NYSDEC SITE NUMBER: 9-15-151 318 URBAN STREET, BUFFALO, NEW YORK

# SITE MANAGEMENT PLAN

MAY 25, 2012

Prepared By:





#### LETTER OF TRANSMITTAL

To: Div. of Remediation, NYSDEC – Region 9 270 Michigan Avenue Buffalo, NY 14203 Date: May 29, 2012 Via: FedEx

Attention: Mr. Eugene Melnyk

We are enclosing two sets of paper replacement pages for the Site Management Plan (SMP) for the 318 Urban Street site. These replacement pages reflect the changes made to the SMP to address the concerns of the New York State Department of Health (NYSDOH). Also enclosed is a CD with the revised electronic submittal. A draft of the revised SMP was approved by the NYSDEC via an e-mail on May 17, 2012 and by NYSDOH on May 18, 2012.

These are:

(As checked below)

ApprovedFor your approvalNot approvedFor review and commentNo exception observedPer your requestMake corrections observedFor use on jobRevise and resubmitXReturn corrected copies

Remarks: Please note that the copy of the Site Management Plan being provided to the current property owner, Mr. Mike Sweeney, under separate cover contains the updated pages.

If enclosures received are not listed above, please notify at once.

Very truly yours, URS CORPORATION 3 Corporate Drive, Suite 203 Clifton Park, New York 12065

By: te n

Copy: Ms. Dawn Varacchi-Ives, GE

# **318 Urban Street Site** ERIE COUNTY, NEW YORK

# Site Management Plan

NYSDEC Site Number: 9-15-151

Prepared for: General Electric Company 1 River Road Schenectady, New York 12345

**Prepared by:** 

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

Revision #	Submitted Date	Summary of Revision	DEC Approval Date
Initial	March 29, 2012	Initial Plan	
1	May 25,2012	Added vapor intrusion investigation requirement to address NYSDOH concerns.	

### MAY 2012

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# SITE MANAGEMENT PLAN

# 1.0 INTRODUCTION AND DESCRIPTION OF REMEDIAL PROGRAM

#### **1.1 INTRODUCTION**

This document is required as an element of the remedial program at the 318 Urban Street Site (hereinafter referred to as the "Site") under the New York State (NYS) Inactive Hazardous Waste Disposal Site Remedial Program administered by New York State Department of Environmental Conservation (NYSDEC). The site was remediated in accordance with Order on Consent Index # B9-0388-91-09, Site # 915151, which was executed on September 9, 1996.

#### 1.1.1 General

General Electric Company (GE) entered into an Order on Consent with the NYSDEC to remediate an approximately 2.5 acre property located in the City of Buffalo in Erie County, New York. This Order on Consent required the Remedial Party, GE, to investigate and remediate contaminated media at the site. A figure showing the site location and boundaries of this approximately 2.5-acre site is provided in Figure 1. The boundaries of the site are depicted on a site figure that is part of the Environmental Notice. Additional property boundary information is contained within the existing property deed (Appendix A).

The remedial work undertaken at the site was performed in substantial compliance with NYSDEC-approved work plans and modifications. The cleanup levels achieved are generally consistent with industrial use. After completion of the remedial work described in the Remedial Action Work Plan, some contamination was left in the subsurface at this site, which is hereafter referred to as "residual impacts." Residually

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impacted material at the site contains concentrations of contaminants above unrestricted use criteria and less than industrial use criteria with the exception of small area where further remedial actions could not be undertaken without undermining the building foundation. This Site Management Plan (SMP) was prepared to manage these residual impacts at the site until the Environmental Notice is extinguished in accordance with ECL Article 71, Title 36. All reports associated with the site can be viewed by contacting the NYSDEC or its successor agency managing environmental issues in New York State.

This SMP was prepared by URS Corporation-New York (URS), on behalf of GE, in accordance with the requirements in NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation, dated May 2010, and the guidelines provided by NYSDEC. This SMP addresses the means for implementing the Institutional Controls (ICs) and Engineering Controls (ECs) that are required by the Environmental Notice for the site.

#### 1.1.2 Purpose

The site contains residually impacted soil and concrete between the state industrial and residential cleanup levels left after completion of the remedial action. The site cleanup levels allow for industrial use of the site. Engineering Controls have been incorporated into the site remedy to control exposure to residual impacts during the use of the site to ensure protection of public health and the environment. An Environmental Notice, which was prepared by the NYSDEC and recorded with the Erie County Clerk, will require compliance with this SMP and all ECs and ICs placed on the site. The ICs place restrictions on site use, and mandate maintenance, monitoring, and reporting measures for all ECs and ICs. This SMP specifies the methods necessary to ensure compliance with all ECs and ICs required by the Environmental Notice for residually impacted materials that remain at the site. This plan has been approved by the NYSDEC, and compliance of the property owner, and the owner's successors and assigns is required by the NYSDEC. This SMP may only be revised with the approval of the NYSDEC.

This SMP provides a detailed description of all procedures required to manage residually impacted materials remaining at the site after completion of the Remedial Action, including: (1) management of all Engineering and Institutional Controls; and (2) performance of periodic inspections, certification of results, and submittal of Periodic Review Reports.

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To address these needs, this SMP includes two plans: (1) an Engineering and Institutional Control Plan for implementation and management of EC/ICs; and (2) a Monitoring Plan for implementation of site monitoring.

This plan also includes a description of Periodic Review Reports for the periodic submittal of data, information, recommendations, and certifications to NYSDEC.

It is important to note that:

- This SMP details the site-specific implementation procedures that are required by the Environmental Notice; and
- Failure to comply with this SMP is also a violation of Environmental Conservation Law, 6NYCRR Part 375, and thereby subject to applicable penalties.

#### 1.1.3 Revisions

Revisions to this plan will be proposed in writing to the NYSDEC's project manager. In accordance with the Environmental Notice 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.

#### **1.2 SITE BACKGROUND**

#### **1.2.1 Site Location and Description**

The site is located in the City of Buffalo, County of Erie, New York and is identified by tax parcel number 101.46-3-1 on the Erie County Tax Map. The site is an approximately 2.25-acre area bounded by residential homes along French Street to the north, Urban Street to the south, apartments and a playground to the east, and railroad tracks to the west (see Figure 1). The boundaries of the site are more fully detailed in the Site Plan and existing property deed contained in Appendix A, with the Environmental Notice.

The site is in a developed area of relatively flat land in an urban section of Buffalo. The approximately 2.25 acre property contains a brick building. The surrounding properties consist of both residential and commercial land. As shown in Figure 1, more than half the site is either paved (asphalt cover) or covered by the building. The remainder of the site is covered with a 12 inch soil cover stabilized with turf grass.

The surface soils consist primarily of poorly drained silts and clays. The depth to groundwater and bedrock has not been determined. Neither groundwater nor bedrock were encountered in borings advanced 32 feet below ground surface during the Remedial Investigation. Based on the USGS topographic map, there are no surface water bodies within a one-mile radius of the site. The nearest surface water body shown on the map is Scajaquada Creek, which is one and one-half miles northwest of the site. The creek flows northwest, away from the site, and ultimately discharges into Lake Erie. However, Scajaquada Creek is reportedly contained within a tunnel approximately 2,000 feet north of the site.

Drinking water is supplied to the surrounding neighborhood by the City of Buffalo, which pulls surface water from Lake Erie. There are no known drinking water wells near the site.

Storm water runoff enters on-site catch basins and is directed through the combined storm and sanitary sewer to the public sewer on French Street. During normal flow conditions, the flow is discharged to the publicly-owned treatment works (POTW) on Squaw Island. During heavy storms, the storm water overflow discharges directly to Scajaquada Creek.

#### **1.2.2 Site History**

GE owned and operated the site from 1921 to 1968. GE used the building as a service shop to repair equipment and to machine parts. A transformer pit (see Figure 1) was used for operations including draining oil from transformers.

Pyramid Steel Corporation has owned the site since 1985. Prior to GE's remediation, Pyramid Steel Corporation used the building as a machine shop and warehouse.

In July 1990, The Environmental Consulting Company, Inc. conducted a Phase I Environmental Site Assessment (ESA) for a prospective purchaser of the property. Soil and floor samples were collected during the ESA. The analytical results indicated that

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there were polychlorinated biphenyls (PCBs) in both the soil outside the building and the wood block floor inside the building.

In response to the 1990 analytical data, GE performed a series of investigations at and near the property. The investigations confirmed that there were PCBs throughout the interior of the building and in both on-site and off-site soil outside the building. Specific information about the pre-remediation conditions at the 318 Urban Street property is documented in these three reports:

- *Phase I Environmental Site Assessment* prepared by The Environmental Consulting Company, Inc and dated July 19, 1990;
- *Remedial Investigation Report 318 Urban Street Site* prepared by ERM-Northeast and dated November 19, 1992; and
- *Supplemental Remedial Investigation* by ERM-Northeast and dated November 1993.

There have been two Orders on Consent between GE and NYSDEC for the Urban Street site. The NYSDEC also issued a Record of Decision (ROD) for this site.

#### 1992 Order on Consent

GE signed the initial Order on Consent in June 1992. In the 1992 Order, GE agreed to implement Interim Remedial Measures (IRMs) to remove PCB-contaminated surface soil from neighboring properties and PCB-contaminated sediment from the onsite sewer lines and the Buffalo Sewer Authority's (BSA's) manhole nearest the site.

#### 1995 Record of Decision

In March 1995, the NYSDEC issued a ROD for the site requiring remediation of on- and off-site sewers, decontamination of the building, and excavation and off-site disposal of PCB-containing soil. The remediation goals established in the ROD for PCBs in the soil were 1 milligram per kilogram (mg/kg) from zero to one foot in depth and 10 mg/kg deeper than one foot. The ROD also required that the on-site and off-site sewers be cleaned and inspected. Additional remedial goals were to be developed during

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the design phase. ERM-Northeast prepared the *1995 Work Plan* for GE in response to the ROD.

#### 1996 Order on Consent

In September 1996, GE signed the second Order on Consent with the NYSDEC. This second Order required that GE implement the scope of work that was outlined in ERM-Northeast's *1995 Work Plan*.

In July 1996, GE and Pyramid Steel entered into an access agreement for the site. In the agreement, Pyramid Steel granted GE, its employees, agents, consultants, and contractors the right to enter the subject property and building to do all things necessary and convenient for the purpose of accomplishing the goals of the 1996 Order on Consent.

GE conducted two phases of remediation under the 1996 Order. The first phase, which was conducted in accordance with the *1995 Work Plan*, included roof cleaning, on-site sewer cleaning and replacement, and the demolition of a steel storage shed. ERM-Northeast documented this work in their 1997 *Phase I Certification Report*.

In 1997, GE retained Dames & Moore as the environmental consultant for the second phase of remediation. It should be noted that URS acquired Dames & Moore in 1999. Subsequent work has been conducted as URS. The Phase 2 work consisted of onsite soil removal and building and equipment decontamination and restoration. The second phase of remediation was conducted in accordance with the *1995 Work Plan*, the *Project Manual*, which ERM-Northeast prepared for the second phase of remediation, and Dames & Moore's *Confirmation Sampling Plan* and *1998 Work Plan*.

#### **1.4 SUMMARY OF REMEDIAL ACTIONS**

The site was remediated in two phases. According to ERM-Northeast, who provided oversight of the Phase 1 work, the remediation was completed in accordance with the NYSDEC-approved Remedial Design and other Contract Documents. The Contract Documents consisted of:

- Original Project Manual (July 26, 1996);
- Addendum No. 1 to the Project Manual (August 9, 1996);

- Addendum No. 2 to the Project Manual (August 20, 1996);
- Addendum No.3 to the Project Manual (August 30, 1996);
- A Work Plan (Sevenson Environmental Services [SES]); and
- A Site Safety, Health, and Emergency Response Plan (SES).

Dames & Moore/URS provided oversight of the Phase 2 work. The work was performed in substantial accordance with the applicable provisions of the NYSDEC-approved:

- Project Manual, Building Decontamination and Soil Remediation, 318 Urban Street, Buffalo, New York (ERM-Northeast, March 15, 1997);
- Confirmation Sampling Plan, Building Decontamination and Soil Remediation, 318 Urban Street, Buffalo, New York (Dames & Moore, June 4, 1997); and
- Work Plan for Final Building Decontamination and Site Restoration General Electric Company, 318 Urban Street, Buffalo, New York (Dames & Moore, July 20, 1998).

The remediation goals for the project are summarized below.

Remediation	Goals
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Media	Remediation Goal
Impervious non-porous surfaces, including machinery and equipment, windows, painted walls, and ceiling, and the Johnson Heater Unit	10 microgram per 100 square centimeters (μg/100 cm <sup>2</sup> ) PCBs
Impervious porous surfaces, including concrete floors and the walls and floor of the transformer pit	10 $\mu$ g/100 cm <sup>2</sup> PCBs (wall wipe samples) 50 mg/kg PCBs (concrete chip samples) 100 $\mu$ g/100 cm <sup>2</sup> PCBs and encapsulation (concrete floor wipe samples)
Soil from 0 to 1 foot in depth	1 mg/kg PCBs
Soil at depths greater than 1 foot	10 mg/kg PCBs
Soil along the foundation of the building that contains more than 10 mg/kg PCBs	Covered with an HDPE barrier and the area backfilled with clean soil
Soil near the former fuel oil UST	NYSDEC STARS Memo #1 guidance levels

Media	Remediation Goal
Sewers	Cleaned and sediment removed

While not a remedial goal, the BSA's slug discharge limit of 2 microgram per liter ( $\mu/L$ ) for PCBs was initially used as a comparison value for the sewer monitoring results. Subsequently, the BSA's sewer discharge limit of 0.3  $\mu/L$  for PCBs was used as a comparison value.

In addition to the active remedial steps undertaken at the site (decontamination of the building, soil removal and construction of cover systems), additional provisions have been implemented because residually impacted soils remain at the site. These provisions include an Environmental Notice to limit land use and protect the Engineering Controls, and the creation of this Site Management Plan for the long term management of residually impacted soils.

#### 1.4.1 Removal of Contaminated Materials from the Site

GE conducted the remediation in two phases. The first phase, which was documented in ERM-Northeast's report, entitled *Final Engineering Report and Certification, Roof Decontamination, Roof Drain, and Floor Drain Cleaning; On-site Sewer Replacement, and Off-site Sewer Cleaning Project, 318 Urban Street Site, Buffalo, New York*, dated October 1997, included:

- Decontamination and restoration of the 22,250 square foot roof of the main building;
- Decontamination of roof drains and floor drains of the main building;
- Demolition and removal of an on-site metal shed;
- Removal and replacement of 345 linear feet of on-site sewer lines, five manholes, and two catch basins;
- Removal of a water meter pit;
- Abandonment of 275 linear feet of on-site sewer lines;
- Abandonment of 300 linear feet of an on-site fire protection water main;
- Cleaning of BSA sewer lines along French Street, Moselle Street, East Ferry Street, and the railroad right of way between Urban Street and East Ferry Street;
- Excavation of 440 cubic yards of on-site soil from an on-site trench. A portion of this soil was used as fill material on-site; and
- Excavation and off-site disposal of 530 cubic yards of soil from an off-site trench and 25 cubic yards of soil from one hot spot, which contained elevated concentrations of PCBs.

The second phase of remediation began in May 1997 and was substantially completed by December 1999. The final landscaping was completed by the property owner in 2000 and the sewer work was completed in 2007. The second phase of remediation, which is documented in URS' report entitled *Final Construction Certification Report* included:

- Cleaning and removal of equipment and machines and off-site disposal of approximately 130 cubic yards of miscellaneous building debris;
- Demolition and disposal of interior and exterior portions of the main building, totaling approximately 1,700 cubic yards;
- Removal and off-site disposal of approximately 100 cubic yards of wood blocks from the floor;
- Removal and off-site disposal of approximately 940 cubic yards of pre-existing concrete floor;
- Cleaning of the remaining floors in the building;
- Replacement of the building's concrete floor, which measured approximately 18,000 square feet;
- Pressure washing and painting of more than 26,000 square feet of walls, ceiling, and trusses within the building;
- Excavation and off-site disposal of approximately 7,000 tons (4,700 cubic yards) of soil from the site;
- Asphalt paving of more than 31,000 square feet of the parking lots adjacent to the west, north, and east sides of the building; and
- Cleaning and re-cleaning of more than 5,800 linear feet of on- and off-site sewers, followed by a two-year monitoring program (1998-1999) and subsequent sampling (2000 and 2007) to evaluate the PCB concentrations in the water and sediments.

GE was not able to clean a 600-foot section of the Belt Line sewer during the second phase of the remediation because of a root mass that obstructed the sewer. However, the BSA removed the root mass in 2004. The results of additional water samples collected from the sewers in 2007, which were below the BSA sewer discharge limit of 0.3  $\mu$ g/L used for comparison, confirm that the sewers no longer present a threat to the environment. The results of additional sediment samples collected from the sewers in 2007 were below 1 mg/kg, which was used for comparison and generally considered to be protective of human health and the environment.

#### **1.4.2 Site-Related Treatment Systems**

No long-term treatment systems were installed as part of the site remedy.

#### **1.4.3 Residual Impacts**

Remedial actions at the site were performed in accordance with the remedial work plans and subsequent NYSDEC-approved modifications. The cleanup goals were achieved with the exception of an area along the south property boundary where soil with one semi-volatile organic compound (SVOC), naphthalene, was present in the sidewall sample from the former underground storage tank excavation at a concentration greater than STARS criteria. Further excavation could not be undertaken in this area because of the proximity of the excavation to the adjacent Urban Street. The remedial work performed at the site generally achieved levels comparable with the current cleanup standards for industrial use.

