | UJ | 2300 | UJ | 2100 | UJ | 2,200 | UJ | 2,200 | U | 2,400 | UJ | 2,100 | UJ | 2,200 | UJ | 2,400 | UJ | 2,500 | UJ | 1,900 | UJ |
| Benzo(a)anthracene | µg/Kg | 1,000 | 1,000 | 5,600 | | NA | | NA | | NA | | NA | | NA | | 82 | U | 92 | U | 83 | U | 87 | U | 88 | U | 98 | U | **140** | | **910** | | **1300** | | **110** | | **96** | |
| Benzo(a)pyrene | µg/Kg | 1,000 | 1,000 | 1,000 | | NA | | NA | | NA | | NA | | NA | | 82 | U | 92 | U | 83 | U | 87 | U | 88 | U | 98 | U | **110** | | **760** | | **1100** | | **98** | | 76 | U |
| Benzo(b)fluoranthene | µg/Kg | 1,000 | 1,000 | 5,600 | | NA | | NA | | NA | | NA | | NA | | 82 | U | 92 | U | 83 | U | 87 | U | 88 | U | 98 | U | **150** | | **1200** | | **1400** | | **150** | | **110** | |
| Benzo(g,h,i)perylene | µg/Kg | 100,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | 82 | U | 92 | U | 83 | U | 87 | U | 88 | U | 98 | U | 86 | U | **490** | | **620** | | 98 | U | 76 | U |
| Benzo(K)fluoranthene | µg/Kg | 800 | 3,900 | 56,000 | | NA | | NA | | NA | | NA | | NA | | 82 | U | 92 | U | 83 | U | 87 | U | 88 | U | 98 | U | **69** | **J** | **410** | | **580** | | 98 | U | 76 | U |
| Benzyl Butyl Phthalate | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | 410 | U | 460 | U | 410 | U | 430 | U | 440 | U | 480 | U | 430 | U | 440 | U | 480 | U | 490 | U | 380 | U |
| Biphenyl (Diphenyl, 1,1'-Biphenyl) | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | 410 | U | 460 | U | 410 | U | 430 | U | 440 | U | 480 | U | 430 | U | 440 | U | 480 | U | 490 | U | 380 | U |
| Bis(2-ethyhexyl) Phthalate | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | **260** | **J** | 460 | U | 410 | U | 430 | U | 440 | U | 480 | U | 430 | U | **260** | **J** | 480 | U | **310** | **J** | 380 | U |
| Caprolactam | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | 410 | U | 460 | U | 410 | U | 430 | U | 440 | U | 480 | U | 430 | UJ | 440 | U | 480 | U | 490 | U | 380 | U |
| Carbazole | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | 410 | U | 460 | U | 410 | U | 430 | U | 440 | U | 480 | U | 430 | U | **170** | **J** | 480 | U | 490 | U | 380 | U |
| Chrysene | µg/Kg | 1,000 | 3,900 | 56,000 | | NA | | NA | | NA | | NA | | NA | | 82 | U | 92 | U | 83 | U | 87 | U | 88 | U | 98 | U | **150** | | **970** | | **1200** | | **130** | | **110** | |
| Dibenz(a,h)anthracene | µg/Kg | 330 | 330 | 560 | | NA | | NA | | NA | | NA | | NA | | 82 | U | 92 | U | 83 | U | 87 | U | 88 | U | 98 | U | 86 | U | **160** | | **150** | | 98 | U | 76 | U |
| Dibenzofuran | µg/Kg | 7,000 | 59,000 | 350,000 | | NA | | NA | | NA | | NA | | NA | | 410 | U | 460 | U | 410 | U | 430 | U | 440 | U | 480 | U | 430 | U | **93** | **J** | **180** | **J** | 490 | U | 380 | U |
| Diethyl Phthalate | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | 410 | U | 460 | | 410 | U | 430 | U | 440 | U | 480 | U | 430 | U | 440 | U | 480 | U | 490 | U | 380 | U |
| Dimethyl Phthalate | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | 2,000 | U | **150** | **J** | 2,100 | U | 2,200 | U | 2,200 | U | 2,400 | U | 2100 | U | **94** | **J** | 2400 | U | 2500 | U | 1900 | U |
| Di-n-Butyl Phthalate | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | 410 | U | 460 | U | 410 | U | 430 | U | 440 | U | 480 | U | 430 | U | 440 | U | 480 | U | 490 | U | 380 | U |
| Fluoranthene | µg/Kg | 100,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | 82 | U | 92 | U | 83 | U | 87 | U | 88 | U | 98 | U | **270** | | **1700** | | **2800** | | **170** | | **160** | |
| Fluorene | µg/Kg | 30,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | 82 | U | 92 | U | 83 | U | 87 | U | 88 | U | 98 | U | 86 | U | **130** | | **110** | | 98 | U | 76 | U |
| Indeno(1,2,3-cd)pyrene | µg/Kg | 500 | 500 | 5,600 | | NA | | NA | | NA | | NA | | NA | | 82 | U | 92 | U | 83 | U | 87 | U | 88 | U | 98 | U | 86 | U | **450** | | **600** | | 98 | U | 76 | U |
| Isophrone | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | 410 | U | 460 | U | 410 | U | 430 | U | 440 | U | 480 | U | 430 | U | 440 | U | 480 | U | 490 | U | 380 | U |
| Naphthalene | µg/Kg | 12,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | 82 | U | 92 | U | 83 | U | 87 | U | 88 | U | 98 | U | 86 | U | **110** | | **410** | | 98 | U | 76 | U |
| N-Nitrosodiphenylamine | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | 410 | U | 460 | U | 410 | U | 430 | U | 440 | U | 480 | U | 430 | U | 440 | U | 480 | U | 490 | U | 380 | U |
| Phenanthrene | µg/Kg | 100,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | 82 | U | 92 | U | 83 | U | 87 | U | 88 | U | 98 | U | **170** | | **1300** | | **1800** | | **150** | | **150** | |
| Phenol | µg/Kg | 330 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | 410 | U | 460 | U | 410 | U | 430 | U | 440 | U | 480 | U | 430 | U | 440 | U | 480 | U | 490 | J | 380 | U |
| Pyrene | µg/Kg | 100,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | 82 | U | 92 | U | 83 | U | 87 | U | 88 | U | 98 | U | **220** | | **1300** | | **2300** | | **150** | | **140** | |
| **Target Compound List (TCL) Pesticides** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| alpha-BHC (alpha Hexachlorocyclohexane) | µg/Kg | 20 | 480 | 3,400 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| beta-BHC (beta Hexachlorocyclohexane) | µg/Kg | 36 | 360 | 3,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| delta-BHC (delta Hexachlorocyclohexane) | µg/Kg | 40 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Dieldrin | µg/Kg | 5 | 200 | 1,400 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Endrin Ketone | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Gamma BHC (Lindane) | µg/Kg | 100 | 1,300 | 9,200 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Methoxychlor | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 4,4'-DDD (p,p'-DDD) | µg/Kg | 3.3 | 13,000 | 92,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 4,4'-DDE (p,p'-DDE) | µg/Kg | 3.3 | 8,900 | 62,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 4,4'-DDT (p,p'-DDT) | µg/Kg | 3.3 | 7,900 | 47,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Target Compound List (TCL) Polychlorinated Biphenyls (PCBs)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Target Analyte List (TAL) Metals (Total)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | mg/Kg[12] | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | **14,400** | | **17,200** | | **13,000** | | **12,200** | | **12,000** | | **14,300** | | **12,300** | | **11,800** | | **741** | | **12,100** | | **10,400** | |
| Antimony | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | 1.0 | U | 1.3 | U | 1.2 | U | 1.2 | UJ | 1.3 | U | 1.2 | U | 1.3 | U | **1.5** | | 1.4 | U | 1.2 | U | **1.6** | |
| Arsenic | mg/Kg | 13 | 16 | 16 | | NA | | NA | | NA | | NA | | NA | | **3.9** | | **5.4** | | **4.4** | | **4.6** | | **4.4** | | **2.2** | | **6.6** | | **9.0** | | **1.4** | | **6.9** | | **7.7** | |
| Barium | mg/Kg | 350 | 400 | 400 | | NA | | NA | | NA | | NA | | NA | | **96.4** | | **171** | | **127** | | **99.0** | | **97.5** | | **144** | | **105** | | **118** | | 27.5 | U | **86.3** | | **92.6** | |
| Beryllium | mg/Kg | 7.2 | 72 | 590 | | NA | | NA | | NA | | NA | | NA | | **0.64** | | **0.78** | | **0.61** | | **0.57** | | **0.63** | | **0.64** | | **0.64** | | **0.64** | | 0.55 | U | **0.62** | | **0.54** | |
| Cadmium | mg/Kg | 2.5 | 4.3 | 9.3 | | NA | | NA | | NA | | NA | | NA | | 0.51 | U | 0.63 | U | 0.61 | U | 0.61 | U | 0.63 | U | **0.81** | | 0.63 | U | 0.59 | U | 0.69 | U | 0.59 | U | 0.60 | U |
| Calcium | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | **2170** | | **5880** | | **3870** | | **3420** | | **3380** | | **4490** | | **38,400** | | **36,800** | | **1,240** | | **24,700** | | **55,500** | |
| Chromium | mg/Kg | 1 | 110 | 400 | | NA | | NA | | NA | | NA | | NA | | **17.1** | | **23.8** | | **17.6** | | **15.4** | | **15.7** | | **15.9** | | **23.4** | | **22.3** | | **2.0** | | **17.3** | | **20.7** | |
| Chromium (trivalent)[12] | mg/Kg | 30 | 180 | 1,500 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Hexavalent Chromium | mg/Kg | 1 | 110 | 400 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Cobalt | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | **8.9** | | **12.7** | | **8.6** | | **9.0** | | **8.8** | | **6.2** | | **9.9** | | **10.2** | | 6.9 | U | **9.8** | | **9.3** | |
| Copper | mg/Kg | 50 | 270 | 270 | | NA | | NA | | NA | | NA | | NA | | **8.2** | | **13.8** | | **14.7** | | **8.6** | | **13.9** | | **17.2** | | **45.2** | | **48.3** | | **9.1** | | **46.5** | | **31.5** | |
| Iron | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | **18,800** | | **28,700** | | **20,200** | | **22,300** | | **19,200** | | **11,300** | | **20,400** | | **23,200** | | **3,870** | | **20,200** | | **18,200** | |
| Lead | mg/Kg | 63 | 400 | 1,000 | | **13.1** | | **498** | | **310** | | **252** | | **941** | | **6.9** | | **23.3** | | **8.3** | | **15.4** | | **19.0** | | **15.8** | | **103** | | **178** | | **8.5** | | **82.3** | | **105** | |
| Magnesium | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | **3840** | | **7500** | | **5020** | | **3880** | | **3990** | | **3340** | | **14,200** | | **13,700** | | 687 | U | **10,900** | | **31,900** | |
| Manganese | mg/Kg | 1,600 | 2,000 | 10,000 | | NA | | NA | | NA | | NA | | NA | | **240** | | **616** | | **231** | | **231** | J | **186** | | **108** | | **457** | | **558** | | **21.3** | | **461** | | **553** | |
| Nickel | mg/Kg | 30 | 310 | 310 | | NA | | NA | | NA | | NA | | NA | | **18.2** | | **33.3** | | **22.0** | | **18.8** | | **19.5** | | **17.4** | | **22.0** | | **25.7** | | 5.5 | U | **22.3** | | **21.3** | |
| Potassium | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | **980** | | **2030** | | **1180** | | **845** | | **974** | | **1100** | | **1580** | | **1900** | | 687 | U | **1290** | | **1340** | |
| Selenium | mg/Kg | 3.9 | 180 | 1,500 | | NA | | NA | | NA | | NA | | NA | | 1.0 | U | 1.3 | U | 1.2 | U | 1.2 | U | 1.3 | U | 1.2 | U | 1.3 | U | 1.2 | U | 1.4 | U | 1.2 | U | 1.2 | U |
| Silver | mg/Kg | 2 | 180 | 1,500 | | NA | | NA | | NA | | NA | | NA | | 0.51 | U | 0.63 | U | 0.61 | U | 0.61 | U | 0.63 | U | 0.61 | U | 0.63 | U | 0.59 | U | 0.69 | U | 0.59 | U | 0.60 | U |
| Sodium | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | 511 | U | 635 | U | 611 | U | 605 | U | 631 | U | 610 | U | 626 | U | 589 | U | 687 | U | 592 | U | 596 | U |
| Thallium | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | 2.0 | U | 2.5 | U | 2.4 | U | 2.4 | U | 2.5 | U | 2.4 | U | 2.5 | U | 2.4 | U | 2.7 | U | 2.4 | U | 2.4 | U |
| Tin | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Vanadium | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | **25.9** | | **32.0** | | **24.0** | | **24.4** | | **22.4** | | **18.1** | | **26.7** | | **27.6** | | 6.9 | U | **25.0** | | **21.3** | |
| Zinc | mg/Kg | 109 | 10,000 | 10,000 | | NA | | NA | | NA | | NA | | NA | | **55.6** | | **1070** | | **143** | | **648** | | **574** | | **548** | | **238** | | **174** | | **11.7** | | **122** | | **216** | |
| Mercury | mg/Kg | 0.18 | 0.81 | 2.8 | | NA | | NA | | NA | | NA | | NA | | 0.040 | U | **0.14** | | **0.042** | | **0.077** | | **0.12** | | **0.65** | | **1.1** | | **3.1** | | **0.93** | | **2.6** | | **9.8** | |
| **General Chemistry** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sulfate | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | ND | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Toxicity Characteristic Leaching Procedure (TCLP) Metals** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lead | mg/L[14] | NS | NS | NS | | 0.50 | U | 0.50 | U | 0.50 | U | 0.50 | U | **1.9** | | ND | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Physical Parameters** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Percent Solids | Percent | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | ND | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |

**Table 2**
**Confirmatory Samples Eastern Portion of Site**
**Detections Only**

| Parameter | Units | Unrestricted Use Soil Cleanup Objectives[1] | Restricted Use Soil Cleanup Objectives - Restricted Residential Standard[1] | Restricted Use Soil Cleanup Objectives - Commercial Standard[1] | Sample ID: | T2-BS-SW6 | | T2-BS-SW7 | | T2-BS-SW8 | | T2-AL-CB1 | | T2-AL-CB2 | | T2-AL-CB3 | | T2-AL-CB4 | | T2-AL-CB5 | | T2-EP-SS4-3 | | T2-EP-SS5-2 | | T2-EP-SS6-2 | | T2-EP-SS7-2 | | NG-5 | | NG-6 | | NG-7 | | NG-8 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Sample Depth (feet): | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | Sample Date: | 7/15/2014 | | 7/16/2014 | | 7/16/2014 | | 6/26/2014 | | 6/26/2014 | | 6/26/2014 | | 6/27/2014 | | 6/27/2014 | | 11/4/2014 | | 10/28/2014 | | 10/28/2014 | | 10/28/2014 | | 11/25/2014 | | 11/25/2014 | | 11/25/2014 | | 11/25/2014 | |
| | | | | | | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acetone | µg/Kg[2] | 50 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Dichlorodifluoromethane | µg/Kg | NS[6] | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Isopropylbenzene (Cumene) | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Methyl Acetate | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Methylcyclohexane | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Methylene Chloride | µg/Kg | 50 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Semivolatile Organic Compounds (SVOCs)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1-Biphenyl | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 2,4-Dimethylphenol | µg/Kg | NS | NS | NS | | 440 | U | 460 | U | 490 | U | 220 | U | 240 | U | 260 | U | 200 | U | 210 | U | NA | | NA | | NA | | NA | | 410 | U | 440 | U | 440 | U | 500 | U |
| 2,4-Dinitrotoluene | µg/Kg | NS | NS | NS | | 440 | U | 460 | U | 490 | U | 220 | U | 240 | U | 260 | U | 200 | U | 210 | U | NA | | NA | | NA | | NA | | 410 | U | 440 | U | 440 | U | 500 | U |
| 2,6-Dintrotoluene | µg/Kg | NS | NS | NS | | 440 | U | 460 | U | 490 | U | 220 | U | 240 | U | 260 | U | 200 | U | 210 | U | NA | | NA | | NA | | NA | | 410 | U | 440 | U | 440 | U | 500 | U |
| 2-Methylnaphthalene | µg/Kg | NS | NS | NS | | 90 | U | 93 | U | **360** | | 220 | U | 240 | U | 260 | U | 200 | U | 210 | U | NA | | NA | | NA | | NA | | 83 | U | 88 | U | 89 | U | 100 | U |
| 2-Methylphenol (O-Cresol) | µg/Kg | 330 | 100,000 | 500,000 | | 440 | U | 460 | U | 490 | U | 220 | U | 240 | U | 260 | U | 200 | U | 210 | U | NA | | NA | | NA | | NA | | 410 | U | 440 | U | 440 | U | 500 | U |
| 3&4-Methylphenol (m+p Cresol) | µg/Kg | 330[5] | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 410 | U | 440 | U | 440 | U | 500 | U |
| 4-Methylphenol (p-Cresol) | µg/Kg | 330 | 100,000 | 500,000 | | NA | | NA | | NA | | 420 | U | 460 | U | 500 | U | 390 | U | 400 | U | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Acenaphthene | µg/Kg | 20,000 | 100,000 | 500,000 | | 90 | U | 93 | U | 98 | U | **21** | **J** | 240 | U | 260 | U | 200 | U | 210 | U | NA | | NA | | NA | | NA | | 83 | U | 88 | U | 89 | U | 100 | U |
| Acenaphthylene | µg/Kg | 100,000 | 100,000 | 500,000 | | 90 | U | 93 | U | 98 | U | 220 | U | 240 | U | 260 | U | 200 | U | 210 | U | NA | | NA | | NA | | NA | | 83 | U | 88 | U | 89 | U | 100 | U |
| Anthracene | µg/Kg | 100,000 | 100,000 | 500,000 | | 90 | U | 93 | U | 98 | U | **35** | **J** | 240 | U | 260 | U | **14** | **J** | 210 | U | NA | | NA | | NA | | NA | | 83 | U | 88 | U | 89 | U | 100 | U |
| Benzaldehyde | µg/Kg | NS | NS | NS | | 2200 | UJ | 2,300 | UJ | 2,400 | UJ | 220 | U | 240 | U | 260 | U | 200 | U | 210 | U | NA | | NA | | NA | | NA | | 2,100 | U R | 2,200 | U R | 2,200 | U R | 2,500 | U R |
| Benzo(a)anthracene | µg/Kg | 1,000 | 1,000 | 5,600 | | 90 | U | **150** | | **120** | | **44** | **J** | 240 | U | 260 | U | **72** | **J** | 210 | U | NA | | NA | | NA | | NA | | 83 | U | 88 | U | 89 | U | 100 | U |
| Benzo(a)pyrene | µg/Kg | 1,000 | 1,000 | 1,000 | | 90 | U | **160** | | **100** | | **36** | **J** | 240 | U | 260 | U | 200 | U | 210 | U | NA | | NA | | NA | | NA | | 83 | U | 88 | U | 89 | U | 100 | U |
| Benzo(b)fluoranthene | µg/Kg | 1,000 | 1,000 | 5,600 | | 90 | U | **240** | | **180** | | **42** | **J** | 240 | U | 260 | U | 200 | U | 210 | U | NA | | NA | | NA | | NA | | 83 | U | 88 | U | 89 | U | 100 | U |
| Benzo(g,h,i)perylene | µg/Kg | 100,000 | 100,000 | 500,000 | | 90 | U | **120** | | 98 | U | **23** | **J** | 240 | U | 260 | U | 200 | U | 210 | U | NA | | NA | | NA | | NA | | 83 | U | 88 | U | 89 | U | 100 | U |
| Benzo(K)fluoranthene | µg/Kg | 800 | 3,900 | 56,000 | | 90 | U | **120** | | 98 | U | **32** | **J** | 240 | U | 260 | U | 200 | U | 210 | U | NA | | NA | | NA | | NA | | 83 | U | 88 | U | 89 | U | 100 | U |
| Benzyl Butyl Phthalate | µg/Kg | NS | NS | NS | | 440 | U | 460 | U | 490 | U | 220 | U | 240 | U | 260 | U | 200 | U | 210 | U | NA | | NA | | NA | | NA | | 410 | U | 440 | U | 440 | U | 500 | U |
| Biphenyl (Diphenyl, 1,1'-Biphenyl) | µg/Kg | NS | NS | NS | | 440 | U | 460 | U | 490 | U | 220 | U | 240 | U | 260 | U | 200 | U | 210 | U | NA | | NA | | NA | | NA | | 410 | U | 440 | U | 440 | U | 500 | U |
| Bis(2-ethyhexyl) Phthalate | µg/Kg | NS | NS | NS | | 440 | U | 460 | U | 490 | U | 220 | U | 240 | U | 260 | U | 200 | U | 210 | U | NA | | NA | | NA | | NA | | 410 | U | 440 | U | 440 | U | **51** | **J B** |
| Caprolactam | µg/Kg | NS | NS | NS | | 440 | U | 460 | U | 490 | U | 220 | U | 240 | U | 260 | U | 200 | U | 210 | U | NA | | NA | | NA | | NA | | 410 | U | 440 | U | 440 | U | 500 | U |
| Carbazole | µg/Kg | NS | NS | NS | | 440 | U | 460 | U | 490 | U | 220 | U | 240 | U | 260 | U | 200 | U | 210 | U | NA | | NA | | NA | | NA | | 410 | U | 440 | U | 440 | U | 500 | U |
| Chrysene | µg/Kg | 1,000 | 3,900 | 56,000 | | 90 | U | **200** | | **220** | | **39** | **J** | 240 | U | 260 | U | **66** | **J** | 210 | U | NA | | NA | | NA | | NA | | 83 | U | 88 | U | 89 | U | 100 | U |
| Dibenz(a,h)anthracene | µg/Kg | 330 | 330 | 560 | | 90 | U | 93 | U | 98 | U | **20** | **J** | 240 | U | 260 | U | 200 | U | 210 | U | NA | | NA | | NA | | NA | | 83 | U | 88 | U | 89 | U | 100 | U |
| Dibenzofuran | µg/Kg | 7,000 | 59,000 | 350,000 | | 440 | U | 460 | U | **110** | **J** | 220 | U | 240 | U | 260 | U | 200 | U | 210 | U | NA | | NA | | NA | | NA | | 410 | U | 440 | U | 440 | U | 500 | U |
| Diethyl Phthalate | µg/Kg | NS | NS | NS | | 440 | U | 460 | U | 490 | U | **23** | **J** | 240 | U | 260 | U | 200 | U | 210 | U | NA | | NA | | NA | | NA | | 410 | U | 440 | U | 440 | U | 500 | U |
| Dimethyl Phthalate | µg/Kg | NS | NS | NS | | 2200 | U | 2300 | U | 2400 | U | 220 | U | 240 | U | 260 | U | 200 | U | 210 | U | NA | | NA | | NA | | NA | | 2,100 | U | 2,200 | U | 2,200 | U | 2,500 | U |
| Di-n-Butyl Phthalate | µg/Kg | NS | NS | NS | | 440 | U | 460 | U | 490 | U | 220 | U | 240 | U | 260 | U | 200 | U | 210 | U | NA | | NA | | NA | | NA | | 410 | U | 440 | U | 440 | U | 500 | U |
| Fluoranthene | µg/Kg | 100,000 | 100,000 | 500,000 | | 90 | U | **250** | | **140** | | **64** | **J** | 240 | U | 260 | U | **97** | **J** | 210 | U | NA | | NA | | NA | | NA | | 83 | U | 88 | U | 89 | U | 100 | U |
| Fluorene | µg/Kg | 30,000 | 100,000 | 500,000 | | 90 | U | 93 | U | 98 | U | 220 | U | 240 | U | 260 | U | 200 | U | 210 | U | NA | | NA | | NA | | NA | | 83 | U | 88 | U | 89 | U | 100 | U |
| Indeno(1,2,3-cd)pyrene | µg/Kg | 500 | 500 | 5,600 | | 90 | U | **100** | | 98 | U | **25** | **J** | 240 | U | 260 | U | **120** | **J** | 210 | U | NA | | NA | | NA | | NA | | 83 | U | 88 | U | 89 | U | 100 | U |
| Isophrone | µg/Kg | NS | NS | NS | | 440 | U | 460 | U | 490 | U | 220 | U | 240 | U | 260 | U | 200 | U | 210 | U | NA | | NA | | NA | | NA | | 410 | U | 440 | U | 440 | U | 500 | U |
| Naphthalene | µg/Kg | 12,000 | 100,000 | 500,000 | | **44** | **J** | 93 | U | **210** | | 220 | U | 240 | U | 260 | U | 200 | U | 210 | U | NA | | NA | | NA | | NA | | 83 | U | 88 | U | 89 | U | 100 | U |
| N-Nitrosodiphenylamine | µg/Kg | NS | NS | NS | | 440 | U | 460 | U | 490 | U | 220 | U | 240 | U | 260 | U | 200 | U | 210 | U | NA | | NA | | NA | | NA | | 410 | U | 440 | U | 440 | U | 500 | U |
| Phenanthrene | µg/Kg | 100,000 | 100,000 | 500,000 | | **110** | | **170** | | **400** | | **71** | **J** | 240 | U | 260 | U | **59** | **J** | 210 | U | NA | | NA | | NA | | NA | | 83 | U | 88 | U | 89 | U | 100 | U |
| Phenol | µg/Kg | 330 | 100,000 | 500,000 | | 440 | U | 460 | U | 490 | U | 220 | U | 240 | U | 260 | U | 200 | U | 210 | U | NA | | NA | | NA | | NA | | **65** | **J** | 440 | U | **60** | **J** | 500 | U |
| Pyrene | µg/Kg | 100,000 | 100,000 | 500,000 | | 90 | U | **220** | | **140** | | **53** | **J** | 240 | U | 260 | U | **78** | **J** | 210 | U | NA | | NA | | NA | | NA | | 83 | U | 88 | U | 89 | U | 100 | U |
| **Target Compound List (TCL) Pesticides** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| alpha-BHC (alpha Hexachlorocyclohexane) | µg/Kg | 20 | 480 | 3,400 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| beta-BHC (beta Hexachlorocyclohexane) | µg/Kg | 36 | 360 | 3,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| delta-BHC (delta Hexachlorocyclohexane) | µg/Kg | 40 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Dieldrin | µg/Kg | 5 | 200 | 1,400 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Endrin Ketone | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Gamma BHC (Lindane) | µg/Kg | 100 | 1,300 | 9,200 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Methoxychlor | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 4,4'-DDD (p,p'-DDD) | µg/Kg | 3.3 | 13,000 | 92,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 4,4'-DDE (p,p'-DDE) | µg/Kg | 3.3 | 8,900 | 62,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 4,4'-DDT (p,p'-DDT) | µg/Kg | 3.3 | 7,900 | 47,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Target Compound List (TCL) Polychlorinated Biphenyls (PCBs)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Target Analyte List (TAL) Metals (Total)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | mg/Kg[12] | NS | NS | NS | | **10,600** | | **12,200** | | **1,170** | | **21,100** | | **14,300** | | **15,100** | | **13,100** | | **15,300** | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Antimony | mg/Kg | NS | NS | NS | | **5.1** | | **4.4** | | **9.0** | | 1.2 | UJ | **1.6** | | 1.3 | U | 0.98 | UJ | 1.1 | U | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Arsenic | mg/Kg | 13 | 16 | 16 | | **81.1** | | **7.2** | | **3.5** | | **7.4** | | **3.7** | | **6.1** | | **4.4** | | **5.0** | | NA | | NA | | NA | | NA | | **5.4** | | **5.7** | | **3.2** | | **3.7** | |
| Barium | mg/Kg | 350 | 400 | 400 | | **235** | | **90.1** | | **42.4** | | **81.7** | | **53.3** | | **126** | | **106** | | **154** | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Beryllium | mg/Kg | 7.2 | 72 | 590 | | **0.50** | | **0.65** | | 0.65 | U | **0.93** | | 0.54 | U | **0.82** | | **0.64** | | **0.73** | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Cadmium | mg/Kg | 2.5 | 4.3 | 9.3 | | 0.62 | U | 0.72 | U | 0.82 | U | 0.58 | U | 0.68 | U | 0.67 | U | 0.49 | U | 0.56 | U | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Calcium | mg/Kg | NS | NS | NS | | **32,600** | | **18,600** | | **1,090** | | **1,990** | | **2,050** | | **2,720** | | **2,630** | | **3,000** | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Chromium | mg/Kg | 1 | 110 | 400 | | **30.2** | | **18.0** | | **4.1** | | **23.5** | | **15.4** | | **18.5** | | **17.0** | | **18.1** | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Chromium (trivalent)[13] | mg/Kg | 30 | 180 | 1,500 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Hexavalent Chromium | mg/Kg | 1 | 110 | 400 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Cobalt | mg/Kg | NS | NS | NS | | **8.9** | | **9.6** | | 8.2 | U | **16.2** | | **14.3** | | **13.4** | | **11.4** | | **12.1** | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Copper | mg/Kg | 50 | 270 | 270 | | **248** | | **34.8** | | **18.8** | | **25.2** | | **7.6** | | **21.5** | | **19.1** | | **13.5** | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Iron | mg/Kg | NS | NS | NS | | **27,200** | | **22,100** | | **14,000** | | **33,000** | | **20,900** | | **24,600** | | **22,100** | | **24,300** | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Lead | mg/Kg | 63 | 400 | 1,000 | | **243** | | **133** | | **189** | | **10** | | **17.7** | | **8.6** | | **7.2** | | **9.6** | | **32.9** | | **749** | | **248** | | **188** | | NA | | NA | | **5.0** | | **9.5** | |
| Magnesium | mg/Kg | NS | NS | NS | | **8,080** | | **5,290** | | 816 | U | **6,040** | | **3,320** | | **4,510** | | **4,260** | | **4,520** | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Manganese | mg/Kg | 1,600 | 2,000 | 10,000 | | **500** | | **447** | | **51.7** | | **453** | | **462** | | **658** | | **573** | | **537** | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Nickel | mg/Kg | 30 | 310 | 310 | | **26.6** | | **22.6** | | **7.1** | | **26.6** | | **13.0** | | **30.4** | | **26.1** | | **24.3** | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Potassium | mg/Kg | NS | NS | NS | | **1230** | | **1370** | | 816 | U | **1,290** | | 680 | U | **1,240** | | **1,020** | | **1,380** | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Selenium | mg/Kg | 3.9 | 180 | 1,500 | | 1.2 | U | 1.4 | U | 1.6 | U | 1.2 | U | 1.4 | U | 1.3 | U | 0.98 | U | 1.1 | U | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Silver | mg/Kg | 2 | 180 | 1,500 | | **9.4** | | 0.72 | U | 0.82 | U | 0.58 | U | 0.68 | U | 0.67 | U | 0.49 | U | 0.56 | U | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Sodium | mg/Kg | NS | NS | NS | | 619 | U | 721 | U | 816 | U | 580 | U | 680 | U | 670 | U | 492 | U | 557 | U | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Thallium | mg/Kg | NS | NS | NS | | 2.5 | U | 2.9 | U | 3.3 | U | 2.3 | U | 2.7 | U | 2.7 | U | 2.0 | U | 2.2 | U | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Tin | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Vanadium | mg/Kg | NS | NS | NS | | **22.6** | | **23.8** | | **8.7** | | **35.9** | | **26.4** | | **26.8** | | **23.7** | | **25.2** | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Zinc | mg/Kg | 109 | 10,000 | 10,000 | | **209** | | **104** | | **23.1** | | **65.1** | | **61.8** | | **49.9** | | **44.5** | | **151** | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Mercury | mg/Kg | 0.18 | 0.81 | 2.8 | | **923** | | **1.6** | | **0.11** | | 0.040 | U | 0.044 | U | 0.049 | U | 0.040 | U | **0.068** | | NA | | NA | | NA | | NA | | NA | | NA | | 0.041 | U | 0.044 | U |
| **General Chemistry** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sulfate | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Toxicity Characteristic Leaching Procedure (TCLP) Metals** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lead | mg/L[14] | NS | NS | NS | | NA | | NA | | 0.50 | U | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Physical Parameters** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Percent Solids | Percent | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |

**Table 2**
**Confirmatory Samples Eastern Portion of Site**
**Detections Only**

| Parameter | Units | Unrestricted Use Soil Cleanup Objectives[1] | | Restricted Use Soil Cleanup Objectives - Restricted Residential Standard[1] | | Restricted Use Soil Cleanup Objectives - Commercial Standard[1] | | Sample ID: | NG-9 | | T2-NG-CB1 | | T2-NG-CB2 | | T2-NG-CB3 | | T2-NG-CB4 | | T2-NG-SW3 | | T2-NG-SW4 | | T2-NG-SW5 | | T2-NG-SW6 | | 3003-CB1 | | 3003-SW1 | | 3007-CB1 | | 3007-SW1 | | 3011-CB1 | | 3011-SW1 | | 3017-CB1 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Sample Depth (feet): | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | Sample Date: | 11/25/2014 | | 10/10/2014 | | 10/10/2014 | | 10/10/2014 | | 10/10/2014 | | 10/10/2014 | | 10/10/2014 | | 12/15/2014 | | 12/15/2014 | | 10/29/2014 | | 10/29/2014 | | 10/24/2014 | | 10/24/2014 | | 10/22/2014 | | 10/22/2014 | | 10/22/2014 | |
| | | | | | | | | | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acetone | µg/Kg[2] | 50 | | 100,000 | | 500,000 | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Dichlorodifluoromethane | µg/Kg | NS | [6] | NS | | NS | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Isopropylbenzene (Cumene) | µg/Kg | NS | | NS | | NS | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Methyl Acetate | µg/Kg | NS | | NS | | NS | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Methylcyclohexane | µg/Kg | NS | | NS | | NS | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Methylene Chloride | µg/Kg | 50 | | 100,000 | | 500,000 | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Semivolatile Organic Compounds (SVOCs)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1-Biphenyl | µg/Kg | NS | | NS | | NS | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 2,4-Dimethylphenol | µg/Kg | NS | | NS | | NS | | | 410 | U | 390 | U | 400 | U | 4,100 | U | 410 | U | 400 | U | 380 | U | 2,400 | U | 210 | U | 410 | U | 510 | U | 4700 | U | 4300 | U | 4,300 | U | 4,700 | U | 3,900 | U |
| 2,4-Dinitrotoluene | µg/Kg | NS | | NS | | NS | | | 410 | U | 390 | U | 400 | U | 4,100 | U | 410 | U | 400 | U | 380 | U | 3,100 | U | 280 | U | 84 | U | 100 | U | 4700 | U | 4300 | U | 4,300 | U | 4,700 | U | 3,900 | U |
| 2,6-Dinitrotoluene | µg/Kg | NS | | NS | | NS | | | 410 | U | 390 | U | 400 | U | 4,100 | U | 410 | U | 400 | U | 380 | U | 3,100 | U | 280 | U | 84 | U | 100 | U | 4700 | U | 4300 | U | 4,300 | U | 4,700 | U | 3,900 | U |
| 2-Methylnaphthalene | µg/Kg | NS | | NS | | NS | | | 82 | U | 390 | U | 400 | U | 4,100 | U | 410 | U | 400 | U | 380 | U | **290** | | **20** | | 410 | U | **24** | **J** | 4,700 | U | 4,300 | U | 4,300 | U | 4,700 | U | 3,900 | U |
| 2-Methylphenol (O-Cresol) | µg/Kg | 330 | | 100,000 | | 500,000 | | | 410 | U | 390 | U | 400 | U | 4,100 | U | 410 | U | 400 | U | 380 | U | 3,100 | U | 280 | U | 410 | U | 510 | U | 4700 | U | 4,300 | U | 4,300 | U | 4,700 | U | 3,900 | U |
| 3&4-Methylphenol (m+p Cresol) | µg/Kg | 330 | [5] | 100,000 | | 500,000 | | | 410 | U | 390 | U | 400 | U | 4,100 | U | 410 | U | 400 | U | 380 | U | 6300 | U | 560 | U | NA | | NA | | 4700 | U | 4300 | U | 4,300 | U | 4,700 | U | 3,900 | U |
| 4-Methylphenol (p-Cresol) | µg/Kg | 330 | | 100,000 | | 500,000 | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 410 | U | 510 | U | NA | | NA | | NA | | NA | | NA | |
| Acenaphthene | µg/Kg | 20,000 | | 100,000 | | 500,000 | | | 82 | U | 390 | U | 400 | U | 4,100 | U | 410 | U | 400 | U | 380 | U | **610** | **J** | **34** | | 410 | U | **57** | **J** | 4,700 | U | 4,300 | U | 4,300 | U | 4,700 | U | 3,900 | U |
| Acenaphthylene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | | 82 | U | 390 | U | 400 | U | 4,100 | U | 410 | U | 400 | U | 380 | U | **170** | | **31** | | 410 | U | 510 | U | 4,700 | U | 4,300 | U | 4,300 | U | 4,700 | U | 3,900 | U |
| Anthracene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | | 82 | U | 390 | U | 400 | U | 4,100 | U | 410 | U | 400 | U | 380 | U | **1,300** | **J** | **89** | | 410 | U | **110** | **J** | 4,700 | U | 4,300 | U | 4,300 | U | 4,700 | U | 3,900 | U |
| Benzaldehyde | µg/Kg | NS | | NS | | NS | | | **2,000** | **R** | 390 | UJ | 400 | UJ | 4,100 | UJ | 410 | UJ | 400 | UJ | 380 | UJ | 1,600 | UJ | 140 | UJ | 410 | U | 510 | U | 4,700 | UJ | 4,300 | UJ | 4,300 | UJ | **1,800** | **J** | 3,900 | UJ |
| Benzo(a)anthracene | µg/Kg | 1,000 | | 1,000 | | 5,600 | | | 82 | U | 390 | U | 400 | U | **1,300** | **J** | 410 | U | 400 | U | 380 | U | **4,800** | | **450** | | 41 | U | **420** | | 4,700 | U | **1,200** | **J** | 4,300 | U | **620** | **J** | 3,900 | U |
| Benzo(a)pyrene | µg/Kg | 1,000 | | 1,000 | | 1,000 | | | 82 | U | 390 | U | 400 | U | **960** | **J** | 410 | U | 400 | U | 380 | U | **4,700** | | **440** | | **15** | **J** | **460** | | 4,700 | U | **930** | **J** | 4,300 | U | 4,700 | U | 3,900 | U |
| Benzo(b)fluoranthene | µg/Kg | 1,000 | | 1,000 | | 5,600 | | | 82 | U | 390 | U | 400 | U | **930** | **J** | 410 | U | 400 | U | 380 | U | **5,900** | | **640** | | **18** | **J** | **620** | | 4,700 | U | **810** | **J** | 4,300 | U | **600** | **J** | 3,900 | U |
| Benzo(g,h,i)perylene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | | 82 | U | 390 | U | 400 | U | **310** | **J** | 410 | U | 400 | U | 380 | U | **1,600** | **J** | **150** | | 410 | U | **290** | **J** | 4,700 | U | **560** | **J** | 4,300 | U | **370** | **J** | 3,900 | U |
| Benzo(K)fluoranthene | µg/Kg | 800 | | 3,900 | | 56,000 | | | 82 | U | 390 | U | 400 | U | **840** | **J** | 410 | U | 400 | U | 380 | U | **3,000** | **J** | **300** | | 41 | U | **250** | | 4,700 | U | 4,300 | U | 4,300 | U | 4,700 | U | 3,900 | U |
| Benzyl Butyl Phthalate | µg/Kg | NS | | NS | | NS | | | 410 | U | 390 | U | 400 | U | 4,100 | U | 410 | U | 400 | U | 380 | U | 1,100 | U | 98 | U | 410 | U | 510 | U | 4,700 | U | 4,300 | U | 4,300 | U | 4,700 | U | 3,900 | U |
| Biphenyl (Diphenyl, 1,1'-Biphenyl) | µg/Kg | NS | | NS | | NS | | | 410 | U | 2,000 | U | 2,100 | U | 21,000 | U | 2,100 | U | 2,000 | U | 2,000 | U | **57** | **J** | 70 | U | 410 | U | 510 | U | 24,000 | U | 22,000 | U | 22,000 | U | 24,000 | U | 20,000 | U |
| Bis(2-ethyhexyl) Phthalate | µg/Kg | NS | | NS | | NS | | | 410 | U | 390 | U | 400 | U | 4,100 | U | 410 | U | 400 | U | 380 | U | 1,100 | U | **30** | **J** | 410 | U | 510 | U | 4,700 | U | 4,300 | U | **560** | **J** | 4,700 | U | 3,900 | U |
| Caprolactam | µg/Kg | NS | | NS | | NS | | | 410 | U | 390 | UJ | 400 | U | 4,100 | U | 410 | U | 400 | U | 380 | U | 5,200 | U | 460 | U | 410 | UJ | 510 | U | 4,700 | U | 4,300 | U | 4,300 | U | 4,700 | U | 3,900 | U |
| Carbazole | µg/Kg | NS | | NS | | NS | | | 410 | U | 390 | U | 400 | U | 4,100 | U | 410 | U | 400 | U | 380 | U | **720** | **J** | **52** | **J** | 410 | U | **110** | **J** | 4,700 | U | 4,300 | U | 4,300 | U | 4,700 | U | 3,900 | U |
| Chrysene | µg/Kg | 1,000 | | 3,900 | | 56,000 | | | 82 | U | 390 | U | 400 | U | **1,300** | **J** | 410 | U | 400 | U | 380 | U | **4,600** | | **460** | | **14** | **J** | **560** | | 4,700 | U | **1,400** | **J** | 4,300 | U | **490** | **J** | 3,900 | U |
| Dibenz(a,h)anthracene | µg/Kg | 330 | | 330 | | 560 | | | 82 | U | 390 | U | 400 | U | 4,100 | U | 410 | U | 400 | U | 380 | U | **480** | **J** | **52** | | 41 | U | **120** | | 4,700 | U | 4,300 | U | 4,300 | U | 4,700 | U | 3,900 | U |
| Dibenzofuran | µg/Kg | 7,000 | | 59,000 | | 350,000 | | | 410 | U | 390 | U | 400 | U | 4,100 | U | 410 | U | 400 | U | 380 | U | **410** | **J** | **24** | **J** | 410 | U | **45** | **J** | 4,700 | U | 4,300 | U | 4,300 | U | 4,700 | U | 3,900 | U |
| Diethyl Phthalate | µg/Kg | NS | | NS | | NS | | | 410 | U | 390 | U | 400 | U | 4,100 | U | 410 | U | 400 | U | 380 | U | 1,100 | U | 98 | U | 410 | U | 510 | U | 4,700 | U | 4,300 | U | 4,300 | U | 4,700 | U | 3,900 | U |
| Dimethyl Phthalate | µg/Kg | NS | | NS | | NS | | | 2,000 | U | 390 | U | 400 | U | 4,100 | U | 410 | U | 400 | U | 380 | U | 1,100 | U | 98 | U | 410 | U | 510 | U | 4,700 | U | 4,300 | U | 4,300 | U | 4,700 | U | 3,900 | U |
| Di-n-Butyl Phthalate | µg/Kg | NS | | NS | | NS | | | 410 | U | 390 | U | 400 | U | 4,100 | U | 410 | U | 400 | U | 380 | U | **920** | **J** | 98 | U | 410 | U | 510 | U | 4,700 | U | 4,300 | U | 4,300 | U | 4,700 | U | 3,900 | U |
| Fluoranthene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | | 82 | U | 390 | U | 400 | U | **1,800** | **J** | 410 | U | 400 | U | 380 | U | **8,900** | | **910** | | **24** | **J** | **1,000** | | 4,700 | U | **2,500** | **J** | 4,300 | U | **1,200** | **J** | 3,900 | U |
| Fluorene | µg/Kg | 30,000 | | 100,000 | | 500,000 | | | 82 | U | 390 | U | 400 | U | 4,100 | U | 410 | U | 400 | U | 380 | U | **550** | **J** | **29** | | 410 | U | **58** | **J** | 4,700 | U | 4,300 | U | 4,300 | U | 4,700 | U | 3,900 | U |
| Indeno(1,2,3-cd)pyrene | µg/Kg | 500 | | 500 | | 5,600 | | | 82 | U | 390 | U | 400 | U | 4,100 | U | 410 | U | 400 | U | 380 | U | **1,600** | **J** | **160** | | 41 | U | **400** | | 4,700 | U | **450** | **J** | 4,300 | U | 4,700 | U | 3,900 | U |
| Isophrone | µg/Kg | NS | | NS | | NS | | | 410 | U | 390 | U | 400 | U | 4,100 | U | 410 | U | 400 | U | 380 | U | 790 | U | 70 | U | 170 | U | **60** | **J** | 4,700 | U | 4,300 | U | 4,300 | U | 4,700 | U | 3,900 | U |
| Naphthalene | µg/Kg | 12,000 | | 100,000 | | 500,000 | | | 82 | U | 390 | U | 400 | U | **370** | **J** | 410 | U | 400 | U | 380 | U | **390** | **J** | **35** | | 410 | U | **39** | **J** | 4,700 | U | 4,300 | U | 4,300 | U | 4,700 | U | 3,900 | U |
| N-Nitrosodiphenylamine | µg/Kg | NS | | NS | | NS | | | 410 | U | 390 | U | 400 | U | 4,100 | U | 410 | U | 400 | U | 380 | U | 790 | U | 70 | U | 410 | U | 510 | U | 4,700 | U | 4,300 | U | 4,300 | U | 4,700 | U | 3,900 | U |
| Phenanthrene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | | 82 | U | 390 | U | 400 | U | **1,000** | **J** | 410 | U | 400 | U | 380 | U | **5,500** | | **410** | | **17** | **J** | **850** | | 4,700 | U | **1,900** | **J** | 4,300 | U | **950** | **J** | 3,900 | U |
| Phenol | µg/Kg | 330 | | 100,000 | | 500,000 | | | **70** | **J** | 390 | U | 400 | U | 4,100 | U | 410 | U | 400 | U | 380 | U | 790 | U | 70 | U | 410 | U | 510 | U | 4,700 | U | 4,300 | U | 4,300 | U | 4,700 | U | 3,900 | U |
| Pyrene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | | 82 | U | 390 | U | 400 | U | **1,700** | **J** | 410 | U | 400 | U | 380 | U | **8,000** | | **830** | | **24** | **J** | **620** | | 4,700 | U | **2,100** | **J** | 4,300 | U | **900** | **J** | 3,900 | U |
| **Target Compound List (TCL) Pesticides** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| alpha-BHC (alpha Hexachlorocyclohexane) | µg/Kg | 20 | | 480 | | 3,400 | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| beta-BHC (beta Hexachlorocyclohexane) | µg/Kg | 36 | | 360 | | 3,000 | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| delta-BHC (delta Hexachlorocyclohexane) | µg/Kg | 40 | | 100,000 | | 500,000 | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Dieldrin | µg/Kg | 5 | | 200 | | 1,400 | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Endrin Ketone | µg/Kg | NS | | NS | | NS | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Gamma BHC (Lindane) | µg/Kg | 100 | | 1,300 | | 9,200 | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Methoxychlor | µg/Kg | NS | | NS | | NS | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 4,4'-DDD (p,p'-DDD) | µg/Kg | 3.3 | | 13,000 | | 92,000 | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 4,4'-DDE (p,p'-DDE) | µg/Kg | 3.3 | | 8,900 | | 62,000 | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 4,4'-DDT (p,p'-DDT) | µg/Kg | 3.3 | | 7,900 | | 47,000 | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Target Compound List (TCL) Polychlorinated Biphenyls (PCBs)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Target Analyte List (TAL) Metals (Total)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | mg/Kg[12] | NS | | NS | | NS | | | NA | | NA | | NA | | NA | | NA | | **7,120** | | **8,680** | | **6,070** | | **8,800** | | **18,300** | | **16,000** | | **17,200** | | **13,500** | | **18,000** | | **15,300** | | **15,700** | |
| Antimony | mg/Kg | NS | | NS | | NS | | | NA | | NA | | NA | | NA | | NA | | 1.1 | UJ | 1.1 | U | **289** | **J** | **5.1** | | 1.2 | U | **2.2** | | 1.5 | U | 1.4 | U | 1.1 | U | **2.4** | | **10.8** | |
| Arsenic | mg/Kg | 13 | | 16 | | 16 | | | **4.0** | | **3.9** | | **2.0** | | **4.5** | | **3.9** | | **3.8** | | **3.8** | | **22.2** | | **10.6** | | **5.3** | | **6.4** | | **5.0** | | **5.2** | | **4.6** | | **6.9** | | **4.9** | |
| Barium | mg/Kg | 350 | | 400 | | 400 | | | NA | | NA | | NA | | NA | | NA | | **55.4** | | **60.2** | | **275** | | **90.2** | | **62.0** | | **81.1** | | **156** | | **104** | | **61.4** | | **84.3** | | **83.6** | |
| Beryllium | mg/Kg | 7.2 | | 72 | | 590 | | | NA | | NA | | NA | | NA | | NA | | 0.43 | U | **0.44** | | **0.69** | | **0.54** | | **0.77** | | **0.57** | | **0.66** | | 0.54 | U | **0.74** | | **0.60** | | **0.61** | |
| Cadmium | mg/Kg | 2.5 | | 4.3 | | 9.3 | | | NA | | NA | | NA | | NA | | NA | | 0.54 | U | 0.53 | U | **2.0** | | 0.57 | U | 0.62 | U | 0.65 | U | 0.77 | U | 0.68 | U | 0.57 | U | **1.5** | | 0.60 | U |
| Calcium | mg/Kg | NS | | NS | | NS | | | NA | | NA | | NA | | NA | | NA | | **36,200** | | **34,300** | | **16,900** | | **42,100** | | **1,920** | | **4,100** | | **1,970** | | **9,640** | | **1,600** | | **5,610** | | **6,510** | |
| Chromium | mg/Kg | 1 | | 110 | | 400 | | | NA | | NA | | NA | | NA | | NA | | **11.1** | | **13.4** | | **47.2** | | **15.2** | | **21.4** | | **20.0** | | **20.7** | | **20.1** | | **21.3** | | **22.3** | | **19.3** | |
| Chromium (trivalent)[13] | mg/Kg | 30 | | 180 | | 1,500 | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Hexavalent Chromium | mg/Kg | 1 | | 110 | | 400 | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Cobalt | mg/Kg | NS | | NS | | NS | | | NA | | NA | | NA | | NA | | NA | | **8.1** | | **9.1** | | 7.5 | U | **8.8** | | **19.8** | | **9.7** | | **12.5** | | **8.8** | | **14.2** | | **9.6** | | **9.1** | |
| Copper | mg/Kg | 50 | | 270 | | 270 | | | NA | | NA | | NA | | NA | | NA | | **15.1** | | **15.6** | | **282** | | **49.3** | | **19.8** | | **16.1** | | **15.7** | | **20.1** | | **18.9** | | **21.7** | | **65.5** | |
| Iron | mg/Kg | NS | | NS | | NS | | | NA | | NA | | NA | | NA | | NA | | **15,500** | | **17,500** | | **27,500** | | **24,400** | | **26,800** | | **21,300** | | **24,900** | | **19,900** | | **25,300** | | **20,500** | | **20,800** | |
| Lead | mg/Kg | 63 | | 400 | | 1,000 | | | **6.1** | | **542** | | **8.5** | | **17.4** | | **4.7** | | **19,400** | | **7.6** | | **19,400** | | **1,030** | | **13.7** | | **80.4** | | **16.3** | | **62.2** | | **19.7** | | **168** | | **543** | |
| Magnesium | mg/Kg | NS | | NS | | NS | | | NA | | NA | | NA | | NA | | NA | | **7,080** | | **7,160** | | **4,070** | | **10,600** | | **5,350** | | **4,030** | | **4,830** | | **4,880** | | **5,120** | | **4,390** | | **5,310** | |
| Manganese | mg/Kg | 1,600 | | 2,000 | | 10,000 | | | NA | | NA | | NA | | NA | | NA | | **505** | | **486** | | **578** | | **549** | | **423** | | **331** | | **581** | | **511** | | **511** | | **386** | | **354** | |
| Nickel | mg/Kg | 30 | | 310 | | 310 | | | NA | | NA | | NA | | NA | | NA | | **17.8** | | **19.5** | | **23.3** | | **21.9** | | **23.7** | | **18.6** | | **21.2** | | **20.4** | | **23.4** | | **21.5** | | **19.3** | |
| Potassium | mg/Kg | NS | | NS | | NS | | | NA | | NA | | NA | | NA | | NA | | **1,090** | | **1,380** | | 754 | U | **1,260** | | **1,320** | | **1,080** | | **1,430** | | **1,020** | | **1,510** | | **1,080** | | **911** | |
| Selenium | mg/Kg | 3.9 | | 180 | | 1,500 | | | NA | | NA | | NA | | NA | | NA | | 1.1 | U | 1.1 | U | **1.6** | | 1.1 | U | 1.2 | U | 1.3 | U | 1.5 | U | 1.4 | U | 1.1 | U | 1.2 | U | 1.2 | U |
| Silver | mg/Kg | 2 | | 180 | | 1,500 | | | NA | | NA | | NA | | NA | | NA | | 0.54 | U | 0.53 | U | **1.1** | | 0.57 | U | 0.62 | U | 0.65 | U | 0.77 | U | 0.68 | U | 0.57 | U | 0.60 | U | 0.60 | U |
| Sodium | mg/Kg | NS | | NS | | NS | | | NA | | NA | | NA | | NA | | NA | | 537 | U | 534 | U | 754 | U | 575 | U | 624 | U | 652 | U | 774 | U | 677 | U | 572 | U | 601 | U | 597 | U |
| Thallium | mg/Kg | NS | | NS | | NS | | | NA | | NA | | NA | | NA | | NA | | 2.1 | U | 2.1 | U | 3.0 | U | 2.3 | U | 2.5 | U | 2.6 | U | 3.1 | U | 2.7 | U | 2.3 | U | 2.4 | U | 2.4 | U |
| Tin | mg/Kg | NS | | NS | | NS | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Vanadium | mg/Kg | NS | | NS | | NS | | | NA | | NA | | NA | | NA | | NA | | **17.6** | | **20.1** | | **21.2** | | **28.4** | | **31.1** | | **30.5** | | **31.9** | | **27.3** | | **33.3** | | **29.8** | | **29.1** | |
| Zinc | mg/Kg | 109 | | 10,000 | | 10,000 | | | NA | | NA | | NA | | NA | | NA | | **30.8** | **J** | **34.3** | | **618** | | **733** | | **57.8** | | **91.5** | | **55.1** | | **89.4** | | **58.1** | | **155** | | **274** | |
| Mercury | mg/Kg | 0.18 | | 0.81 | | 2.8 | | | 0.040 | U | NA | | NA | | NA | | NA | | NA | | NA | | **3.2** | | **0.23** | | **0.045** | | **0.49** | | **0.062** | | **0.28** | | 0.042 | U | **0.28** | | **0.17** | |
| **General Chemistry** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sulfate | mg/Kg | NS | | NS | | NS | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Toxicity Characteristic Leaching Procedure (TCLP) Metals** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lead | mg/L[14] | NS | | NS | | NS | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Physical Parameters** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Percent Solids | Percent | NS | | NS | | NS | | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |

**Table 2**
**Confirmatory Samples Eastern Portion of Site**
**Detections Only**

| Parameter | Units | Unrestricted Use Soil Cleanup Objectives[1] | Restricted Use Soil Cleanup Objectives - Restricted Residential Standard[1] | Restricted Use Soil Cleanup Objectives - Commercial Standard[1] | Sample ID: | 3017-SW1 | | 3021-CB1 | | 3021-SW1 | | 3027-CB1 | | 3027-SW1 | | 3031-CB1 | | 3031-SW1 | | 3031-SW2 | | 3200-CB1 | | 3200-CB2 | | 3200-CB3 | | 3200-SW1 | | 3200-SW2 | | 3200-SW3 | | KOG-CB1 | | KOG-CB2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Sample Depth (feet): | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2.5 | |
| | | | | | Sample Date: | 10/22/2014 | | 10/21/2014 | | 10/21/2014 | | 10/23/2014 | | 10/23/2014 | | 10/28/2014 | | 10/28/2014 | | 10/28/2014 | | 10/30/2014 | | 11/3/2014 | | 11/3/2014 | | 10/30/2014 | | 11/3/2014 | | 11/3/2014 | | 10/23/2015 | | 10/23/2015 | |
| | | | | | | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acetone | µg/Kg[2] | 50 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Dichlorodifluoromethane | µg/Kg | NS[3] | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Isopropylbenzene (Cumene) | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Methyl Acetate | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Methylcyclohexane | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Methylene Chloride | µg/Kg | 50 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Semivolatile Organic Compounds (SVOCs)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1-Biphenyl | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 2,4-Dimethylphenol | µg/Kg | NS | NS | NS | | 4,300 | U | 4,300 | U | 3,700 | U | 4,700 | U | 4,100 | U | 410 | U | 4100 | U | 4300 | U | 400 | U | 4500 | U | 4900 | U | 390 | U | 4300 | U | 5200 | U | 200 | U |
| 2,4-Dinitrotoluene | µg/Kg | NS | NS | NS | | 4,300 | U | 4,300 | U | 3,700 | U | 4,700 | U | 4,100 | U | 410 | U | 4100 | U | 4300 | U | 82 | U | 4500 | U | 4900 | U | 80 | U | 4300 | U | 5200 | U | 200 | U |
| 2,6-Dinitrotoluene | µg/Kg | NS | NS | NS | | 4,300 | U | 4,300 | U | 3,700 | U | 4,700 | U | 4,100 | U | 410 | U | 4100 | U | 4300 | U | 82 | U | 4500 | U | 4900 | U | 80 | U | 4300 | U | 5200 | U | 200 | U |
| 2-Methylnaphthalene | µg/Kg | NS | NS | NS | | 4,300 | U | 4,300 | U | 3,700 | U | 4,700 | U | 4,100 | U | 410 | U | 4100 | U | 4300 | U | 400 | U | 4500 | U | 4900 | U | **61** | **J** | 4300 | U | 5200 | U | 200 | U |
| 2-Methylphenol (O-Cresol) | µg/Kg | 330 | 100,000 | 500,000 | | 4,300 | U | 4,300 | U | 3,700 | U | 4,700 | U | 4,100 | U | 410 | U | 4100 | U | 4300 | U | 400 | U | 4500 | U | 4900 | U | 390 | U | 4300 | U | 5200 | U | 200 | U |
| 3&4-Methylphenol (m+p Cresol) | µg/Kg | 330[5] | 100,000 | 500,000 | | 4,300 | U | 4,300 | U | 3,700 | U | 4,700 | U | 4,100 | U | 410 | U | 4100 | U | 4300 | U | NA | | 4,500 | U | 4900 | U | NA | | 4300 | U | 5200 | U | NA | |
| 4-Methylphenol (p-Cresol) | µg/Kg | 330 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 400 | U | NA | | NA | | **22** | **J** | NA | | NA | | 400 | U |
| Acenaphthene | µg/Kg | 20,000 | 100,000 | 500,000 | | **700** | **J** | 4,300 | U | 3,700 | U | 4,700 | U | 4,100 | U | 410 | U | **1,300** | **J** | 4,300 | U | 400 | U | 4,500 | U | 4,900 | U | **110** | **J** | 4300 | U | 5,200 | U | 200 | U |
| Acenaphthylene | µg/Kg | 100,000 | 100,000 | 500,000 | | 4,300 | U | 4,300 | U | 3,700 | U | 4,700 | U | 4,100 | U | 410 | U | 4,100 | U | 4,300 | U | 400 | U | 4,500 | U | 4,900 | U | **120** | **J** | 4300 | U | 5,200 | U | 200 | U |
| Anthracene | µg/Kg | 100,000 | 100,000 | 500,000 | | **1,400** | **J** | 4,300 | U | **670** | **J** | 4,700 | U | 4,100 | U | 410 | U | **2,000** | **J** | 4,300 | U | 400 | U | 4,500 | U | 4,900 | U | **380** | **J** | 4300 | U | **1,800** | **J** | 200 | U |
| Benzaldehyde | µg/Kg | NS | NS | NS | | 4,300 | UJ | 4,300 | UJ | 3,700 | UJ | 4,700 | UJ | 4,100 | UJ | 410 | UJ | 4,100 | UJ | 4,300 | UJ | 400 | U | 4,500 | UJ | 4,900 | UJ | **42** | **J** | 4,300 | UJ | 5,200 | UJ | 200 | U |
| Benzo(a)anthracene | µg/Kg | 1,000 | 1,000 | 5,600 | | **2,400** | **J** | 4,300 | U | **1,600** | **J** | 4,700 | U | 4,100 | U | 410 | U | **3,600** | **J** | **830** | **J** | 40 | U | **570** | **J** | 4,900 | U | **1,400** | | **3,100** | **J** | **14,000** | | **48** | **J** |
| Benzo(a)pyrene | µg/Kg | 1,000 | 1,000 | 1,000 | | **1,600** | **J** | 4,300 | U | **1,200** | **J** | 4,700 | U | 4,100 | U | 410 | U | **2,700** | **J** | 4,300 | U | **34** | **J** | 4,500 | U | 4,900 | U | **1,400** | | **2,500** | **J** | **10,000** | | **51** | **J** |
| Benzo(b)fluoranthene | µg/Kg | 1,000 | 1,000 | 5,600 | | **2,300** | **J** | 4,300 | U | **1,900** | **J** | 4,700 | U | 4,100 | U | 410 | U | **2,800** | **J** | **560** | **J** | **49** | | **990** | **J** | 4,900 | U | **2,000** | | **4,800** | | **21,000** | | **61** | **J** |
| Benzo(g,h,i)perylene | µg/Kg | 100,000 | 100,000 | 500,000 | | **880** | **J** | 4,300 | U | **940** | **J** | 4,700 | U | 4,100 | U | 410 | U | **1,300** | **J** | 4,300 | U | **29** | **J** | **540** | **J** | 4,900 | U | **760** | | **1,500** | **J** | **5,600** | | **38** | **J** |
| Benzo(K)fluoranthene | µg/Kg | 800 | 3,900 | 56,000 | | **930** | **J** | 4,300 | U | 3,700 | U | 4,700 | U | 4,100 | U | 410 | U | **1,900** | **J** | 4,300 | U | 40 | U | 4,500 | U | 4,900 | U | **780** | | **1,700** | **J** | **7,000** | | **26** | **J** |
| Benzyl Butyl Phthalate | µg/Kg | NS | NS | NS | | 4,300 | U | 4,300 | U | 3,700 | U | 4,700 | U | 4,100 | U | 410 | U | 4,100 | U | 4,300 | U | 400 | U | 4,500 | U | 4,900 | U | **180** | **J** | 4300 | U | 5,200 | U | 200 | U |
| Biphenyl (Diphenyl, 1,1'-Biphenyl) | µg/Kg | NS | NS | NS | | 22,000 | U | 22,000 | U | 19,000 | U | 24,000 | U | 21,000 | U | 2,100 | U | 21000 | U | 22000 | U | 400 | U | 23,000 | U | 25,000 | U | 390 | U | 22000 | U | 27000 | U | 200 | U |
| Bis(2-ethyhexyl) Phthalate | µg/Kg | NS | NS | NS | | 4,300 | U | **490** | **J** | **420** | **J** | 4,700 | U | 4,100 | U | 410 | U | 4,100 | U | 4,300 | U | 400 | U | 4,500 | U | 4,900 | U | **180** | **J** | 4,300 | U | 5,200 | U | 200 | U |
| Caprolactam | µg/Kg | NS | NS | NS | | 4,300 | U | 4,300 | U | 3,700 | U | 4,700 | U | 4,100 | U | 410 | U | 4,100 | U | 4,300 | U | 400 | U | 4,500 | U | 4,900 | U | 390 | UJ | 4300 | U | 5,200 | U | 200 | U |
| Carbazole | µg/Kg | NS | NS | NS | | **830** | **J** | 4,300 | U | **410** | **J** | 4,700 | U | 4,100 | U | 410 | U | **1,000** | **J** | 4,300 | U | 400 | U | 4,500 | U | 4,900 | U | **300** | **J** | 4,300 | U | **880** | **J** | 200 | U |
| Chrysene | µg/Kg | 1,000 | 3,900 | 56,000 | | **2,200** | **J** | 4,300 | U | **1,500** | **J** | 4,700 | U | **370** | **J** | 410 | U | **3,800** | **J** | **730** | **J** | **37** | **J** | **730** | **J** | 4,900 | U | **1,600** | | **4,000** | **J** | **21,000** | | **55** | **J** |
| Dibenz(a,h)anthracene | µg/Kg | 330 | 330 | 560 | | 4,300 | U | 4,300 | U | 3,700 | U | 4,700 | U | 4,100 | U | 410 | U | 4,100 | U | 4,300 | U | 40 | U | 4,500 | U | 4,900 | U | **270** | | **510** | **J** | **1,900** | **J** | 200 | U |
| Dibenzofuran | µg/Kg | 7,000 | 59,000 | 350,000 | | **610** | **J** | 4,300 | U | 3,700 | U | 4,700 | U | 4,100 | U | 410 | U | **680** | **J** | 4,300 | U | 400 | U | 4,500 | U | 4,900 | U | **120** | **J** | 4,300 | U | 5,200 | U | 200 | U |
| Diethyl Phthalate | µg/Kg | NS | NS | NS | | 4,300 | U | 4,300 | U | 3,700 | U | 4,700 | U | 4,100 | U | 410 | U | 4,100 | U | 4,300 | U | 400 | U | 4,500 | U | 4,900 | U | 390 | U | 4,300 | U | 5,200 | U | 200 | U |
| Dimethyl Phthalate | µg/Kg | NS | NS | NS | | 4,300 | U | 4,300 | U | 3,700 | U | 4,700 | U | 4,100 | U | 410 | U | 4,100 | U | 4,300 | U | 400 | U | 4,500 | U | 4,900 | U | 390 | U | 4,300 | U | 5,200 | U | 200 | U |
| Di-n-Butyl Phthalate | µg/Kg | NS | NS | NS | | 4,300 | U | 4,300 | U | 3,700 | U | 4,700 | U | 4,100 | U | 410 | U | 4,100 | U | 4,300 | U | 400 | U | 4,500 | U | 4,900 | U | **13** | **J** | 4,300 | U | 5,200 | U | 200 | U |
| Fluoranthene | µg/Kg | 100,000 | 100,000 | 500,000 | | **6,000** | | 4,300 | U | **3,300** | **J** | 4,700 | U | **620** | **J** | 410 | U | **9,100** | **J** | **1,500** | **J** | **57** | **J** | **700** | **J** | 4,900 | U | **3,300** | | **4,800** | | **22,000** | | **60** | **J** |
| Fluorene | µg/Kg | 30,000 | 100,000 | 500,000 | | **790** | **J** | 4,300 | U | 3,700 | U | 4,700 | U | 4,100 | U | 410 | U | **1,100** | **J** | 4,300 | U | 400 | U | 4,500 | U | 4,900 | U | **140** | **J** | 4,300 | U | 5,200 | U | 200 | U |
| Indeno(1,2,3-cd)pyrene | µg/Kg | 500 | 500 | 5,600 | | **890** | **J** | 4,300 | U | **830** | **J** | 4,700 | U | 4,100 | U | 410 | U | **1,000** | **J** | 4,300 | U | **40** | | **490** | **J** | 4,900 | U | **1,100** | | **1,200** | **J** | **4,900** | **J** | **30** | **J** |
| Isophrone | µg/Kg | NS | NS | NS | | 4,300 | U | 4,300 | U | 3700 | U | 4,700 | U | 4,100 | U | 410 | U | 4,100 | U | 4,300 | U | 160 | U | 4,500 | U | 4,900 | U | 160 | U | 4,300 | U | 5,200 | U | 200 | U |
| Naphthalene | µg/Kg | 12,000 | 100,000 | 500,000 | | 4,300 | U | 4,300 | U | 3700 | U | 4,700 | U | 4,100 | U | 410 | U | **770** | **J** | 4,300 | U | 400 | U | 4,500 | U | 4,900 | U | **110** | **J** | 4,300 | U | 5,200 | U | 200 | U |
| N-Nitrosodiphenylamine | µg/Kg | NS | NS | NS | | 4,300 | U | 4,300 | U | 3,700 | U | 4,700 | U | 4,100 | U | 410 | U | 4,100 | U | 4,300 | U | 400 | U | 4,500 | U | 4,900 | U | 390 | U | 4,300 | U | 5,200 | U | 200 | U |
| Phenanthrene | µg/Kg | 100,000 | 100,000 | 500,000 | | **7,100** | | 4,300 | U | **2,800** | **J** | 4,700 | U | **400** | **J** | 410 | U | **8,200** | **J** | **1,400** | **J** | **40** | **J** | 4,500 | U | 4,900 | U | **2,500** | | **1,200** | **J** | **5,200** | | 200 | U |
| Phenol | µg/Kg | 330 | 100,000 | 500,000 | | 4,300 | U | 4,300 | U | 3,700 | U | 4,700 | U | 4,100 | U | 410 | U | 4,100 | U | 4,300 | U | 400 | U | 4,500 | U | 4,900 | U | 390 | U | 4,300 | U | 5,200 | U | 200 | U |
| Pyrene | µg/Kg | 100,000 | 100,000 | 500,000 | | **4,700** | | 4,300 | U | **2,600** | **J** | 4,700 | U | **500** | **J** | 410 | U | **7,000** | **J** | **1,400** | **J** | **62** | **J** | **650** | **J** | 4,900 | U | **1,800** | | **4,400** | | **21,000** | | **65** | **J** |
| **Target Compound List (TCL) Pesticides** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| alpha-BHC (alpha Hexachlorocyclohexane) | µg/Kg | 20 | 480 | 3,400 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| beta-BHC (beta Hexachlorocyclohexane) | µg/Kg | 36 | 360 | 3,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| delta-BHC (delta Hexachlorocyclohexane) | µg/Kg | 40 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Dieldrin | µg/Kg | 5 | 200 | 1,400 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Endrin Ketone | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Gamma BHC (Lindane) | µg/Kg | 100 | 1,300 | 9,200 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Methoxychlor | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 4,4'-DDD (p,p'-DDD) | µg/Kg | 3.3 | 13,000 | 92,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 4,4'-DDE (p,p'-DDE) | µg/Kg | 3.3 | 8,900 | 62,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 4,4'-DDT (p,p'-DDT) | µg/Kg | 3.3 | 7,900 | 47,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Target Compound List (TCL) Polychlorinated Biphenyls (PCBs)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Target Analyte List (TAL) Metals (Total)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | mg/Kg[12] | NS | NS | NS | | **14,400** | | **17,100** | | **12,800** | | **14,800** | | **15,800** | | **13,200** | | **9,960** | | **18,200** | | **11,200** | | **12,200** | | **22,100** | | **14,600** | | **15,300** | | **13,800** | | **27,200** | | **22,100** | |
| Antimony | mg/Kg | NS | NS | NS | | **10.1** | | 1.2 | U | **1.3** | | 1.3 | U | **2.9** | | 1.3 | UJ | 1.2 | U | **2.8** | | 1.2 | U | 1.4 | U | 1.6 | U | **2.1** | | 1.3 | UJ | **1.8** | | 19.9 | U | 17.7 | U |
| Arsenic | mg/Kg | 13 | 16 | 16 | | **7.6** | | **3.9** | | **6.7** | | **4.0** | | **6.4** | | **4.1** | **J** | **6.6** | | **6.4** | | **5.7** | | **5.4** | | **5.3** | | **6.0** | | **4.7** | | **6.6** | | **4.6** | | **6.0** | |
| Barium | mg/Kg | 350 | 400 | 400 | | **90.3** | | **61.7** | | **95.2** | | **74.2** | | **96.5** | | **126** | **J** | **245** | | **184** | | **107** | | **95.1** | | **122** | | **367** | | **110** | | **102** | | **157** | | **123** | |
| Beryllium | mg/Kg | 7.2 | 72 | 590 | | **0.64** | | **0.64** | | **0.61** | | **0.61** | | **0.72** | | **0.63** | **J** | **0.53** | | **0.92** | | **0.55** | | **0.64** | | **1.1** | | **0.70** | | **0.76** | | **0.70** | | **1.3** | | **1.1** | |
| Cadmium | mg/Kg | 2.5 | 4.3 | 9.3 | | 0.68 | U | 0.61 | U | 0.57 | U | 0.64 | U | 0.58 | U | **0.86** | **J** | **1.2** | | **0.83** | | 0.62 | U | 0.71 | U | 0.79 | U | **0.63** | | 0.66 | U | 0.82 | U | 0.26 | U | **0.27** | |
| Calcium | mg/Kg | NS | NS | NS | | **6,770** | | **1,780** | | **26,000** | | **2,690** | | **8,650** | | **3,400** | **J** | **33,500** | | **27,500** | | **3,350** | | **5,020** | | **2,500** | | **19,600** | | **27,000** | | **22,900** | | **3,020** | | **2,640** | |
| Chromium | mg/Kg | 1 | 110 | 400 | | **20.2** | | **20.3** | | **23.1** | | **17.5** | | **24.7** | | **17.9** | | **148** | | **37.4** | | **15.8** | | **18.7** | | **27.6** | | **34.1** | | **27.4** | | **111** | | **33.2** | | **26.6** | |
| Chromium (trivalent)[12] | mg/Kg | 30 | 180 | 1,500 | | NA | | NA | | NA | | **16.94** | | **24.2** | | **17.42** | | **147.49** | | **36.88** | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Hexavalent Chromium | mg/Kg | 1 | 110 | 400 | | NA | | NA | | NA | | 0.56 | U | 0.50 | U | 0.48 | U | 0.51 | U | 0.52 | U | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Cobalt | mg/Kg | NS | NS | NS | | **10.8** | | **11.1** | | **11.3** | | **9.8** | | **11.9** | | **12.1** | | **9.6** | | **15.8** | | **13.0** | | **12.5** | | **18.7** | | **11.2** | | **11.9** | | **11.7** | | **14.2** | | **15.7** | |
| Copper | mg/Kg | 50 | 270 | 270 | | **22.6** | | **12.6** | | **24.4** | | **10.8** | | **25.3** | | **8.6** | **J** | **52.1** | | **36.5** | | **16.3** | | **18.9** | | **24.5** | | **85.7** | | **27.1** | **J** | **38.0** | | **23.3** | | **23.2** | |
| Iron | mg/Kg | NS | NS | NS | | **22,600** | | **23,800** | | **22,000** | | **20,900** | | **24,700** | | **23,300** | | **20,300** | | **26,800** | | **21,900** | | **23,800** | | **33,500** | | **22,500** | | **24,100** | | **23,900** | | **30,500** | | **30,300** | |
| Lead | mg/Kg | 63 | 400 | 1,000 | | **789** | | **13.5** | | **138** | | **28.7** | | **172** | | **19.1** | | **453** | | **135** | | **8.3** | | **37.4** | | **14.2** | | **271** | | **60.4** | **J** | **184** | | **13.1** | | **39.7** | |
| Magnesium | mg/Kg | NS | NS | NS | | **5,550** | | **4,680** | | **9,130** | | **3,830** | | **5,880** | | **4,350** | | **19,600** | | **13,300** | | **4,360** | | **5,230** | | **6,740** | | **7,070** | | **11,200** | | **9,510** | | **7,530** | | **5,520** | |
| Manganese | mg/Kg | 1,600 | 2,000 | 10,000 | | **526** | | **332** | | **612** | | **309** | | **450** | | **742** | | **569** | | **683** | | **592** | | **934** | | **397** | | **453** | | **462** | | **553** | | **533** | | **597** | |
| Nickel | mg/Kg | 30 | 310 | 310 | | **23.8** | | **20.3** | | **27.0** | | **16.9** | | **27.3** | | **27.0** | | **26.1** | | **36.2** | | **23.0** | | **28.9** | | **30.9** | | **39** | | **29.5** | | **31.5** | | **39.0** | | **28.8** | |
| Potassium | mg/Kg | NS | NS | NS | | **1,370** | | **1,230** | | **1,460** | | **909** | | **1,550** | | **1,740** | | **1,450** | | **2,440** | | **1,450** | | **1,250** | | **1,950** | | **1,810** | | **1,760** | | **1,650** | | **4,690** | | **3350** | |
| Selenium | mg/Kg | 3.9 | 180 | 1,500 | | 1.4 | U | 1.2 | U | 1.1 | U | 1.3 | U | 1.2 | U | 1.3 | UJ | 1.2 | U | 1.3 | U | 1.2 | U | 1.4 | U | 1.6 | U | 1.2 | U | 1.3 | U | 1.6 | U | 5.3 | U | 4.7 | U |
| Silver | mg/Kg | 2 | 180 | 1,500 | | 0.68 | U | 0.61 | U | 0.57 | U | 0.64 | U | 0.58 | U | 0.65 | UJ | 0.59 | U | 0.65 | U | 0.62 | U | 0.71 | U | 0.79 | U | 0.59 | U | 0.66 | U | 0.82 | U | 0.79 | U | 0.71 | U |
| Sodium | mg/Kg | NS | NS | NS | | 684 | U | 608 | U | 569 | U | 644 | U | 582 | U | 647 | U | 589 | U | 651 | U | 622 | U | 707 | U | 786 | U | 592 | U | 661 | U | 822 | U | **514** | | 165 | U |
| Thallium | mg/Kg | NS | NS | NS | | 2.7 | U | 2.4 | U | 2.3 | U | 2.6 | U | 2.3 | U | 2.6 | U | 2.4 | U | 2.6 | U | 2.5 | U | 2.8 | U | 3.1 | U | 2.4 | U | 2.6 | U | 3.3 | U | 7.9 | U | 7.1 | U |
| Tin | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Vanadium | mg/Kg | NS | NS | NS | | **30.7** | | **32.4** | | **29.2** | | **28.2** | | **32.3** | | **25.0** | | **28.1** | | **39.2** | | **25.8** | | **27.2** | | **37.4** | | **31.5** | | **31.1** | | **30.3** | | **47.3** | | **42.5** | |
| Zinc | mg/Kg | 109 | 10,000 | 10,000 | | **88.4** | | **58.8** | | **104** | | **70.3** | | **90.2** | | **379** | | **406** | | **235** | | **39.4** | | **50.9** | | **69.3** | | **230** | | **87.4** | **J** | **115** | | **71.1** | | **65.3** | |
| Mercury | mg/Kg | 0.18 | 0.81 | 2.8 | | **0.23** | | 0.039 | U | **0.15** | | **0.090** | | **0.42** | | **0.044** | | **1.9** | | **0.48** | | 0.040 | U | **0.083** | | 0.048 | U | **0.39** | | **0.10** | | **0.28** | | **0.079** | | **0.024** | |
| **General Chemistry** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sulfate | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Toxicity Characteristic Leaching Procedure (TCLP) Metals** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lead | mg/L[14] | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Physical Parameters** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Percent Solids | Percent | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |

**Table 2**
**Confirmatory Samples Eastern Portion of Site Detections Only**

| Parameter | Units | Unrestricted Use Soil Cleanup Objectives[1] | Restricted Use Soil Cleanup Objectives - Restricted Residential Standard[1] | Restricted Use Soil Cleanup Objectives - Commercial Standard[1] | Sample ID: | KOG-SW1 | | KOG-SW2 | | KOG-SW3 | | KOG-SW4 | | KOG-SW5A | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Sample Depth (feet): | 3.0 | | 0-2.0 | | 1.5-2.0 | | 1.5-2.0 | | 1.5-2.0 | |
| | | | | | Sample Date: | 10/23/2015 | | 10/23/2015 | | 10/23/2015 | | 10/23/2015 | | 10/27/2015 | |
| | | | | | | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | |
| Acetone | µg/Kg[2] | 50 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | |
| Dichlorodifluoromethane | µg/Kg | NS[4] | NS | NS | | NA | | NA | | NA | | NA | | NA | |
| Isopropylbenzene (Cumene) | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | |
| Methyl Acetate | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | |
| Methylcyclohexane | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | |
| Methylene Chloride | µg/Kg | 50 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | |
| **Semivolatile Organic Compounds (SVOCs)** | | | | | | | | | | | | | | | |
| 1,1-Biphenyl | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | |
| 2,4-Dimethylphenol | µg/Kg | NS | NS | NS | | 210 | U | 1,000 | U | 15,000 | U | 2,000 | U | 1,000 | U |
| 2,4-Dinitrotoluene | µg/Kg | NS | NS | NS | | 210 | U | 1,000 | U | 15,000 | U | 2,000 | U | 1,000 | U |
| 2,6-Dintrotoluene | µg/Kg | NS | NS | NS | | 210 | U | 1,000 | U | 15,000 | U | 2,000 | U | 1,000 | U |
| 2-Methylnaphthalene | µg/Kg | NS | NS | NS | | 210 | U | 1,000 | U | 15,000 | U | 2,000 | U | 1,000 | U |
| 2-Methylphenol (O-Cresol) | µg/Kg | 330 | 100,000 | 500,000 | | 210 | U | 1,000 | U | 15,000 | U | 2,000 | U | 1,000 | U |
| 3&4-Methylphenol (m+p Cresol) | µg/Kg | 330[6] | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | |
| 4-Methylphenol (p-Cresol) | µg/Kg | 330 | 100,000 | 500,000 | | 400 | U | 2,000 | U | 29,000 | U | 3,900 | U | 2,000 | U |
| Acenaphthene | µg/Kg | 20,000 | 100,000 | 500,000 | | **160** | **J** | **170** | **J** | 15,000 | U | **430** | **J** | 1,000 | U |
| Acenaphthylene | µg/Kg | 100,000 | 100,000 | 500,000 | | 210 | U | 1,000 | U | 15,000 | U | **360** | **J** | 1,000 | U |
| Anthracene | µg/Kg | 100,000 | 100,000 | 500,000 | | **330** | | **1,200** | | 15,000 | U | **15000** | | 1,000 | U |
| Benzaldehyde | µg/Kg | NS | NS | NS | | 210 | U | 1,000 | U | 15,000 | U | 2,000 | U | 1,000 | U |
| Benzo(a)anthracene | µg/Kg | 1,000 | 1,000 | 5,600 | | **1100** | | **8,800** | | **33,000** | | **64000** | | **870** | **J** |
| Benzo(a)pyrene | µg/Kg | 1,000 | 1,000 | 1,000 | | **1100** | | **4,300** | | **33,000** | | **23000** | | **840** | **J** |
| Benzo(b)fluoranthene | µg/Kg | 1,000 | 1,000 | 5,600 | | **1600** | | **9,200** | | **38,000** | | **56,000** | | **990** | **J** |
| Benzo(g,h,i)perylene | µg/Kg | 100,000 | 100,000 | 500,000 | | **970** | | **3,000** | | **24,000** | | **14000** | | **670** | **J** |
| Benzo(K)fluoranthene | µg/Kg | 800 | 3,900 | 56,000 | | **710** | | **3,900** | | **18,000** | | **19000** | | **610** | **J** |
| Benzyl Butyl Phthalate | µg/Kg | NS | NS | NS | | 210 | U | 1,000 | U | 15,000 | U | 2,000 | U | 1,000 | U |
| Biphenyl (Diphenyl, 1,1'-Biphenyl) | µg/Kg | NS | NS | NS | | 210 | U | 1,000 | U | 15,000 | U | 2,000 | U | 1,000 | U |
| Bis(2-ethyhexyl) Phthalate | µg/Kg | NS | NS | NS | | 210 | U | 1,000 | U | 15,000 | U | 2,000 | U | **520** | **JB** |
| Caprolactam | µg/Kg | NS | NS | NS | | 210 | U | 1,000 | U | 15,000 | U | 2,000 | U | 1,000 | U |
| Carbazole | µg/Kg | NS | NS | NS | | **130** | **J** | **400** | **J** | **3300** | **J** | **7800** | | 1,000 | U |
| Chrysene | µg/Kg | 1,000 | 3,900 | 56,000 | | **1400** | | **12,000** | | **37,000** | | **85000** | | **1000** | |
| Dibenz(a,h)anthracene | µg/Kg | 330 | 330 | 560 | | 210 | U | 1,000 | U | 15,000 | U | **5400** | | 1,000 | U |
| Dibenzofuran | µg/Kg | 7,000 | 59,000 | 350,000 | | **66** | **J** | **120** | **J** | 15,000 | U | **1300** | **J** | 1,000 | U |
| Diethyl Phthalate | µg/Kg | NS | NS | NS | | 210 | U | 1,000 | U | 15,000 | U | 2,000 | U | **760** | **JB** |
| Dimethyl Phthalate | µg/Kg | NS | NS | NS | | 210 | U | 1,000 | U | 15,000 | U | 2,000 | U | 1,000 | U |
| Di-n-Butyl Phthalate | µg/Kg | NS | NS | NS | | 210 | U | 1,000 | U | 15,000 | U | 2,000 | U | **200** | **J** |
| Fluoranthene | µg/Kg | 100,000 | 100,000 | 500,000 | | **2700** | | **19,000** | | **45,000** | | **210,000** | | **1,100** | |
| Fluorene | µg/Kg | 30,000 | 100,000 | 500,000 | | **150** | **J** | **300** | **J** | 15,000 | U | **920** | **J** | 1,000 | U |
| Indeno(1,2,3-cd)pyrene | µg/Kg | 500 | 500 | 5,600 | | **750** | | **2,500** | | **20000** | | **12000** | | **520** | **J** |
| Isophrone | µg/Kg | NS | NS | NS | | 210 | U | 1,000 | U | 15,000 | U | 2,000 | U | 1,000 | U |
| Naphthalene | µg/Kg | 12,000 | 100,000 | 500,000 | | 210 | U | 1,000 | U | 15,000 | U | 2,000 | U | 1,000 | U |
| N-Nitrosodiphenylamine | µg/Kg | NS | NS | NS | | 210 | U | 1,000 | U | 15,000 | U | 2,000 | U | 1,000 | U |
| Phenanthrene | µg/Kg | 100,000 | 100,000 | 500,000 | | **1700** | | **5,100** | | **8,900** | **J** | **68000** | | 1,000 | U |
| Phenol | µg/Kg | 330 | 100,000 | 500,000 | | 210 | U | 1,000 | U | 15,000 | U | 2,000 | U | 1,000 | U |
| Pyrene | µg/Kg | 100,000 | 100,000 | 500,000 | | **2400** | | **16,000** | | **42,000** | | **160,000** | | **1,100** | |
| **Target Compound List (TCL) Pesticides** | | | | | | | | | | | | | | | |
| alpha-BHC (alpha Hexachlorocyclohexane) | µg/Kg | 20 | 480 | 3,400 | | NA | | NA | | NA | | NA | | NA | |
| beta-BHC (beta Hexachlorocyclohexane) | µg/Kg | 36 | 360 | 3,000 | | NA | | NA | | NA | | NA | | NA | |
| delta-BHC (delta Hexachlorocyclohexane) | µg/Kg | 40 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | |
| Dieldrin | µg/Kg | 5 | 200 | 1,400 | | NA | | NA | | NA | | NA | | NA | |
| Endrin Ketone | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | |
| Gamma BHC (Lindane) | µg/Kg | 100 | 1,300 | 9,200 | | NA | | NA | | NA | | NA | | NA | |
| Methoxychlor | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | |
| 4,4'-DDD (p,p'-DDD) | µg/Kg | 3.3 | 13,000 | 92,000 | | NA | | NA | | NA | | NA | | NA | |
| 4,4'-DDE (p,p'-DDE) | µg/Kg | 3.3 | 8,900 | 62,000 | | NA | | NA | | NA | | NA | | NA | |
| 4,4'-DDT (p,p'-DDT) | µg/Kg | 3.3 | 7,900 | 47,000 | | NA | | NA | | NA | | NA | | NA | |
| **Target Compound List (TCL) Polychlorinated Biphenyls (PCBs)** | | | | | | | | | | | | | | | |
| **Target Analyte List (TAL) Metals (Total)** | | | | | | | | | | | | | | | |
| Aluminum | mg/Kg[12] | NS | NS | NS | | **16,100** | | **19,600** | | **10,900** | | **15,900** | | **20,900** | |
| Antimony | mg/Kg | NS | NS | NS | | 18.4 | U | 18.6 | U | 20.0 | U | 16.7 | U | 18.3 | U |
| Arsenic | mg/Kg | 13 | 16 | 16 | | **6.0** | | **8.4** | | **8.2** | | **6.0** | | **5.6** | |
| Barium | mg/Kg | 350 | 400 | 400 | | **92.6** | | **117** | | **70.1** | | **94.4** | | **116** | |
| Beryllium | mg/Kg | 7.2 | 72 | 590 | | **0.79** | | **0.93** | | **0.40** | | **0.74** | | **0.95** | |
| Cadmium | mg/Kg | 2.5 | 4.3 | 9.3 | | 0.24 | U | **0.32** | | **0.81** | | **0.22** | | 0.24 | U |
| Calcium | mg/Kg | NS | NS | NS | | **58,900** | | **10,400** | | **10,300** | | **34,200** | | **7,000** | |
| Chromium | mg/Kg | 1 | 110 | 400 | | **29.1** | | **39.9** | | **62.7** | | **29.1** | | **26.6** | |
| Chromium (trivalent)[13] | mg/Kg | 30 | 180 | 1,500 | | NA | | NA | | NA | | NA | | NA | |
| Hexavalent Chromium | mg/Kg | 1 | 110 | 400 | | NA | | NA | | NA | | NA | | NA | |
| Cobalt | mg/Kg | NS | NS | NS | | **11.6** | | **14.8** | | **12.4** | | **13.0** | | **17.0** | |
| Copper | mg/Kg | 50 | 270 | 270 | | **30.0** | | **33.6** | | **58.2** | | **27.2** | | **22.1** | |
| Iron | mg/Kg | NS | NS | NS | | **23,000** | | **27,300** | | **17,500** | | **22,300** | | **26,300** | |
| Lead | mg/Kg | 63 | 400 | 1,000 | | **40.4** | | **198** | | **1,480** | | **111** | | **29.4** | |
| Magnesium | mg/Kg | NS | NS | NS | | **19,800** | | **7,190** | | **12,200** | | **9,930** | | **7,910** | |
| Manganese | mg/Kg | 1,600 | 2,000 | 10,000 | | **777** | | **628** | | **279** | | **776** | | **514** | |
| Nickel | mg/Kg | 30 | 310 | 310 | | **28.9** | | **38.7** | | **129** | | **33.6** | | **37.0** | |
| Potassium | mg/Kg | NS | NS | NS | | **3,250** | | **2790** | | **1210** | | **3080** | | **3370** | |
| Selenium | mg/Kg | 3.9 | 180 | 1,500 | | 4.9 | U | 5.0 | U | 5.3 | U | 4.4 | U | 4.9 | U |
| Silver | mg/Kg | 2 | 180 | 1,500 | | 0.73 | U | 0.75 | U | 0.80 | U | 0.67 | U | 0.73 | U |
| Sodium | mg/Kg | NS | NS | NS | | **793** | | **765** | | **954** | | **167** | | **1220** | |
| Thallium | mg/Kg | NS | NS | NS | | 7.3 | U | 7.5 | U | 8.0 | U | 6.7 | U | 7.3 | U |
| Tin | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | |
| Vanadium | mg/Kg | NS | NS | NS | | **33.2** | | **43.8** | | **160** | | **38.3** | | **38.0** | |
| Zinc | mg/Kg | 109 | 10,000 | 10,000 | | **69.1** | | **95.8** | | **218** | | **65.1** | | **65.4** | |
| Mercury | mg/Kg | 0.18 | 0.81 | 2.8 | | **0.032** | | **0.090** | | **0.32** | | **0.053** | | **0.11** | |
| **General Chemistry** | | | | | | | | | | | | | | | |
| Sulfate | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | |
| **Toxicity Characteristic Leaching Procedure (TCLP) Metals** | | | | | | | | | | | | | | | |
| Lead | mg/L[14] | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | |
| **Physical Parameters** | | | | | | | | | | | | | | | |
| Percent Solids | Percent | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | |

***Notes*:**
(1)-Standards taken from New York Code of Rules and Regulations (NYCRR) Part 375
(2)-"µg/Kg"-micrograms per kilogram.
(3)-"NA"-denotes the compound was not analyzed
(4)-"NS" indicates that no Standard is listed.
(5)-"U" indicates that compound was not detected above laboratory reporting limit.
(6)-The m- and p-methylphenol standards are separated in the SCO; However, the lower standard was applied to the summed m&p-methylphenol result.
(7)-**Bold**-indicates laboratory detection.
(8)-"J"-indicates that compound was detected at a value less than laboratory reporting limit; as such, the concentration is estimated.
(9)-Green Shading indicates that concentration exceeds the Restricted Residential SCO.
(10)-Yellow shading indicates concentration exceeds the commercial SCO.
(11)-Purple shading indicates concentration exceeds the unrestricted SCO.
(12)-"mg/Kg"-milligrams per kilogram.
(13)-The trivalent chromium concentration was calculated by subtracting the hexavalent chromium concentration from the total chromium concentration reported.
(14)-"mg/L"-milligrams per liter.
(15)- "R" indicates the value reported by the laboratory was rejected during the data validation process.
(16)-"B" indicates that compound was also detected in the associated laboratory blank.
(17)-"N" indicates the relative percent difference for the second column was outside of the allowable limits.

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**Table 3**
**Confirmatory Samples Park Area**
**Detections Only**

| Parameter | Units | Unrestricted Use Soil Cleanup Objectives [1] | Restricted Use Soil Cleanup Objectives - Restricted Residential Standard[1] | Restricted Use Soil Cleanup Objectives - Commercial Standard[1] | Sample ID: | TE2-F | | TE9-F | | T2-WC-SW4 | | T2-WP-CB1 | | T2-WP-CB1 | | T2-WP-CB2 | | T2-WP-CB2 | | T2-WP-CB3 | | T2-WP-CB3 | | T2-WP-CB4 | | T2-WP-CB5 | | T2-WP-CB6 | | T2-E2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Sample Date: | 10/10/2012 | | 9/13/2013 | | 10/23/2014 | | 9/18/2014 | | 4/13/2016 | | 9/18/2014 | | 4/13/2016 | | 9/18/2014 | | 4/13/2016 | | 9/18/2014 | | 9/18/2014 | | 9/18/2014 | | 12/4/2014 | |
| | | | | | | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acetone | µg/Kg[2] | 50 | 100,000 | 500,000 | | NA [3] | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Benzene | µg/Kg | 60 | 4,800 | 44,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Cis-1,2-Dichloroethylene | µg/Kg | 250 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Cyclohexane | µg/Kg | NS [4] | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Ethylbenzene | µg/Kg | 1,000 | 41,000 | 390,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Isopropylbenzene (Cumene) | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Methylcyclohexane | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Methylene Chloride | µg/Kg | 50 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Semivolatile Organic Compounds (SVOCs)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1-Biphenyl | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 2,4-Dimethylphenol | µg/Kg | NS | NS | NS | | NA | | NA | | 4,100 | U | 420 | U | 190 | U | 420 | U | 190 | U | 420 | U | 200 | U | 390 | U | 430 | U | 430 | U | 180 | UJ |
| 2,4-Dinitrophenol | µg/Kg | NS | NS | NS | | NA | | NA | | 21000 | U | 2000 | U | 1,900 | U | 2000 | U | 1,900 | U | 2000 | U | 1,900 | U | 1900 | U | 2100 | U | 2100 | U | 400 | U |
| 2,4-Dinitrotoluene | µg/Kg | NS | NS | NS | | NA | | NA | | 4100 | U | 420 | U | 190 | U | 420 | U | 190 | U | 420 | U | 200 | U | 390 | U | 430 | U | 430 | U | 250 | U |
| 2,6-Dintrotoluene | µg/Kg | NS | NS | NS | | NA | | NA | | 4100 | U | 420 | U | 190 | U | 420 | U | 190 | U | 420 | U | 200 | U | 390 | U | 430 | U | 430 | U | 250 | U |
| 2-Methylnaphthalene | µg/Kg | NS | NS | NS | | NA | | NA | | 4,100 | U | 420 | U | 190 | U | 420 | U | 190 | U | 420 | U | 200 | U | 390 | U | 430 | U | 430 | U | 8.2 | U |
| Acenaphthene | µg/Kg | 20,000 | 100,000 | 500,000 | | NA | | NA | | 4,100 | U | 420 | U | 190 | U | 420 | U | 190 | U | 420 | U | 200 | U | 390 | U | 430 | U | 430 | U | 8.2 | U |
| Anthracene | µg/Kg | 100,000 | 100,000 | 500,000 | | NA | | NA | | 4,100 | U | 420 | U | 190 | U | 420 | U | 190 | U | 420 | U | 200 | U | 390 | U | 430 | U | 430 | U | 8.2 | U |
| Benzo(a)anthracene | µg/Kg | 1,000 | 1,000 | 5,600 | | NA | | NA | | **990** | **J** | 420 | U | 190 | U | 420 | U | **61** | **J** | 420 | U | 200 | U | 390 | U | 430 | U | 430 | U | 8.2 | U |
| Benzo(a)pyrene | µg/Kg | 1,000 | 1,000 | 1,000 | | NA | | NA | | **1,200** | **J** [9] | 420 | U | 190 | U | 420 | U | **54** | **J** | 420 | U | 200 | U | 390 | U | 430 | U | 430 | U | 8.2 | U |
| Benzo(b)fluoranthene | µg/Kg | 1,000 | 1,000 | 5,600 | | NA | | NA | | **1,700** | **J** | 420 | U | 190 | U | 420 | U | **62** | **J** | 420 | U | 200 | U | 390 | U | 430 | U | 430 | U | 8.2 | U |
| Benzo(g,h,i)perylene | µg/Kg | 100,000 | 100,000 | 500,000 | | NA | | NA | | **720** | **J** | 420 | U | 190 | U | 420 | U | **31** | **J** | 420 | U | 200 | U | 390 | U | 430 | U | 430 | U | 8.2 | U |
| Benzo(K)fluoranthene | µg/Kg | 800 | 3,900 | 56,000 | | NA | | NA | | 4,100 | U | 420 | U | 190 | U | 420 | U | 190 | U | 420 | U | 200 | U | 390 | U | 430 | U | 430 | U | 8.2 | U |
| Biphenyl (Diphenyl, 1,1'-Biphenyl) | µg/Kg | NS | NS | NS | | NA | | NA | | 21,000 | U | 420 | U | 190 | U | 420 | U | 190 | U | 420 | U | 200 | U | 390 | U | 430 | U | 430 | U | 61 | U |
| Bis(2-ethyhexyl) Phthalate | µg/Kg | NS | NS | NS | | NA | | NA | | 4,100 | U | 420 | U | 190 | U | 420 | U | 190 | U | 420 | U | 200 | U | 390 | U | 430 | U | 430 | U | **55** | **J** |
| Carbazole | µg/Kg | NS | NS | NS | | NA | | NA | | 4,100 | U | 420 | U | 190 | U | 420 | U | 190 | U | 420 | U | 200 | U | 390 | U | 430 | U | 430 | U | 61 | U |
| Chrysene | µg/Kg | 1,000 | 3,900 | 56,000 | | NA | | NA | | **1,100** | **J** [11] | 420 | U | 190 | U | 420 | U | **60** | **J** | 420 | U | 200 | U | 390 | U | 430 | U | 430 | U | 8.2 | U |
| Dibenz(a,h)anthracene | µg/Kg | 330 | 330 | 560 | | NA | | NA | | 4,100 | U | 420 | U | 190 | U | 420 | U | 190 | U | 420 | U | 200 | U | 390 | U | 430 | U | 430 | U | 8.2 | U |
| Dibenzofuran | µg/Kg | 7,000 | 59,000 | 350,000 | | NA | | NA | | 4,100 | U | 420 | U | 190 | U | 420 | U | 190 | U | 420 | U | 200 | U | 390 | U | 430 | U | 430 | U | 61 | U |
| Di-n-Butyl Phthalate | µg/Kg | NS | NS | NS | | NA | | NA | | 4,100 | U | 420 | U | 190 | U | 420 | U | 190 | U | 420 | U | **57** | **J** | 390 | U | 430 | U | 430 | U | 86 | U |
| Fluoranthene | µg/Kg | 100,000 | 100,000 | 500,000 | | NA | | NA | | **2,200** | **J** | 420 | U | 190 | U | 420 | U | **120** | **J** | 420 | U | 200 | U | 390 | U | 430 | U | 430 | U | 8.2 | U |
| Fluorene | µg/Kg | 30,000 | 100,000 | 500,000 | | NA | | NA | | 4,100 | U | 420 | U | 190 | U | 420 | U | 190 | U | 420 | U | 200 | U | 390 | U | 430 | U | 430 | U | 8.2 | U |
| Indeno(1,2,3-cd)pyrene | µg/Kg | 500 | 500 | 5,600 | | NA | | NA | | **750** | **J** | 420 | U | 190 | U | 420 | U | **28** | **J** | 420 | U | 200 | U | 390 | U | 430 | U | 430 | U | 8.2 | U |
| Naphthalene | µg/Kg | 12,000 | 100,000 | 500,000 | | NA | | NA | | 4,100 | U | 420 | U | 190 | U | 420 | U | 190 | U | 420 | U | 200 | U | 390 | U | 430 | U | 430 | U | 8.2 | U |
| N-Nitrosodiphenylamine | µg/Kg | NS | NS | NS | | NA | | NA | | 4,100 | U | 420 | U | 190 | U | 420 | U | 190 | U | 420 | U | 200 | U | 390 | U | 430 | U | 430 | U | 61 | U |
| Phenanthrene | µg/Kg | 100,000 | 100,000 | 500,000 | | NA | | NA | | **1,500** | **J** | 420 | U | 190 | U | 420 | U | **87** | **J** | 420 | U | 200 | U | 390 | U | 430 | U | 430 | U | 8.2 | U |
| Pyrene | µg/Kg | 100,000 | 100,000 | 500,000 | | NA | | NA | | **1,800** | **J** | 420 | U | 190 | U | 420 | U | **120** | **J** | 420 | U | 200 | U | 390 | U | 430 | U | 430 | U | 8.2 | U |
| **Target Compound List (TCL) Pesticides** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| alpha-BHC (alpha Hexachlorocyclohexane) | µg/Kg | 20 | 480 | 3,400 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| beta-BHC (beta Hexachlorocyclohexane) | µg/Kg | 36 | 360 | 3,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| delta-BHC (delta Hexachlorocyclohexane) | µg/Kg | 40 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Dieldrin | µg/Kg | 5 | 200 | 1,400 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Endrin Ketone | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Gamma BHC (Lindane) | µg/Kg | 100 | 1,300 | 9200 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Methoxychlor | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 4,4'-DDD (p,p'-DDD) | µg/Kg | 3.3 | 13,000 | 92,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 4,4'-DDE (p,p'-DDE) | µg/Kg | 3.3 | 8,900 | 62,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 4,4'-DDT (p,p'-DDT) | µg/Kg | 3.3 | 7,900 | 47,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Target Compound List (TCL) Polychlorinated Biphenyls (PCBs)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Target Analyte List (TAL) Metals (Total)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | mg/Kg[12] | NS | NS | NS | | NA | | NA | | **7,220** | | NA | | **11,900** | | NA | | **16,600** | | NA | | **15,000** | | NA | | NA | | NA | | NA | |
| Arsenic | mg/Kg | 13 | 16 | 16 | | NA | | NA | | **4.1** | | NA | | **4.0** | | NA | | **4.5** | | NA | | **4.6** | | NA | | NA | | NA | | **6.8** | |
| Barium | mg/Kg | 350 | 400 | 400 | | **143** | | NA | | **127** | | NA | | **60.3** | **F1** [13] | NA | | **92.9** | | NA | | **73.8** | | NA | | NA | | NA | | NA | |
| Beryllium | mg/Kg | 7.2 | 72 | 590 | | NA | | NA | | 0.42 | U | NA | | **0.52** | | NA | | **0.74** | | NA | | **0.67** | | NA | | NA | | NA | | NA | |
| Cadmium | mg/Kg | 2.5 | 4.3 | 9.3 | | NA | | NA | | **0.75** | | NA | | 0.24 | U | NA | | 0.24 | U | NA | | 0.24 | U | NA | | NA | | NA | | NA | |
| Calcium | mg/Kg | NS | NS | NS | | NA | | NA | | **57,300** | | NA | | **43,000** | | NA | | **52,100** | | NA | | **47,300** | | NA | | NA | | NA | | NA | |
| Chromium | mg/Kg | 1 [14] | 110 [14] | 400 [14] | | NA | | NA | | **30.6** | | NA | | **15.8** | | NA | | **22.5** | | NA | | **19.9** | | NA | | NA | | NA | | NA | |
| Cobalt | mg/Kg | NS | NS | NS | | NA | | NA | | **6.0** | | NA | | **8.6** | | NA | | **10.4** | | NA | | **11.2** | | NA | | NA | | NA | | NA | |
| Copper | mg/Kg | 50 | 270 | 270 | | NA | | NA | | **39.2** | | NA | | **15.2** | | NA | | **19.5** | | NA | | **18.1** | | NA | | NA | | NA | | NA | |
| Iron | mg/Kg | NS | NS | NS | | NA | | NA | | **13,300** | | NA | | **18,600** | | NA | | **22,600** | | NA | | **21,500** | | NA | | NA | | NA | | NA | |
| Lead | mg/Kg | 63 | 400 | 1,000 | | NA | | **7.8** | | **133** | | NA | | **4.6** | | NA | | **8.5** | | NA | | **5.4** | | NA | | NA | | NA | | NA | |
| Magnesium | mg/Kg | NS | NS | NS | | NA | | NA | | **27,800** | | NA | | **7,590** | **F1** | NA | | **10,900** | | NA | | **8,500** | | NA | | NA | | NA | | NA | |
| Manganese | mg/Kg | 1,600 | 2,000 | 10,000 | | NA | | NA | | **477** | | NA | | **622** | | NA | | **571** | | NA | | **700** | | NA | | NA | | NA | | NA | |
| Nickel | mg/Kg | 30 | 310 | 310 | | NA | | NA | | **15.5** | | NA | | **19.5** | | NA | | **24.5** | | NA | | **24.4** | | NA | | NA | | NA | | NA | |
| Potassium | mg/Kg | NS | NS | NS | | NA | | NA | | **1,190** | | NA | | **2,970** | **F1** | NA | | **4,270** | | NA | | **3,770** | | NA | | NA | | NA | | NA | |
| Sodium | mg/Kg | NS | NS | NS | | NA | | NA | | 523 | U | NA | | **181** | | NA | | **296** | | NA | | **205** | | NA | | NA | | NA | | NA | |
| Vanadium | mg/Kg | NS | NS | NS | | NA | | NA | | **20.2** | | NA | | **24.8** | | NA | | **33.6** | | NA | | **30.2** | | NA | | NA | | NA | | NA | |
| Zinc | mg/Kg | 109 | 10,000 | 10,000 | | NA | | NA | | **231** | | NA | | **36.4** | | NA | | **45.8** | | NA | | **43.5** | | NA | | NA | | NA | | NA | |
| Mercury | mg/Kg | 0.18 | 0.81 | 2.8 | | NA | | NA | | **0.26** | | NA | | 0.022 | U | NA | | 0.023 | U | NA | | 0.022 | U | NA | | NA | | NA | | 0.040 | U |
| **General Chemistry** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sulfate | mg/L | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Toxicity Characteristic Leaching Procedure (TCLP) Metals** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lead | mg/L[15] | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Physical Parameters** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Percent Solids | Percent | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |

**Table 3**
**Confirmatory Samples Park Area**
**Detections Only**

| Parameter | Units | Unrestricted Use Soil Cleanup Objectives [1] | Restricted Use Soil Cleanup Objectives - Restricted Residential Standard[1] | Restricted Use Soil Cleanup Objectives - Commercial Standard[1] | Sample ID: | T2-E3 | | T2-E5 | | T2-E6 | | T2-E7 | | T2-E8 | | T2-E9 | | T2-E10 | | T2-E13-2 | | T2-E14 | | T2-E15 | | T2-E16 | | T2-SW11 | | T2-SW16-1.0-1.5 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Sample Date: | 12/4/2014 | | 11/12/2014 | | 11/12/2014 | | 11/12/2014 | | 11/12/2014 | | 11/12/2014 | | 11/12/2014 | | 4/6/2015 | | 11/13/2014 | | 11/13/2014 | | 11/13/2014 | | 7/23/2013 | | 7/26/2013 | |
| | | | | | | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acetone | µg/Kg[2] | 50 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Benzene | µg/Kg | 60 | 4,800 | 44,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Cis-1,2-Dichloroethylene | µg/Kg | 250 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Cyclohexane | µg/Kg | NS[4] | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Ethylbenzene | µg/Kg | 1,000 | 41,000 | 390,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Isopropylbenzene (Cumene) | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Methylcyclohexane | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Methylene Chloride | µg/Kg | 50 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Semivolatile Organic Compounds (SVOCs)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1-Biphenyl | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 1000 | U | NA | | NA | | NA | | NA | |
| 2,4-Dimethylphenol | µg/Kg | NS | NS | NS | | 190 | UJ | 400 | U | 390 | U | 380 | UJ | 380 | U | 420 | U | 440 | U | 1,000 | U | 430 | U | 410 | U | 440 | U | NA | | NA | |
| 2,4-Dinitrophenol | µg/Kg | NS | NS | NS | | 420 | U | 2100 | U | 2000 | U | 1900 | U | 2000 | U | 2200 | U | 2300 | U | 10,000 | U | 2200 | U | 2100 | U | 2300 | U | NA | | NA | |
| 2,4-Dinitrotoluene | µg/Kg | NS | NS | NS | | 260 | U | 400 | U | 390 | U | 380 | U | 380 | U | 420 | U | 440 | U | 1,000 | U | 430 | U | 410 | U | 440 | U | NA | | NA | |
| 2,6-Dintrotoluene | µg/Kg | NS | NS | NS | | 260 | U | 400 | U | 390 | U | 380 | U | 380 | U | 420 | U | 440 | U | 1,000 | U | 430 | U | 410 | U | 440 | U | NA | | NA | |
| 2-Methylnaphthalene | µg/Kg | NS | NS | NS | | 8.5 | U | 400 | U | 390 | U | 380 | U | 380 | U | **85** | **J** | 440 | U | 1,000 | U | 430 | U | 410 | U | **150** | **J** | NA | | NA | |
| Acenaphthene | µg/Kg | 20,000 | 100,000 | 500,000 | | 8.5 | U | 400 | U | 390 | U | 380 | U | 380 | U | 420 | U | 440 | U | 1,000 | U | 430 | U | 410 | U | 440 | U | NA | | NA | |
| Anthracene | µg/Kg | 100,000 | 100,000 | 500,000 | | **5.3** | **J** | 400 | U | 390 | U | 380 | U | **56** | **J** | **56** | **J** | 440 | U | 1,000 | U | 430 | U | 410 | U | **58** | **J** | NA | | NA | |
| Benzo(a)anthracene | µg/Kg | 1,000 | 1,000 | 5,600 | | **9.4** | | **100** | **J** | 390 | U | **36** | **J** | **160** | **J** | **280** | **J** | 440 | U | 1,000 | U | **97** | **J** | **140** | **J** | **240** | **J** | NA | | NA | |
| Benzo(a)pyrene | µg/Kg | 1,000 | 1,000 | 1,000 | | **8.8** | | **110** | **J** | 390 | U | 380 | U | **140** | **J** | **220** | **J** | 440 | U | 1,000 | U | **95** | **J** | **120** | **J** | **200** | **J** | NA | | NA | |
| Benzo(b)fluoranthene | µg/Kg | 1,000 | 1,000 | 5,600 | | **11** | | **150** | **J** | 390 | U | 380 | U | **180** | **J** | **360** | **J** | 440 | U | 1,000 | U | **140** | **J** | **220** | **J** | **280** | **J** | NA | | NA | |
| Benzo(g,h,i)perylene | µg/Kg | 100,000 | 100,000 | 500,000 | | **7.7** | **J** | **75** | **J** | 390 | U | 380 | U | **98** | **J** | **160** | **J** | 440 | U | 1,000 | U | **63** | **J** | **89** | **J** | **120** | **J** | NA | | NA | |
| Benzo(K)fluoranthene | µg/Kg | 800 | 3,900 | 56,000 | | **4.3** | **J** | 400 | U | 390 | U | 380 | U | **92** | **J** | **130** | **J** | 440 | U | 1,000 | U | 430 | U | **81** | **J** | **100** | **J** | NA | | NA | |
| Biphenyl (Diphenyl, 1,1'-Biphenyl) | µg/Kg | NS | NS | NS | | 64 | U | 2,100 | U | 2,000 | U | 1,900 | U | 2000 | U | 2,200 | U | 2300 | U | 1,000 | U | 2,200 | U | 2,100 | U | 2,300 | U | NA | | NA | |
| Bis(2-ethyhexyl) Phthalate | µg/Kg | NS | NS | NS | | **45** | **J** | 400 | U | 390 | U | 380 | U | 380 | U | 420 | U | 440 | U | 1,000 | U | 430 | U | 410 | U | 440 | U | NA | | NA | |
| Carbazole | µg/Kg | NS | NS | NS | | 64 | U | 400 | U | 390 | U | 380 | U | 380 | U | **50** | **J** | 440 | U | 1,000 | U | 430 | U | **39** | **J** | 440 | U | NA | | NA | |
| Chrysene | µg/Kg | 1,000 | 3,900 | 56,000 | | **8.4** | **J** | **120** | **J** | **28** | **J** | **30** | **J** | **160** | **J** | **360** | **J** | 440 | U | 1,000 | U | **110** | **J** | **220** | **J** | **260** | **J** | NA | | NA | |
| Dibenz(a,h)anthracene | µg/Kg | 330 | 330 | 560 | | 8.5 | U | 400 | U | 390 | U | 380 | U | 380 | U | **60** | **J** | 440 | U | 1,000 | U | 430 | U | 410 | U | 440 | U | NA | | NA | |
| Dibenzofuran | µg/Kg | 7,000 | 59,000 | 350,000 | | 64 | U | 400 | U | 390 | U | 380 | U | 380 | U | 420 | U | 440 | U | 1,000 | U | 430 | U | 410 | U | **61** | **J** | NA | | NA | |
| Di-n-Butyl Phthalate | µg/Kg | NS | NS | NS | | 90 | U | 400 | U | 390 | U | 380 | U | 380 | U | 420 | U | 440 | U | 1,000 | U | 430 | U | 410 | U | 440 | U | NA | | NA | |
| Fluoranthene | µg/Kg | 100,000 | 100,000 | 500,000 | | **18** | | **220** | **J** | **45** | **J** | **61** | **J** | **320** | **J** | **540** | | **46** | **J** | 1,000 | U | **220** | **J** | **330** | **J** | **460** | | NA | | NA | |
| Fluorene | µg/Kg | 30,000 | 100,000 | 500,000 | | 8.5 | U | 400 | U | 390 | U | 380 | U | 380 | U | 420 | U | 440 | U | 1,000 | U | 430 | U | 410 | U | 440 | U | NA | | NA | |
| Indeno(1,2,3-cd)pyrene | µg/Kg | 500 | 500 | 5,600 | | **5.9** | **J** | **66** | **J** | 390 | U | 380 | U | **66** | **J** | **130** | **J** | 440 | U | 1,000 | U | **63** | **J** | **83** | **J** | **120** | **J** | NA | | NA | |
| Naphthalene | µg/Kg | 12,000 | 100,000 | 500,000 | | 8.5 | U | 400 | U | 390 | U | 380 | U | 380 | U | **65** | **J** | 440 | U | 1,000 | U | 430 | U | 410 | U | **99** | **J** | NA | | NA | |
| N-Nitrosodiphenylamine | µg/Kg | NS | NS | NS | | 64 | U | 400 | U | 390 | U | 380 | U | 380 | U | 420 | U | 440 | U | 1,000 | U | 430 | U | 410 | U | 440 | U | NA | | NA | |
| Phenanthrene | µg/Kg | 100,000 | 100,000 | 500,000 | | **15** | | **98** | **J** | **35** | **J** | **43** | **J** | **210** | **J** | **380** | **J** | **47** | **J** | 1,000 | U | **120** | **J** | **280** | **J** | **350** | **J** | NA | | NA | |
| Pyrene | µg/Kg | 100,000 | 100,000 | 500,000 | | **17** | | **190** | **J** | **52** | **J** | **54** | **J** | **270** | **J** | **450** | | **40** | **J** | 1,000 | U | **170** | **J** | **230** | **J** | **410** | **J** | NA | | NA | |
| **Target Compound List (TCL) Pesticides** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| alpha-BHC (alpha Hexachlorocyclohexane) | µg/Kg | 20 | 480 | 3,400 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| beta-BHC (beta Hexachlorocyclohexane) | µg/Kg | 36 | 360 | 3,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| delta-BHC (delta Hexachlorocyclohexane) | µg/Kg | 40 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Dieldrin | µg/Kg | 5 | 200 | 1,400 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Endrin Ketone | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Gamma BHC (Lindane) | µg/Kg | 100 | 1,300 | 9200 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Methoxychlor | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 4,4'-DDD (p,p'-DDD) | µg/Kg | 3.3 | 13,000 | 92,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 4,4'-DDE (p,p'-DDE) | µg/Kg | 3.3 | 8,900 | 62,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 4,4'-DDT (p,p'-DDT) | µg/Kg | 3.3 | 7,900 | 47,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Target Compound List (TCL) Polychlorinated Biphenyls (PCBs)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Target Analyte List (TAL) Metals (Total)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | mg/Kg[12] | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **14,700** | | NA | | NA | | NA | | NA | | NA | |
| Arsenic | mg/Kg | 13 | 16 | 16 | | **3.9** | | NA | | NA | | NA | | NA | | NA | | NA | | 2.5 | U | NA | | NA | | NA | | NA | | NA | |
| Barium | mg/Kg | 350 | 400 | 400 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **68.9** | | NA | | NA | | NA | | NA | | NA | |
| Beryllium | mg/Kg | 7.2 | 72 | 590 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **0.61** | | NA | | NA | | NA | | NA | | NA | |
| Cadmium | mg/Kg | 2.5 | 4.3 | 9.3 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **3.1** | | NA | | NA | | NA | | NA | | NA | |
| Calcium | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **37,600** | | NA | | NA | | NA | | NA | | NA | |
| Chromium | mg/Kg | 1[14] | 110[14] | 400[14] | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **19.0** | | NA | | NA | | NA | | NA | | NA | |
| Cobalt | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **10.2** | | NA | | NA | | NA | | NA | | NA | |
| Copper | mg/Kg | 50 | 270 | 270 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **12.8** | | NA | | NA | | NA | | NA | | NA | |
| Iron | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **16,500** | | NA | | NA | | NA | | NA | | NA | |
| Lead | mg/Kg | 63 | 400 | 1,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **6.7** | | NA | | NA | | **183** | | **312** | |
| Magnesium | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **9,760** | | NA | | NA | | NA | | NA | | NA | |
| Manganese | mg/Kg | 1,600 | 2,000 | 10,000 | | NA | | NA | | NA | | NA | | NA | | **435** | | **637** | | **416** | | **698** | | **504** | | NA | | NA | | NA | |
| Nickel | mg/Kg | 30 | 310 | 310 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **24.5** | | NA | | NA | | NA | | NA | | NA | |
| Potassium | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **2,410** | | NA | | NA | | NA | | NA | | NA | |
| Sodium | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 176 | U | NA | | NA | | NA | | NA | | NA | |
| Vanadium | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **23.2** | | NA | | NA | | NA | | NA | | NA | |
| Zinc | mg/Kg | 109 | 10,000 | 10,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **638** | | NA | | NA | | NA | | NA | | NA | |
| Mercury | mg/Kg | 0.18 | 0.81 | 2.8 | | 0.034 | U | NA | | 0.036 | U | 0.036 | U | NA | | NA | | NA | | 0.023 | U | NA | | NA | | NA | | NA | | NA | |
| **General Chemistry** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sulfate | mg/L | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Toxicity Characteristic Leaching Procedure (TCLP) Metals** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lead | mg/L[15] | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Physical Parameters** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Percent Solids | Percent | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |

**Table 3**
**Confirmatory Samples Park Area**
**Detections Only**

| Parameter | Units | Unrestricted Use Soil Cleanup Objectives [1] | Restricted Use Soil Cleanup Objectives - Restricted Residential Standard[1] | Restricted Use Soil Cleanup Objectives - Commercial Standard[1] | Sample ID: | T2-SW17-1.0-1.5 | | T2-SW22 | | T2-CB3 | | T2-CB11 | | T2-CB12 | | T2-W12-F | | T2-EP-PM1 | | T2-EP-PM2-2 | | T2-EP-PM3-2 | | T2-EP-PM4-2 | | T2-EP-PM5-2 | | T2-EP-PM6-1 | | T2-EP-PM7 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Sample Date: | 8/9/2013 | | 8/26/2013 | | 8/9/2013 | | 8/26/2013 | | 9/6/2013 | | 8/21/2014 | | 12/19/2014 | | 2/25/2015 | | 3/17/2015 | | 3/17/2015 | | 3/17/2015 | | 1/21/2015 | | 12/19/2014 | |
| | | | | | | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acetone | µg/Kg[2] | 50 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Benzene | µg/Kg | 60 | 4,800 | 44,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Cis-1,2-Dichloroethylene | µg/Kg | 250 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Cyclohexane | µg/Kg | NS[4] | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Ethylbenzene | µg/Kg | 1,000 | 41,000 | 390,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Isopropylbenzene (Cumene) | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Methylcyclohexane | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Methylene Chloride | µg/Kg | 50 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Semivolatile Organic Compounds (SVOCs)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1-Biphenyl | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | NA | | NA | |
| 2,4-Dimethylphenol | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | NA | | NA | |
| 2,4-Dinitrophenol | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 390 | U | 2,000 | U | 2,000 | U | 2,000 | U | NA | | NA | |
| 2,4-Dinitrotoluene | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | NA | | NA | |
| 2,6-Dintrotoluene | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | NA | | NA | |
| 2-Methylnaphthalene | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | **62** | **J** | NA | | NA | |
| Acenaphthene | µg/Kg | 20,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | **34** | **J** | NA | | NA | |
| Anthracene | µg/Kg | 100,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | NA | | NA | |
| Benzo(a)anthracene | µg/Kg | 1,000 | 1,000 | 5,600 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | NA | | NA | |
| Benzo(a)pyrene | µg/Kg | 1,000 | 1,000 | 1,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | NA | | NA | |
| Benzo(b)fluoranthene | µg/Kg | 1,000 | 1,000 | 5,600 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | NA | | NA | |
| Benzo(g,h,i)perylene | µg/Kg | 100,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | NA | | NA | |
| Benzo(K)fluoranthene | µg/Kg | 800 | 3,900 | 56,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | NA | | NA | |
| Biphenyl (Diphenyl, 1,1'-Biphenyl) | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | NA | | NA | |
| Bis(2-ethyhexyl) Phthalate | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **140** | **J** | 210 | U | 210 | U | 260 | U | NA | | NA | |
| Carbazole | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | NA | | NA | |
| Chrysene | µg/Kg | 1,000 | 3,900 | 56,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | NA | | NA | |
| Dibenz(a,h)anthracene | µg/Kg | 330 | 330 | 560 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | NA | | NA | |
| Dibenzofuran | µg/Kg | 7,000 | 59,000 | 350,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | NA | | NA | |
| Di-n-Butyl Phthalate | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | NA | | NA | |
| Fluoranthene | µg/Kg | 100,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | **24** | **J** | NA | | NA | |
| Fluorene | µg/Kg | 30,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | **32** | **J** | NA | | NA | |
| Indeno(1,2,3-cd)pyrene | µg/Kg | 500 | 500 | 5,600 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | NA | | NA | |
| Naphthalene | µg/Kg | 12,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | **46** | **J** | NA | | NA | |
| N-Nitrosodiphenylamine | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | 200 | U | NA | | NA | |
| Phenanthrene | µg/Kg | 100,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | **110** | **J** | NA | | NA | |
| Pyrene | µg/Kg | 100,000 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 200 | U | 210 | U | 210 | U | **33** | **J** | NA | | NA | |
| **Target Compound List (TCL) Pesticides** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| alpha-BHC (alpha Hexachlorocyclohexane) | µg/Kg | 20 | 480 | 3,400 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| beta-BHC (beta Hexachlorocyclohexane) | µg/Kg | 36 | 360 | 3,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| delta-BHC (delta Hexachlorocyclohexane) | µg/Kg | 40 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Dieldrin | µg/Kg | 5 | 200 | 1,400 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Endrin Ketone | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Gamma BHC (Lindane) | µg/Kg | 100 | 1,300 | 9200 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Methoxychlor | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 4,4'-DDD (p,p'-DDD) | µg/Kg | 3.3 | 13,000 | 92,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 4,4'-DDE (p,p'-DDE) | µg/Kg | 3.3 | 8,900 | 62,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 4,4'-DDT (p,p'-DDT) | µg/Kg | 3.3 | 7,900 | 47,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Target Compound List (TCL) Polychlorinated Biphenyls (PCBs)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Target Analyte List (TAL) Metals (Total)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | mg/Kg[12] | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **14,500** | **J** | **17,000** | | **16,600** | | **13,000** | | NA | | NA | |
| Arsenic | mg/Kg | 13 | 16 | 16 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **11.6** | | **4.6** | | **8.0** | | **2.7** | | NA | | NA | |
| Barium | mg/Kg | 350 | 400 | 400 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **125** | | **90.2** | | **121** | | **59.4** | | NA | | NA | |
| Beryllium | mg/Kg | 7.2 | 72 | 590 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **1.2** | | **0.80** | | **0.81** | | **0.54** | | NA | | NA | |
| Cadmium | mg/Kg | 2.5 | 4.3 | 9.3 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **1.0** | | **1.8** | | **0.82** | | **2.3** | | NA | | NA | |
| Calcium | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **4,330** | | **10,500** | | **51,800** | | **41,700** | | NA | | NA | |
| Chromium | mg/Kg | 1[14] | 110[14] | 400[14] | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **22.2** | | **23.4** | | **22.8** | | **18.0** | | NA | | NA | |
| Cobalt | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **16.3** | | **13.8** | | **17.0** | | **7.8** | | NA | | NA | |
| Copper | mg/Kg | 50 | 270 | 270 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **27.2** | | **19.3** | | **25.5** | | **13.5** | | NA | | NA | |
| Iron | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **37,600** | **J** | **24,700** | | **29,300** | | **15,400** | | NA | | NA | |
| Lead | mg/Kg | 63 | 400 | 1,000 | | **87.8** | | **27.9** | | **11.3** | | **23.5** | | **206** | | **3.9** | | **38.7** | | **16.2** | | **10.8** | | **9.6** | | **6.9** | | **46.8** | | **395** | |
| Magnesium | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **5,600** | **J** | **8,630** | | **9,050** | | **8,590** | | NA | | NA | |
| Manganese | mg/Kg | 1,600 | 2,000 | 10,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **332** | | **390** | | **1440** | | **370** | | NA | | NA | |
| Nickel | mg/Kg | 30 | 310 | 310 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **32.9** | | **33.4** | | **40.5** | | **22.2** | | NA | | NA | |
| Potassium | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **1,460** | | **1,810** | | **2,730** | | **1,820** | | NA | | NA | |
| Sodium | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 164 | U | 171 | U | 176 | U | 160 | U | NA | | NA | |
| Vanadium | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **47.5** | | **32.7** | | **35.2** | | **22.8** | | NA | | NA | |
| Zinc | mg/Kg | 109 | 10,000 | 10,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **1,260** | | **1,520** | | **102** | | **377** | | NA | | NA | |
| Mercury | mg/Kg | 0.18 | 0.81 | 2.8 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 0.022 | UJ | 0.025 | U | 0.023 | U | 0.024 | U | NA | | NA | |
| **General Chemistry** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sulfate | mg/L | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Toxicity Characteristic Leaching Procedure (TCLP) Metals** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lead | mg/L[15] | NS | NS | NS | | NA | | 0.0050 | U | NA | | 0.005 | U | **0.12** | | 0.50 | U | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Physical Parameters** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Percent Solids | Percent | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |

**Table 3**
**Confirmatory Samples Park Area**
**Detections Only**

| Parameter | Units | Unrestricted Use Soil Cleanup Objectives [1] | Restricted Use Soil Cleanup Objectives - Restricted Residential Standard[1] | Restricted Use Soil Cleanup Objectives - Commercial Standard[1] | Sample ID: | T2-EP-PM8 | | T2-EP-PM9-1 | | T2-EP-PM10 | | T2-EP-PM11-2 | | T2-EP-PM12 | | T2-EP-PM13-2 | | T2-EP-PM14-1 | | T2-EP-PM15-2 | | T2-EP-PM16 | | T2-PS-UST4E | | T2-PS-UST4F | | T2-PS-UST4N | | T2-PS-UST4S | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Sample Date: | 12/19/2014 | | 1/21/2015 | | 12/19/2014 | | 3/9/2015 | | 12/19/2014 | | 2/19/2015 | | 1/21/2015 | | 3/25/2015 | | 12/19/2014 | | 2/28/2014 | | 2/28/2014 | | 2/28/2014 | | 2/28/2014 | |
| | | | | | | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acetone | µg/Kg[2] | 50 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **20** | | **11** | | 22 | | 26 | U |
| Benzene | µg/Kg | 60 | 4,800 | 44,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **0.89** | **J** | **2.0** | **J** | 4.4 | U | 5.2 | U |
| Cis-1,2-Dichloroethylene | µg/Kg | 250 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 3.8 | U | 4.9 | U | **1.8** | **J** | 5.2 | U |
| Cyclohexane | µg/Kg | NS [4] | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **16** | | 4.9 | U | 4.4 | U | 5.2 | U |
| Ethylbenzene | µg/Kg | 1,000 | 41,000 | 390,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **3.9** | | **0.47** | **J** | 4.4 | U | 5.2 | U |
| Isopropylbenzene (Cumene) | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **1.9** | **J** | 4.9 | U | 4.4 | U | 5.2 | U |
| Methylcyclohexane | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | **19** | | 4.9 | U | 4.4 | U | 5.2 | U |
| Methylene Chloride | µg/Kg | 50 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | 3.8 | U | 4.9 | U | 4.4 | U | 5.2 | U |
| **Semivolatile Organic Compounds (SVOCs)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1-Biphenyl | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | 210 | U | NA | | 210 | U | NA | | 1,100 | U | NA | | NA | | NA | | NA | | NA | |
| 2,4-Dimethylphenol | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | 210 | U | NA | | 210 | U | NA | | 1,100 | U | NA | | 2000 | U | 220 | U | 210 | U | 210 | U |
| 2,4-Dinitrophenol | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | 410 | U | NA | | 400 | U | NA | | 10,000 | U | NA | | 4000 | UJ | 420 | UJ | 400 | UJ | 410 | UJ |
| 2,4-Dinitrotoluene | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | 210 | U | NA | | 210 | U | NA | | 1,100 | U | NA | | 2000 | U | 220 | U | 210 | U | 210 | U |
| 2,6-Dintrotoluene | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | 210 | U | NA | | 210 | U | NA | | 1,100 | U | NA | | 2000 | U | 220 | U | 210 | U | 210 | U |
| 2-Methylnaphthalene | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | 210 | U | NA | | 210 | U | NA | | 1,100 | U | NA | | 2000 | U | **240** | | **15** | **J** | 210 | U |
| Acenaphthene | µg/Kg | 20,000 | 100,000 | 500,000 | | NA | | NA | | NA | | 210 | U | NA | | 210 | U | NA | | 1,100 | U | NA | | **260** | **J** | **23** | **J** | 210 | U | 210 | U |
| Anthracene | µg/Kg | 100,000 | 100,000 | 500,000 | | NA | | NA | | NA | | 210 | U | NA | | 210 | U | NA | | 1,100 | U | NA | | **260** | **J** | **33** | **J** | 210 | U | 210 | U |
| Benzo(a)anthracene | µg/Kg | 1,000 | 1,000 | 5,600 | | NA | | NA | | NA | | 210 | U | NA | | 210 | U | NA | | 1,100 | U | NA | | 2000 | U | **45** | **J** | 210 | U | 210 | U |
| Benzo(a)pyrene | µg/Kg | 1,000 | 1,000 | 1,000 | | NA | | NA | | NA | | 210 | U | NA | | 210 | U | NA | | 1,100 | U | NA | | 2000 | U | 220 | U | 210 | U | 210 | U |
| Benzo(b)fluoranthene | µg/Kg | 1,000 | 1,000 | 5,600 | | NA | | NA | | NA | | 210 | U | NA | | 210 | U | NA | | 1,100 | U | NA | | 2000 | U | 220 | U | 210 | U | 210 | U |
| Benzo(g,h,i)perylene | µg/Kg | 100,000 | 100,000 | 500,000 | | NA | | NA | | NA | | 210 | U | NA | | 210 | U | NA | | 1,100 | U | NA | | 2000 | U | 220 | U | 210 | U | 210 | U |
| Benzo(K)fluoranthene | µg/Kg | 800 | 3,900 | 56,000 | | NA | | NA | | NA | | 210 | U | NA | | 210 | U | NA | | 1,100 | U | NA | | 2000 | U | 220 | U | 210 | U | 210 | U |
| Biphenyl (Diphenyl, 1,1'-Biphenyl) | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | 210 | U | NA | | 210 | U | NA | | 1,100 | U | NA | | 2000 | U | **16** | **J** | 210 | U | 210 | U |
| Bis(2-ethyhexyl) Phthalate | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | 210 | U | NA | | 210 | U | NA | | 1,100 | U | NA | | 2000 | U | 220 | U | 210 | U | 210 | U |
| Carbazole | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | 210 | U | NA | | 210 | U | NA | | 1,100 | U | NA | | **260** | **J** | **55** | **J** | 210 | U | 210 | U |
| Chrysene | µg/Kg | 1,000 | 3,900 | 56,000 | | NA | | NA | | NA | | 210 | U | NA | | 210 | U | NA | | 1,100 | U | NA | | 2000 | U | **100** | **J** | 210 | U | 210 | U |
| Dibenz(a,h)anthracene | µg/Kg | 330 | 330 | 560 | | NA | | NA | | NA | | 210 | U | NA | | 210 | U | NA | | 1,100 | U | NA | | 2000 | U | 220 | U | 210 | U | 210 | U |
| Dibenzofuran | µg/Kg | 7,000 | 59,000 | 350,000 | | NA | | NA | | NA | | 210 | U | NA | | 210 | U | NA | | 1,100 | U | NA | | **130** | **J** | **16** | **J** | 210 | U | 210 | U |
| Di-n-Butyl Phthalate | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | 210 | U | NA | | 210 | U | NA | | 1,100 | U | NA | | 2000 | U | 220 | U | 210 | U | 210 | U |
| Fluoranthene | µg/Kg | 100,000 | 100,000 | 500,000 | | NA | | NA | | NA | | **43** | **J** | NA | | 210 | U | NA | | 1,100 | U | NA | | **130** | **J** | **18** | **J** | 210 | U | 210 | U |
| Fluorene | µg/Kg | 30,000 | 100,000 | 500,000 | | NA | | NA | | NA | | 210 | U | NA | | 210 | U | NA | | 1,100 | U | NA | | **400** | **J** | **55** | **J** | 210 | U | 210 | U |
| Indeno(1,2,3-cd)pyrene | µg/Kg | 500 | 500 | 5,600 | | NA | | NA | | NA | | 210 | U | NA | | 210 | U | NA | | 1,100 | U | NA | | 2000 | U | 220 | U | 210 | U | 210 | U |
| Naphthalene | µg/Kg | 12,000 | 100,000 | 500,000 | | NA | | NA | | NA | | 210 | U | NA | | 210 | U | NA | | 1,100 | U | NA | | **110** | **J** | **86** | **J** | 210 | U | 210 | U |
| N-Nitrosodiphenylamine | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | 210 | U | NA | | 210 | U | NA | | 1,100 | U | NA | | 2000 | U | **100** | **J** | 210 | U | 210 | U |
| Phenanthrene | µg/Kg | 100,000 | 100,000 | 500,000 | | NA | | NA | | NA | | **38** | **J** | NA | | 210 | U | NA | | 1,100 | U | NA | | **2300** | | **170** | **J** | **22** | **J** | 210 | U |
| Pyrene | µg/Kg | 100,000 | 100,000 | 500,000 | | NA | | NA | | NA | | **31** | **J** | NA | | 210 | U | NA | | 1,100 | U | NA | | **1700** | **J** | **110** | **J** | **14** | **J** | 210 | U |
| **Target Compound List (TCL) Pesticides** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| alpha-BHC (alpha Hexachlorocyclohexane) | µg/Kg | 20 | 480 | 3,400 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| beta-BHC (beta Hexachlorocyclohexane) | µg/Kg | 36 | 360 | 3,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| delta-BHC (delta Hexachlorocyclohexane) | µg/Kg | 40 | 100,000 | 500,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Dieldrin | µg/Kg | 5 | 200 | 1,400 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Endrin Ketone | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Gamma BHC (Lindane) | µg/Kg | 100 | 1,300 | 9200 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| Methoxychlor | µg/Kg | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 4,4'-DDD (p,p'-DDD) | µg/Kg | 3.3 | 13,000 | 92,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 4,4'-DDE (p,p'-DDE) | µg/Kg | 3.3 | 8,900 | 62,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 4,4'-DDT (p,p'-DDT) | µg/Kg | 3.3 | 7,900 | 47,000 | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Target Compound List (TCL) Polychlorinated Biphenyls (PCBs)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Target Analyte List (TAL) Metals (Total)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | mg/Kg[12] | NS | NS | NS | | NA | | NA | | NA | | **16,900** | | NA | | **18,500** | | NA | | **16,800** | | NA | | NA | | NA | | NA | | NA | |
| Arsenic | mg/Kg | 13 | 16 | 16 | | NA | | NA | | NA | | **4.1** | | NA | | **2.7** | | NA | | **3.7** | | NA | | NA | | NA | | NA | | NA | |
| Barium | mg/Kg | 350 | 400 | 400 | | NA | | NA | | NA | | **99.6** | | NA | | **192** | | NA | | **132** | | NA | | NA | | NA | | NA | | NA | |
| Beryllium | mg/Kg | 7.2 | 72 | 590 | | NA | | NA | | NA | | **0.76** | | NA | | **0.88** | | NA | | **0.80** | | NA | | NA | | NA | | NA | | NA | |
| Cadmium | mg/Kg | 2.5 | 4.3 | 9.3 | | NA | | NA | | NA | | **2.9** | | NA | | **3.0** | | NA | | 0.23 | U | NA | | NA | | NA | | NA | | NA | |
| Calcium | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | **14,400** | | NA | | **45,100** | | NA | | **3,890** | | NA | | NA | | NA | | NA | | NA | |
| Chromium | mg/Kg | 1 [14] | 110 [14] | 400 [14] | | NA | | NA | | NA | | **22.0** | | NA | | **23.3** | | NA | | **23.0** | | NA | | NA | | NA | | NA | | NA | |
| Cobalt | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | **11.0** | | NA | | **11.8** | | NA | | **13.0** | | NA | | NA | | NA | | NA | | NA | |
| Copper | mg/Kg | 50 | 270 | 270 | | NA | | NA | | NA | | **20.5** | | NA | | **25.1** | | NA | | **13.5** | | NA | | NA | | NA | | NA | | NA | |
| Iron | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | **23,100** | | NA | | **25,900** | | NA | | **24,500** | | NA | | NA | | NA | | NA | | NA | |
| Lead | mg/Kg | 63 | 400 | 1,000 | | **330** | | **173** | | **372** | | **13.4** | | **99.4** | | **11.3** | | **256** | | **10.4** | | **207** | | NA | | NA | | NA | | NA | |
| Magnesium | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | **8,310** | | NA | | **9,510** | | NA | | **5,670** | **J** | NA | | NA | | NA | | NA | | NA | |
| Manganese | mg/Kg | 1,600 | 2,000 | 10,000 | | NA | | NA | | NA | | **395** | | NA | | **447** | | NA | | **522** | **F2** | NA | | NA | | NA | | NA | | NA | |
| Nickel | mg/Kg | 30 | 310 | 310 | | NA | | NA | | NA | | **27.8** | | NA | | **30.2** | | NA | | **29.4** | | NA | | NA | | NA | | NA | | NA | |
| Potassium | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | **1,890** | | NA | | **2,480** | | NA | | **2,190** | **J** | NA | | NA | | NA | | NA | | NA | |
| Sodium | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | 176 | U | NA | | **217** | | NA | | 160 | U | NA | | NA | | NA | | NA | | NA | |
| Vanadium | mg/Kg | NS | NS | NS | | NA | | NA | | NA | | **31.4** | | NA | | **34.2** | | NA | | **29.4** | | NA | | NA | | NA | | NA | | NA | |
| Zinc | mg/Kg | 109 | 10,000 | 10,000 | | NA | | NA | | NA | | **1,070** | | NA | | **271** | | NA | | **89.8** | | NA | | NA | | NA | | NA | | NA | |
| Mercury | mg/Kg | 0.18 | 0.81 | 2.8 | | NA | | NA | | NA | | 0.024 | U | NA | | 0.023 | UJ | NA | | **0.041** | **J** | NA | | NA | | NA | | NA | | NA | |
| **General Chemistry** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sulfate | mg/L | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Toxicity Characteristic Leaching Procedure (TCLP) Metals** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lead | mg/L[15] | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| **Physical Parameters** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Percent Solids | Percent | NS | NS | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |

**Table 3**
**Confirmatory Samples Park Area**
**Detections Only**

| Parameter | Units | Unrestricted Use Soil Cleanup Objectives [1] | | Restricted Use Soil Cleanup Objectives - Restricted Residential Standard[1] | | Restricted Use Soil Cleanup Objectives - Commercial Standard[1] | | Sample ID: | T2-PS-UST4W | T2-WP-CB1* | | T2-WP-CB2* | | T2-WP-CB3* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Sample Date: | 2/28/2014 | 4/13/2016 | | 4/13/2016 | | 4/13/2016 | |
| | | | | | | | | | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | |
| Acetone | µg/Kg[2] | 50 | | 100,000 | | 500,000 | | | **8.2** | **J** | NA | | NA | | NA | |
| Benzene | µg/Kg | 60 | | 4,800 | | 44,000 | | | 4.7 | U | NA | | NA | | NA | |
| Cis-1,2-Dichloroethylene | µg/Kg | 250 | | 100,000 | | 500,000 | | | **0.68** | **J** | NA | | NA | | NA | |
| Cyclohexane | µg/Kg | NS [4] | | NS | | NS | | | 4.7 | U | NA | | NA | | NA | |
| Ethylbenzene | µg/Kg | 1,000 | | 41,000 | | 390,000 | | | 4.7 | U | NA | | NA | | NA | |
| Isopropylbenzene (Cumene) | µg/Kg | NS | | NS | | NS | | | 4.7 | U | NA | | NA | | NA | |
| Methylcyclohexane | µg/Kg | NS | | NS | | NS | | | 4.7 | U | NA | | NA | | NA | |
| Methylene Chloride | µg/Kg | 50 | | 100,000 | | 500,000 | | | 4.7 | U | NA | | NA | | NA | |
| **Semivolatile Organic Compounds (SVOCs)** | | | | | | | | | | | | | | | |
| 1,1-Biphenyl | µg/Kg | NS | | NS | | NS | | | NA | | NA | | NA | | NA | |
| 2,4-Dimethylphenol | µg/Kg | NS | | NS | | NS | | | 210 | U | 190 | U | 190 | U | 200 | U |
| 2,4-Dinitrophenol | µg/Kg | NS | | NS | | NS | | | 400 | UJ | 1900 | U | 1900 | U | 1900 | U |
| 2,4-Dinitrotoluene | µg/Kg | NS | | NS | | NS | | | 210 | U | 190 | U | 190 | U | 200 | U |
| 2,6-Dintrotoluene | µg/Kg | NS | | NS | | NS | | | 210 | U | 190 | U | 190 | U | 200 | U |
| 2-Methylnaphthalene | µg/Kg | NS | | NS | | NS | | | **2.7** | **J** | 190 | U | 190 | U | 200 | U |
| Acenaphthene | µg/Kg | 20,000 | | 100,000 | | 500,000 | | | 210 | U | 190 | U | 190 | U | 200 | U |
| Anthracene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | | 210 | U | 190 | U | 190 | U | 200 | U |
| Benzo(a)anthracene | µg/Kg | 1,000 | | 1,000 | | 5,600 | | | 210 | U | 190 | U | **61** | **J** | 200 | U |
| Benzo(a)pyrene | µg/Kg | 1,000 | | 1,000 | | 1,000 | | | 210 | U | 190 | U | **54** | **J** | 200 | U |
| Benzo(b)fluoranthene | µg/Kg | 1,000 | | 1,000 | | 5,600 | | | 210 | U | 190 | U | **62** | **J** | 200 | U |
| Benzo(g,h,i)perylene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | | 210 | U | 190 | U | **31** | **J** | 200 | U |
| Benzo(K)fluoranthene | µg/Kg | 800 | | 3,900 | | 56,000 | | | 210 | U | 190 | U | 190 | U | 200 | U |
| Biphenyl (Diphenyl, 1,1'-Biphenyl) | µg/Kg | NS | | NS | | NS | | | 210 | U | 190 | U | 190 | U | 200 | U |
| Bis(2-ethyhexyl) Phthalate | µg/Kg | NS | | NS | | NS | | | 210 | U | 190 | U | 190 | U | 200 | U |
| Carbazole | µg/Kg | NS | | NS | | NS | | | 210 | U | 190 | U | 190 | U | 200 | U |
| Chrysene | µg/Kg | 1,000 | | 3,900 | | 56,000 | | | 210 | U | 190 | U | **60** | **J** | 200 | U |
| Dibenz(a,h)anthracene | µg/Kg | 330 | | 330 | | 560 | | | 210 | U | 190 | U | 190 | U | 200 | U |
| Dibenzofuran | µg/Kg | 7,000 | | 59,000 | | 350,000 | | | 210 | U | 190 | U | 190 | U | 200 | U |
| Di-n-Butyl Phthalate | µg/Kg | NS | | NS | | NS | | | 210 | U | 190 | U | 190 | U | **57** | **J** |
| Fluoranthene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | | 210 | U | 190 | U | **120** | **J** | 200 | U |
| Fluorene | µg/Kg | 30,000 | | 100,000 | | 500,000 | | | 210 | U | 190 | U | 190 | U | 200 | U |
| Indeno(1,2,3-cd)pyrene | µg/Kg | 500 | | 500 | | 5,600 | | | 210 | U | 190 | U | **28** | **J** | 200 | U |
| Naphthalene | µg/Kg | 12,000 | | 100,000 | | 500,000 | | | 210 | U | 190 | U | 190 | U | 200 | U |
| N-Nitrosodiphenylamine | µg/Kg | NS | | NS | | NS | | | 210 | U | 190 | U | 190 | U | 200 | U |
| Phenanthrene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | | **12** | **J** | 190 | U | **87** | **J** | 200 | U |
| Pyrene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | | **16** | **J** | 190 | U | **120** | **J** | 200 | U |
| **Target Compound List (TCL) Pesticides** | | | | | | | | | | | | | | | |
| alpha-BHC (alpha Hexachlorocyclohexane) | µg/Kg | 20 | | 480 | | 3,400 | | | NA | | NA | | NA | | NA | |
| beta-BHC (beta Hexachlorocyclohexane) | µg/Kg | 36 | | 360 | | 3,000 | | | NA | | NA | | NA | | NA | |
| delta-BHC (delta Hexachlorocyclohexane) | µg/Kg | 40 | | 100,000 | | 500,000 | | | NA | | NA | | NA | | NA | |
| Dieldrin | µg/Kg | 5 | | 200 | | 1,400 | | | NA | | NA | | NA | | NA | |
| Endrin Ketone | µg/Kg | NS | | NS | | NS | | | NA | | NA | | NA | | NA | |
| Gamma BHC (Lindane) | µg/Kg | 100 | | 1,300 | | 9200 | | | NA | | NA | | NA | | NA | |
| Methoxychlor | µg/Kg | NS | | NS | | NS | | | NA | | NA | | NA | | NA | |
| 4,4'-DDD (p,p'-DDD) | µg/Kg | 3.3 | | 13,000 | | 92,000 | | | NA | | NA | | NA | | NA | |
| 4,4'-DDE (p,p'-DDE) | µg/Kg | 3.3 | | 8,900 | | 62,000 | | | NA | | NA | | NA | | NA | |
| 4,4'-DDT (p,p'-DDT) | µg/Kg | 3.3 | | 7,900 | | 47,000 | | | NA | | NA | | NA | | NA | |
| **Target Compound List (TCL) Polychlorinated Biphenyls (PCBs)** | | | | | | | | | | | | | | | |
| **Target Analyte List (TAL) Metals (Total)** | | | | | | | | | | | | | | | |
| Aluminum | mg/Kg[12] | NS | | NS | | NS | | | NA | | **11,900** | | **16,600** | | **15,000** | |
| Arsenic | mg/Kg | 13 | | 16 | | 16 | | | NA | | **4.0** | | **4.5** | | **4.6** | |
| Barium | mg/Kg | 350 | | 400 | | 400 | | | NA | | **60.3** | **F1** | **92.9** | | **73.8** | |
| Beryllium | mg/Kg | 7.2 | | 72 | | 590 | | | NA | | **0.52** | | **0.74** | | **0.67** | |
| Cadmium | mg/Kg | 2.5 | | 4.3 | | 9.3 | | | NA | | 0.24 | U | 0.24 | U | 0.24 | U |
| Calcium | mg/Kg | NS | | NS | | NS | | | NA | | **43000** | | **52100** | | **47300** | |
| Chromium | mg/Kg | 1 [14] | | 110 [14] | | 400 [14] | | | NA | | **15.8** | | **22.5** | | **19.9** | |
| Cobalt | mg/Kg | NS | | NS | | NS | | | NA | | **8.6** | | **10.4** | | **11.2** | |
| Copper | mg/Kg | 50 | | 270 | | 270 | | | NA | | **15.2** | | **19.5** | | **18.1** | |
| Iron | mg/Kg | NS | | NS | | NS | | | NA | | **18,600** | | **22,600** | | **21,500** | |
| Lead | mg/Kg | 63 | | 400 | | 1,000 | | | NA | | **4.6** | | **8.5** | | **5.4** | |
| Magnesium | mg/Kg | NS | | NS | | NS | | | NA | | **7,590** | **F1** | **10,900** | | **8,500** | |
| Manganese | mg/Kg | 1,600 | | 2,000 | | 10,000 | | | NA | | **622** | | **571** | | **700** | |
| Nickel | mg/Kg | 30 | | 310 | | 310 | | | NA | | **19.5** | | **24.5** | | **24.4** | |
| Potassium | mg/Kg | NS | | NS | | NS | | | NA | | **2,970** | | **4,270** | | **3,770** | |
| Sodium | mg/Kg | NS | | NS | | NS | | | NA | | **181** | | **296** | | **205** | |
| Vanadium | mg/Kg | NS | | NS | | NS | | | NA | | **24.8** | | **33.6** | | **30.2** | |
| Zinc | mg/Kg | 109 | | 10,000 | | 10,000 | | | NA | | **36.4** | | **45.8** | | **43.5** | |
| Mercury | mg/Kg | 0.18 | | 0.81 | | 2.8 | | | NA | | 0.022 | U | 0.023 | U | 0.022 | U |
| **General Chemistry** | | | | | | | | | | | | | | | |
| Sulfate | mg/L | NS | | NS | | NS | | | NA | | NA | | NA | | NA | |
| **Toxicity Characteristic Leaching Procedure (TCLP) Metals** | | | | | | | | | | | | | | | |
| Lead | mg/L[15] | NS | | NS | | NS | | | NA | | NA | | NA | | NA | |
| **Physical Parameters** | | | | | | | | | | | | | | | |
| Percent Solids | Percent | NS | | NS | | NS | | | NA | | NA | | NA | | NA | |

***Notes*** **:**

(1)-Standards taken from New York Code of Rules and Regulations (NYCRR) Part 375.
(2)-"µg/Kg"-micrograms per kilogram
(3)-"NA"-indicates the compound was not analyzed
(4)-"NS" indicates that no Standard is listed
(5)-"U" indicates that compound was not detected above laboratory reporting limit.
(6)-**Bold**-indicates laboratory detection
(7)-Green Shading indicates that concentration exceeds the Restricted Residential SCO.
(8)-"J"-indicates that compound was detected at a value less than laboratory reporting limit; as such, the concentration is estimated.
(9)-Yellow shading indicates concentration exceeds the commericial SCO.
(10)-"F2" indicates MS/MSD RPD exceeds control limits.
(11)-Purple shading indicates concentration exceeds the unrestricted SCO.
(12)-"mg/Kg"-milligrams per kilogram.
(13)-"F1" indicates MS and/or MSD Recovery is outside acceptance limits.
(14)- The standard used for unspeciated (total) chromium is that for hexavalent chromium.
(15)-"mg/L"-milligrams per liter.

