

**Site Management Plan
for
125 Main Street Site
Buffalo, NY
NYSDEC BCP Site No. C915262**

Prepared for:

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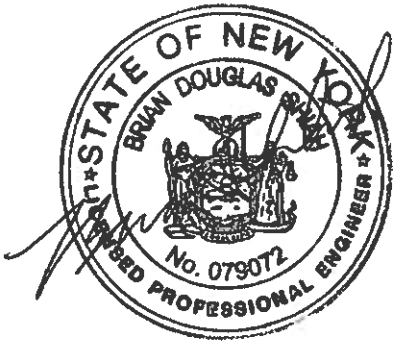
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**SITE MANAGEMENT PLAN
FOR
125 MAIN ST. SITE BUFFALO, NEW YORK
NYSDEC BCP SITE NO. C91562**

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Brian D. Shiah, P.E.
ENSOL, INC.

10/1/13
Date

125 Main St. Site
ERIE COUNTY, NEW YORK

Site Management Plan

NYSDEC Site Number: C915262

Prepared for:

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Revisions to Final Approved Site Management Plan:

Revision #	Submitted Date	Summary of Revision	DEC Approval Date
1	12/19/13	Replaced Terminated Env. Easement	12/19/13
2	8/18/20	Corrected Site Acreage, Corrected Parcel D2 Cover Systems Descriptions, Updated Site Contact Info.	

OCTOBER 2013
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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 125 Main Street Site (hereinafter referred to as the “Site”) under the New York State (NYS) Brownfield Cleanup Program (BCP) administered by the New York State Department of Environmental Conservation (NYSDEC). The site was remediated in accordance with Brownfield Cleanup Agreement (BCA) Index# C915262-05-12, Site # C915262, which was executed on August 16, 2012. It should be noted that the Site is comprised of parcels D1 and D2 which are discontinuous. A third parcel, D3, lies in-between parcels D1 and D2 and as per an amendment to the BCA dated July 9, 2013, parcel D3 was excluded from the Site. Refer to Sections 1.1.1 and 1.2.1 for further details.

1.1.1 General

Harbor District Associates, LLC (HDA) entered into a BCA with the NYSDEC to remediate the property located at 125 Main Street in Buffalo, New York. A figure showing the location of the site and surrounding areas is provided as Figure 1. This BCA required the Remedial Party, HDA, to investigate and remediate contaminated media at the site. The site is comprised of two separate parcels, identified as parcels D1 and D2. Parcel D1 is the main development parcel and is approximately 1.61 acres. Parcel D2 is approximately 0.21 acres and is located south of D1 along Scott Street. A figure showing the site location and boundaries of this 1.82-acre Site is provided in Figure 2. The boundaries of the site are more fully described in the metes and bounds site description that is part of the Environmental Easement. The metes and bounds site description and Environmental Easement are included as Appendices A and B, respectively.

After completion of the remedial work described in the Remedial Investigation/Interim Remedial Measures Work Plan (Work Plan) (TurnKey Environmental Restoration, LLC (TurnKey), June 2012), some contamination was left in the subsurface at this site, which is hereafter referred to as ‘remaining contamination.’ This Site Management Plan (SMP) was prepared to manage remaining contamination at the site until the Environmental Easement 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 Ensol, Inc. (EnSol) on behalf of HDA, 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 Easement for the site.

1.1.2 Purpose

The site contains contamination left after completion of the remedial action. Engineering Controls have been incorporated into the site remedy to control exposure to remaining contamination during the use of the site to ensure protection of public health and the environment. An Environmental Easement granted to 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 operation, 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 Easement for contamination that remains at the site. This plan has been approved by the NYSDEC, and compliance with this plan is required by the grantor of the Environmental Easement and the grantor's successors and assigns. This SMP may only be revised with the approval of the NYSDEC.

This SMP provides a detailed description of all procedures required to manage remaining contamination at the site after completion of the Remedial Action, including: (1) implementation and management of all Engineering and Institutional Controls; (2) routine inspections and maintenance of the site cover systems; and (3) performance of periodic inspections, certification of results, and submittal of Periodic Review Reports.

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) an Inspection Plan for implementation of routine inspections.

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 Easement. Failure to properly implement the SMP is a violation of the environmental easement, which is grounds for revocation of the Certificate of Completion (COC); and
- Failure to comply with this SMP is also a violation of Environmental Conservation Law, 6NYCRR Part 375 and the BCA(Index # C915262-05-12; Site # C915262) for the site, 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 Easement 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 as Tax Map/Parcel No. 111.17-7-1 on the Erie County Tax Map. The site is an approximately 1.82-acre area bounded by a depressed railroad track and Interstate I90 to the north, Scott St. to the south, Washington St. to the east, and Main St. to the west (see Figures 1 and 2). The boundaries of the site are more fully described in Appendix A – Metes and Bounds.

The site is comprised of two separate parcels, identified as parcels D1 and D2, which are currently being developed by HDA. Erie County Harbor Development Corporation (ECHDC) is the current site owner.

Parcel D1 is the main development parcel and is approximately 1.61 acres. Parcel D2 is approximately 0.21 acres and is located south of D1 along Scott St. An additional approximately 0.34-acre parcel, D3, located between parcels D1 and D2, was initially included in the executed BCA until recently. A formal request to modify the existing BCA Site boundary to exclude parcel D3 from the BCA was approved by the NYSDEC on July 9, 2013. Parcel D3 is currently being developed by the site owner, ECHDC.

1.2.2 Site History

The site is located in the historic canal district of the City of Buffalo, New York and currently includes one vacant eight story commercial building (former Donovan State Office Building) that is presently undergoing renovation (parcel D1) and a vacant, paved area south of the former Hamburg Canal (parcel D2). The former Hamburg Canal bisects the site through parcel D3. The Hamburg Canal was rebuilt prior to being buried and is currently used as a combined sewer outfall. The site formerly contained a small maintenance garage in the northeast corner of the property which has recently been removed as part of Site renovation activities. The current site owner is ECHDC.