A site management program was developed cooperatively between GE and the NYSDEC. The program has been implemented at the site in order to prevent inadvertent disruption and possible release of subsurface soil with residual concentrations of PCBs. The site management program has been incorporated into this *Site Management Plan*, and includes:

- A description of the Engineering controls and of the areas and media with residual or trace PCB-impacts;
- An Excavation Plan; and
- An Environmental Notice.

Contaminants remaining at the site include soil with residual concentrations of PCBs underneath a cover layer throughout the property and a limited area with soils containing volatile organic compounds (VOCs). Specifically the remaining impacts include:

- 1. <u>Exterior Areas:</u> a 12 inch cover layer, comprised of soil and/or asphalt depending on the specific location, over soils containing PCBs at levels above 1 mg/kg and less than or equal to 10 mg/kg.
- 2. <u>Exterior Area, adjacent to southern wall of the building:</u> a geotextile fabric and 12 or more inches of soil cover over soils containing VOCs above

unrestricted use values in a small area 50 feet long and 2 feet wide near the building foundation.

3. <u>Main Building Area:</u> reinforced concrete flooring over soils containing PCBs at levels above 1 mg/kg and less than or equal to 10 mg/kg, and reinforced concrete associated with a former transformer pit at a depth of 4 to 10 feet below the building containing PCBs at levels above 1 mg/kg and less than or equal to 10 mg/kg.

Each of these areas and the applicable cover types are shown on Figure 1.

Specific information regarding residual contamination at the site can be found in the *Final Construction Certification Report* prepared by URS Corporation.

# 2.0 ENGINEERING AND INSTITUTIONAL CONTROL PLAN

#### **2.1 INTRODUCTION**

#### 2.1.1 General

Since soil with residual impacts exists beneath the site, Engineering Controls and Institutional Controls (EC/ICs) are required to protect human health and the environment. This Engineering and Institutional Control Plan describes the procedures for the implementation and management of all EC/ICs at the site. The EC/IC Plan is one component of the SMP and is subject to revision by NYSDEC based on discussions with the property owner.

#### 2.1.2 Purpose

This plan provides:

- A description of all EC/ICs on the site;
- The basic implementation and intended role of each EC/IC;
- A description of the key components of the ICs set forth in the Environmental Notice;
- A description of the features to be evaluated during each required inspection and periodic review;
- A description of plans and procedures to be followed for implementation of EC/ICs, such as the implementation of the Excavation Work Plan for the proper handling of residually impacted materials 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 EC/ICs required by the site remedy, as determined by the NYSDEC and discussed with the property owner and incorporated into a revised plan.

#### 2.2 ENGINEERING CONTROLS

#### 2.2.1 Cover Systems

Exposure to residually impacted soil/fill at the site is prevented by a cover system placed over the site. This cover system is comprised of a minimum of 12 inches of clean soil and/or asphalt pavement, dependent on the location, and the concrete building slab. The Excavation Work Plan that appears in Appendix B outlines the procedures required to be implemented in the event the cover system is breached, penetrated or temporarily removed, and any underlying residually impacted materials are disturbed. The Excavation Work Plan is intended to provide procedures for small projects that disturb up to approximately 20 cubic yards of soil and can be completed in a few days. A more extensive and project-specific Excavation Work Plan will need to be prepared and submitted to NYSDEC for approval for larger and more complicated projects. Procedures for the inspection and maintenance of this cover are provided in the Monitoring Plan included in Section 3 of this SMP. The Monitoring Plan also addresses severe condition inspections in the event that a severe condition, which may affect controls at the site, occurs.

#### 2.2.2 Access Controls

Disruption of the cover systems is prevented by controlled access to the site. Access to the property is controlled by six-foot high chain link fence and lockable gates. Procedures for the inspection and maintenance of the fence and gates are provided in the Monitoring Plan included in Section 3 of this SMP.

#### **2.3 INSTITUTIONAL CONTROLS**

A series of Institutional Controls is required by the NYSDEC ROD to: (1) maintain and monitor Engineering Control systems; (2) prevent future exposure to residually impacted materials by controlling disturbances of the subsurface; and, (3) limit the use and development of the site to industrial, manufacturing, and all ancillary or related uses only. Adherence to these Institutional Controls on the site is required by the Environmental Notice and will be implemented under this Site Management Plan. These Institutional Controls are:

- Compliance with the Environmental Notice and this SMP by the property owner and the owner's successors and assigns;
- All Engineering Controls must be maintained as specified in this SMP;
- All Engineering Controls on the Controlled Property must be inspected at a frequency and in a manner defined in the SMP; and
- Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in this SMP.

Institutional Controls identified in the Environmental Notice may not be discontinued without an amendment to or extinguishment of the Environmental Notice.

The site has a series of Institutional Controls in the form of site restrictions. Adherence to these Institutional Controls is required by the Environmental Notice. Site restrictions that apply to the Controlled Property are:

- The property may only be used for industrial, manufacturing, and all ancillary or related uses provided that the long-term Engineering and Institutional Controls included in this SMP are employed.
- The property may not be used for a higher level of use, such as unrestricted, restricted residential, or commercial use without additional remediation and amendment of the Environmental Notice, as approved by the NYSDEC;
- All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with this SMP;
- The use of the groundwater underlying the property is prohibited without treatment rendering it safe for intended use;
- Vegetable gardens and farming on the property are prohibited; and
- The site owner 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. NYSDEC retains the right to access such Controlled Property at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted with the Periodic Review Report (Section 5) every two years and will be certified by a Professional Engineer.

#### 2.3.1 Excavation Work Plan

The site has been remediated for industrial, manufacturing, and all ancillary or related uses. Any future intrusive work that will penetrate the cover system, or encounter or disturb the residually impacted materials, including any modifications or repairs to the existing cover system, will be performed in compliance with a NYSDEC-approved Excavation Work Plan (EWP). An EWP for small projects is attached as Appendix B to 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) and Community Air Monitoring Plan (CAMP) prepared for the site. A sample HASP is attached as Appendix C to this SMP that is in current compliance with DER-10, and 29 CFR 1910, 29 CFR 1926, and all other applicable Federal, State and local regulations. Based on future changes to State and federal health and safety requirements, and specific methods employed by future contractors, the HASP and CAMP will be updated and resubmitted with the notification provided in Section B-1 of the EWP. Any intrusive construction work will be performed in compliance with a NYSDEC-approved EWP, HASP and CAMP, and will be included in the periodic inspection and certification reports submitted under the Site Management Reporting Plan (See Section 5).

The site owner and parties performing this work, are completely responsible for the safe performance of all intrusive work, the structural integrity of excavations, proper disposal of excavation de-water, control of runoff from open excavations into residually impacted materials, and for structures that may be affected by excavations (such as building foundations and bridge footings). The site owner will ensure that site development activities will not interfere with, or otherwise impair or compromise, the engineering controls described in this SMP.

#### **2.3.2 Soil Vapor Intrusion Evaluation**

Soil vapor intrusion (SVI) is not expected to be an issue at this site because VOC impacts at the site were found to be in limited areas, such as south of the building where underground storage tanks were historically present and west of the former shed. Each of these areas were remediated to the extent practicable. Soil with minor VOC impacts was left in place south of the building (along the building foundation and on the east side of the former tank pit) because additional excavation would have undermined nearby structures (the building foundation or site entrance). Should the existing building be used for purposes other than industrial or manufacturing activities, or a building addition or new building on the site be planned, an SVI evaluation shall be conducted, in accordance with current NYSDOH guidance, to assess SVI. If the SVI evaluations results exceed NYSDOH vapor intrusion criteria, an active vapor intrusion mitigation system shall be designed and installed inside the building per NYSDOH requirements.

#### 2.4 INSPECTIONS AND NOTIFICATIONS

#### 2.4.1 Inspections

Inspections of all remedial components installed at the site will be conducted at the frequency specified in the SMP Monitoring Plan schedule. A comprehensive sitewide inspection will be conducted annually, regardless of the frequency of the Periodic Review Report. The inspections will determine and document the following:

- Whether Engineering Controls continue to perform as intended;
- If these controls continue to be protective of human health and the environment;
- Compliance with requirements of this SMP and the Environmental Notice;
- Achievement of remedial performance criteria (cover materials in place and remaining impacted material undisturbed); and
- Changes, or needed changes, to the site cover system.

Inspections will be conducted in accordance with the procedures set forth in the Monitoring Plan of this SMP (Section 3). The reporting requirements are outlined in the Periodic Review Reporting section of this plan (Section 5).

If an emergency, such as a natural disaster or an unforeseen failure of any of the ECs occurs, an inspection of the site will be conducted within 5 days of the event by a Professional Engineer to verify the effectiveness of the EC/ICs implemented at the site.

#### 2.4.2 Notifications

Notifications will be submitted by the property owner to the NYSDEC as needed for the following reasons:

- 60-day advance notice of any proposed changes in site use that are required under the terms of the Order on Consent, 6NYCRR Part 375, and/or Environmental Conservation Law.
- 15-day advance notice of any proposed ground-intrusive activities larger or more complicated than the small project covered by the Excavation Work Plan (Appendix B), and shall include a project-specific Excavation Work Plan.
- Notice within 48-hours of any small excavation work conducted pursuant to the Excavation Work Plan (Appendix B).
- Notice within 48-hours of any emergency, such as a fire, flood, or earthquake that reduces or has the potential to reduce the effectiveness of Engineering Controls in place at the site, including a summary of actions taken, or to be taken, and the potential impact to the environment and the public.
- Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action shall be submitted to the NYSDEC within 45 days and shall describe and document 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 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 has been provided with a copy of the Order on Consent, this SMP, and all approved work plans and approved reports generated after the initial approval of this SMP.
- Within 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.

#### 2.5 CONTINGENCY PLAN

Emergencies may include injury to personnel, fire or explosion, environmental release, or serious weather conditions. This Contingency Plan pertains only to

environmental releases from beneath the cover systems or emergency that could affect the integrity of the cover system. It is not intended to replace plans developed by the Owner or Occupant for general site operations.

#### **2.5.1 Emergency Telephone Numbers**

In the event of any environmentally related situation or unplanned occurrence requiring assistance the Owner or Owner's representative(s) should contact the appropriate party from the contact list below. For emergencies, appropriate emergency response personnel should be contacted. Prompt contact should also be made to the qualified environmental professional selected by the Owner. These emergency contact lists must be maintained in an easily accessible location at the site.

Medical, Fire, and Police:	911
One Call Center:	<ul><li>(800) 272-4480</li><li>(3 day notice required for utility markout)</li></ul>
Poison Control Center:	(800) 222-1222
Pollution Toxic Chemical Oil Spills:	(800) 424-8802
NYSDEC Spills Hotline	(800) 457-7362

#### **Emergency Contact Numbers**

#### **General Contact Number**

qualified environmental professional:	[nhone]
[to be determined by site owner]	[phone]

\* Note: Contact numbers subject to change and should be updated as necessary

#### 2.5.2 Map and Directions to Nearest Health Facility

The map and directions to a nearby hospital is current as of the preparation date of this *Site Management Plan*, and is provided for informational purposes only and is not intended to replace information in site-specific Health and Safety Plan(s) or information developed by the Owner or Occupant for general site operations.

Site Location: 318 Urban Street Site

Nearest Hospital Name: Erie County Medical Center

Hospital Location: 462 Grider Street, Buffalo, NY

Hospital Telephone: (716) 898-3000

Directions to the Hospital:

- 1. Exit site by going west onto Urban Street towards Moselle Street;
- 2. Turn left on Moselle Streeet;
- 3. Turn left onto East Ferry Street; and
- 4. Turn right onto Grider Street
- Total Distance: 1.7 miles

Total Estimated Time: about 7 minutes



### Map Showing Route from the site to the Hospital:

#### 2.5.3 Response Procedures

As appropriate, the fire department and other emergency response group will be notified immediately by telephone of the emergency. The emergency telephone number list is found above, in Section 2.5.1. The list will also be posted prominently at the site and made readily available to all personnel at all times.

In the event that an emergency causes disruption of the cover systems (soil and/or asphalt cover, or concrete slab), measures to prevent the disruption of residually impacted soil shall be implemented as quickly as can be safely undertaken. Disruption of subsurface soil should be prevented, if practical, or undertaken in accordance with the procedures outlined in the Excavation Work Plan (Appendix B). In the event that the emergency causes a disruption of the cover system, erosion control measures, including protection of storm sewer catch basins and perimeter controls, will be installed as soon as safely practicable. Inspection of the site and the Engineering Controls will be undertaken as described in Section 2.4 and Corrective Measures implemented in accordance with this SMP, if necessary.

# **3.0 SITE MONITORING PLAN**

#### **3.1 INTRODUCTION**

#### 3.1.1 General

The Monitoring Plan describes the measures for evaluating the performance and effectiveness of the cover system to mitigate potential affects of the residually impacted materials. Monitoring of site media is not required. Monitoring of active Engineering Controls is not required at this site because the site remedy does not rely on active systems or controls. This Monitoring Plan may only be revised with the approval of NYSDEC.

#### 3.1.2 Purpose and Schedule

This Monitoring Plan describes the methods to be used for:

- Assessing compliance with applicable NYSDEC standards, criteria and guidance, particularly Part 375 soil cleanup objectives (SCOs) for soil;
- Evaluating site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment; and
- Preparing the necessary reports for the various monitoring activities.

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

- Reporting requirements; and
- Annual inspection and biannual periodic certification.

#### **3.2 COVER SYSTEM MONITORING AND MAINTENANCE**

A visual inspection of the complete cover system (soil and/or asphalt and concrete building slab) will be conducted at least once a year. The inspection will be performed when the ground surface is visible and not covered by snow. Cover system components to be monitored include, but are not limited to, the following:

• Areas of the site covered with grass;

- Areas of the site covered with pavement; and
- Areas of the site covered by the concrete building slab or ancillary slabs.

The inspection will include documenting areas that might need repair, such as areas of the grass torn up by traffic or plowing activities, and deteriorated pavement. A complete list of components to be checked is provided in the Inspection Form, presented in Appendix D.

To ensure that cover systems remain effective, maintenance and repair activities may be necessary. Non-invasive maintenance work, such as sealing cracks in pavement, seal coating asphalt pavement, mowing the grass, reseeding bare areas, and re-attaching loose chain link fencing, may be completed without notification to NYSDEC. Invasive work, such as removing stumps of woody vegetation, replacing portions of the asphalt pavement or concrete, or replacing fence posts must be performed in accordance with the provisions of the SMP, including notifying NYSDEC, following the provisions of the EWP for small projects, and preparing a project-specific work plan for larger more complicated projects that will disturb more than approximately 20 cubic yards of soil, asphalt, and concrete.

#### **3.3 SITE-WIDE INSPECTION**

Site-wide inspections will be performed on a regular schedule at a minimum of once a year. Site-wide inspections will also be performed after all severe weather conditions, emergencies, or site work that may affect Engineering Controls. During these inspections, a Site-Wide Inspection Form will be completed (Appendix D). 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 inspection forms are maintained on-site as required.

#### **3.4 MONITORING REPORTING REQUIREMENTS**

Forms and any other information generated during inspections will be kept on file on-site. All forms and other relevant reporting formats used during the inspection events will be (1) subject to approval by NYSDEC and (2) submitted at the time of the Periodic Review Report, as specified in the Reporting Plan of this SMP.

The monitoring program deliverables are summarized in the table below.

Inspection Type	Inspection Frequency*
Site Wide Inspection	Annual
Severe Weather or Emergency	As-Needed
After Site Work Involving the Cover System (such as excavation)	As-Needed

#### **Schedule of Inspections**

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

# 4.0 OPERATION AND MAINTENANCE PLAN

The site remedy does not rely on any mechanical systems, such as 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.

# 5.0 INSPECTIONS, REPORTING AND CERTIFICATIONS

#### **5.1 SITE INSPECTIONS**

#### **5.1.1 Inspection Frequency**

All inspections will be conducted at the frequency specified in the schedules provided in Section 3 Monitoring Plan of this SMP. At a minimum, a site-wide inspection will be conducted annually. Inspections will also be conducted whenever a severe condition or emergency has taken place, such as an erosion or flooding event that may affect the ECs, and after completion of any project that disturbs the cover systems.

#### 5.1.2 Inspection Form

All inspections will be recorded on the appropriate form, which are contained in Appendix D. A site figure is also included in Appendix D in the event that site conditions warrant location-specific notations.

All applicable inspection forms and other records generated for the site during the reporting period will be provided in electronic format in the Periodic Review Report.

#### 5.1.3 Evaluation of Records and Reporting

The results of the inspection and site monitoring data will be evaluated as part of the EC/IC certification to confirm that the:

- EC/ICs are in place, are performing properly, and remain effective;
- The Monitoring Plan is being implemented;
- Operation and maintenance activities are being conducted properly; and,
- Based on the above items, the site remedy continues to be protective of public health and the environment and is performing as intended.

#### **5.2 CERTIFICATION OF ENGINEERING AND INSTITUTIONAL CONTROLS**

After the last inspection of the reporting period, a Professional Engineer licensed to practice in New York State will prepare the following certification:

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 the site management plan for this control;
- Use of the site is compliant with the Environmental Notice;
- The engineering control systems are performing as intended 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 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's Designated Site Representative] for the site.

The signed certification will be included in the Periodic Review Report described below.

#### **5.3 PERIODIC REVIEW REPORT**

A Periodic Review Report will be submitted to the Department every second year, beginning two years after the Certificate of Completion is issued. In the event that the site is subdivided into separate parcels with different ownership, a single Periodic Review Report will be prepared that addresses the site described in Appendix A (Environmental Notice and Existing Property Deed). The report will be prepared in accordance with NYSDEC May 2010 DER-10 and submitted within 45 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 inspection forms and other records generated for the site during the reporting period in electronic format;
- A summary of any information generated during the reporting period with comments and conclusions; and
- A site evaluation, which includes the following:
  - The compliance of the remedy with the remedial goals for the site;
  - The effectiveness of the cover systems, including identification of any needed repairs or modifications;
  - Any new conclusions or observations regarding site contamination based on inspections;
  - Recommendations regarding any necessary changes to the remedy and/or Monitoring Plan; and
  - The overall performance and effectiveness of the remedy.