**Table 4**
**Confirmatory Samples in Western Commercial Area**
**Detections Only**

| Parameter | Units | Unrestricted Use Soil Cleanup Objectives[1] | | Restricted Use Soil Cleanup Objectives - Restricted Residential Standard[1] | | Restricted Use Soil Cleanup Objectives - Commercial Standard[1] | | Sample ID: | T2-W1 | | WC-TP1-B | | WC-TP1-W3 | | WC-TP3 | | WC-TP4 | | WC-TP5 | | WC-TP6 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Sample Date: | 8/21/2014 | | 5/19/2015 | | 9/23/2015 | | 5/19/2015 | | 5/19/2015 | | 5/19/2015 | | 5/19/2015 | |
| | | | | | | | | | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier |
| **Semivolatile Organic Compounds (SVOCs)** | | | | | | | | | | | | | | | | | | | | | | |
| 1,1-Biphenyl | µg/Kg[2] | NS | [3] | NS | | NS | | | NA | [4] | NA | | NA | | **860** | **J**[6][7] | NA | | NA | | NA | |
| 2-Methylnaphthalene | µg/Kg | NS | | NS | | NS | | | 7.6 | U | 190 | U[5] | NA | | **2,300** | **J** | 9,600 | U | 89,000 | U | 48,000 | U |
| Acenaphthene | µg/Kg | 20,000 | | 100,000 | | 500,000 | | | 7.6 | U | 190 | U | NA | | **13,000** | | **7,600** | **J** | **41,000** | **J** | 48,000 | U |
| Acenaphthylene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | | 7.6 | U | 190 | U | NA | | **470** | **J** | 9,600 | U | 89,000 | U | 48,000 | U |
| Anthracene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | | **5.9** | **J** | 190 | U | NA | | **32,000** | | **20,000** | | **120,000** | [9] | 48,000 | U |
| Benzaldehyde | µg/Kg | NS | | NS | | NS | | | **15** | **J** | 190 | U | NA | | 3,600 | U | 9,600 | U | 89,000 | U | 48,000 | U |
| Benzo(a)anthracene | µg/Kg | 1,000 | | 1,000 | | 5,600 | | | **8.3** | | **57** | **J** | NA | | **54,000** | | **42,000** | | **180,000** | | 48,000 | U |
| Benzo(a)pyrene | µg/Kg | 1,000 | | 1,000 | | 1,000 | | | **7.1** | **J** | **46** | **J** | NA | | **42,000** | | **33,000** | | **130,000** | | 48,000 | U |
| Benzo(b)fluoranthene | µg/Kg | 1,000 | | 1,000 | | 5,600 | | | **7.8** | | **63** | **J** | NA | | **55,000** | | **48,000** | | **180,000** | | 48,000 | U |
| Benzo(g,h,i)perylene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | | 7.6 | U | **82** | **J** | NA | | **25,000** | | **20,000** | | **70,000** | **J** | 48,000 | U |
| Benzo(K)fluoranthene | µg/Kg | 800 | | 3,900 | | 56,000 | | | **7.5** | **J** | **25** | **J** | NA | | **21,000** | | **18,000** | | **73,000** | **J** | 48,000 | U |
| Biphenyl (Diphenyl, 1,1'-Biphenyl) | µg/Kg | NS | | NS | | NS | | | 57 | U | 190 | U | NA | | **860** | **J** | 9,600 | U | 89,000 | U | 48,000 | U |
| Bis(2-ethyhexyl) Phthalate | µg/Kg | NS | | NS | | NS | | | **94** | **B**[11] | 190 | U | NA | | 3,600 | U | 9,600 | U | 89,000 | U | 48,000 | U |
| Carbazole | µg/Kg | NS | | NS | | NS | | | 57 | U | 190 | U | NA | | **17,000** | U | **8,800** | **J** | **49,000** | **J** | 48,000 | U |
| Chrysene | µg/Kg | 1,000 | | 3,900 | | 56,000 | | | **6.8** | **J** | **53** | **J** | NA | | **54,000** | | **43,000** | | **180,000** | | 48,000 | U |
| Dibenz(a,h)anthracene | µg/Kg | 330 | | 330 | | 560 | | | 7.6 | U | 190 | U | NA | | **9,400** | | **6,500** | **J** | **26,000** | **J** | 48,000 | U |
| Dibenzofuran | µg/Kg | 7,000 | | 59,000 | | 350,000 | | | 57 | U | 190 | U | NA | | **8,900** | | **3,900** | **J** | **32,000** | **J** | 48,000 | U |
| Di-n-Butyl Phthalate | µg/Kg | NS | | NS | | NS | | | **36** | **J** | 190 | U | NA | | 3,600 | U | 9,600 | U | 89,000 | U | 48,000 | U |
| Fluoranthene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | | **12** | | **120** | **J** | NA | | **120,000** | | **72,000** | | **490,000** | | 48,000 | U |
| Fluorene | µg/Kg | 30,000 | | 100,000 | | 500,000 | | | **4.2** | **J** | 190 | U | NA | | **15,000** | | **8,900** | **J** | **59,000** | **J** | 48,000 | U |
| Indeno(1,2,3-cd)pyrene | µg/Kg | 500 | | 500 | | 5,600 | | | 7.6 | U | **69** | **J** | NA | | **25,000** | | **18,000** | | **70,000** | **J** | 48,000 | U |
| Naphthalene | µg/Kg | 12,000 | | 100,000 | | 500,000 | | | 7.6 | U | 190 | U | NA | | **7,000** | | **2,200** | **J** | **24,000** | **J** | 48,000 | U |
| Phenanthrene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | | **9.0** | | **87** | **J** | NA | | **110,000** | | **76,000** | | **410,000** | | 48,000 | U |
| Pyrene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | | **8.6** | | **56** | **J** | NA | | **120,000** | | **77,000** | | **340,000** | | 48,000 | U |
| **Target Analyte List (TAL) Metals (Total)** | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | mg/Kg[12] | NS | | NS | | NS | | | NA | | **13,100** | | NA | | **7,370** | | **9,210** | | **9,230** | | **7,750** | |
| Antimony | mg/Kg | NS | | NS | | NS | | | NA | | 16.9 | U | NA | | 16.0 | U | 17.0 | U | 20.3 | U | 16.4 | U |
| Arsenic | mg/Kg | 13 | | 16 | | 16 | | | NA | | **4.3** | | NA | | **5.8** | | **8.2** | | **21.0** | | **3.7** | |
| Barium | mg/Kg | 350 | | 400 | | 400 | | | NA | | **75.9** | | NA | | **303** | | **727** | | **1550** | | **733** | |
| Beryllium | mg/Kg | 7.2 | | 72 | | 590 | | | NA | | **0.61** | | NA | | **0.32** | | **0.42** | | **0.46** | | **0.43** | |
| Cadmium | mg/Kg | 2.5 | | 4.3 | | 9.3 | | | NA | | 0.23 | U | NA | | **0.35** | | **0.91** | | **6.4** | | **4.3** | |
| Calcium | mg/Kg | NS | | NS | | NS | | | NA | | **38,400** | | NA | | **72,700** | | **67,400** | | **72,600** | | **43,100** | |
| Chromium | mg/Kg | 1 | [13] | 110 | [13] | 400 | [13] | | NA | | **17.4** | | NA | | **9.2** | | **20.0** | | **31.4** | | **33.9** | |
| Cobalt | mg/Kg | NS | | NS | | NS | | | NA | | **10.9** | | NA | | **3.6** | | **6.5** | | **7.1** | | **4.7** | |
| Copper | mg/Kg | 50 | | 270 | | 270 | | | NA | | **26.9** | | NA | | **26.0** | | **185** | | **37.5** | | **43.1** | |
| Iron | mg/Kg | NS | | NS | | NS | | | NA | | **19,600** | | NA | | **9,240** | | **12,400** | | **16,800** | | **15,400** | |
| Lead | mg/Kg | 63 | | 400 | | 1,000 | | | NA | | **21.7** | | NA | | **59.4** | | **405** | | **239** | | **571** | |
| Magnesium | mg/Kg | NS | | NS | | NS | | | NA | | **7,520** | | NA | | **24,400** | | **9,580** | | **15,700** | | **5,730** | |
| Manganese | mg/Kg | 1,600 | | 2,000 | | 10,000 | | | NA | | **611** | **B** | NA | | **426** | | **480** | | **585** | | **658** | |
| Nickel | mg/Kg | 30 | | 310 | | 310 | | | NA | | **48.2** | | NA | | **8.3** | | **19.2** | | **21.5** | | **16.6** | |
| Potassium | mg/Kg | NS | | NS | | NS | | | NA | | **2,830** | | NA | | **1,330** | | **1,350** | | **1,780** | | **1,240** | |
| Silver | mg/Kg | 2 | | 180 | | 1500 | | | NA | | 0.68 | U | NA | | 0.64 | U | 0.68 | U | 0.81 | U | 0.65 | U |
| Sodium | mg/Kg | NS | | NS | | NS | | | NA | | **193** | | NA | | **691** | | **598** | | **341** | | **325** | |
| Vanadium | mg/Kg | NS | | NS | | NS | | | NA | | **25.6** | | NA | | **15.6** | | **26.9** | | **23.4** | | **19.4** | |
| Zinc | mg/Kg | 109 | | 10,000 | | 10,000 | | | NA | | **44.4** | | NA | | **176** | | **404** | | **999** | | **808** | |
| Mercury | mg/Kg | 0.18 | | 0.81 | | 2.8 | | | NA | | 0.023 | U | NA | | **0.059** | **J** | **0.20** | **J** | **0.54** | **J** | **0.35** | **J** |
| **Toxicity Characteristic Leaching Procedure (TCLP) Metals** | | | | | | | | | | | | | | | | | | | | | | |
| Lead | mg/L[14] | NS | | NS | | NS | | | NA | | NA | | **2.38** | | NA | | NA | | NA | | NA | |

**Table 4**
**Confirmatory Samples in Western Commercial Area**
**Detections Only**

| Parameter | Units | Unrestricted Use Soil Cleanup Objectives[1] | | Restricted Use Soil Cleanup Objectives - Restricted Residential Standard[1] | | Restricted Use Soil Cleanup Objectives - Commercial Standard[1] | | Sample ID: / Sample Date: WC-TP7 5/19/2015 | | TE1-F2 10/19/2012 | | TE1-F3 8/19/2014 | | TE1-E3 11/1/2012 | | TE1-N 10/10/2012 | | TE1-S 10/10/2012 | | TE1-W 10/10/2012 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier | Result | Qualifier |
| **Semivolatile Organic Compounds (SVOCs)** | | | | | | | | | | | | | | | | | | | | | |
| 1,1-Biphenyl | µg/Kg[2] | NS | [3] | NS | | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |
| 2-Methylnaphthalene | µg/Kg | NS | | NS | | NS | | 9,100 | U | **4,400** | **J** | 8.5 | U | 230 | U | NA | | NA | | NA | |
| Acenaphthene | µg/Kg | 20,000 | | 100,000 | | 500,000 | | **2,800** | **J** | **24,000** | | 8.5 | U | **48** | **J** | **85** | | **74** | | **190** | |
| Acenaphthylene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | 9,100 | U | **4,900** | **J** | 8.5 | U | **78** | **J** | **66** | | **24** | | **70** | |
| Anthracene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | **11,000** | | **68,000** | | 8.5 | U | **180** | | **240** | | **140** | | **520** | |
| Benzaldehyde | µg/Kg | NS | | NS | | NS | | 9,100 | U | NA | | 130 | U | NA | | NA | | NA | | NA | |
| Benzo(a)anthracene | µg/Kg | 1,000 | | 1,000 | | 5,600 | | **21,000** | | **140,000** | | 8.5 | U | **450** | | **660** | | **540** | | **1,200** | |
| Benzo(a)pyrene | µg/Kg | 1,000 | | 1,000 | | 1,000 | | **17,000** | | **120,000** | | 8.5 | U | **380** | | **530** | | **480** | | **920** | |
| Benzo(b)fluoranthene | µg/Kg | 1,000 | | 1,000 | | 5,600 | | **21,000** | | **150,000** | | 8.5 | U | **550** | | **680** | | **630** | | **1,200** | |
| Benzo(g,h,i)perylene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | **11,000** | | **65,000** | | 8.5 | U | **220** | | **290** | | **290** | | **470** | |
| Benzo(K)fluoranthene | µg/Kg | 800 | | 3,900 | | 56,000 | | **10,000** | | **54,000** | | 8.5 | U | **220** | | **270** | | **220** | | **550** | |
| Biphenyl (Diphenyl, 1,1'-Biphenyl) | µg/Kg | NS | | NS | | NS | | 9,100 | U | NA | | 64 | U | NA | | NA | | NA | | NA | |
| Bis(2-ethyhexyl) Phthalate | µg/Kg | NS | | NS | | NS | | 9,100 | U | NA | | 89 | U | NA | | NA | | NA | | NA | |
| Carbazole | µg/Kg | NS | | NS | | NS | | **2,200** | **J** | NA | | 64 | U | NA | | NA | | NA | | NA | |
| Chrysene | µg/Kg | 1,000 | | 3,900 | | 56,000 | | **22,000** | | **130,000** | | 8.5 | U | **500** | | **660** | | **590** | | **1,100** | |
| Dibenz(a,h)anthracene | µg/Kg | 330 | | 330 | | 560 | | 9,100 | U | **19,000** | | 8.5 | U | **58** | **J** | **83** | | **78** | | **130** | |
| Dibenzofuran | µg/Kg | 7,000 | | 59,000 | | 350,000 | | **1,700** | **J** | NA | | 64 | U | NA | | NA | | NA | | NA | |
| Di-n-Butyl Phthalate | µg/Kg | NS | | NS | | NS | | 9,100 | U | NA | | 89 | U | NA | | NA | | NA | | NA | |
| Fluoranthene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | **50,000** | | **320,000** | | 8.5 | U | **1,200** | | **1,400** | | **1,100** | | **2,600** | |
| Fluorene | µg/Kg | 30,000 | | 100,000 | | 500,000 | | **3,500** | **J** | **28,000** | | 8.5 | U | **71** | **J** | **110** | | **56** | | **200** | |
| Indeno(1,2,3-cd)pyrene | µg/Kg | 500 | | 500 | | 5,600 | | **11,000** | | **76,000** | | 8.5 | U | **270** | | **260** | | **260** | | **460** | |
| Naphthalene | µg/Kg | 12,000 | | 100,000 | | 500,000 | | 9,100 | U | **9,300** | | 8.5 | U | **68** | **J** | **27** | | **34** | | **51** | |
| Phenanthrene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | **33,000** | | **250,000** | | 8.5 | U | **1,100** | | **910** | | **680** | | **2,000** | |
| Pyrene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | **42,000** | | **240,000** | | 8.5 | U | **920** | | **1,000** | | **930** | | **2,000** | |
| **Target Analyte List (TAL) Metals (Total)** | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | mg/Kg[12] | NS | | NS | | NS | | **5,740** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Antimony | mg/Kg | NS | | NS | | NS | | 16.3 | U | NA | | NA | | NA | | NA | | NA | | NA | |
| Arsenic | mg/Kg | 13 | | 16 | | 16 | | **4.7** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Barium | mg/Kg | 350 | | 400 | | 400 | | **88.1** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Beryllium | mg/Kg | 7.2 | | 72 | | 590 | | **0.33** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Cadmium | mg/Kg | 2.5 | | 4.3 | | 9.3 | | **3.4** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Calcium | mg/Kg | NS | | NS | | NS | | **34,500** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Chromium | mg/Kg | 1 | [13] | 110 | [13] | 400 | [13] | **41.8** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Cobalt | mg/Kg | NS | | NS | | NS | | **3.1** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Copper | mg/Kg | 50 | | 270 | | 270 | | **39.0** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Iron | mg/Kg | NS | | NS | | NS | | **17,200** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Lead | mg/Kg | 63 | | 400 | | 1,000 | | **297** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Magnesium | mg/Kg | NS | | NS | | NS | | **3,080** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Manganese | mg/Kg | 1,600 | | 2,000 | | 10,000 | | **713** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Nickel | mg/Kg | 30 | | 310 | | 310 | | **14.4** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Potassium | mg/Kg | NS | | NS | | NS | | **683** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Silver | mg/Kg | 2 | | 180 | | 1500 | | **0.69** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Sodium | mg/Kg | NS | | NS | | NS | | **266** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Vanadium | mg/Kg | NS | | NS | | NS | | **14.4** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Zinc | mg/Kg | 109 | | 10,000 | | 10,000 | | **711** | | NA | | NA | | NA | | NA | | NA | | NA | |
| Mercury | mg/Kg | 0.18 | | 0.81 | | 2.8 | | **0.11** | **J** | NA | | NA | | NA | | NA | | NA | | NA | |
| **Toxicity Characteristic Leaching Procedure (TCLP) Metals** | | | | | | | | | | | | | | | | | | | | | |
| Lead | mg/L[14] | NS | | NS | | NS | | NA | | NA | | NA | | NA | | NA | | NA | | NA | |

**Table 4**
**Confirmatory Samples in Western Commercial Area**
**Detections Only**

| Parameter | Units | Unrestricted Use Soil Cleanup Objectives[1] | | Restricted Use Soil Cleanup Objectives - Restricted Residential Standard[1] | | Restricted Use Soil Cleanup Objectives - Commercial Standard[1] | | Sample ID: T2-WC-CB1 Sample Date: 5/19/2015 Result | Qualifier | Sample ID: T2-WC-CB2 Sample Date: 5/19/2015 Result | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Semivolatile Organic Compounds (SVOCs)** | | | | | | | | | | | |
| 1,1-Biphenyl | µg/Kg[2] | NS | [3] | NS | | NS | | 1,400 | U | 29.0 | U |
| 2-Methylnaphthalene | µg/Kg | NS | | NS | | NS | | 9,300 | U[5] | 190 | U |
| Acenaphthene | µg/Kg | 20,000 | | 100,000 | | 500,000 | | 9,300 | U | 190 | U |
| Acenaphthylene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | 9,300 | U | 190 | U |
| Anthracene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | 9,300 | U | 190 | U |
| Benzaldehyde | µg/Kg | NS | | NS | | NS | | 9,300 | U | 190 | U |
| Benzo(a)anthracene | µg/Kg | 1,000 | | 1,000 | | 5,600 | | **1,100** | **J**[6][7][8] | **70** | **J** |
| Benzo(a)pyrene | µg/Kg | 1,000 | | 1,000 | | 1,000 | | 9,300 | U | **54** | **J** |
| Benzo(b)fluoranthene | µg/Kg | 1,000 | | 1,000 | | 5,600 | | 9,300 | U | **73** | **J F2**[10] |
| Benzo(g,h,i)perylene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | 9,300 | U | **31** | **J F2** |
| Benzo(K)fluoranthene | µg/Kg | 800 | | 3,900 | | 56,000 | | 9,300 | U | **33** | **J F2** |
| Biphenyl (Diphenyl, 1,1'-Biphenyl) | µg/Kg | NS | | NS | | NS | | 9,300 | U | 190 | U |
| Bis(2-ethyhexyl) Phthalate | µg/Kg | NS | | NS | | NS | | 9,300 | U | 190 | U |
| Carbazole | µg/Kg | NS | | NS | | NS | | 9,300 | U | 190 | U |
| Chrysene | µg/Kg | 1,000 | | 3,900 | | 56,000 | | 9,300 | U | **61** | **J** |
| Dibenz(a,h)anthracene | µg/Kg | 330 | | 330 | | 560 | | 9,300 | U | 190 | U |
| Dibenzofuran | µg/Kg | 7,000 | | 59,000 | | 350,000 | | 9,300 | U | 190 | U |
| Di-n-Butyl Phthalate | µg/Kg | NS | | NS | | NS | | 9,300 | U | 190 | U |
| Fluoranthene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | **1,800** | **J** | **110** | **J** |
| Fluorene | µg/Kg | 30,000 | | 100,000 | | 500,000 | | 9,300 | U | 190 | U |
| Indeno(1,2,3-cd)pyrene | µg/Kg | 500 | | 500 | | 5,600 | | 9,300 | U | **28** | **J F2** |
| Naphthalene | µg/Kg | 12,000 | | 100,000 | | 500,000 | | 9,300 | U | 190 | U |
| Phenanthrene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | **1,800** | **J** | **94** | **J** |
| Pyrene | µg/Kg | 100,000 | | 100,000 | | 500,000 | | **2,300** | **J** | **140** | **J** |
| **Target Analyte List (TAL) Metals (Total)** | | | | | | | | | | | |
| Aluminum | mg/Kg[12] | NS | | NS | | NS | | **10,300** | | **14,700** | |
| Antimony | mg/Kg | NS | | NS | | NS | | 16.6 | U | 17.5 | U |
| Arsenic | mg/Kg | 13 | | 16 | | 16 | | **3.9** | | **4.8** | |
| Barium | mg/Kg | 350 | | 400 | | 400 | | **62.4** | | **87.2** | |
| Beryllium | mg/Kg | 7.2 | | 72 | | 590 | | **0.47** | | **0.66** | |
| Cadmium | mg/Kg | 2.5 | | 4.3 | | 9.3 | | 0.22 | U | 0.23 | U |
| Calcium | mg/Kg | NS | | NS | | NS | | **41,800** | | **16,800** | |
| Chromium | mg/Kg | 1 | [13] | 110 | [13] | 400 | [13] | **14.2** | | **19.5** | |
| Cobalt | mg/Kg | NS | | NS | | NS | | **8.9** | | **11.6** | |
| Copper | mg/Kg | 50 | | 270 | | 270 | | **15.4** | | **18.9** | |
| Iron | mg/Kg | NS | | NS | | NS | | **16,300** | | **22,000** | |
| Lead | mg/Kg | 63 | | 400 | | 1,000 | | **11.3** | | **11.8** | |
| Magnesium | mg/Kg | NS | | NS | | NS | | **7,210** | | **6,070** | |
| Manganese | mg/Kg | 1,600 | | 2,000 | | 10,000 | | **605** | | **699** | |
| Nickel | mg/Kg | 30 | | 310 | | 310 | | **18.1** | | **25.3** | |
| Potassium | mg/Kg | NS | | NS | | NS | | **1,890** | | **2,390** | |
| Silver | mg/Kg | 2 | | 180 | | 1500 | | 0.66 | U | 0.70 | U |
| Sodium | mg/Kg | NS | | NS | | NS | | **285** | | **207** | |
| Vanadium | mg/Kg | NS | | NS | | NS | | **18.6** | | **24.5** | |
| Zinc | mg/Kg | 109 | | 10,000 | | 10,000 | | **42.9** | | **48.9** | |
| Mercury | mg/Kg | 0.18 | | 0.81 | | 2.8 | | 0.022 | UJ | **0.049** | **J** |
| **Toxicity Characteristic Leaching Procedure (TCLP) Metals** | | | | | | | | | | | |
| Lead | mg/L[14] | NS | | NS | | NS | | NA | | NA | |

***Notes:***

(1)-Standards taken from New York Code of Rules and Regulations (NYCRR) Part 375
(2)-"µg/Kg"-micrograms per kilogram.
(3)-"NS" indicates that no Standard is listed
(4)-"NA"-indicates the compound was not analyzed
(5)-"U" indicates that compound was not detected above laboratory reporting limit.
(6)-**Bold**-indicates laboratory detection.
(7)-"J"-indicates that compound was detected at a value less than laboratory reporting limit; as such, the concentration is estimated.
(8)Purple shading indicates concentration exceeds the unrestricted SCO.
(9)-Green Shading indicates that concentration exceeds the Restricted Residential SCO.
(10)-Yellow shading indicates concentration exceeds the commercial SCO.
(11)-"B" indicates that compound was also detected in the associated laboratory blank.
(12)-"mg/Kg"-milligrams per kilogram.
(13)- The standard used for unspeciated (total) chromium is that for hexavalent chromium.
(14)-"mg/L"-milligrams per liter.
(15)-"F1" indicates MS and/or MSD Recovery is outside acceptance limits

## Table 5: Schedule of Monitoring/Inspection Reports

| Task/Report | Reporting Frequency* |
|---|---|
| Inspection Report | Annually, results to be included within the Periodic Review Report |
| Periodic Review Report | Annually, or as otherwise determined by the Department |

* The frequency of events will be conducted as specified until otherwise approved by the NYSDEC.