Historic Sanborn maps from 1889 to 1951 show former on-site operations to include: Wire works (weaving and painting), paint shop, tin shop, junk yard/storage, contractor's yard, medicine manufacturing, a bit brace factory (including machine shop), and a boot and shoe manufacturer. The Lehigh Valley Railroad passenger terminal was also once located on the southern half of the site. The former Donovan State Office Building, currently undergoing renovation, was built in 1961-1962.

Several investigations were conducted at the site to evaluate previous site history and subsurface soil and groundwater quality. Previous investigations performed by others at the site included:

- Phase I Environmental Site Assessment (URS, May 2007);
- Phase II Environmental Site Assessment (URS, November 2007);
- Underground Storage Tank Closure Report (Lender, December 2008);
- Phase IB Cultural Resources Investigation (Panamerican, December 2009); and
- Supplemental Phase II Investigation (Benchmark, November 2011).

The Phase IB Cultural Resources Investigation report is included as Appendix C. The remaining reports were previously submitted as attachments to the BCP Application and/or the Remedial Investigation/Interim Remedial Measures/Alternatives Analysis (RI/IRM/AAR) report (EnSol, July 2013).

1.2.3 Geologic Conditions

The U.S Department of Agriculture Soil Conservation Service soil survey map of Erie County describes the general soil type at the Site as Urban Land (Ud). This is indicative of the level to gently sloping land in which 80 percent or more of the soil surface is covered by asphalt, concrete, buildings, or impervious structures (USDA, 1978) typical of an urban environment. The presence of overburden fill material is widespread and common throughout the City of Buffalo.

Based on the bedrock geologic map of Erie County, the site is situated over the Onondaga Formation of the Middle Devonian Series. The Onondaga Formation is comprised of a varying texture from coarse to very finely crystalline with a dark gray to tan color with chert and fossils contained within. The unit has an approximated thickness of 110 to 160 feet. During the 2007 URS Phase II subsurface investigation, bedrock was encountered at an approximate depth of 51 feet below ground surface (ftbgs) and was described as limestone.

The site is located within the Erie-Niagara River Basin. In the Erie-Niagara Basin, the major areas of groundwater are within coarser overburden deposits and limestone and shale bedrock. Based on previous investigations, groundwater was typically found to be 16-18 ftbgs and assumed to flow in a westerly direction towards Lake Erie. Figure 3 depicts the groundwater isopotential map generated from data collected in May 2013.

The geology at the site was investigated during the RI and is generally described as fill materials consisting of; ash, cinders, and construction and demolition debris. Areas

of slag fill were also present in the northern portion of the Site. All fill materials are underlain by native sand and lean clay. Figure 4 depicts historical soil boring locations and cross-section details, illustrating approximate overburden thickness, from the 2007 URS Phase II ESA.

1.3 SUMMARY OF REMEDIAL INVESTIGATION FINDINGS

A Remedial Investigation (RI) was performed to characterize the nature and extent of contamination at the site. The RI was performed by TurnKey in May-September 2012 and EnSol in May-June 2013 (supplemental groundwater sampling). The results of the RI are described in detail in the Remedial Investigation/Interim Remedial Measures/Alternative Analysis Report (RI/IRM/AAR) (EnSol, July 2013). Generally, the RI determined that remediation of soil was not required at the site, beyond the IRM activities, and that additional investigation or remediation of groundwater, soil vapor, or other environmental media or ecological resources were also not required. It should be noted that the RI/IRM/AAR compared soil analytical results to the Commercial use Soil Cleanup Objectives (SCOs). It was subsequently determined that a local zoning ordinance would permit Residential use as well. As such, the findings statements below differ from what was presented in the RI/IRM/AAR report in that soil concentrations are primarily compared to Restricted Residential SCOs. A qualitative human health exposure assessment was performed and potential exposure pathways were evaluated. Below is a summary of site conditions when the RI was performed in 2012-2013.

Soil

The current and future contemplated use of the site is Commercial, however the site is zoned for Restricted Residential use as well. Chemical analytical results for soil were compared to Title 6, New York Code of Rules and Regulations (6 NYCRR) Part 375 SCOs for Unrestricted, Restricted Residential, and Commercial use. Soil boring locations are depicted on Figure 4. Soil analytical results from the RI are summarized in Table 1.

VOCs

The majority of samples analyzed for volatile organic compounds (VOCs) were reported as non-detectable or at trace (estimated) concentrations below the laboratory sample quantitation limit. No VOCs were detected above Part 375 Restricted Residential SCOs. Acetone and methylene chloride were the only two VOCs detected at concentrations exceeding the Unrestricted SCOs. In four samples, from three locations, acetone was found at concentrations of 0.058 to 0.09 ppm. Methylene chloride was found in just one sample at 0.37 ppm. The Unrestricted and Restricted Residential SCOs for both contaminants is 0.05 ppm and 100 ppm respectively. At two of the three locations where the acetone was slightly elevated, the closely placed boreholes BH-20(R) and BH-20(R)E, sampled soils exhibited a petroleum odor. Semi-volatile organic compound (SVOC) concentrations were however either below Unrestricted SCOs or non-detect at these locations.

SVOCs

The majority of samples analyzed for SVOCs were reported as non-detectable or at trace (estimated) concentrations below the laboratory sample quantitation limit. Five sample locations had SVOC concentrations above Restricted Residential SCOs, however, two of the five locations were within the excluded D3 parcel. One of the five locations was a composite sample of surface soils (SS-1) collected from the small grass-covered area along the site's southwest perimeter. The SVOCs exceeding the Restricted Residential SCOs are the carcinogenic polycyclic aromatic hydrocarbons (cPAHs): benzo(a)anthracene, benzo(b)fluoranthene, benzo(a)pyrene and dibenzo(a,h) anthracene. The concentrations in excess of the Restricted Residential SCOs (0.33 and 1 ppm) ranged from 0.67 to 11 ppm. The only other SVOCs found at concentrations exceeding Restricted Residential SCOs were other cPAHs: benzo(k)fluoranthene, chrysene, and indeno(1,2,3-c,d)pyrene. The Restricted Residential SCOs for benzo(k)fluoranthene and indeno(1,2,3-c,d)pyrene are the same as their respective Unrestricted SCOs (1 and 0.5 ppm).