The Periodic Review Report will be submitted, in hard-copy format, to the NYSDEC Central Office and Region 9 Office, and in electronic format to NYSDEC Central Office, Region 9 Office, and the NYSDOH Bureau of Environmental Exposure Investigation.

#### **5.4 CORRECTIVE MEASURES 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 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 plan until it is approved by the NYSDEC.



SOURCE: "FINAL EXCAVATION PLAN", OCTOBER 20, 1997 (REVISED NOVEMBER 10, 1997) BAC KILLAM CONSULTING ENGINEERS, BUFFALO, NEW YORK.

#### **URBAN STREET**



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GENERAL ELECTRIC COMPANY


## APPENDIX A – ENVIRONMENTAL NOTICE AND EXISITING PROPERTY DEED

**ENVIRONMENTAL NOTICE** 

#### ENVIRONMENTAL NOTICE

THIS ENVIRONMENTAL NOTICE is made the <u>10<sup>th</sup></u> day of <u>June</u> 2011, by the New York State Department of Environmental Conservation (Department), having an office for the transaction of business at 625 Broadway, Albany, New York 12233

WHEREAS, that parcel of real property located on 318 Urban Street in the City of Buffalo, County of Erie, State of New York which is part of lands conveyed by Erie County IDA to Pyramid Steel Corporation by deed dated January 13, 1998 and recorded in the Erie County Clerk's Office on January 14, 1998 in Book 10926 of Deeds at Page 3533, and being more particularly described as Erie County Tax Map Number 101.46-3-1, hereinafter referred to as "the Property"; and

WHEREAS, the property is an inactive hazardous waste disposal site known as the 318 Urban Street Site (the "Site") which is listed in the Registry of Inactive Hazardous Waste Disposal Sites in New York State as Site Number 915151 and was remediated by General Electric Company; and

WHEREAS, the Department approved a cleanup to address contamination disposed at the Property and such cleanup was conditioned upon certain limitations.

NOW, THEREFORE, the Department provides notice that:

FIRST, the part of lands subject to this Environmental Notice is as shown on a map attached to this Notice as Appendix "A" and made a part hereof.

**SECOND**, unless prior written approval by the Department or, if the Department shall no longer exist, any New York State agency or agencies subsequently created to protect the environment of the State and the health of the State's citizens, hereinafter referred to as "the Relevant Agency," is first obtained, where contamination remains at the Property subject to the provisions of the Site Management Plan ("SMP") and as shown on Appendix "A", there shall be no disturbance or excavation of the Property which threatens the integrity of the Engineering Controls or which results or may result in a significantly increased threat of harm or damage at any site as a result of exposure to soils. ). The SMP is available from the Department. A violation of this provision is a violation of 6 NYCRR 375-1.1 1(b)(2).

THIRD, no person shall disturb, remove, or otherwise interfere with the installation, use, operation, and maintenance of Engineering Controls required for the Remedy, including but not limited to those Engineering Controls described in the SMP unless in each instance they first obtain a written waiver of such prohibition from the Department or Relevant Agency.

**FOURTH**, the remedy was designed to be protective for Industrial use. Therefore, any use for purposes other than Industrial use without the express written waiver of such prohibition by the Relevant Agency may result in a significantly increased threat of harm or damage at any site.

FIFTH, the no person shall use the groundwater underlying the Property without treatment rendering it safe for drinking water or industrial purposes, as appropriate, unless the user first obtains permission to do so from the Department or Relevant Agency. Use of the groundwater without appropriate treatment may result in a significantly increased threat of harm or damage at any site.

**SIXTH**, it is a violation of 6 NYCRR 375-1.11(b) to use the Property in a manner inconsistent with this environmental notice.

IN WITNESS WHEREOF, the undersigned has executed this instrument the day written below.

By:

Dale A. Desnoyers, Director

11 11

Division of Remediation

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

On the <u>10<sup>th</sup></u> day of <u>June</u>, in the year 2011, before me, the undersigned, personally appeared Dale Desnoyers, 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, 20 APPENDIX A





19 West Main Street, Suite 100 Rochester, NY 14614 585-546-6350 Fax: 585-546-5465

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#### PLEASE RECORD THE ATTACHED DOCUMENTS

### DATE: 6/29/11 RECORD DATE: ASAP

**TO:** Erie County Title

FROM: Susan Hindmarsh

**PROPERTY ADDRESS: 318 Urban Street, Buffalo NY** 

**COUNTY: Erie** 

**LECORDED:** Environmental Notice

JOHN J. CRANGLE, JR., INTERIM ERIE COUNTY CL

e record the attached documents & ion to Susan Hindmarsh. ASAP.

CHICAGO TITLE ACCOUNT #: RECEIPT: 11095278 DATE: 6/30/2011 TIME: 10:45:29 AM ITEM - 01 70H RECD: 6/30/2011 10:45:29 AM FILE: 2011136426 BK/PG D 11205/2990 ERIE COUNTY IDA PYRAMID STEEL CORPORATION 60.00 **Recording Fees** 60,00 Sub, Total TOTAL DUE \$60.00 \$60.00 PAID TOTAL PAID CHECK 60.00 60.00 Check #1863: 

REC BY: Loretta COUNTY RECORDER

#### ENVIRONMENTAL NOTICE

# FILED

## JUN 3 0 2011

**ERIE COUNTY THIS ENVIRONMENTAL NOTICE** is made the <u>10<sup>th</sup></u> day of **GLERWS OFFICE** New York State Department of Environmental Conservation (Department), having an office for the transaction of business at 625 Broadway, Albany, New York 12233

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1.15

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THIRD, no person shall disturb, remove, or otherwise interfere with the installation, use, operation, and maintenance of Engineering Controls required for the Remedy, including but not limited to those Engineering Controls described in the SMP unless in each instance they first obtain a written waiver of such prohibition from the Department or Relevant Agency.

FOURTH, the remedy was designed to be protective for Industrial use. Therefore, any use for purposes other than Industrial use without the express written waiver of such prohibition by the Relevant Agency may result in a significantly increased threat of harm or damage at any site.

FIFTH, the no person shall use the groundwater underlying the Property without treatment rendering it safe for drinking water or industrial purposes, as appropriate, unless the user first **EXISTING DEED** 

ERIE COUNTY CLERKS OFFICE County Clerk's Recording Page

Return To:

BOX 61

ERIE COUNTY INDUSTRIAL DEVELOPMENT AGENCY (THE) PYRAMID STEEL CORPORATION

Index	DEED LI.	BER	
Book	10926	Page	3533
No. Pag	es 00	06	
Instrum	ent DE	ED	
Date :	1/14	/1998	
Time :	2:04	:14	
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#### MORTGAGE TAX

COUNTY	\$ 23.00			
STATE	\$ 25.00		*	00
COE	\$ 5.00	Basic	\$	.00
TRANSFER	\$ .00			~~
	\$ .00	Special	\$	.00
NETA TT	\$ .00			
	\$ .00	Special Addl	\$	.00
	\$ .00			
	\$ .00	Total	\$	.00
Total:	\$ 53.00			

STATE OF NEW YORK ERIE COUNTY CLERKS OFFICE

#### TRANSFER TAX

WARNING - THIS SHEET CONSTITUTES	THE CLERKS	CONSIDERATN	\$ 1.00
ENDORSEMENT, REQUIRED BY SECTION SECTION 319 OF THE REAL PROPERTY STATE OF NEW YORK DO NOT DETACH	316-a(5) & LAW OF THE	Transfer Tax	\$ .00

DAVID J SWARTS COUNTY CLERK



D109263533



Aty - 10

DID-5

TOGETHER with the appurtenances and all the estate and rights of the party of the first part in and to said premises,

TO HAVE AND TO HOLD the premises herein granted unto the part second part, its successors

SS. :

of the and assigns forever.

xantroxha haver wax a xx Mx ad x dax these presents to be signed by its duly authorized officer this 137 day of 4200day of Januny Nineteen Hundred and Ninety Seven Elght ERIE COUNTY INDUSTRIAL DEVELOPMENT AGENCY

IN WITNESS WHEREOF, The

Baren M. Frala ant. Treas

STATE OF NEW YORK COUNTY OF ERIE

On this 13 Th day of January Nineteen Hundred and Ninety Seven Eight Karen M. Frala

before me personally came

to me personally, known, who, being by me duly sworn, did depose and say that \_\_\_\_\_\_ he resides in Swelmy St, nm Tonawing, new you that She is the AB3+. The asview of Erie County Industrial Development Agency the corporation described in, and which executed, the within Instrument; WaxXXX he shows what say that say the the corporation described in and which executed, the within Instrument; WaxXXX he shows what say that say that say the the corporation described in and which executed, the within Instrument; WaxXXX he shows what say that say that say the the corporation described in and which executed, the within Instrument; WaxXXX he shows what say that say the the say the XALLY MANYKWWYYYY WAN THA TANTANTI BEEL WY TANY MWYMWWYYN Y TANY DY TANESER TAND Y THWAL MAU TANG WY TH by MW order. of the Board of Directors of said corporation.

Church 111129

DIANE E. KAT Public, State of New Yo fied in Niegera County

**出ateb** 

ERIE COUNTY INDUSTRIAL DEVELOPMENT AGENCY

STEEL CORPORATION

PYRAMID

#### SCHEDULE "A"

ALL THAT TRACT OR PARCEL OF LAND situate in the City of Buffalo, County of Erie and State of New York, being part of Lot No. 7, Township 11, Range 8 of the Holland Land Company's Survey, bounded and described as follows:

BEGINNING at a point in the northerly line of Urban Street 244.8 feet westerly from a stone monument at the intersection of the northerly line of Urban Street and the westerly line of Moselle Street, said point of beginning being also at the intersection of the northerly line of Urban Street and the westerly line of lands heretofore conveyed by George Urban, Jr. and Ada E. Urban to the City of Buffalo by Deed recorded in the Erie County Clerk's Office in Liber 949 of Deeds, page 267; running thence northerly at right angles with the said line of Urban Street and along the west line of lands so conveyed by Urban to the City of Buffalo 195.60 feet to the north line of lands conveyed by Grover Cleveland, Sheriff to George Urban in November 1872; thence westerly along said north line of lands so conveyed by Cleveland to Urban 795.25 feet to the southeasterly corner of that parcel of land conveyed by Robert C. Palmer and wife to The New York Central and Hudson River Railroad Company by deed dated April 16, 1909 recorded in the Erie County Clerk's Office in Liber 1049 of Deeds, page 417; thence northerly along the easterly line of said parcel of land conveyed by said Palmer and wife by the aforesaid deed 139.29 feet more or less to the southerly line of French Street; thence westerly along the southerly line of French Street 125.53 feet more or less to a point distant easterl

25

#### SCHEDULE "A" (page two)

74.5 feet at right angles from the monumented center line of the Penn-Central Railroad, said center line being situate between the inner rail of the two middle tracks of said railroad; thence southerly at right angles to the southerly line of French Street 10 feet; thence westerly parallel with the southerly line of French Street 25 feet to a point distant easterly 49.5 feet at right angles from said center line; thence southerly parallel with said center line to the northerly line of Urban Street; thence easterly along the northerly line of Urban Street 940 feet to the place of beginning, containing 4.670 acres of land more or less.

EXCEPTING AND EXCLUDING from the premises conveyed herein a parcel of land situated in the City of Buffalo, County of Erie and State of New York, conveyed by General Electric Company to the City of Buffalo by deed dated November 12, 1925 and recorded in the Erie County Clerk's Office in Liber 1852 of Deeds, page 86, bounded and described as follows BEGINNING at a point in the northerly line of Urban Street 244.8 feet westerly from a stone monument at the intersection of the northerly line of Urban Street and the westerly line of Moselle Street, said point of beginning being also at the intersection of the northerly line of Urban Street and the westerly line of lands heretofore conveyed by George Urban Jr. and Ada E. Urban to the City of Buffalo by deed recorded in the Erie County Clerk's Office in Liber 949 of Deeds, page 267; running thence northerly at right angles with the said line of Urban Street and along the west line of lands so conveyed by Urban to the City of Buffalo,

## SCHEDULE "A" (page three)

/195.60 feet, to the north line of lands conveyed by Grover Cleveland, sheriff, to George Urban in November 1872; thence westerly along said north line of lands so conveyed by Cleveland to Urban 490.85 feet more or less to the point of intersection of the easterly line of Barthell Street, if extended northerly with said north line of lands so conveyed by Cleveland to Urban; thence southerly along the easterly lin of Barthell Street extended northerly 194.17 feet to the northerly line of Urban Street; thence easterly along the northerly line of Urban Street 486.28 feet to the place of beginning.

12

## SCHEDULE "A" (page three)

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FRENCH STREET

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25 **GRAPHIC SCALE IN FEET** 

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RESIDENTIAL

LEGEND: - FENCE -- PROPERTY LINE 12-INCH SOIL AND TURF GRASS COVER AREA SUBSURFACE SOIL CONTAINS PCBS AT CONCENTRATIONS LESS THAN INDUSTRIAL AND ABOVE RESIDENTIAL USE STANDARDS \* ASPHALT COVER AREA SUBSURFACE SOIL CONTAINS PCBS AT CONCENTRATIONS LESS THAN INDUSTRIAL AND ABOVE RESIDENTIAL USE STANDARDS + + CONCRETE COVER AREA SUBSURFACE SOIL CONTAINS PCBS AT CONCENTRATIONS LESS THAN INDUSTRIAL AND ABOVE RESIDENTIAL USE STANDARDS SUBSURFACE SOIL CONTAINS VOCS AT CONCENTRATIONS LESS THAN INDUSTRIAL AND ABOVE RESIDENTIAL USE STANDARDS Title: POST-REMEDIATION SITE LAYOUT Location: **318 URBAN STREET BUFFALO, NEW YORK** Client: **GENERAL ELECTRIC** X COMPANY Drafter: KP Date: URS September 2010 Drg. Size: Job No .: 3839478.00000 11 x 17 **URS** Corporation 3 Corporate Drive, Suite 203 Clifton Park, New York 12065 **FIGURE 1** 

## **APPENDIX B - EXCAVATION WORK PLAN**

### **APPENDIX B – EXCAVATION WORK PLAN**

This Excavation Work Plan (EWP) outlines the procedures required to be implemented in the event the cover system is breached, penetrated or temporarily removed, and any underlying residually impacted materials are disturbed. This Excavation Work Plan is intended to provide procedures for small projects that disturb up to approximately 20 cubic yards of soil and that can be completed in a few days. A more extensive and project-specific Excavation Work Plan will need to be prepared and submitted to NYSDEC for approval for larger and more complicated projects.

#### **B-1 NOTIFICATIONS AND REPORTINGB-1.1 NOTIFICATION**

Notification to the NYSDEC will be submitted by the site owner or their representative in accordance with the time frames specified in the Site Management Plan (SMP) for any activity that is anticipated to encounter residually impacted materials. Currently, this notification will be made to:

Regional Hazardous Waste Remediation Engineer New York State Department of Environmental Conservation 270 Michigan Avenue Buffalo, New York 14203

#### **B-1.1.1 Emergency Projects**

48-hour advance notice will be provided to the Department of any emergency project that includes small (i.e. less than 20 cubic yards) excavation work conducted pursuant to this Excavation Work Plan. This notification will include a description of the work performed that impacts an engineering control, including a schedule for the work, detailing the start and completion of all intrusive work; the location and areal extent; details of site restoration; intrusive elements or utilities installed below the cover systems; estimated volumes of contaminated soil or concrete excavated; identification of project approach and whether soil will be segregated for reuse as backfill; identification of disposal facilities for potential waste streams; identification of the contractor(s) performing the work; and identification of the qualified environmental professional documenting the work.

#### **B-1.1.2 Small Projects**

10 day advance notice will be provided to the Department of any small (i.e. less than 20 cubic yards) excavation work conducted pursuant to this Excavation Work Plan. This notification will include a description of the work performed that impacts an engineering control, including a schedule for the work, detailing the start and completion of all intrusive work; the location and areal extent; details of site restoration; intrusive elements or utilities installed below the cover systems; estimated volumes of contaminated soil or concrete excavated; identification of project approach and whether soil will be segregated for reuse as backfill; identification of disposal facilities for potential waste streams; identification of the contractor(s) performing the work; and identification of the qualified environmental professional documenting the work.

#### **B-1.1.3 Larger Projects**

15-day advance notice of any proposed ground-intrusive activities larger or more complicated than the small (i.e. less than 20 cubic yard) project covered by this Excavation Work Plan. This notification will include:

- A project-specific Excavation Work Plan;
- A detailed description of the work to be performed that may impact an engineering control, including the location and areal extent, plans for site restoration, intrusive elements or utilities to be installed below the soil cover, estimated volumes of contaminated soil to be excavated, and the plan for Community Air Monitoring;
- A summary of environmental conditions anticipated 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 statement that the work will be performed in compliance with the projectspecific EWP and 29 CFR 1910.120;
- A copy of the contractor's health and safety plan, in electronic format, if it differs from the example HASP provided in Appendix C of the Site Management Plan;
- Identification of disposal facilities for potential waste streams and a description of the truck transport route(s); and
- Identification of sources of any anticipated backfill, along with all required chemical testing results.