Metals

The majority of samples analyzed for inorganic compounds (metals) were reported as non-detectable or at trace (estimated) concentrations below the laboratory sample quantitation limit. Lead, manganese, and mercury were detected above their respective Restricted Residential SCOs in a total of eight samples. Concentrations of lead exceeding the Restricted Residential SCO of 400 ppm were detected in two samples ranging from 510 ppm to 690 ppm. Concentrations of manganese exceeding the Restricted Residential SCO of 2,000 ppm were detected in four samples ranging from 2,300 ppm to 4,500 ppm. Concentrations of mercury exceeding the Restricted Residential SCO of 0.81 ppm were detected in three samples ranging from 0.92 ppm to 2.5 ppm. No metals were detected above Commercial SCOs.

PCBs, Pesticides, and Herbicides

PCBs, pesticides, and herbicides were reported as non-detectable, at trace (estimated) concentrations below the sample quantitation limit, and/or below Unrestricted Use SCOs, with the exception of one pesticide, chlordane, which was detected above the Unrestricted Use SCO at sample location SS-1.

As described above, concentrations of VOCs, SVOCs, metals, PCBs, pesticides, and herbicides were generally below Unrestricted Use SCOs, although some sample locations across the Site were above Restricted Residential SCOs for SVOCs, primarily PAHs.

Site-Related Groundwater

RI groundwater sampling events were conducted in 2012 and 2013. Monitoring well locations are depicted on Figure 3 and groundwater analytical data are summarized on Table 2. Below is a summary of RI groundwater analytical results by contaminant category.

VOCs

The majority of samples collected in 2012 and 2013 and analyzed for VOCs were reported as non-detectable or at trace (estimated) concentrations below the laboratory sample quantitation limit. No VOCs were detected above groundwater quality standards (GWQS), with the exception of BCP MW-2 which reported a value for 1,2-dichloroethane slightly above the GWQS during the 2012 RI. Subsequent sampling and analysis of BCP MW-2 in May 2013 did not detect 1,2-dichloroethane. During the 2007 URS Phase II ESA, acetone was detected in excess of water quality standards in monitoring well MW-2. During the 2012 RI, replacement well MW-2R was installed in the vicinity of the original MW-2 as this well could not be located. Acetone was not detected in MW-2R during the 2012 RI.

SVOCs

The majority of samples collected in 2012 and 2013 and analyzed for SVOCs were reported as non-detectable or at trace (estimated) concentrations below the laboratory sample quantitation limit. Several compounds, including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, and indeno[1,2,3-cd]pyrene were detected slightly above GWQS in monitoring well MW-1; however, the soils in the vicinity of MW-1 were removed during IRM activities. Subsequent sampling and groundwater analysis of replacement monitoring well MW-1R, conducted in May 2013, resulted in non-detection of all SVOCs analyzed.

Metals

During the 2012 sampling event, soluble metal concentrations above GWQS included exceedances of naturally occurring minerals iron, magnesium, manganese, and sodium. Soluble lead was detected slightly above the GWQS in the groundwater samples collected from monitoring wells BCP MW-2, BCP MW-3, and BCP MW-4.

During the May 2013 sampling event, total metal concentrations detected above GWQS included exceedances of naturally occurring minerals iron, magnesium, manganese, and sodium. Concentrations of total lead, thallium,

arsenic, chromium, manganese, silver, beryllium, cadmium, copper, mercury, nickel, and selenium were also detected above GWQS. Soluble metal concentrations above GWQS included magnesium, manganese, selenium, sodium, and thallium. Based on the results from the soluble metals analysis as compared to total analysis, it is believed that the turbidity of the groundwater samples collected during the May 2013 sampling event, indicating the presence of suspended sediment in the samples, resulted in elevated concentration of total metals and is not indicative of overall groundwater quality.

As discussed in the RI-IRM-AA Report, EnSol utilized alternative sample collection methods in order to collect less turbid samples. Turbidity values ranged from 971 to 6,000 nephelometric turbidity units (NTUs) in May 2013 to 203 to 959 NTUs in June 2013. The June 2013 groundwater sampling event resulted in a significant reduction in total metal concentrations, as compared to the May 2013 sampling event. Total metal concentrations detected above GWQS included naturally occurring minerals iron, manganese, magnesium, and sodium. Total selenium concentrations were detected slightly above the GWQS in wells BCP MW-3 and BCP MW-6R. Total thallium concentrations were detected above the GWQS, but below the quantitation limit in all four monitoring wells. Total lead was detected slightly above the GWQS at MW-1R, however, it was significantly lower (2,110 to 32.8 ug/L) compared to the May 2013 event. Soluble magnesium was detected above the GWQS in BCP MW-6R. Soluble manganese was detected slightly above the GWQS in BCP MW-2. Soluble sodium concentrations exceeded the GWQS in all four monitoring wells. Soluble selenium concentrations were detected slightly above the GWQS in wells BCP MW-3 and BCP MW-6R. Soluble thallium concentrations were detected above the GWQS in wells BCP MW-3, BCP MW-6R, and MW-1R, but reported as below the quantitation limit.

The groundwater monitoring wells installed as part of the RI were abandoned during IRM activities, development activities, or upon completion of all required sampling.

Pesticides, Herbicides, and PCB's

The majority of analytes were reported as non-detectable or trace (estimated) concentrations below the laboratory quantitation limit for pesticides, herbicides, and PCBs. As approved by the Department, groundwater analysis for pesticides, herbicides, and PCBs was not required during the 2013 sampling events.

The placement of a restriction on the use of groundwater at the site is appropriate and is included in the recommended remedy. Additionally, the placement of impervious surfaces on the site (i.e., asphalt or concrete) would help to limit the percolation of precipitation through the soil/fill left in place and reduce impacts to groundwater quality.