#### **B-1.2 REPORTING**

Within 45 days of completing any project that includes ground-intrusive activities a report summarizing the activities will be submitted to the NYSDEC. The report will include:

- A description of the work performed, including identification of the contractor(s) performing the work and the qualified environmental professional documenting the work;
- A map of the site indicating the location and areal extent of the intrusive work;
- A description of the volume of residually impacted materials removed;
- A description of the volume of cover soil reused for backfill and the location, including depth, that it was reused, if applicable;
- A description of the volume of subsurface soil reused for backfill and the location, including depth, that it was reused, if applicable;
- A description of the volume of residually impacted materials or cover systems removed and disposed off-site, along with an identification of disposal facilities for each waste stream, if applicable;
- A description of the restoration, including documentation of the clean fill used, if applicable; and

• A statement that the work was performed in accordance with this EWP or the project-specific EWP, as appropriate.

A copy of the report will remain at the site and a summary of the work incorporated into the next Periodic Review Report.

#### **B-2 SOIL SCREENING METHODS**

Visual, olfactory, and instrument-based soil screening will be performed by a qualified environmental professional during all remedial and development excavations into known or potentially impacted material. Soil screening will be performed regardless of when the invasive work is done and will include all excavation and invasive work performed during excavation or development, such as excavations for foundations and utility work.

Soils will be assumed to contain PCBs at concentrations up to 10 milligrams per kilogram (mg/kg) at depths greater than one foot and will be assumed to contain PCBs at concentrations up to 1 mg/kg at depths shallower than one foot based on previous environmental data. If field screening indicates that unanticipated contamination may be present, soils will be segregated based on depth from which they are excavated if the project approach includes potential reuse of removed soil as backfill, and screening results into material that requires testing. Depending upon project approach, all removed materials will be disposed off-site, or removed materials may be reused as backfill if properly managed (segregation of cover material and subsurface soil) and reuse criteria are met with all surplus removed materials disposed off-site. Regardless of project approach, excavated materials must managed and disposed in accordance with the criteria in this plan

#### **B-3 STOCKPILE METHODS**

Removed soil may be stored in lined and covered roll-off containers or in soil stockpiles at the site until it is removed for disposal or reused as backfill. In order for soil to be reused as backfill, cover soil that is up to one foot below ground surface must be removed, segregated, and stockpiled separately from subsurface soil, which is greater than one foot below ground surface. Separate stockpiles will be created if field screening indicates unanticipated contamination may be present.

Soil stockpiles will be constructed on two layers of polyethylene sheeting, and will be continuously encircled with a berm and/or silt fence. Hay bales and filter fabric will be used to protect catch basins. Hay bales or silt fence will be installed at the perimeter of the work area or site boundary, as appropriate.

Stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers or barrier controls (berm and/or silt fence) will be promptly replaced.

Stockpiles will be inspected at a minimum once each work day, at least once a week if work is suspended, and after every storm event. Results of inspections will be recorded in a logbook and maintained at the site and available for inspection by NYSDEC.

#### **B-4 MATERIAL EXCAVATION AND LOAD OUT**

A qualified environmental professional or person under their supervision will oversee all invasive work and the excavation, management of all excavated material, and load-out of all surplus excavated material.

The owner of the property and its contractors are solely responsible for safe execution of all invasive and other work performed under the SMP.

The presence of utilities and easements on the site will be investigated by the Owner or Owner's contractor. It will be determined whether a risk or impediment to the planned work under the SMP is posed by utilities or easements on the site.

This plan includes provisions for three project approaches for managing site soils:

 Soils will be assumed to contain PCBs at concentrations up to 10 mg/kg based on previous environmental data. Removed materials will not be segregated based on depth during excavation. With this approach removed soil will only be reused for backfilling portions of the excavation deeper than one foot below grade, clean fill from an offsite source will be used to backfill the upper one foot of the excavation, and surplus removed materials will be disposed off-site at a properly permitted facility.

2. Soils will be carefully excavated, segregated, and stockpiled for reuse as backfill at the same depths from which it was excavated. Soil excavated from within one foot of the surface will be segregated from soil excavated from deeper depths. If field screening indicates that unanticipated contamination may be present, soils will be segregated based on screening results into material that requires testing. Soil excavated from one foot or more below ground surface may be reused to backfill portions of the excavation that are at least one foot below grade, unless field screening and subsequent analytical testing indicate that the soil is impacted by contaminants at concentrations that preclude reuse (such as PCBs at concentrations greater than 10 mg/kg). Soil excavated from the surface (up to 12 inches below grade) may be reused to backfill portions of the excavation that are less than one foot below grade, unless field screening and subsequent analytical testing indicate that the soil is impacted by contaminants at concentrations that preclude reuse (such as PCBs at concentrations greater than 1 mg/kg). Soil excavated from within one foot of the surface that has been segregated and tested and found to contain PCBs at concentrations greater than 1 mg/kg may be reused as backfill provided the soil contains PCBs at concentrations less than 10 mg/kg and is used at least one foot below ground surface. Soils that do not meet criteria for reuse or do not fit back in the excavation (surplus) will be disposed off-site at a properly permitted facility. Non-soil cover material, such as concrete or asphalt, may be segregated and recycled after analytical testing documents that the materials are not impacted. Alternatively, non-soil cover material, such as concrete or asphalt may be presumed to contain

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PCBs at concentrations up to 10 mg/kg and disposed off-site at a properly permitted facility.

3. Soils will be assumed to contain PCBs at concentrations up to 10 mg/kg based on previous environmental data and all materials removed will be disposed off-site at a properly permitted facility. With this approach, cover soil and subsurface soil will be excavated without segregation based on depth from which soil is excavated. Removed soil will be disposed off-site and clean fill utilized to backfill the excavation.

Loaded vehicles leaving the site with impacted materials 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).

Polyethylene sheeting will be placed on the ground at the load out area between the excavation or stockpile and the truck or roll-off container. Polyethylene sheeting will be draped over the roll-off container or truck sides during truck loading. After loading and before tarping the Owner or Owner's contractor will inspect the tires, truck or roll-off container sides, tailgate area, and the top of the truck bed rails or roll-off container for spilled soil or debris and will sweep, and if necessary wet clean, to remove spilled material. Material and any liquids generated from wet cleaning will be captured and loaded out with the soil or other contaminated project debris, such as PPE. The Owner or Owner's contractor will be responsible for ensuring that trucks have been adequately cleaned prior to leaving the work zone. Locations where vehicles enter or exit the site shall be inspected daily for evidence of off-site soil tracking.

The Owner or Owner's contractor 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 sitederived materials.

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#### **B-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, if necessary.

Material transported by trucks exiting the site will be secured with tight-fitting covers. Loose-fitting canvas-type truck covers will be prohibited. Liners will be used in truck beds and roll-off containers.

#### **B-6 MATERIALS DISPOSAL OFF-SITE**

All soil, fill, concrete, asphalt, and solid waste excavated and removed from the site will be transported and disposed in accordance with all local, State (including 6NYCRR Part 360) and Federal regulations. Unregulated off-site management of materials from this site will not occur without formal NYSDEC approval.

This plan includes provisions for two approaches for disposal of waste generated during excavation under this plan:

- Waste Management's High Acres facility is the recommended disposal site for materials excavated under this plan.
- Other facilities may be used provided they have the correct licenses to accept the waste stream(s) and are identified in the notification to the NYSDEC that is required prior to the start of the work.

Off-site disposal locations for excavated soils will be identified in the preexcavation 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. If an alternative disposal facility is used, this will also be reported to the NYSDEC. 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 Track 1 unrestricted SCOs is prohibited from being taken to a New York State recycling facility (6NYCRR Part 360-16 Registration Facility).

#### **B-7 MATERIALS REUSE ON-SITE**

For the small projects covered under this EWP, excavated soils may be reused onsite for backfill without analytical testing so long as the field screening does not indicate that unanticipated contamination may be present, and protocols for restoring the cover system are followed. The criteria for reusing excavated soil as backfill on small projects are:

- 1. Portions of the excavation greater than one foot below ground surface may be backfilled with any site soil where field screening indicates that no unanticipated contamination is present. Alternatively, portions of the excavation greater than one foot below ground surface may be backfilled with clean soil from an off-site source (Section B-10).
- 2. Portions of the excavation less than one foot below ground surface may be backfilled with soil excavated from the surface (up to 12 inches below grade) that was carefully segregated from deeper soils, unless field screening and subsequent analytical testing indicate that the soil is impacted by contaminants at concentrations that preclude reuse (such as PCBs at concentrations greater than 1 mg/kg).

Surplus excavated material may not be stored on-site for future reuse on a subsequent project. Surplus excavated material must be disposed off-site as described in this EWP.

For projects greater than the small project (i.e. 20 cubic yard disturbance) covered by this EWP, the project-specific Work Plan will include specific procedures for reusing excavated materials. The plan should include a description of the procedures for

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determining if reuse is appropriate, including the type and frequency of analytical testing and the chemical criteria for reuse, and the size and location of stockpiles.

#### **B-8 FLUIDS MANAGEMENT**

All liquids to be removed from the site, including excavation dewatering, if necessary, and equipment decontamination fluids will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations. Fluids will not be recharged back to the land surface or subsurface of the site, but will be managed off-site.

#### **B-9 COVER SYSTEM RESTORATION**

After the completion of soil removal and any other invasive activities the cover system will be restored in a manner consistent with current site cover.

#### **B-10 BACKFILL FROM OFF-SITE SOURCES**

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 B-1. 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. Solid waste will not be imported onto the site. Material from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated sites will not be imported to 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.

#### **B-11 STORMWATER POLLUTION PREVENTION**

Barriers, hay bale checks, and catch basin protection will be installed and inspected once a week and after every storm event during site excavation work. Results of inspections will be recorded in a logbook and maintained at the site and available for inspection by NYSDEC. All necessary repairs shall be made immediately.

Accumulated sediments will be removed as required to keep the barrier, catch basin protection, 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 EWP 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.

For projects greater than the small project (i.e. 20 cubic yard disturbance) covered by this EWP, the project-specific Work Plan will include specific procedures for storm water pollution prevention. It should be noted that larger projects may require preparation of a Storm Water Pollution Prevention Plan and submission of a Notice of Intent.

#### **B-12 CONTINGENCY PLAN**

If underground tanks or other previously unidentified contaminant sources (stained soil, drums, etc.) 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 a full list of analytes (TAL metals; TCL volatiles and semi-volatiles, TCL pesticides and PCBs), unless the site history and previous sampling results provide a sufficient justification to limit the list of analytes. In this case, a reduced list of analytes will be proposed to the NYSDEC for approval prior to sampling.

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 reports prepared pursuant to Section 5 of the SMP.

#### **B-13 COMMUNITY AIR MONITORING PLAN**

For the small projects covered under this EWP, a Community Air Monitoring Plan is not required. A project-specific Community Air Monitoring Plan (CAMP) will be prepared and submitted to NYSDEC with the project-specific Excavation Work Plan that will be developed for projects disturbing more than 20 cubic yards of soil, concrete, and asphalt. Development of a project-specific CAMP will follow the guidance in DER-10. Exceedances of action levels listed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers.

#### **B-14 ODOR CONTROL PLAN**

Odors are not anticipated to emanate from the residually impacted materials at this site, and therefore odor control is not anticipated to be needed at this site. If nuisance odors are identified at the site boundary, or if odor complaints are received, work will be halted and the source of odors will be identified and corrected. Work will not resume until nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of any other complaints about the project. Initiating implementation of odor controls, including the halt of work, is the responsibility of the property owner's Remediation Engineer, and any measures that are implemented will be discussed in the Periodic Review Report.

If nuisance odors become an issue, measures will be employed to prevent on- and off-site nuisances. These measures may include: (a) limiting the area of open excavations and size of soil stockpiles; (b) shrouding open excavations with tarps and other covers; and (c) using foams to cover exposed odorous soils;. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-site disposal; (e) use of chemical odorants in spray or misting systems; and, (f) use of staff to monitor odors in surrounding neighborhoods.

#### **B-15 DUST CONTROL PLAN**

Dust control for projects covered under this EWP for small projects will be through the use of a garden hose, portable pressure washer equipped with a misting gun, or similar equipment to apply water to the excavation area and area that trucks or equipment may be traveling. If necessary, more aggressive techniques such as those below may be employed.

A dust suppression plan that addresses dust management during invasive on-site work for larger projects will include, at a minimum, the items listed below:

- Dust suppression will be achieved though the use of a dedicated on-site water truck for road wetting. The truck will be equipped with a water cannon capable of spraying water directly onto off-road areas including excavations and stockpiles.
- Clearing and grubbing of larger sites will be done in stages to limit the area of exposed, unvegetated soils vulnerable to dust production.

- Gravel will be used on roadways to provide a clean and dust-free road surface.
- On-site roads will be limited in total area to minimize the area required for water truck sprinkling.

#### **B-16 OTHER NUISANCES**

A plan for rodent control will be developed and utilized by the contractor prior to and during remedial work, as deemed necessary.

A plan will be developed and utilized by the contractor for all remedial work to ensure compliance with local noise control ordinances.

## TABLE B-1 ALLOWABLE CONCENTRATIONS FOR IMPORTED FILL

#### 318 URBAN STREET SITE BUFFALO, NEW YORK

Compound	Concentration (ppm)		
Volatile Organic Compounds (VOCs)			
1,1,1-Trichloroethane	0.68		
1,1-Dichloroethane	0.27		
1,1-Dichloroethene	0.33		
1,2-Dichlorobenzene	1.1		
1,2-Dichloroethane	0.02		
1,2-Dichloroethene(cis)	0.25		
1,2-Dichloroethene(trans)	0.19		
1,3-Dichlorobenzene	2.4		
1,4-Dichlorobenzene	1.8		
1,4-Dioxane	0.1 <sup>3</sup>		
Acetone	0.05		
Benzene	0.06		
Butylbenzene	12		
Carbon Tetrachloride	0.76		
Chlorobenzene	1.1		
Chloroform	0.37		
Ethylbenzene	1		
Hexachlorobenzene	0.33 <sup>3</sup>		
Methyl Ethyl Ketone	0.12		
Methyl Tert-butyl Ether	0.93		
Methylene Chloride	0.05		
Propylbenzene-n	3.9		
Sec-Butylbenzene	11		
Tert-Butylbenzene	5.9		
Tetrachloroethene	1.3		
Toluene	0.7		
Trichloroethene	0.47		
Trimethylbenzene-1,2,4	3.6		
Trimethylbenzene-1,3,5	8.4		
Vinyl Chloride	0.02		
Xylene (Mixed)	0.26		
Metals			
Arsenic	13		
Barium	350		
Beryllium	7.2		
Cadmium	2.5		
Chromium, Hexavalent <sup>1</sup>	1 3		
Chromium, Trivalent <sup>1</sup>	30		
Copper	50		
Cyanide	27		
Lead	63		
Manganese	1600		
Mercury (Total)	0.18		
Nickel	30		
Selenium	3.9		
Silver	2		
Zinc	109		

## TABLE B-1 ALLOWABLE CONCENTRATIONS FOR IMPORTED FILL

#### 318 URBAN STREET SITE BUFFALO, NEW YORK

Compound	Concentration (ppm)		
PCBs/Pesticides			
2,4,5-TP Acid (Silvex)	3.8		
4,4'-DDE	0.0033 <sup>3</sup>		
4,4'-DDT	0.0033 <sup>3</sup>		
4.4'-DDD	0.0033 <sup>3</sup>		
Aldrin	0.005		
Alpha-BHC	0.02		
Beta-BHC	0.036		
Chlordane (Alpha)	0.094		
Delta-BHC	0.04		
Dibenzofuran	7		
Dieldrin	0.005		
Endosulfan I	2.4 <sup>2</sup>		
Endosulfan II	2.4 <sup>2</sup>		
Endosulfan Sulfate	2.4 <sup>2</sup>		
Endrin	0.014		
Heptachlor	0.042		
Lindane	0.1		
Polychlorinated Biphenyls	0.1		
Semivolatile Organic Compounds			
Acenaphthene	20		
Acenaphthylene	100		
Anthracene	100		
Benzo(a)anthracene	1		
Benzo(a)pyrene	1		
Benzo(b)fluoranthene	1		
Benzo(g,h,i)perylene	100		
Benzo(k)fluoranthene	0.8		
Chrysene	1		
Dibenz(a,h)anthracene	0.33 <sup>3</sup>		
Fluoranthene	100		
Fluorene	30		
Indeno(1,2,3-cd)pyrene	0.5		
m-Cresol(s)	0.33 <sup>3</sup>		
Naphthalene	12		
o-Cresol(s)	0.33 <sup>3</sup>		
p-Cresol(s)	0.33 <sup>3</sup>		
Pentachlorophenol	0.8 <sup>3</sup>		
Phenanthrene	100		
Phenol	0.33 <sup>3</sup>		
Pyrene	100		

Source: This table is derived from the soil cleanup objective tables in 6 NYCRR Part 375 Table 375-6.8(a) is the source for unrestricted use.

Footnotes:

<sup>1</sup> The SCO for Hexavalent or Trivalent Chromium is considered to be met if the analysis for the total species of this contaminent is below the specific SCO for Hexavalent Chromium.

<sup>2</sup> The SCO is the sum of endosulfan I, endosulfan II and endosulfan sulfate.

<sup>3</sup> For constituents where the calculated SCO was lower than the contract required quantitation limit (CRQL), the CRQL is used as the Track 1 SCO value.