Site-Related Soil Vapor Intrusion

As part of the 2012 RI conducted by TurnKey, soil and groundwater samples were collected from within the footprint of the property boundaries and around the perimeter of the building. Samples were collected from soil borings, test pits, and groundwater monitoring well locations. Additionally, soil characterization samples collected from locations SB-1, SB-2, and SB-3 were collected from the upper two feet directly beneath the existing building concrete floor slab.

Of the 22 soil samples collected during the 2012 RI, only four samples detected VOCs above the SCO for Unrestricted Use, with all four just slightly above the SCO. Analytical results for VOCs from sample locations SB-1, SB-2, and SB-3 were below the Unrestricted Use SCO or were not detected above the laboratory detection limit. All nine groundwater samples analyzed for VOCs were below the Unrestricted Use SCO or were not detected above the laboratory detection limit, with the exception of BCP-MW-02, which slightly exceeded the Unrestricted Use SCO for 1,2-Dichloroethene.

EnSol responded to correspondence from the New York State Department of Health (NYSDOH) regarding the potential for vapors from residual subsurface contaminated soil. EnSol's response letter, dated April 22, 2013, summarizes the findings of the RI, as it relates to potential contaminated soil vapor, and proposed that no further investigation appeared to be necessary. The NYSDOH's response letter, dated May 20, 2013, agreed with EnSol's assessment regarding no further investigation. Appendix D includes correspondence with the NYSDOH.

Underground Storage Tanks

In December of 2008, Lender Consulting Services (Lender) conducted UST closure activities at the site, and findings are summarized below:

- One diesel fuel day tank for the emergency generator was removed.
- One 2,000 gallon diesel fuel UST was removed.
 - One post-excavation sidewall sample exhibited Benzene concentrations above SCOs.
 - All four post-excavation sidewall samples and the one post-excavation floor sample exhibited various SVOC/PAH concentrations above SCOs.
- One 4,000 gallon gasoline UST was removed.
 - All four post-excavation sidewall samples and the one post-excavation floor sample exhibited various SVOC/PAH concentrations above SCOs.
- One 30,000 gallon #6 fuel oil UST was removed.
 - One post-excavation sidewall sample exhibited a Benzo(a)pyrene concentration above SCOs.

- The post-excavation floor sample exhibited a Benzo(b)fluoranthene concentration above SCOs.
- This location was over-excavated during the Remedial Actions summarized in Section 1.4 below.

All UST locations are depicted on Figure 4.

1.4 SUMMARY OF REMEDIAL ACTIONS

The site was remediated in accordance with the NYSDEC-approved Work Plan.

The following is a summary of the Remedial Actions performed at the site:

1. Impacted soil/fill material was excavated to the approximate subgrade of the proposed parking ramp to be constructed in the IRM area (depths ranging from approximately 3 feet below grade (ftbg) to 12 ftbg);
2. Construction and maintenance of a site cover system consisting of: geotextile fabric overlain by 11 inches of crushed stone, overlain by 5 inches of concrete (IRM area), geotextile fabric overlain by 12 inches of crushed stone, 1-inch of sand, and concrete pavers (non-IRM area), geotextile fabric overlain by 20 inches of crushed stone and four inches of asphalt and concrete (Parcel D2-east), and geotextile fabric overlain by 20 inches of crushed stone and four inches of topsoil and sod to prevent human exposure to remaining contaminated soil/fill remaining at the site;
3. Execution and recording of an Environmental Easement to restrict land use and prevent future exposure to any contamination remaining at the site, as well as to prohibit the use of groundwater beneath the site without prior testing and/or treatment to render it safe for intended use as determined by the State or County Health Department; and
4. Development and implementation of a Site Management Plan for long term management of remaining contamination as required by the Environmental Easement, which includes plans for: (1) Institutional and Engineering Controls, (2) inspections, and (3) reporting.

Remedial activities were significantly completed at the site by September 2013.

1.4.1 Removal of Contaminated Materials from the Site

Mass waste excavation of the IRM area was conducted December 2012 through March 2013. Based upon the intended use of the property, Commercial Use SCOs were applied during IRM activities. As the property zoning district permits residential use, Table 3 contains a summary of Unrestricted, Restricted Residential, and Commercial Use

SCOs. Approximately 27,800-tons of non-hazardous soil/fill was excavated from the IRM area, including soil/fill removed during excavation for utilities, and disposed of off-site at the Town of Tonawanda Landfill. DDS Constructors, LLC (DDS) of West Henrietta, New York conducted the mass excavation of the IRM area. The vertical limits of the excavation were determined by the design for the parking structure to be constructed in the IRM area. DDS was also contracted to install the site utilities. Mass waste excavation began in the northwest corner of parcel D1, north of the on-site building and continued east to the property line. At this point, waste excavation continued south on the east side of the building to within approximately 40-feet of the south end of the building. The approximate lateral extents of the IRM excavation are shown on Figure 5 and approximate IRM excavation depths are presented on Figure 6.

1.4.2 Site-Related Treatment Systems

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

1.4.3 Remaining Contamination

A total of fifty post-excavation confirmatory soil samples were collected from the sidewalls and floors of the remedial excavation. Sample locations are depicted on Figure 5 and laboratory analytical results are summarized in Tables 4 through 8. Twenty-four of these samples exhibited concentrations of one or more SVOC exceeding applicable Commercial Use SCOs and are indicated with a solid square symbol on Figure 5. Twelve of these samples exhibited concentrations of one or more SVOC exceeding applicable Restricted Residential SCOs and are indicated with a solid triangle symbol on Figure 5. Six of these samples exhibited concentrations of one or more SVOC exceeding applicable Unrestricted Use SCOs and are indicated with a solid circle symbol on Figure 5. The remaining eight samples meet Unrestricted Use SCOs and are indicated with an empty circle symbol on Figure 5. For sample locations exceeding Restricted Residential and/or Commercial Use SCOs, contaminant concentrations are relatively consistent across all sampling locations. Soil sample North Floor 8A however, exhibits a lead concentration of 4,500 mg/kg. The Restricted Residential and Commercial Use SCOs for Lead are 400 and 1,000 mg/kg respectively. Lead concentrations at all other sample locations range from 4 mg/kg at East Wall 5 to 1,100 mg/kg at East Floor 2.