## APPENDIX C – EXAMPLE HEALTH AND SAFETY PLAN

#### APPENDIX – C EXAMPLE HEALTH AND SAFETY PLAN

#### 318 URBAN STREET SITE BUFFALO, NEW YORK

NYSDEC SITE NUMBER: 9-15-151

#### HEALTH AND SAFETY PLAN 318 URBAN STREET SITE BUFFALO, NEW YORK

#### **PHONE**

Project Number:	To be determined (TBD)
Project Manager:	TBD
Site Manager:	TBD
Site Safety Officer:	TBD
Plan Preparer:	TBD
Preparation Date:	March 29, 2012
Annual Review Date:	March 29

APPROVALS

Health and Safety Representative:

(DATE)

Regional Health and Safety Manager:

CIH/CSP

(DATE)

Project Manager:

#### (DATE)

This Health and Safety Plan is valid only for this specific project as described in Section 3.0. It is not to be used for other projects or subsequent phases of this project without written approval. A copy of this plan is to be maintained at the site at all times.
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# **Attachments**

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Attachment C	Material Safety Data Sheets

# GLOSSARY OF TERMS, ACRONYMS, AND ABBREVIATIONS

EC	degrees centigrade
EF	degrees Fahrenheit
ACGIH	American Conference of Governmental Industrial Hygienists
analyzer	field instrument described in Section 6.1
atm	atmosphere
С	ceiling
Carcinogen	a substance that can cause cancer
сс	cubic centimeter
CGI	combustible gas indicator
CNS	central nervous system
CSP	Certified Safety Professional
CRZ	contaminant reduction zone
DERA	Designated Emergency Response Authority
DOT	Department of Transportation
ESLI	End-of-Service-Life Indicator
eV	electron volts
EZ	Exclusion Zone
FID	flame ionization detector
HEPA	high-efficiency particular arrestor
Hnu	ionizing radiation detection device
HSM	Health and Safety Manager
HSP	Health and Safety Plan
kg	kilogram
LEL	lower explosive limit
Lpm	liters per minute
m	meter
mg	milligram
$mg/M^3$	milligrams per cubic meter
ml	milliliter
mm	millimeter
MSDS	Material Safety Data Sheet
ND	not detected
NIOSH	National Institute for Occupational Safety and Health

# GLOSSARY OF TERMS, ACRONYMS, AND ABBREVIATIONS (Continued)

O <sub>2</sub>	oxygen
OBZ	operator's breathing zone
OEL	occupational exposure limit
OHM	Oil and Hazardous Material
OSHA	Occupational Safety and Health Administration
OVA	organic vapor analyzer
OVM	organic vapor monitor
PEL	permissible exposure limit
PID	photoionization detector
PM	project manager
ppb	parts per billion
PPE	personal protective equipment
ppm	parts per million
REL	recommended exposure limit
RSO	Radiation Safety Officer
SSO	Site Safety Officer
SSR	Subcontractor's Safety Representative
STEL	short term exposure limit
TLV	threshold limit value
TWA	time-weighted average
UEL	upper explosive limit
VOC	volatile organic compound

#### **318 URBAN STREET BUFFALO, NEW YORK**

#### **1.0 PLAN-AT-A-GLANCE**

#### HEALTH AND SAFETY PLAN SUMMARY SHEET

THIS SUMMARY SHEET IS PROVIDED AS A QUICK-REFERENCE/OVERVIEW ONLY. THE REMAINDER OF THIS SITE-SPECIFIC HEALTH AND SAFETY PLAN (HSP) IS INTEGRAL TO THE SAFE CONDUCT OF SITE OPERATIONS AND MUST BE APPLIED IN ITS ENTIRETY.

#### **EMERGENCY INFORMATION**

Ambulance:	911
Fire:	911
Police:	911
Hospital:	(716) 898-3000 Erie County Medical Center, 462 Grider Street,
-	Buffalo. NY 14215

Project Manager:TBDHealth and Safety Representative:TBDRegional Health and Safety Manager:<br/>TBDTBDAlternates:TBDNational Response Center:(800) 424-8802

#### **HOSPITAL DIRECTIONS:**

To reach the hospital from the site, exit the site by going west onto Urban Street toward Kehr Street; take a right onto Kehr Street; turn right onto East Ferry Street; turn left onto Grider Street.

Additional information concerning emergency procedures is located in Section 12.0, and the hospital route map is located in Attachment A. A copy of the hospital route map must be readily available in each site vehicle that may be used to transport accident victims to the hospital.

# **CONSTITUENTS OF CONCERN**

Depending on the area of excavation, constituents of concern could include the list below. VOCs are expected to be found in limited areas of the site, primarily south of the building (see Figure 1 of the Site Management Plan).

- **Polychlorinated Biphenyls (PCBs)** 1.
- **Xylene** 2.
- Toluene 3.
- 4. Chlorobenzene
- 5. Ethylbenzene

- 6. Naphthalene
- **1,1-Dichloroethane** 7.
- 1,1,1-Trichloroethane 8.

Additional information regarding site history, constituents of concern, and scope of work activities is located in section 2.0.

Task	Chemical Hzds.	Heat/ Cold Stress	Noise	Slip/Trip/ Fall	Lifting Hzds.	Mechanical Hzds.	Electro- cution	Explosion	Excav- ation
1. Soil excavation	Low	Med	Med	Med	Med	High	Low	Low	High

# PROJECT HAZARD ANALYSIS

High - Exposure likely more than 50% of the time Med - Exposure likely 10 to 50% of the time Low - Exposure likely less than 10% of the time

n/a – Exposure not anticipated

Concentrations of residual contaminants at the site are such that the need for respiratory protection is not anticipated. However, monitoring will be conducted to ensure worker safety in the event unforeseen conditions are encountered during work activities.

Additional information concerning project hazards and their control can be found in Section 5.0.

Task	Minimum Protective Clothing/Equipment Requirements				
1.	Steel-toed boots, hard hat, safety glasses, nitrile gloves when handling potentially				
	contaminated materials, surgical nitriles for handling samples.				

For small projects (less than approximately 20 cubic yards) that are of short duration, no specific PPE should be needed. However, the following list of PPE is recommended for use at the site.

# **PROTECTIVE CLOTHING (FIRST ACTION LEVEL)**

Chemical Protective Clothing

Outer Coveralls:Kleenguard® or Tyvek®\*Outer Gloves:NitrileInner Gloves:Surgical Nitriles

Chemical protective steel-toed boots or chemical-resistant boot covers over steel-toed boots

\* Substitute poly-Coated Tyvek<sup>®</sup> if there is a potential for contact with liquids (groundwater, mud, etc.)

The HSP Preparer has conducted a Hazard Assessment for small intrusive projects at this site based on information provided by the Project Manager, in accordance with 29 CFR 1910.132(d).

For more information on Personal Protective Equipment (PPE) and respiratory protection requirements, see the Action Levels table (Page 4) and Sections 7.0 and 8.0.

#### ENGINEERING CONTROLS TO BE USED (AS APPLICABLE)

- Water spray for dust suppression
- Natural wind forces to reduce exposure to airborne contaminants
- Light-colored PPE to reduce solar load for heat stress control
- Dining canopy to provide shaded work/rest area for heat stress control

For more information, see Sections 5.0 and 6.0.

### **INSTRUMENTATION TO BE USED**

- \_\_\_\_ HNu Photoionization Detector (PID) w/ 10.6 eV probe
- X Organic Vapor Monitor (OVM), PID w/ 11.7 eV lamp OR EQUIVALENT PID
- Photovac Microtip PID w/ \_\_ eV lamp
- \_\_\_\_ MiniRAE PID w/ \_\_\_\_ eV lamp
- **\_\_\_\_** Combustible Gas/O<sub>2</sub> Indicator
- **\_\_\_\_** Foxboro Organic Vapor Analyzer (OVA) Flame Ionization Detector (FID)
- \_\_\_\_ Miniram Real-time Dust Monitor
- \_\_\_ Other \_\_\_\_\_

For more information, see Section 6.0

### PERSONAL EXPOSURE SAMPLING

- \_\_\_ Will be conducted
- Will be conducted if PID readings require the use of respiratory protection as described in the Action Level Table (page 4) and in Section 5.1.1
- X Is not anticipated

For more information on monitoring, see Section 6.0.

# HAZ-COM MATERIALS INVENTORY

• TBD

				••••
Analyzer Reading*	Location	Duration	Action	Personal Protective Equipment
<5 ppm	Point of Operations/ Release Source Point		Continued periodic monitoring	Minimum site ensemble
<5 ppm	OBZ		No respirators required	As for 1 <sup>st</sup> Action Level
>5 ppm	Point of	>1	Monitor OBZ; don	Minimum Site
(1 <sup>st</sup> Action	<b>Operations</b> /	minute	protective	<b>Ensemble, PLUS:</b>
Level)	<b>Release Source</b>		clothing; establish	<b>Chemical-resistant</b>
	point		work zones as	boot covers or steel-
			described in	toed boots, Tyvek <sup>®</sup>
			Section 10.	coveralls‡, Nitrile
				Outer Gloves, and
				Nitrile Inner
5 5	007	. 1	D	(surgical) gloves
>5 ppm	OBT	> 1 minuto	Provide	Add Iull-lace
(2 Action Level)		mmute	nrotaction.	organic vapor/P100
Level)			establish decon	combo cartridges
			area as described	combo car triuges
			in 10.0. Contact the	
			Health and Safety	
			Manager to perform	
			personal	
			monitoring.	
>20 ppm	OBZ	>1 minute	Stop work; move	
(3 <sup>rd</sup> Action			upwind while	
Level)			vapors dissipate. If	
			elevated levels	As specified by
			remain, cover soil,	Health and Safety
			evacuate upwind	Manager
			and notify Health	
			and Safety	
<b>\75</b> nnm	OP7	Instant	Ston work: move	
$(3^{rd} Action)$	UDL	aneous	unwind while	
Level)		ancous	vanors dissinate If	
			elevated levels	As specified hv
			remain, cover soil	Health and Safety
			evacuate upwind	Manager
			and notify Health	
			and Safety	
			Manager or PM.	

# **ACTION LEVELS** (for Photoionization Detector)

\*above background readings (OBZ= Operator's Breathing Zone) ‡Substitute poly-coated Tyvek<sup>®</sup> if there is potential for contact with liquids (groundwater, stormwater, mud, etc)

For additional information on Action Levels and their implementation, see Sections 6.0 and 7.0.

#### HEALTH AND SAFETY EQUIPMENT LIST

The following list presents the health and safety equipment that may be needed for small projects at this site. Actual equipment needed may vary depending on the scope of the particular project.

Occupational Safety and Health Administration (OSHA) "Safety on the Job" Posters Hardhats Safety glasses Ear plugs or muffs Cotton coveralls Traffic safety vest Tyvek<sup>®</sup> coveralls or equivalent Polycoated Tyvek<sup>®</sup> Q-23 coveralls Steel-toed boots Chemical-resistant steel-toed boots or chemical-resistant boot covers Work gloves Nitrile outer gloves Surgical nitrile inner gloves Plastic sheeting (visqueen) 55-gallon 17-H drums (for contaminated solids) 55-gallon 17-E drums (for liquids) Drum liners Barricade tape and barricades Wash tubs and scrub brushes Decontamination solution (i.e., TSP) Folding chairs 5- or 10-gallon portable eyewash Respirator sanitizing equipment First aid kit Infection control kit Drinking water Gatorade or similar drink Type ABC fire extinguishers Half-face respirators approved by National Institute for Occupational Safety and Health (NIOSH) Full-face respirators (NIOSH-approved) Respirator cartridges [organic vapor/P100 combo0] PID w/11.7 eV lamp and calibration kit Garden sprayer Х Compressed gas horn

Χ		Paper towels and hand soap
	X	Spill sorbent
X		Plastic garbage bags
	Χ	Broom and/or shovel

#### 2.0 FACILITY BACKGROUND/WORK PLAN

### 2.1 SITE HISTORY

The site was remediated under oversight of NYSDEC. The site cleanup levels were established for industrial use of the property. Remedial actions performed at the site met the cleanup goals established in the remedial work plans and subsequent NYSDEC-approved modifications with the exception of an area along the south property boundary where soil with one semi-volatile organic compound (SVOC), naphthalene, was present in the sidewall sample from the former underground tank excavation at concentration greater than STARS criteria. Further excavation could not be undertaken in this area because of the proximity of the excavation to Urban Street.

Contaminants remaining at the site include soil with residual concentrations of PCBs underneath a cover layer throughout the property and limited area with soils containing volatile organic compounds (VOCs). Specifically the remaining impacts include:

- <u>Exterior Areas</u>: a 12 inch cover layer, comprised of soil and/or asphalt depending on the specific location, over soils containing PCBs at levels above 1 mg/kg and less than or equal to 10 mg/kg.
- <u>Exterior Area, adjacent to southern wall of the building:</u> a geotextile fabric and 12 or more inches of soil cover over soils containing VOCs above unrestricted use values in a small area 160 feet long and 2 feet wide near the building foundation.
- <u>Main Building Area:</u> reinforced concrete flooring over soils containing PCBs at levels above 1 mg/kg and less than or equal to 10 mg/kg, and reinforced concrete associated with a former transformer pit at a depth of 4 to 10 feet below the building containing PCBs at levels above 1 mg/kg and less than or equal to 10 mg/kg.

### 2.2 PURPOSE AND SCOPE OF WORK

The elements of the scope of work covered by this Health and Safety Plan are as follows:

• Soil Excavation

All work at the site that disturbs the cover system, which is composed of soil, asphalt, and concrete, must be performed in accordance with the *Site Management Plan* and *Excavation Work Plan*. Because the site has been remediated, encountering hazardous levels of contamination is not anticipated. However, monitoring for unforeseen conditions must be conducted. Following standard practices for working at a hazardous waste site will be protective of human health for workers performing intrusive work at this site, where residual impacts are less than hazardous criteria.

Entities that perform excavation at the site must confirm that the state and local authorities have been notified and that the proper permits are obtained, if necessary.

Sediment and liquid wastes generated during the excavation will be managed and disposed in accordance with Federal, State, and local regulations.

#### **3.0 APPLICABILITY**

The purpose of this HSP, which was developed specifically for small project of short duration that require disruption of the cover systems at the **318 Urban Street** site **in Buffalo**, **New York** is to assign responsibilities, establish personal protection standards and mandatory safety procedures, and provide for contingencies that may arise while operations are being conducted at the site. This HSP complies with, but does not replace, Federal Health and Safety Regulations, as set forth in 29 CFR 1910 and 1926, and applicable state regulations. This HSP is to be used as a supplement to these rules, regulations, and guidance.

The provisions of the HSP are mandatory for all onsite employees engaged in intrusive work with the potential to contact residually impacted material and related material management activities associated with this project, which may involve health and safety hazards.

Changing and/or unanticipated site conditions may require modification of this HSP to maintain a safe and healthful work environment. Any proposed changes to this plan will be reviewed with a health and safety professional prior to their implementation. If this is not feasible, the Site/Project Manager may modify the plan and record all changes in the field log book; under no circumstances will modifications to this plan conflict with federal, state, or other governmental health and safety regulations.

If a subcontractor is used, each site subcontractor will be provided a copy of this HSP to fulfill its obligation under 29 CFR 1910.120(b) to inform subcontractors of site hazards. In turn, each subcontractor will provide documentation to the contracting firm that describes their plan for addressing applicable the health and safety requirements for activities that are unique to their scope of services (for example: drill rig operation, excavation safety, electrical safety, etc).

#### 4.0 **RESPONSIBILITIES**

The employer will have site safety and health oversight and coordination responsibilities for its personnel; each subcontractor will be held accountable for the safe and healthful performance of work by each of its employees, subcontractors, or support personnel who may enter the site.

The employer will adhere strictly to the provisions of this HSP, along with applicable regulations issued by governmental entities.

### 4.1 **PROJECT MANAGER**

The PM will direct onsite operations. The PM may delegate all or part of these duties to a properly qualified employee who is designated as the Site Manager. At the site, the PM, assisted by the Site Safety Officer (SSO), has primary responsibility for the following.

- Seeing that appropriate PPE and monitoring equipment are available and properly used by all onsite employees.
- Establishing that personnel are aware of the provisions of this HSP, are instructed in the work practices necessary to ensure safety, and are familiar with planned procedures for dealing with emergencies.
- Establishing that all onsite personnel have completed a minimum of 40 hours of health and safety training, have appropriate medical clearance, as required by 29 CFR 1910.120, and have been fit tested for the appropriate respirators.
- Seeing that personnel are aware of the potential hazards associated with site operations.
- Monitoring the safety performance of all personnel to see that required work practices are employed.
- Correcting any work practices or conditions that may result in injury or exposure to hazardous substances.
- Preparing any accident/incident reports (see Section 12.6).
- Seeing to the completion of Safety Plan Compliance Agreements by personnel (See Attachment B).
- Halting site operations, if necessary, in the event of an emergency or to correct unsafe work practices.
- Seeing that utility clearances are obtained prior to the commencement of work (see Section 5.2.7).
- Seeing that the appropriate procedures are appended to this HSP and are available on site (see "Plan-at-a-Glance").
- Reviewing and approving this project HSP.

### 4.2 SITE SAFETY OFFICER

The SSO's duties may be carried out by the PM or another qualified Site Manager. The SSO is responsible for the following.

- Implementing the project HSP and reporting any deviations from the anticipated conditions described in that plan to the PM.
- Determining that monitoring equipment is used properly by personnel and calibrated in accordance with manufacturer's instructions or other standards and that results are properly recorded and filed.
- Checking to assure personnel have current medical clearance and training.
- Assuming any other duties as directed by the PM.
- Coordinating with a health and safety professional to identify personnel on site for whom special PPE, exposure monitoring, or work restrictions may be required.
- Conducting safety meetings for all site personnel in accordance with Section 14 of this HSP.
- Conducting daily site inspections prior to the start of each shift. All inspections must be documented (preferably in a bound field logbook).
- Providing ongoing review of protection level needs as project work is performed and informing the PM of the need to upgrade/downgrade protection levels, as appropriate.
- Contacting the Health and Safety Professional to perform personal industrial hygiene monitoring if the second action level is reached (>5 ppm in the OBZ), as described in the Action Level Table (page 4) and Section 5.1.1.
- Seeing that decontamination procedures described in Section 10.0 are followed by personnel.
- Establishing monitoring of personnel and recording the results of exposure evaluations.
- Halting site operations, if necessary, in the event of an emergency or to correct unsafe work practices.
- Maintaining the visitor log.
- Posting OSHA "Safety of the Job" and other required posters at the site.