As indicated on Figure 6, excavation depths ranged from 12 ftbg in the northern excavation area, sloping up to grade level at a location approximately forty feet north of the southern wall of the existing building. A demarcation layer of geotextile fabric has been placed upon the entire floor of the IRM excavation area depicted on Figures 5 and 6. Any subsurface soils encountered below this demarcation layer are undisturbed native soils or backfill and are characterized by the post-excavation confirmatory soil sample results discussed previously.

All active utility lines to the building were installed during or after the IRM. All soils excavated for the installation of utility lines were treated as contaminated and disposed of at the Town of Tonawanda Landfill. All utility line trenches were backfilled

with imported clean fill meeting the specifications identified in the NYSDEC-approved Soil/Fill Management Plan prepared by TurnKey (February 2012). In addition to the fabric demarcation layer placed for the site cover system, additional fabric demarcation layers were installed in the storm sewer utility trenches prior to backfilling with clean stone. Therefore, any future work being conducted on existing utilities will not involve potential exposure to contaminated fill materials provided that all work is done within the limits of the existing trenches.

2.0ENGINEERING AND INSTITUTIONAL CONTROL PLAN

2.1 INTRODUCTION

2.1.1 General

Since remaining contaminated soil 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.

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 Easement;
- 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 remaining contamination that may be disturbed during maintenance or redevelopment work on the site; and
- Any other provisions necessary to identify or establish methods for implementing the EC/ICs required by the site remedy, as determined by the NYSDEC.

2.2 ENGINEERING CONTROLS

2.2.1 Site Cover Engineering Control Systems

Exposure to remaining contamination in soil/fill at the site is prevented by a site cover system placed over the site. There are four separate cover systems that will be installed and maintained at the property. Within the IRM area of Parcel D1, the cover system is comprised of a geotextile fabric demarcation layer, a minimum of 11 inches of clean stone fill, and a five inch concrete slab. The cover system to be placed in the remaining areas of Parcel D1, outside of the IRM area, is comprised of a geotextile fabric demarcation layer, a minimum of 12 inches of clean stone fill, one inch of sand, and three inch concrete pavers. The cover system on the east half of Parcel D2 is comprised of a

geotextile fabric demarcation layer, 20 inches of clean stone fill, and approximately four inches of asphalt. Also on the east half of Parcel D2, as approved by the NYSDEC, concrete was placed in lieu of asphalt when the project trailer was removed from the site in 2014. The cover system on the west half of Parcel D2 consists of a geotextile fabric demarcation layer, 20 inches of clean stone fill, four inches of topsoil, and a layer of sod. Refer to Figure 6 for a depiction of Parcels D1 and D2 as well as illustrations of the respective cover systems. The Excavation Work Plan that appears in Appendix E outlines the procedures required to be implemented in the event the cover system is breached, penetrated or temporarily removed, and any underlying remaining contamination is disturbed. Procedures for the inspection and maintenance of this cover are provided in the Monitoring Plan included in Section 4 of this SMP.

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

2.3 INSTITUTIONAL CONTROLS

A series of Institutional Controls is required by the Decision Document to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; and, (3) limit the use and development of the site to restricted residential, commercial, and industrial uses only. The site is currently zoned for Institutional/Light Industrial, which permits residential use. Adherence to these Institutional Controls on the site is required by the Environmental Easement and will be implemented under this Site Management Plan. These Institutional Controls are:

- Compliance with the Environmental Easement and this SMP by the Grantor and the Grantor's successors and assigns;
- All Engineering Controls must be operated and 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 Easement may not be discontinued without an amendment to or extinguishment of the Environmental Easement.

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

- The property may only be used for restricted residential, commercial, or industrial use 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 or residential use, without additional remediation and amendment of the Environmental Easement, as approved by the NYSDEC;
- All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with this SMP;
- The use of the groundwater underlying the property is prohibited without treatment rendering it safe for intended use as determined by the State or County Health Department;
- Vegetable gardens and farming on the property are prohibited; and
- The site owner or remedial party will submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. 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 annually, or an alternate period of time that NYSDEC may allow and will be made by an expert that the NYSDEC finds acceptable.

2.3.1 Excavation Work Plan

The site has been remediated for restricted residential, commercial, or industrial use. Any future intrusive work that will penetrate the site cover or cap, or encounter or disturb the remaining contamination, including any modifications or repairs to the existing cover system will be performed in compliance with the Excavation Work Plan (EWP) that is attached as Appendix E 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. The HASP and CAMP, in current compliance with DER-10, and 29 CFR 1910, 29 CFR 1926, and all other applicable Federal, State and local regulations, was utilized during the RI and IRM. The HASP and CAMP are attached as Appendix F to this SMP. 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 re-submitted with the notification provided in Section A-1 of the EWP. Any intrusive construction work will be performed in compliance with the 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 associated parties preparing the remedial documents submitted to the State, 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 remaining contamination, 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

As documented in the May 20, 2013 letter from the New York State Department of Health, “soil vapor intrusion does not appear to be a concern for the 125 Main Street site.” A copy of this letter is included as Appendix D.

2.4 INSPECTIONS AND NOTIFICATIONS

2.4.1 Inspections

Inspections of the site cover systems installed at the site will be conducted at the frequency specified in the SMP Monitoring Plan schedule. A comprehensive site-wide 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 designed;
- If these controls continue to be protective of human health and the environment;
- Compliance with requirements of this SMP and the Environmental Easement;
- If site records are complete and up to date; and
- Changes, or needed changes, to the remedial or monitoring system;

Inspections will be conducted in accordance with the procedures set forth in the Site Monitoring Plan of this SMP (Section 3). The reporting requirements are outlined in the Periodic Review Report section of this plan (Section 5.3).

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 to verify the effectiveness of the EC/ICs implemented at the site by a qualified environmental professional as determined by NYSDEC.

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 BCA, 6NYCRR Part 375, and/or Environmental Conservation Law.
- 7-day advance notice of any proposed ground-intrusive activities pursuant to the Excavation Work Plan.
- Notice within 48-hours of any damage or defect to the foundations structures that reduces or has the potential to reduce the effectiveness of other Engineering Controls and likewise any action to be taken to mitigate the damage or defect.
- Verbal notice by noon of the following day of any emergency, such as a fire, flood, or earthquake that reduces or has the potential to reduce the effectiveness of Engineering Controls in place at the site, with written confirmation within 7 days that includes 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 BCA, and all approved work plans and reports, including 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.

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 site

management. These emergency contact lists must be maintained in an easily accessible location at the site.

Emergency Contact Numbers

Medical, Fire, and Police:	911
One Call Center:	(800) 272-4480 (3 day notice required for utility markout)
Poison Control Center:	(800) 222-1222
Pollution Toxic Chemical Oil Spills:	(800) 424-8802
NYSDEC Spills Hotline	(800) 457-7362
Buffalo General Hospital	(716) 856-3600

Contact Information

Site Contact/Owner Representative: Adam Harris (HDA)	(716) 886-0211
NYSDEC Regional Remediation Engineer	(716) 851-7220; Megan.Kuczka@dec.ny.gov (Megan Kuczka)
Qualified Environmental Professional: Daniel Popp (EnSol)	(716) 374-2368 (cell); dpopp@ensolinc.com

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

2.5.2 Map and Directions to Nearest Health Facility

Site Location: 125 Main St., Buffalo, NY

Nearest Hospital Name: Buffalo General Hospital

Hospital Location: 100 High St., Buffalo, NY

Hospital Telephone: (716) 856-3600

Directions to the Hospital:

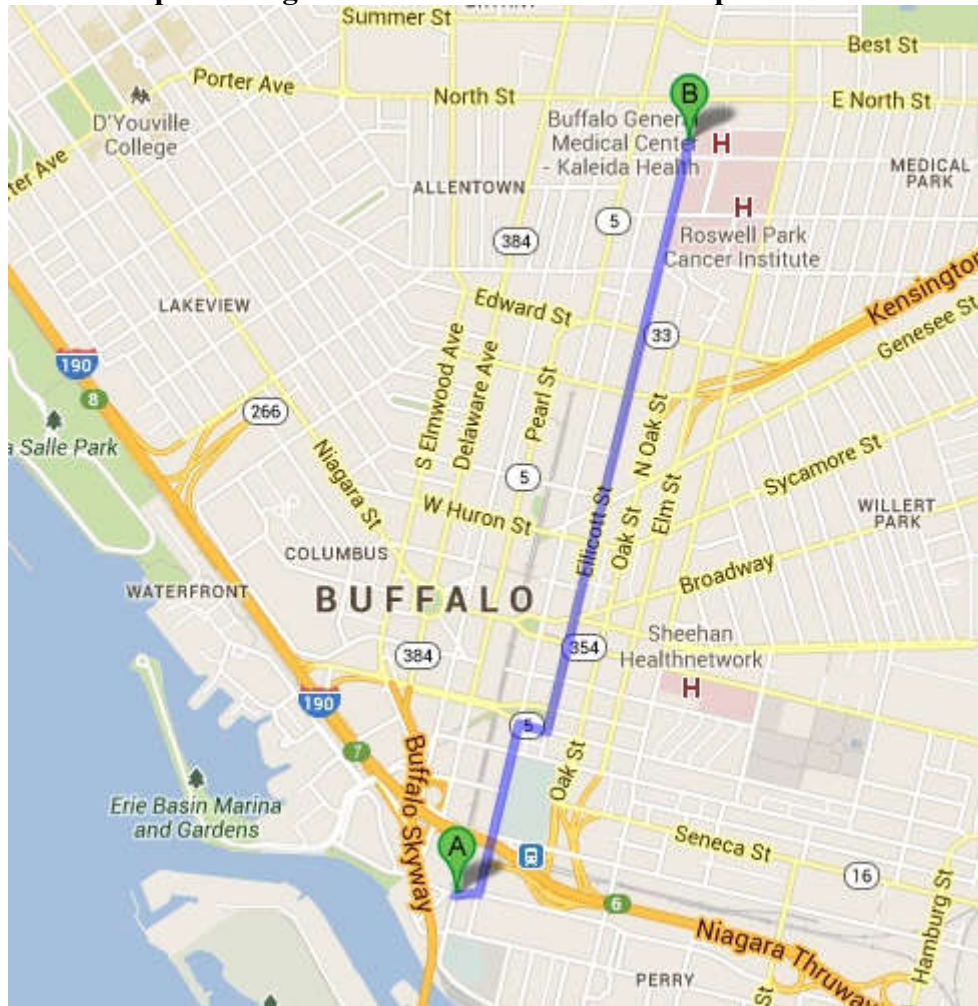
1. East on Scott St. (266 ft.)
2. Left on Washington St. (0.4 mi.)
3. Right on S. Division St. (331 ft.)
4. Left on Ellicott St. (1.2 mi.)
5. Right on Carlton St. (374 ft.)
6. 1st left on Oak St. (Destination)

Total Distance: 2.3 miles

Total Estimated Time: 9 minutes

These directions and map to Buffalo General Hospital are also included as Attachment A to the Site Health and Safety Plan (Appendix F).

Map Showing Route from the site to the Hospital:



2.5.3 Response Procedures

As appropriate, the fire department and other emergency response groups will be notified immediately by telephone of the emergency. The emergency telephone number list is found in Section 2.5.1 of this Contingency Plan. The list will also be posted prominently at the site and made readily available to all personnel at all times. Petroleum spills must be reported to the NYSDEC unless they meet all of the following criteria:

- The spill quantity is known to be less than 5 gallons;
- The spill is contained and under control of the spiller;
- The spill has not and will not reach the State's water or any land; and
- The spill is cleaned up within 2 hours of discovery.