#### 4.3 **PROJECT PERSONNEL**

Project personnel involved in onsite investigations and operations are responsible for:

- Taking all reasonable precautions to prevent injury to themselves and to their fellow employees;
- Performing only those tasks that they believe they can do safely and immediately reporting any accidents and/or unsafe conditions to the SSO or PM;

- Implementing the procedures set forth in the HSP and reporting any deviations from the procedures described in that HSP to the SSO or PM for action;
- Notifying the PM and SSO of any special medical problems (i.e., allergies) and seeing that all onsite personnel are aware of such problems; and
- Reviewing the project HSP and signing the Safety Plan Compliance Agreement.

# 4.5 SUBCONTRACTOR'S SAFETY REPRESENTATIVE

Subcontractors are requested to designate an on-site employee (preferably a manager) who will serve as the Subcontractor's Safety Representative (SSR) for their company. In this capacity, the SSR is responsible for providing health and safety oversight of their personnel participating on the project team. In addition, the SSR will perform routine work area inspections, conduct safety meetings, provide safety orientations for new employees and investigate incidents involving their employees. The SSR will attend periodic safety meetings with the contracting employer.

### 5.0 JOB HAZARD ANALYSIS

### 5.1 CHEMICAL HAZARDS

Two categories of chemical hazards are associated with site activities:

- Site constituents; and
- Chemicals used to conduct the site work.

Site constituents are those that exist at the site and are the cause for conducting site activities. The chemicals that are brought on site to conduct the work may be hazardous and subject to regulation under OSHA's Hazard Communication Standard (29 CFR 1910.1200).

#### 5.1.1 Site Constituents

Concentrations of residual contaminants at the site are such that the need for respiratory protection is not anticipated.

From an occupational health standpoint, given that any potential exposure to site personnel will be only for a short period of time (intermittent for several days), the levels of contaminants that have been, or could be, encountered during site activities should not represent a significant concern if the provisions of this HSP are appropriately implemented. However, if unforeseen conditions are encountered, the potential for exposure to elevated levels of these contaminants may exist. Exposure to elevated levels of these contaminants may pose hazards. Overviews of these hazards are presented here in terms of the following types of occupational exposure limits:

- PEL Permissible Exposure Limit (OSHA Standard)
- TLV Threshold Limit Value (American Conference of Governmental Industrial Hygienists [ACGIH] Guidance)
- REL Recommended Exposure Limit (NIOSH Guidance)
- STEL Short Term Exposure Limit
- C Ceiling

OSHA PELs, ACGIH TLVs, and NIOSH RELs are time-weighted averages (TWAs), which are defined as concentrations for a normal 8-hour work day and 40-hour work week to which almost all workers can be exposed repeatedly without suffering adverse health effects.

STEL is defined as the concentration to which workers can be exposed for short time periods without irritation, tissue damage, or narcosis sufficient to be likely to cause impairment of self-rescue or to precipitate accidental injury. The STEL is a 15-minute TWA that will not be exceeded at any time during the workday. STELs are used by OSHA, ACGIH, and NIOSH for chemical exposure criteria.

A ceiling value (C) is a concentration that will not be exceeded at any time in any workday. Ceiling limits are used by OSHA, ACGIH, and NIOSH for chemical exposure criteria.

<b>Chemical Name</b>	OSHA PEL	Routes of	Health	Symptoms of
		Exposure	Hazard/Target	Overexposure
			Organ	
Chlorobenzene	75 ppm	Inhalation, skin	CNS and eyes	Irritation of skin,
		and/or eye		eyes, and upper
		contact		respiratory tract
1,1	100 ppm	Inhalation,	Skin, respiratory	Irritation skin,
Dichloroethane		ingestion, skin	system, liver,	CNS depressant;
		and/or eye	kidneys, CNS	liver, kidney
		contact		lung damage
Naphthalene	10 ppm	Inhalation, skin	Eyes, skin,	Eye irritation;
		absorption,	blood, liver,	profuse
		ingestion, skin	kidneys, CNS	sweating; head
		and/or eye		confusion;
		contact		excitement;
				nausea,
				vomiting;
				abdominal pain;
				irritated bladder;
				jaundice; renal
				shutdown;
				dermal, optical
				neuritis, corneal
				damage.
PCBs (42%	1 mg/m3 "skin"	Inhalation, skin	Skin, eyes, liver,	Irritation of eyes,
Chlorine)		absorption,	reproductive	chloroacne, liver
		ingestion, skin	system	damage,
		and/or eye		potential
		contact		carcinogen
PCBs (54%	0.5 mg/m3	Inhalation, skin	Skin, eyes, liver,	Irritation of eyes,
Chlorine)	"skin"	absorption,	reproductive	chloroacne, liver
		ingestion, skin	system	damage,
		and/or eye		potential
		contact		carcinogen

Summaries on the site constituents of concern follow.

Chemical Name	OSHA PEL	RoutesofExposure	Health Hazard/Target Organ	Symptoms of Overexposure
1,1,1 Trichloroethane	350 ppm	Inhalation, skin adsorption, ingestion, skin and/or eye contact	Eyes, skin, CNS, CVS, and liver	Irritation of eyes, skin; headache, poor equilibrium, CNS depression; cardiac arrhythmia; liver damage; weakness
Toluene	200 ppm	Inhalation, skin adsorption, ingestion, skin and/or eye contact	CNS and eyes	Headache, nausea, tremors, fatigue
Xylene	100 ppm	Inhalation, skin absorption, ingestion, skin and/or eye contact	Eyes, skin, respiratory system, central nervous system, gastrointestinal tract, blood, liver, kidneys	Irritation eyes, skin, nose, throat; dizziness, excitement, drowsiness, incoordination, staggering gait; corneal vacuolization; anorexia, nausea, vomiting, abdominal pain; dermatitis

Skin contact with potentially contaminated materials will be minimized by the use of personal protective clothing (as described in Sections 1.0 and 7.0). Inhalation of vapors or particulates during site activities will be minimized by the use of engineering controls. Respiratory protection is unlikely to be necessary at this site, but will be used if the action levels described in Section 1.0 are exceeded. Ingestion of contaminated materials will be minimized by the use of appropriate personal hygiene procedures during decontamination (i.e., thoroughly washing face and hands with soap and water after leaving the work area and prior to eating or drinking).

### 5.1.2 Hazard Communication Materials

Materials that are considered hazardous materials under the OSHA Hazard Communication Standard (29 CFR 1910.1200) may be used during this project. In accordance with the Hazard Communication Program, the Material Safety Data Sheets (MSDSs) for the hazardous materials listed in Section 1.0 are included in Attachment C. The SSO will make copies of these MSDSs available to any subcontractors (i.e, drillers, excavators) on this project.

A written Hazard Communication Program is provided, a copy of which is to be maintained on site.

# 5.2 PHYSICAL HAZARDS

Physical hazards at this work site include:

- Heat stress and cold stress;
- Noise from the operation of site equipment;
- Slip-trip-fall types of accidents;
- Back injuries resulting from improper lifting;
- Being caught in or struck by moving equipment;
- *Electrocution or explosion* hazards associated with *excavation activities*, such as contact with overhead or underground power lines or pipelines; and
- Excavation hazards.

# 5.2.1 Heat Stress Recognition and Control

Heat stress monitoring will commence when personnel are wearing PPE, including Tyvek®-type coveralls, and the ambient temperature exceeds 70°F. If standard work garments (cotton coveralls) are worn, monitoring will commence at 85°F.

### 5.2.2 Cold Stress Recognition and Control

Protection against cold stress will be initiated when temperatures drop below 45°F. Cold stress guidance is provided below.

Exposure to cold working conditions can result in cold stress (hypothermia) and/or injury (frostbite) to hands, feet, and head. Hypothermia can result when the core body temperature drops below  $36^{\circ}$ C ( $96.8^{\circ}$ F). Lower body temperature will be likely to result in dizziness, drowsiness, disorientation, slurred speech, or loss of consciousness, with possible fatal consequences. Pain in the extremities may be the first warning of danger from cold stress. Shivering develops when the body temperature falls to  $35^{\circ}$ C ( $95^{\circ}$ F).

Hypothermia can be brought on by exposure to cold air, immersion in cold water, or a combination of both. The wind chill factor, which is the cooling power of moving air, is a critical factor in cold stress.

Workers must wear adequate insulating clothing if work is performed in temperatures below  $4^{\circ}$ C ( $40^{\circ}$ F). At temperatures of  $2^{\circ}$ C ( $35.6^{\circ}$ F or less), workers whose clothing becomes wet will be provided immediately with a change of clothing and, if necessary, treated for hypothermia. Treatment includes warming the victim (with skin-to-skin contact or by providing warm blankets

or other coverings) and providing warm liquids for the victim to drink. Skin exposure will not be permitted at temperatures of  $-32^{\circ}$ C ( $-25^{\circ}$ F) or below.

If fine work is to be performed with bare hands for more than 10 to 20 minutes at temperatures below  $16^{\circ}C$  ( $60^{\circ}F$ ), provisions will be made for keeping the workers' hands warm. If equivalent chill temperatures fall below  $40^{\circ}F$ , and fine manual dexterity is not required, gloves will be worn. Metal handles of tools will be covered with insulating material at air temperatures below  $-1^{\circ}C$  ( $30^{\circ}F$ ).

If work is to be performed continuously in the cold when the wind chill factor is at or below  $-7^{\circ}C$  (19°F), heated warming shelters (tents, trailers, vehicle cabs) will be made available nearby.

# 5.2.3 Noise Hazards

Previous surveys indicate that heavy equipment, such as *excavation* equipment, may produce continuous and impact noise at or above the action level of 85 dBA. All personnel within 25 feet of operating equipment or near an operation that creates noise levels high enough to impair conversation will wear hearing protective devices (either muffs or plugs). Personnel wearing hearing protection must be enrolled in a Hearing Conservation Program and have had baseline audiogram and, where appropriate, annual audiograms. Personnel will wash their hands with soap and water prior to inserting earplugs to avoid initiating ear infections.

# 5.2.4 Slip/Trip/Fall Hazards

Workers should exercise caution when walking around the site to avoid fall and trip hazards. If there are holes or uneven terrain in the work area that could cause site personnel to fall or trip, they must be covered, flagged, or marked to warn workers. Workers should exercise caution around open excavations, such as test pits, and avoid getting closer than 2 feet to the edge of an unsloped excavation unless guardrails or fall protection is provided. If conditions become slippery, workers should take small steps with their feet pointed slightly outward to decrease the probability of slipping. Gravel or sand will be spread in muddy areas to reduce slipperiness. Workers should watch where they are walking and walk only in areas of good stability.

### 5.2.5 Lifting Hazards

The following guidelines will be followed whenever lifting equipment such as portable generators, coolers filled with samples, and any other objects that are of odd size or shape or that weigh over 40 pounds. Safe lifting procedures are described below:

- Get help when lifting heavy loads.
- When moving heavy objects, such as drums or containers, use a dolly or other means of assistance.
- Plan the lift. If lifting a heavy object, plan the route and where to place the object. In addition, plan communication signals to be used (i.e., "1,2,3, lift," etc.)
- Wear sturdy shoes that are in good condition and supply traction when performing lifts.

- Keep your back straight and head aligned during the lift, and use your legs to lift the load do not twist or bend from the waist. Keep the load in front of you do not lift or carry objects from the side.
- Keep the heavy part of the load close to your body to help maintain your balance.

# 5.2.6 Heavy Equipment

Operation of heavy equipment during site activities presents potential physical hazards to personnel. The following precautions must be observed whenever heavy equipment is in use:

- Wear PPE, such as steel-toed shoes, safety glasses or goggles, and hard hats, whenever such equipment is present.
- At all times, be aware of the location and operation of heavy equipment, and take precautions to avoid getting in the way of its operation. Never assume that the equipment operator sees you. Make eye contact and use hand signals to inform the operator of your intent, particularly if you intend to work near or approach the equipment.
- Traffic safety vests **ARE REQUIRED** for personnel working near mobile heavy equipment, such as backhoes and other excavators.
- Never walk directly in back of or to the side of heavy equipment without the operator's acknowledgment.
- When an equipment operator must operate in tight quarters, the equipment subcontractor will provide a person to assist in guiding the operator's movements.
- Keep all non-essential personnel out of the work area.
- Any heavy equipment that is used in the exclusion zone (EZ) will remain in that zone until its task is completed. The equipment subcontractor will completely decontaminate such equipment in the designated equipment decontamination area as required prior to moving the equipment outside of the EZ/Contamination Reduction Zone (CRZ).

### 5.2.7 Underground and Aboveground Utilities

The Site Manager or SSO is responsible for locating underground utilities before the commencement of any subsurface (> 0.3 meter [1 ft.]) activities. Resources include site plans, utility companies, and regional utility locating services. The proper utility company personnel will certify in writing to the Site Manager or SSO that underground utilities have been deactivated, and the certification will be retained in the project files.

Excavation, drilling, crane work, or similar operations adjacent to overhead lines will not be initiated until operations are coordinated with utility officials. Operations adjacent to overhead lines are prohibited unless one of the following conditions is satisfied.

Power has been shut off and positive means (e.g., lockout/tagout) have been taken to prevent lines from being energized. Wherever possible, the SSO will observe power shut off and place a lock and tag on the switch. In all cases, utility company personnel will certify in writing to the

Site Manager or SSO that the overhead utilities have been deactivated, and the certification will be retained in the project files. The Site Manager or SSO must also attempt to verify power shut off by checking that power is no longer available to the affected building or equipment.

Equipment, or any part of the equipment, cannot come within the following minimum clearance from energized overhead lines:

Power Lines	Minimum Required
Nominal System (kv)	Clearance
0-50	10 feet
51-200	15 feet
201-300	<b>20 feet</b>
301-500	25 feet
501-750	35 feet
751-1000	45 feet

### 5.2.8 Work Area Protection

Project operations may be undertaken in a roadway or parking lot, causing motor vehicles to pose a hazard. on the work are must be properly coned and flagged. Consideration should be given to parking work vehicles within the coned area between the work area and oncoming traffic.

### 5.2.9 Trenching and Excavation

All personnel are prohibited from entering a trench or excavation until it has been inspected by a competent person in accordance with 29 CFR 1926.650-651. If personnel are required to enter a trench or excavation that is deeper than 4 feet, the contractor who created the excavation must provide the following prior to personnel entry:

- If hazardous atmospheres are suspected, any trench or excavation more than 4 feet deep must be monitored.
- Adequate shoring, sloping, or benching techniques must be employed.
- Adequate means of employee access and egress must be used.
- The contractor's trained, competent person must inspect the trench or excavation daily, before work commences and on an as-needed basis throughout the day.

A copy of the Fed-OSHA Excavation Standard must be obtained. Compliance with all provisions of this regulation must be maintained when working in a trench or excavation.

#### 6.0 EXPOSURE MONITORING PLAN

Heat stress, noise, and chemical exposures may be encountered at this site. Heat stress monitoring and prevention is addressed in Section 5.2.1. Noise levels will not be monitored; personnel will wear hearing protection as described in Section 5.2.3.

### 6.1 CHEMICAL EXPOSURE MONITORING

The field instrumentation described in this HSP has been specifically selected for the contaminants that may be reasonably anticipated to be encountered during the course of this project. Selection factors include anticipated airborne concentrations, potential interference, ionization potentials, instrument sensitivity, and occupational exposure limits. The action levels specified in Section 1.0 were established with the expectation that specific instruments will be used. DO NOT SUBSTITUTE INSTRUMENTS WITHOUT THE CONSENT OF THE HEALTH AND SAFETY PERSONNEL OR PROJECT MANAGER.

The monitoring equipment specified in Section 1.0 will be used on a regular basis to evaluate the potential for exposure to airborne contaminants, typically every five to ten minutes. Monitoring will be conducted in the immediate vicinity of the contaminant source point or work area (e.g., at the excavation and soil stockpile). If readings exceed the first action level (5 ppm> one minute), monitoring will start immediately in the OBZ of the person working nearest the point of operations/contaminant source, and site personnel will don protective clothing.

A reading in the OBZ above the second action level (5 ppm > one minute) will require the use of half-face respirators with appropriate cartridges. If we do not stock suitable half-face respirators, personnel will upgrade to full-face units. An OBZ reading above the third action level (10 ppm > one minute) will require the use of full-face respirators with appropriate cartridges. If the monitoring instrument reads more than the fourth action level (20 ppm > one minute, or 75 ppm instantaneously), work will stop, and workers will move upwind while the airborne contaminants dissipate. If elevated levels remain for more than five minutes, the source of the airborne contamination will be covered with clean soil, plastic sheeting, or foam (or be controlled in an appropriate manner), and the PM will be contacted for further guidance.

If respirator protection supplies are not available on-site, work will be suspended and the excavation and removed soil will securely covered.

### 6.2 BACKGROUND READINGS

All direct-reading instrument readings will be evaluated relative to background readings, not "meter zero." Prior to the start of work at each shift, and whenever there is a significant shift in wind direction, instrument readings will be obtained upwind of the site work zone to determine the level of "background" readings from such things as local vehicle traffic or emissions from nearby operations unrelated to the site. Site readings will be evaluated against these background readings (i.e., if an action level is listed as 20 parts per million [ppm], it is evaluated as 20 ppm

above background). The SSO will consult with the industrial hygienist regarding the potential health hazards associated with background readings above 5 ppm.