A spill is considered to have not impacted land if it occurs on a paved surface such as asphalt or concrete. A spill in a dirt or gravel parking lot is considered to have impacted land and is reportable.

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 remedy to reduce or mitigate contamination at the site, the site cover system, and all affected site media identified below. 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 SCOs for soil;
- Evaluating site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment;
- Preparing the necessary reports for the various monitoring activities; and
- Annual inspection and periodic certification.

Annual monitoring of the performance of the remedy will be conducted for the first five years. The frequency thereafter will be determined by NYSDEC. The site cover systems monitoring program is outlined in detail in Section 3.2 below.

3.2 SITE COVER SYSTEM MONITORING

Site-wide inspection of the cover system will be performed annually and in association with the Periodic Review Report (PRR) and will also be performed after all severe weather conditions or any other severe conditions such as earthquakes and sinkholes that may affect site cover systems.

The site-wide inspection will include a general visual evaluation of all areas of the site. Concrete and asphalt paved areas and concrete-paver (or approved alternate) covered areas across the site will be inspected to verify that these areas are being maintained, as appropriate to prevent potential off-site migration of remaining contaminants by surface water run-off. Photographs documenting the conditions of the site cover system are required for reporting. The site cover system monitoring will be performed by a Qualified Environmental Professional (QEP) approved by NYSDEC. Any surface or subsurface disturbances related to redevelopment activities will be performed in compliance with the Excavation Work Plan, included as Appendix E.

3.3 SITE-WIDE INSPECTION

Site-wide inspections will be performed by a QEP on a regular schedule at a minimum of once a year. Site-wide inspections will also be performed by a QEP after all severe weather conditions that may affect site cover systems. During these inspections, an inspection form will be completed (Appendix G). The form will compile sufficient information to assess the following:

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

3.4 MONITORING REPORTING REQUIREMENTS

Forms and any other information generated during regular monitoring events and inspections will be kept on file on-site (or at the owner designated local office). All forms, and other relevant reporting formats used during the monitoring/inspection events, will be (1) subject to approval by NYSDEC and (2) submitted at the time of the PRR, as specified in the Reporting Plan of this SMP (Section 5.0).

All inspection results will be reported to NYSDEC on a periodic basis in the PRR. Site inspections will be conducted, at a minimum, on an annual basis. Additional inspections may be required due to severe weather conditions. The first PRR will be due eighteen months from the issuance of the Certificate of Completion (COC). Initially, PRR reporting was completed on an annual basis. In a letter dated April 28, 2017 the NYSDEC approved a PRR frequency modification from annual to triennial. The reports will include, at a minimum:

- Date of event;
- Personnel conducting inspection;
- Description of the activities performed;
- A figure illustrating areas of site cover system breakdown and areas of obvious repair or disturbance throughout the monitoring period;
- A determination as to whether repair or modification of the site cover system is warranted;

- Copies of all inspection forms completed; and
- Any observations, conclusions, or recommendations.

Data will be reported in hard copy or digital format as determined by NYSDEC.

4.0 OPERATION AND MAINTENANCE PLAN

4.1 INTRODUCTION

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. 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 has taken place, such as an erosion or flooding event that may affect the ECs.

5.1.2 Inspection Forms, Sampling Data, and Maintenance Reports

All inspections will be recorded on the appropriate form which is contained in Appendix G. This form is subject to NYSDEC revision.

All applicable inspection forms and other pertinent records generated for the site during the reporting period will be provided in a format prescribed by the Department in the Periodic Review Report.

5.1.3 Evaluation of Records and Reporting

The results of the inspections 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; and
- The site remedy continues to be protective of public health and the environment and is performing as designed in the RAWP and FER.

5.2 CERTIFICATION OF ENGINEERING AND INSTITUTIONAL CONTROLS

After the last inspection of the reporting period, a qualified environmental professional will prepare the following certification, or as otherwise specified by the NYSDEC:

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

- The inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction;

- The institutional control and/or engineering control employed at this site is unchanged from the date the control was put in place, or last approved by the Department;
- Nothing has occurred that would impair the ability of the control to protect the public health and environment;
- Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control;
- Access to the site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;
- If a financial assurance mechanism is required under the oversight document for the site, the mechanism remains valid and sufficient for the intended purpose under the document;
- Use of the site is compliant with the environmental easement;
- The engineering control systems are performing as designed and are effective;
- No new information has come to my attention, including groundwater monitoring data from wells located at the site boundary, if any, to indicate that the assumptions made in the qualitative exposure assessment of off-site contamination are no longer valid;
- The assumptions made in the qualitative exposure assessment remain valid.
- 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 generally accepted engineering practices;
- The information presented in this report is accurate and complete; and
- I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class “A” misdemeanor, pursuant to Section 210.45 of the Penal Law. I, [name], of [business address], am certifying as [Owner or 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 three years, beginning eighteen months 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 (Metes and Bounds). The report will be prepared in accordance with NYSDEC 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; and
- A site evaluation, which includes the following:
 - The compliance of the remedy with the requirements of the site-specific RAWP, ROD or Decision Document;
 - 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 Regional Office in which the site is located, and in electronic format to NYSDEC Central Office, Regional 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.