# 6.3 DATA LOGGING

All monitoring data, including background readings, will be logged in a field logbook. The results of daily instrument calibrations can be logged on a separate form or in the field logbook. All monitoring instruments will be calibrated in accordance with the manufacturers' instructions prior to the start of each shift. Calibration also will be performed when inconsistent or erratic readings are obtained. IF AN INSTRUMENT CANNOT BE CALIBRATED TO SPECIFICATION OR BECOMES OTHERWISE INOPERABLE, ALL INVASIVE SITE WORK (I.E., DRILLING, EXCAVATING) WILL CEASE UNTIL THE INSTRUMENT IS APPROPRIATELY REPAIRED OR REPLACED, and the PM will be contacted for further guidance.

### 6.4 DUST CONTROL

High winds and site operations can cause airborne dust hazards. Air monitoring will consist of visual monitoring for dust during small projects.

Continuous visual monitoring will be required for all ground intrusive activities. Ground intrusive activities include, but are not limited to, soil excavation and handling, utility trenching, and building construction.

If visible dust is generated from work activities, dust suppression techniques, such as applying water, will be performed.

### 7.0 PERSONAL PROTECTIVE EQUIPMENT

The minimum Personal Protective Equipment (PPE) for site personnel includes:

- Hardhat;
- Safety glasses with side shields (or impact-resistant goggles);
- Steel-toed boots or chemical-resistant steel-toed boots;
- Ear protection in the vicinity of noisy equipment;
- Work gloves and/or chemical-resistant gloves; and
- Traffic safety vest in the vicinity of heavy equipment.

If monitoring action levels are reached, additional PPE is required. Section 1.0 describes the incremental PPE requirements relative to specific action levels and the specific kinds of PPE to be used. Procedures for the use and selection of PPE are provided, a copy of which is to be maintained on site.

### 7.1 LIMITATIONS OF PROTECTIVE CLOTHING

The protective equipment ensembles selected for this project are anticipated to provide protection against the types and concentrations of contaminants that may be encountered during field operations. However, no protective garment, glove, or boot is resistant to all chemicals at any concentration; in fact, chemicals may continue to permeate or degrade a garment even after the source of the contamination is removed.

To obtain optimal usage from PPE, the following procedures are to be followed by all personnel.

- When using disposable coveralls, don a clean, new garment after each rest break or at the beginning of each shift.
- Inspect all clothing, gloves and boots both prior to and during use for:
  - Imperfect seams;
  - Non-uniform coatings;
  - Tears; and
  - Poorly functioning closures.
- Inspect reusable garments, boots, and gloves prior to and during use for:
  - Visible signs of chemical permeation, such as swelling, discoloration, stiffness, or brittleness; and
  - Cracks or any signs of puncture or abrasion.

Reusable garments exhibiting any of these characteristics will be discarded.

### 7.2 DURATION OF WORK TASKS

The SSO will establish the duration of work tasks in which personnel use PPE ensembles that include chemical protective clothing (including uncoated Tyvek®). Variables to be considered include ambient temperature and other weather conditions, the capacity of individual personnel to work in the required level of PPE in heat and cold, and the limitations of specific PPE ensembles. Recommended rest breaks are as follows:

- Fifteen minutes midway between shift startup and lunch;
- Lunch break (30 to 60 minutes); and
- Fifteen minutes midway between lunch and shift end.

Rest breaks are to be taken in the support zone or other clean area after personnel have completed the decontamination process, including washing the hands and face with soap and water. *[Additional rest breaks will be scheduled according to heat stress monitoring protocols.]* 

### 8.0 RESPIRATORY PROTECTION

Concentrations of residual contaminants at the site are such that the need for respiratory protection is not anticipated. However, monitoring will be conducted to ensure worker safety in the event unforeseen conditions are encountered during work activities.

#### 8.1 **RESPIRATOR SELECTION**

Engineering controls and safe work practices (e.g., elimination of the source of contamination, ventilation equipment, working upwind, limiting exposure time, etc). always must be the primary control for air contaminants. Respirators will be used if engineering or work practice controls are not feasible for controlling airborne exposures below acceptable concentrations and as an interim control measure while engineering or work practice controls are implemented.

If the need for respirators has been established, the respirators will be selected on the basis of the hazards to which the worker is exposed. Only NIOSH-approved respirators will be issued. Selection criteria established in 29 CFR 1910.134 have been used by the Preparer of this HSP in determining respirator requirements for this project.

CAUTION: Full-face piece or half-face piece air-purifying respirators are not to be used where there is an oxygen deficiency. Only air-supplied respirators with an emergency escape cylinder or self-contained breathing apparatus will be worn when an oxygen deficiency exists.

CAUTION: A respirator does not protect against excessive heat or against a hazardous substance that can attack the body through the skin.

Airborne contaminants have been evaluated based on the suspected contaminants of concern. The concentration of the airborne chemical hazard will be evaluated using direct-reading instruments to determine what type of respirator will be used. Airborne readings will be compared to the action levels in the table in Section 1.0. See action level/respirator requirements in Section 5.1.

### 8.2 MEDICAL SCREENING

Project employees are enrolled in the Medical Surveillance Program and are medically evaluated in compliance with the requirements of 29 CFR 1910.134(a)(10). Employees not medically cleared to wear respirators will not be allowed to work on this project if conditions are encountered that require respiratory protection.

The medical status of each employee is reviewed annually and as may be deemed necessary by the examining physician if the physical status of the employee changes.

### 8.3 FIT TESTING

A person wearing a respirator must be clean-shaven in the area of the face-piece seal. Long hair, sideburns, and skullcaps that extend under the seal are not allowed. Glasses with temple pieces extending under the seal are not allowed for full-face respirators. Persons with facial conditions that prevent a proper seal are not allowed to wear a respirator until the condition is corrected. Facial conditions that may cause a seal problem include missing dentures, scars, severe acne, etc. Contact lenses may be worn with respiratory protection.

No individual will enter an area where the use of respiratory protective equipment is required unless the person has been fit tested within the last year. Fit testing will be performed in accordance with accepted fit test procedures.

Records of fit testing will be maintained on site or by the employee's office and/or corporate medical surveillance program.

Respirator wearers will perform a user seal check each time they put on the respirator. For airpurifying respirators, the positive user seal check is performed by removing the exhalation valve cover, placing the palm over the respirator exhalation valve, and exhaling gently. The respirator mask should puff out without noticeable leakage. The negative user seal check is performed by placing the palms over both of the respirator cartridges, inhaling gently, and holding the breath for 10 seconds. The respirator mask should remain collapsed on the face without noticeable leakage.

# 8.4 **RESPIRATOR USE INSTRUCTIONS**

Only those employees who have been properly trained and qualified on the specific type of respirator to be worn may use respirators. No individual will enter an area where the use of respiratory protective equipment is required unless the person has been trained.

All employees whose job assignments require the use of respirators are trained in accordance with 29 CFR 1910.134 during an initial 40-hour and an annual refresher training for hazardous waste operations.

Hands-on training in inspecting and donning a respirator, including user seal checks, also is provided at the time of fit testing. Retraining is performed annually on each type of respirator worn by the individual. In addition, site-specific respirator training is provided during site safety briefings conducted by the SSO. Training records are kept in the employee's training file.

A particulate respirator cartridge will be changed out when the wearer has difficulty breathing through the cartridge. Chemical gas or vapor respirator cartridges will be *changed out at least daily*.

The fit of a chemical gas or vapor respirator will be rechecked, and the cartridges will be changed, if the wearer detects chemical odor or feels chemical irritation on the skin, both of which are indicators of leakage or cartridge breakthrough. Where available, an End-of-Service Life Indicator (ESLI) will be used on chemical respirator cartridges. Cartridges will be changed

as soon as the ESLI indicates that the cartridge is saturated and no longer effective in absorbing airborne chemicals.

### 8.5 **RESPIRATOR INSPECTION**

The user will inspect respirators before and after each day's use. The inspection procedure for air-purifying respirators (full-face piece and half-face piece cartridge respirators) follows.

Examine the face piece for:

- Excessive dirt;
- Cracks, tears, holes, or distortion from improper storage;
- Inflexibility;
- Cracked or badly scratched lenses (full-face only);
- Incorrectly mounted eyeglass lenses or broken or missing mounting clips (full-face only); and
- Cracked or broken air-purifying element holder, badly worn threads, or missing gaskets.

Examine the head straps or head harness for:

- Breaks or cracks;
- Broken or malfunctioning buckles; and
- Excessively worn serration on the headstraps, which may permit slippage.

Examine the two inhalation valves and the exhalation valve for:

- Foreign material (e.g., hairs, particles, etc.);
- Improper insertion of the valve body in the face piece;
- Cracks, tears, or chips in the valve body, particularly in the sealing surface; and
- Missing or defective exhalation valve covers.

Examine the air-purifying cartridge for:

- Missing or worn cartridge-holder gasket;
- Incorrect cartridge/canister for the hazard;
- Incorrect cartridge installation, loose connections, or cross threading in the holder; and
- Cracks or dents in the outside case or threads of the filter or cartridge/canister.

### 8.6 CLEANING OF RESPIRATORS

Respirators assigned and worn by one individual must be dismantled and thoroughly cleaned and disinfected after each day's use. Visitors' respirators or respirators assigned to several individuals must be cleaned and disinfected after each use. A disinfectant spray or wipe is approved as a disinfectant between uses during the day but not for cleaning and sanitizing after each day's use. Care must be taken to prevent damage from rough handling during the cleaning procedure. After cleaning, respirators must be reassembled. The procedures for cleaning respirators follows.

- Washing: Disassemble and wash with a mild liquid detergent in warm water (not to exceed 110°F). A stiff bristle (not wire) brush may be used.
- Rinsing: Rinse in clean water (110°F maximum) to remove all traces of detergent. This is important to prevent dermatitis.
- Disinfecting: Thoroughly rinse or immerse in a sanitizer provided by the manufacturer. Alternatively, a weak chlorine bleach solution (1 milliliter of liquid bleach per liter of water) may be used.
- Final Rinsing: Rinse thoroughly in clean water (110°F maximum) to remove all traces of disinfectant. This is important to prevent dermatitis.
- Drying: Drain and dry by hanging by the straps from racks (take care to prevent damage) or by towel drying with clean, soft cloths or paper towels.

# 8.7 MAINTENANCE OF RESPIRATORS

Routine respirator maintenance, such as replacing missing valves, gaskets, and nosecups, must only be performed by trained respirator users or a respirator manufacturer's representative. Only approved replacement parts must be used. The substitution of parts from a different brand or type of respirator is generally not possible, invalidates the technical approval of the respirator, and is not permitted. Any respirator suspected of being defective must be removed from service and replaced.

### 8.8 STORAGE OF RESPIRATORS

When not in use, respirators must be stored to protect them from dust, sunlight, heat, extreme cold, excessive moisture, damaging chemicals, and physical damage. Respirators must be stored in sealable (e.g., Ziplock<sup>®</sup> or twist-tie) reusable plastic bags between shifts.

The respirator storage environment must be clean, dry, and away from direct sunlight. Onsite cabinets or cases are suggested. Storing bagged respirators in vehicles is discouraged because of the potential for damage from other material or equipment.

# 8.9 ADDITIONAL INFORMATION

Additional information on the Respiratory Protection Program will be available on site.

#### 9.0 SITE CONTROL

### 9.1 GENERAL

Barricade tape and/or barricades will be used to delineate a work zone for safety purposes around the work area. The barriers will be set in a 25-foot radius (as practical) around the work area to provide sufficient maneuvering space for personnel and equipment. A short piece of barricade tape can be affixed to a secure upright (e.g., a drill rig mast or a vehicle antenna) to serve as a wind direction telltale. A 5-foot opening in the barricades at the support zone (upwind of the work area) will serve as the personnel and equipment entry and exit point. The personnel decontamination station will be established at this point if formal decontamination procedures are required (see Section 10.0). All entry and exit from the work area will be made at this opening to control potential sources of contamination and leave contaminated soil and debris in the work area.

At the end of the shift, all boring/sampling holes, soil stockpiles, and excavations must be covered or otherwise secured. All soil, asphalt and concrete debris, and decontamination fluids are to be handled in accordance with relevant regulations, the *Site Management Plan*, and the *Site Excavation Work Plan*.

The PM or SSO (*with the assistance of the facility representative*) will determine an upwind evacuation area prior to each shift, and all personnel will be notified of its location. A horn or other signaling device will be used to signal an evacuation in the event of an emergency. Three blasts of the horn will be the signal to immediately stop work and proceed to the evacuation area.

The SSO will verify that all site visitors sign the visitors' log. In addition, all personnel and site visitors entering the work area must present evidence of their participation in a medical surveillance program and completion of health and safety training programs that fulfill the requirements of this HSP.

The SSO will provide site hazard and emergency action information to all site visitors before they enter the site. This can be done by providing a copy of this HSP to the visitor.

### 9.2 WORK ZONES

If monitoring instrument readings exceed the first action level (5 ppm > one minute), requiring the use of chemical protective equipment, work zones must be established as described below.

• EZ – A 25-foot circle (as practical) around the work area will be defined before work starts. The encircled area will constitute the EZ. This zone is where the potential for contact with residually impacted materials and physical hazards to the workers will be contained. Appropriate personal protection, as described in Section 1.0, will be required in this area. Plastic sheeting (visqueen) and/or tarps may be used as necessary to control contaminated materials spilled to the ground during site operations. The size of the EZ may be altered to accommodate site conditions and to ensure contaminant containment.

- CRZ A corridor leading from the EZ will be defined; it will lead from the work area to a break area. All decontamination activities will occur in the CRZ. A waste container will be placed at the end of the corridor so that contaminated disposable equipment can be placed inside and covered. Surface/soil contamination in this area will be controlled using plastic sheeting. No one will be permitted into the CRZ or EZ unless he/she is in full compliance with the requirements of this HSP.
- Support Zone A Support Zone, the outermost part of the site, must be defined for each field activity. Support equipment is located in this uncontaminated or clean area. Normal work clothes are appropriate within this zone. The location of this zone depends on factors such as accessibility, wind direction (upwind of work area), and resources (i.e., roads, shelter, utilities).

### **10.0 DECONTAMINATION PROCEDURES**

If the monitoring instrument readings indicate respirator use (the second action level [5 ppm > one minute]) in the OBZ, the following steps will be followed whenever personnel leave the EZ/work area.

- Remove all equipment, sample containers, and notes to the CRZ. Obtain decontamination solutions and decontaminate the tools (shovels, auger flights, etc.) by brushing them under a water rinse. A high-pressure steam cleaner also may be used for decontamination. All waste and spent decontamination solutions will be properly contained.
- Scrub boots with a stiff bristle brush and water. Washtubs and chairs will be provided.
- Remove outer gloves (and boot covers, if used).
- Remove Tyvek<sup>®</sup> coveralls; discard in provided container.
- Remove hardhat and eye protection.
- Remove respirator.
- Remove inner gloves.
- Wash hands and face.

The decontamination area will be covered with plastic sheeting that will be replaced when torn or heavily soiled and at the end of each shift.

Each worker will be responsible for cleaning, sanitizing, and storing his/her own respirator in accordance with the manufacturer's guidance (i.e., washing in warm water and detergent or sanitizing solution, air drying, and storing in a plastic storage bag; see Sections 8.6 - 8.8). Cartridges will be changed in accordance with the procedures described in Section 8.4.

All spent decontamination fluids (rinse waters, etc.) will be handled as directed by the PM and in accordance with relevant regulations and as specified in the site *Excavation Work Plan*.

#### **10.1 SANITATION**

Potable water will be made available at the site, either from a pressurized source or as commercially available bottled water. Drinking cups will be supplied; personnel will not drink directly from the source of water or share drinking cups. Sources of non-potable water will be labeled clearly.

Unless toilet facilities are available on site, or transportation is readily available (within five minutes) to transport personnel to nearby toilet facilities, portable toilet facilities, such as chemical toilets, will be provided on site.

Washing facilities will be provided on site and be located in the decontamination area or in the support area. Soap, clean water, wash basins, and single-use towels will be available for personnel use.

#### **10.2 DECONTAMINATION – MEDICAL EMERGENCIES**

In the event of physical injury or other serious medical concerns, immediate first aid is to be administered in lieu of further decontamination efforts.

See the Emergency Decontamination chart for a decision tree for emergency decontamination.

### **10.3 DECONTAMINATION OF TOOLS**

When all work activities have been completed, contaminated tools used by personnel will be appropriately decontaminated or disposed with other project waste at appropriately licensed facilities.

Contact with PCB-contaminated media is not considered to be high. However, because PCBs are very persistent chemicals, steam-cleaning, and/or use of a terpene-based degreaser on the equipment and associated tools will be necessary for the well rehabilitation and well decommissioning tasks.

It is expected that all tools will be constructed of non-porous, non-absorbent materials. This will aid the decontamination process. Any tool or part of a tool that is made of a porous/absorbent material will be discarded and disposed at properly licensed facilities with other project waste if it cannot be properly decontaminated.

Tools will be placed on a decontamination pad or into a bucket and thoroughly washed using a non-phosphate wash, tap water rinse, distilled water rinse, hexane rinse, air drying, and a second distilled water rinse. All visible particles are to be removed before the tool is considered clean. All investigation derived waste including all fluids will be containerized in 55-gallon drums and characterized for subsequent transport offsite by a properly licensed waste transporter and disposal at a properly licensed facility.
## **11.0 SAFE WORK PRACTICES**

#### 11.1 GENERAL SITE RULES

- Eating, drinking, chewing gum or tobacco, and smoking are prohibited in the contaminated or potentially contaminated area or where the possibility for the transfer of contamination exists.
- Alcohol consumption is prohibited during work hours. Excessive drinking is strongly discouraged at all times while the team is in the field. Use of prescription medications that impair judgement or affect motor skill and all illegal drugs are also prohibited. Behavior that could endanger the health or safety of any individual of the field team will not be tolerated. Any individual violating these requirements will be subject to disciplinary action that may include termination.
- All personnel will enter designated work areas only through the CRZ. All personnel leaving an EZ/work zone must exit through the CRZ and pass through the decontamination station, as described in Section 10.0.
- Personnel will wash their hands and faces thoroughly with soap and water prior to eating, drinking, or smoking.
- Personnel will avoid contact with potentially contaminated substances. Do not walk through puddles, pools, mud, etc. Avoid, whenever possible, kneeling, leaning, or sitting on contaminated surfaces. Do not place monitoring equipment on potentially contaminated surfaces (i.e., the ground, etc.)
- All field crew members should remain alert to potentially dangerous situations in which they should not become involved (i.e., note the presence of strong, irritating, or nauseating odors, etc.).
- Only those vehicles and the equipment required to complete work tasks should be permitted within the EZ/work zone (drill rigs, excavators, and similar items). All non-essential vehicles should remain within the support zone.
- Containers, such as drums, will be moved only with the proper equipment and will be secured to prevent dropping or the loss of control during transport.
- Field survey instruments, such as PIDs, will be covered with plastic or similar coverings to minimize the potential for contamination.
- No matches or lighters are permitted in the work area/EZ or CRZ.
- Contaminated protective equipment, such as respirators, hoses, boots, and disposable protective clothing, will not be removed from the work area/EZ or decontamination area until it has been cleaned or properly packaged and labeled.

- Spills should be prevented, to the extent possible. Should a spill occur, any liquid should be contained, if possible.
- Splashing of contaminated materials should be prevented.
- Field crew members should be familiar with the physical characteristics of the site operations including:
  - Wind direction in relation to the contaminated area;
  - Accessibility to equipment and vehicles;
  - Areas of known or suspected contamination;
  - Site access; and
  - Nearest water sources.
- The number of personnel and equipment in the EZ should be minimized, but only to the extent consistent with workforce requirements for safe site operations.
- All wastes generated by site activities will be disposed of as directed by the PM.
- All personal protective equipment will be used as specified and required.
- The buddy system will be used at all times when sampling for potentially hazardous material, when the first action level criteria has been exceeded, or when working in remote areas.
- Personnel are to immediately notify the SSO or Site Manager if any indications of potential explosions or unusual conditions are observed.

# **11.2 SAMPLING PRACTICES**

For all sampling activities, the following standard safety procedures will be employed:

- All sampling equipment will be cleaned before proceeding to the site.
- At the sampling site, sampling equipment will be cleaned after each use.
- Work in "cleaner" areas will be conducted first, where practical.
- All unauthorized personnel will remain outside the EZ at all times.

# 11.3 SAMPLE SHIPMENT/HAZARDOUS MATERIALS SHIPMENT

If samples to be collected during the course of this project fall under criteria that define them as hazardous materials under Department of Transportation (DOT) regulations 49 CFR Parts 171-177, then they <u>must</u> be shipped in accordance with those regulations by an individual who is certified as having been "function-specific" trained, as required under the DOT regulations.

Shipping of samples that may contain PCBs cannot be shipped via FedEx air services unless strict packaging requirements are followed. Furthermore, the liability imposed by UPS for shipping samples that may contain PCBs also prohibits using UPS. Samples that may contain

PCBs may be shipped via FedEx ground services as long as holding times are not exceeded. It is recommended that a laboratory or qualified independent courier services are used to transport the samples to the laboratory for analysis.

#### **12.0 EMERGENCY RESPONSE PLAN**

Evacuate personnel from areas of potentially hazardous material emergencies and to summon outside assistance from agencies with personnel trained to respond to the specific emergency. This section outlines the procedures to be followed by personnel in the event of a site emergency. These procedures are to be reviewed during the onsite safety briefings conducted by the SSO.

In the event of a fire or medical emergency, the emergency numbers identified in Section 1.0 (page 1) can be called for assistance.

## **12.1 PLACES OF REFUGE**

In the event of a site emergency requiring evacuation, all personnel will evacuate to a predesignated area a safe distance from any health or safety hazard (typically, the field office, unless conditions dictate otherwise). The SSO (*in cooperation with a facility representative*) will designate a primary assembly area prior to the start of work each day. The assembly area may have to be re-designated by the SSO in the event that the area of influence of an emergency affects the primary assembly area. Once personnel are assembled, the SSO will do a head count. The SSO will evaluate the assembly area to determine whether it is outside of the influence of the situation; if it is not, the SSO will redirect the group to a new assembly area where a new head count will be taken.

During any site evacuation, all employees will be instructed to observe wind direction indicators. During evacuation, employees will be instructed to travel upwind or crosswind of the area of influence. The SSO will provide site personnel with specific evacuation instructions via the site emergency radio, if necessary, specifying the actual site conditions.

## 12.2 FIRE

Fire prevention procedures are to be maintained on site. To protect against fires, the following special precautions must be taken.

- Before any flame-producing devices (i.e., cutting torches or welding irons) are used in the EZ, the SSO must be contacted. In some cases, the client may require to be contacted as well, to determine whether a hot work permit is required. A detailed inspection of the work area will be conducted to determine whether potential fire sources exist; if they do, they must be removed to at least 35 feet away before work can commence.
- Two 2A10B:C fire extinguishers must be located at the work area when cutting or welding is being conducted, and a fire watch will be posted.
- Upon completion of the cutting/welding activities, the area will be inspected for hot metal, slag, etc. The fire watch will remain at its station for at least 15 minutes after the hot work is completed.

Type ABC fire extinguishers will be available on site to contain and extinguish small fires. The local or facility fire department will be summoned in the event of any fire on site.

## **12.3 COMMUNICATION**

A communication network must be set up to alert site personnel of emergencies and to summon outside emergency assistance. Where voice communication is not feasible, an alarm system (i.e., sirens, horns, etc.) will be set up to alert employees of emergencies. Radio communication also may be used to communicate with personnel in the EZ. Where phone service is not readily available, radios or portable telephones will be used to communicate with outside agencies. Site personnel will be trained on the use of the site emergency communication network. Emergency phone numbers will be posted at the phone or radio used for outside communication. The SSO is responsible for establishing the communication network prior to the start of work and for explaining it to all site personnel during the site safety briefing.

In the event of an emergency, personnel will use the following hand signals where voice communications are not feasible:

Signal	Definition		
Hands clutching throat	Out of air/can't breathe		
Hands on top of head	Need assistance		
Thumbs up	OK/I'm all right/I understand		
Thumbs down	No/negative		
Arms waving upright	Send backup support		
Grip partner's wrist	Exit area immediately		

# **12.4 EMERGENCY RESPONSE PROCEDURES**

The emergency response team will consist of employees who assume the following roles:

- Emergency care provider(s)
- Provide first aid/CPR as needed
- Communicator

The role of the communicator is to maintain contact with appropriate emergency services and to provide as much information as possible, such as the number injured, the type and extent of injuries, and the exact location of the accident scene. The communicator will be located as close to the scene as possible to transmit to the emergency care providers any additional instructions that may be given by emergency services personnel in route.

• Site Supervisor

The site supervisor (usually the SSO) will survey and assess existing and potential hazards, evacuate personnel as needed, and contain the hazard. Follow up responsibilities include replacing or repairing damaged equipment, documenting the incident, and notifying

appropriate personnel/agencies described under Incident Reporting. Responsibilities also include reviewing and revising site safety and contingency plans as necessary.

In the event of an emergency. Notify site personnel of the situation, survey the scene to determine whether the situation is safe, to determine what happened, and to search for other victims. The Emergency Response Checklist provided on the next page can be used to help remember the things to do in an emergency.

## EMERGENCY RESPONSE CHECKLIST

In an Emergency	Yes	No
Confirm the reported incident		
Evacuate and secure the area		
Render first aid/emergency medical care		
Notify promptly:		
Project Manager		
Fire Department		
Police Department		
Nearest Hospital or Medical Care Facility		
Start Documentation		
If spill or leak occurs:		
Don the proper PPE		
Stop the source		
Contain the spill		
Clean up the spill		
Upon evacuating, take attendance at the assembly area		
Authority given:		
Leave the site		
Restart the operations		
Debrief and document the incident		
A copy of the document submitted to the HSM		

## 12.5 MEDICAL EMERGENCY RESPONSE PLAN

At least one employee on site will hold a current certificate in American Red Cross Standard First Aid. This training provides six and one-half hours of instruction in adult CPR and basic first aid. If a medical emergency exists, personnel should:

- Consult the emergency phone number list and request an ambulance immediately;
- Perform First Aid/CPR as necessary;
- Stabilize the injured; decontaminate if necessary, and extricate *only* if the environment the injured/ill person is in is dangerous or unsafe and ONLY if the rescuers are appropriately protected from potential hazards that might be encountered during the rescue.
- When emergency services personnel arrive, communicate all first aid activities that have occurred.
- Transfer responsibility for the care of the injured/ill to the emergency services personnel.

The following items and emergency response equipment will be located within easy access at all times:

- First aid kit and infection control kit;
- Eyewash A 15 minute eyewash (required if corrosives are present), or an appropriate amount of portable sterile eyewash bottles, will be available on site for flushing foreign particles or contaminants out of eyes. The SSO will demonstrate the proper operation of the unit(s) prior to the start of work;
- Emergency telephone numbers list; and
- Portable radios for emergency communications in remote areas.

Drugs, inhalants, or medications will not be included in the first aid kit.

Supplies should be reordered as they are used. A monthly inventory must be done on the first aid kit and infection control kit contents, and supplies that have been used must be reordered.

## **12.6 INCIDENT REPORT**

ALL site injuries and illnesses must be reported to the SSO and PM immediately following firstaid treatment. Work is to be stopped until the PM or SSO have determined the cause of the incident and have taken the appropriate action to prevent a recurrence. Any injury or illness, regardless of severity, is to be reported.

#### 12.7 OPERATION SHUTDOWN

In certain extremely hazardous situations, the SSO or SSR may request that site operations be temporarily suspended while the underlying hazard is corrected or controlled. During operations shutdowns, all personnel will be required to stand upwind to prevent exposure to fugitive emissions. The SSO, with concurrence from the PM, will have ultimate authority for operations shutdown and restart.

## 12.8 SPILL OR HAZARDOUS MATERIALS RELEASE

Small spills are immediately reported to the SSO and are dealt with according to the chemical manufacturer's recommended procedures, which are found on the MSDS. Steps will be taken to contain and/or collect small spills for approved storage and disposal.

In the unlikely event of a larger release of hazardous materials as a result of site activities, site personnel will evacuate to the pre-designated assembly area. The local Designated Emergency Response Authority (DERA) will be notified by the SSO immediately, and appropriate actions will be taken to protect public health and mitigate the contaminant release. The DERA can be reached through the local police or fire department. The Site Manager will make the following emergency contacts:

Health and Safety Manager	TBD
Health and Safety Representative	TBD
Project Manager	TBD

EPA Response Center (if reportable quantity is exceeded) (800) 424-8802

# 13.0 TRAINING, MEDICAL SURVEILLANCE, SITE INSPECTIONS

## 13.1 TRAINING AND MEDICAL SURVEILLANCE

This section describes the training and medical surveillance requirements for personnel performing intrusive work with the potential for contact with residually impacted materials. Less stringent training requirements might be acceptable for some personnel depending upon the project.

All site personnel will have met the requirements of 29 CFR 1910.120(e), including:

- Forty hours of initial off-site training or its recognized equivalent
- Eight hours of annual refresher training for all personnel (as required);
- Eight hours of supervisor training for personnel serving as SSOs; and
- Three days of work activity under the supervision of a trained and experienced supervisor.

All site personnel are participating in medical surveillance programs that meet the requirements of 29 CFR 1910.120(f). Current copies of training certificates and statements of medical program participation for all personnel are maintained by the local office.

In addition, all site personnel will review this HSP and sign a copy of the Safety Plan Compliance Agreement provided in Attachment B. The PM will maintain these agreements at the site and place them in the project file at the conclusion of the operation.

Prior to the start of operations at the site, the SSO will conduct a site safety briefing, which will include all personnel involved in site operations. At this meeting, the SSO will discuss:

- Contents of this HSP;
- Types of hazards at the site and means for minimizing exposure to them;
- The type of monitoring that will be performed;
- Action levels for upgrade and downgrade of PPE;
- PPE that will be used;
- Site-specific respiratory protection requirements;
- Decontamination protocol;
- Site control measures, including safe operating practices and communication;
- Location and use of emergency equipment; and
- Evacuation signals and procedures.

All site personnel, including subcontractor personnel, are to attend the briefings and sign the briefing form.

Subsequent site safety briefings will be conducted at least weekly, or whenever there is a change in task or significant change in task location. Briefings also will be conducted whenever new personnel report to the site.

## **13.2 SITE INSPECTIONS**

The Site Manager or SSO is to conduct a daily site inspection prior to the start of each shift. It is the responsibility of the PM or Site Manager to resolve discrepancies immediately. Inspections are to be documented and maintained on site until the completion of the project, at which time they are placed in the project files.

#### 14.0 RECORD KEEPING

The PM and SSO are responsible for site record keeping. Prior to the start of work, they will review this HSP; if no changes are needed, they will sign the approval form (PM) or acceptance form (SSO).

All personnel will review the HSP and sign the Safety Plan Compliance Agreement in Attachment B; copies of these forms will be maintained in the project file as noted in Section 14.

The SSO will conduct a Site Safety Briefing in accordance with Section 14 and have all attendees sign the form in Attachment B; copies will be maintained in the project file.

Any incident or exposure incident will be investigated and the Incident Report will be completed and forwarded to the Office Human Resources Representative and Health and Safety Manager.

All instrument readings and calibrations, PPE use and changes, health and safety-related issues, and deviations from or problems with this HSP will be recorded in the field log.

ATTACHMENT A

HOSPITAL ROUTE MAP



<b>?</b>	318 Urban St, Buffalo, NY 14211	
	1. Head west on Urban St toward Kehr St	<b>go 0.2 mi</b> total 0.2 mi
L,	2. Take the 1st right onto Kehr St About 2 mins	<b>go 0.4 mi</b> total 0.6 mi
L,	3. Turn right onto E Ferry St About 1 min	<b>go 0.2 mi</b> total 0.8 mi
4	4. Take the 1st left onto Grider St Destination will be on the left About 3 mins	<b>go 0.9 mi</b> total 1.6 mi
P	462 Grider St, Buffalo, NY 14215	

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

Map data ©2011 Google

Directions weren't right? Please find your route on maps.google.com and click "Report a problem" at the bottom left.

#### ATTACHMENT B SAFETY PLAN COMPLIANCE AGREEMENT AND MEDICAL EMERGENCY CONTACT SHEET

I, \_\_\_\_\_\_, have received a copy of the Health and Safety Plan for this Project. I have reviewed the plan, understand it, and agree to comply with all of its provisions. I understand that I could be prohibited from working on the project for violating any of the health and safety requirements specified in the plan.

SIGNED:

Signature

Date

Firm:

This brief Medical Emergency Contact Sheet will be kept in the Support Zone during site operations. It is in no way a substitute for the Medical Surveillance Program requirements of the Health and Safety Program. This data sheet will accompany injured personnel when medical assistance or transport to hospital facilities is necessary.

 Emergency Contact:
 Phone #:\_\_\_\_\_

Relationship: \_\_\_\_\_

Do you wear contact lenses?

ATTACHMENT C

MATERIAL SAFETY DATA SHEETS

**APPENDIX D – INSPECTION FORM** 

Inspection Form 318 Urban Street, Buffalo, New York NYSDEC Site Number: 9-15-151					
Inspection Performed by:					
Name			Title		
Company Phone No. Add	ress	Waathar	Emorgonou	Site Work	
Reason for hispection. Annual	Severe	weather	Emergency	Sile WOIK	
Describe Site Use:					
Is site use compliant with Institutional Co	ntrols?			Yes	No
Describe General Site Conditions:					
Site Records Up To Date:				Yes	No
Cover System Status					
12-Inch Soil and Turf Grass Area Co	ndition:		Is cover effective?	Yes	No
Is cover intact?	Yes	No			
Does cover need maintenance?	Yes	No			
Asphalt Cover Area and Exterior Con	ncrete Sla	b Condition:	Is cover effective?	Yes	No
Is cover intact?	Yes	No			
Does cover need maintenance?	Yes	No			
Interior Concrete Slab Condition:			Is cover effective?	Yes	No
Is cover intact?	Yes	No	× , , , , , , , ,		
Site Security:			Is security effective?	Yes	No
Fence and Gate Condition:	* 7	<b>N</b> .			
Is fencing functional?	Yes	No			
Is maintenance needed?	Yes	No			
Recommendations for maintenance:					
Additional commentation					
Additional comments.					
Corrective Measures necessary?					
Pasidually impacted material remains use	lieturbado	,		Vac	No
Engineering controls continue to protective	re of hum	an health and	the environment?	I CS Ves	No
Site compliant with SMP and Deed Restri	ction?	un nearth anu		Yes	No
She compliant with bill and bood Rosal				105	110
Signature			Inspection Date	<b></b>	
Attachments: Additional Comment	s Site	Map with Not	ations Photographs	Page	_of

Inspection Form 318 Urban Street, Buffalo, New York NYSDEC Site Number: 9-15-151					
Inspection Performed by	/: Name		Title		
	- <b>-</b>				
Company Phone N Reason for Inspection:	No. Annual	Address Severe Weather	Emergency		Site Work
Signature			In	spection Date	
Attachments: Add	litional Comme	Ints Site Map with I	Notations F	hotographs	Pageof

FRENCH STREET



SOURCE: "FINAL EXCAVATION PLAN", OCTOBER 20, 1997 (REVISED NOVEMBER 10, 1997) BAC KILLAM CONSULTING ENGINEERS, BUFFALO, NEW YORK.

# **URBAN STREET**

0 25 50 GRAPHIC SCALE IN FEET



RESIDENTIAL

LEGEND:

\_\_\_\_\_\_\_ FENCE

PROPERTY LINE