Tables

EnSol, Inc. *Environmental Solutions*

professional engineering – business consulting

TABLE 1
RI SOIL ANALYTICAL DATA SUMMARY
Former Donovan Building
125 Main Street Site
Buffalo, New York

PARAMETER	Unrestricted (ppm) ¹	Restricted - Residential (ppm)	Restricted - Commercial (ppm)	Sample Locations																				NOTE 4	PARCEL D1 RM AREA														
				SVI SAMPLING WITHIN THE BUILDING (Parcel D1)				PARCEL D1 RM AREA			PARCEL D2		PARCEL D3			PARCEL D1 RM AREA			PARCEL D3		PARCEL D2	PARCEL D1 NON-RM AREA			PARCEL D1 RM AREA	PARCEL D1 RM AREA													
				SB-1 (1-2)	SB-2 (1-2)	SB-3 (8-9)	SB-7 (15-17)	BH-20 (R) (13-17)	BH-20 (R) (17-20)	BH-20 (E) (17-19)	TP-1 (15-17)	TP-2 (4-6)	TP-3 (4-8)	TP-3 (15-17)	TP-4 (3-7)	TP-5 (15-17)	TP-6 (3-9) ²	TP-6 (10-12)	BCP MW-1 (4-6)	BCP MW-1 (12-14)	BCP MW-2 (5-7)	BCP MW-3 (2-4)	BCP MW-3 (14-16)		BCP MW-4 (8-10)	BCP MW-5 (4-6) ³	BCP MW-6 (8-9) ²	BCP MW-7 (8-10)	MW-2 (R) (2-4) ²	MW-2 (R) (14-16)	SS-1 ¹	Waste Char (5-11) ¹	Waste Char (1-6) ¹	Waste Char (1-3) ¹	Waste Char (9-7) ¹				
Volatile Organic Compounds (VOCs) - mg/Kg																																							
Acephenanthrene	1.1	100	500	ND	ND	ND	--	ND	ND	ND	--	ND	ND	ND	ND	ND	0.0017 J	ND	ND	--	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	--	--	--	--				
1,2,4-Trimethylbenzene	3.6	52	100	0.0052 J	0.0057 J	0.0052 J	--	ND	ND	0.13 J	--	ND	ND	ND	ND	0.016 --	ND	ND	--	ND	ND	--	ND	ND	ND	ND	--	ND	ND	--	ND	ND	--	--	--	--			
1,3,5-Trichlorobenzene	8.4	52	100	0.0052 J	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	0.01 J	--	ND	ND	--	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	--	--	--	--				
1,4-Dibutylbenzene	--	--	--	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	0.0017 J	ND	ND	0.016 --	ND	ND	--	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	--	--	--			
1,2,4-Tetramethylbenzene	--	--	--	ND	0.0059 J	J	--	ND	ND	0.28 J	--	ND	ND	ND	ND	0.0017 J	ND	ND	0.012 --	ND	ND	--	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	--	--	--			
2-Butene	--	--	--	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	0.011 J	--	ND	ND	--	ND	ND	ND	ND	--	ND	ND	--	ND	ND	--	--	--			
4-Ethyltoluene	--	--	--	0.0017 J	ND	0.0007 J	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0029 J	--	ND	ND	--	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	--	--	--			
Acetone	0.05	100	500	ND	ND	ND	--	0.091	0.06	ND	ND	ND	ND	ND	ND	ND	0.058 --	ND	ND	--	ND	0.029 J	ND	ND	ND	ND	--	ND	ND	--	ND	ND	--	--	--				
Carbon disulfide	--	--	--	--	0.0074 J	0.01 J	0.0057 J	--	ND	ND	ND	ND	ND	ND	ND	ND	0.002 J	--	ND	ND	--	ND	0.0001 J	0.0038 J	0.0054 J	ND	--	ND	ND	--	ND	ND	--	--	--				
Methylene Chloride	0.05	100	500	0.0047 J	0.0044 J	0.0044 J	--	ND	ND	0.37 J	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	0.0038 J	ND	ND	--	ND	ND	--	ND	ND	--	--	--				
p-isopropylbenzene	--	--	--	--	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	0.0017 J	--	ND	ND	--	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	--	--	--				
p-methylbenzene	11	500	500	0.0058	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	--	--	--				
Toluene	0.7	100	500	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	--	ND	0.0029 J	ND	0.0022 J	ND	--	ND	ND	--	ND	ND	--	--	--				
Xylene, Total	0.26	100	500	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0018 J	--	ND	ND	--	ND	ND	ND	ND	ND	--	ND	ND	--	ND	ND	--	--	--				
Semi-Volatile Organic Compounds (SVOCs) - mg/Kg																																							
Acephenanthrene	20	100	500	ND	ND	ND	ND	0.11 J	J	--	--	0.71	ND	2.5 --	--	ND	ND	ND	ND	--	0.2 J	ND	--	ND	ND	ND	ND	ND	--	0.11 J	--	--	--	--	--				
Acephenanthrene	--	100	500	ND	ND	ND	ND	0.12 J	--	--	--	0.12 J	--	1.3 --	--	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	--	ND	ND	--	--	--	--				
Anthracene	100	500	500	ND	ND	0.002 J	ND	0.29 J	--	--	--	2.3	1.7	5.8 --	--	0.076 J	ND	ND	ND	--	0.35 J	0.3 J	--	ND	ND	ND	ND	ND	--	ND	ND	--	0.31	--	--				
Benzo (a) anthracene	1	1	5.6	ND	0.082 J	0.18	ND	0.41	ND	--	--	5.7	3.7	11 --	--	0.25	ND	0.047 J	ND	ND	--	0.56	1.3	--	ND	ND	ND	ND	--	1.4	--	--	--	--					
Benzo (b) fluoranthene	1	1	5.6	ND	0.088 J	0.1 J	ND	0.43 J	ND	--	--	5.7	3.3	6.1 --	--	0.17 J	ND	ND	ND	ND	--	0.6	1.8	--	ND	ND	ND	ND	--	2	--	--	--	--					
Benzo (k) fluoranthene	0.8	3.9	56	ND	0.033 J	0.15	ND	0.17	ND	--	--	2.4	2.8	8.3 --	--	0.23	ND	ND	ND	ND	--	0.25 J	0.6 --	--	ND	ND	ND	ND	ND	--	1	--	--	--					
Benzo (a) pyrene	1	1	1	ND	0.054 J	0.13 J	ND	0.34 J	ND	--	--	4.3	3.3	8.6 --	--	0.24 J	ND	ND	ND	ND	--	0.47 J	1.1 --	--	ND	ND	ND	ND	ND	--	1.5	--	--	--					
Benzo (a) pyrene	100	100	500	ND	ND	0.081 J	ND	0.19 J	ND	--	--	2.7	2.3	4.2 --	--	0.14 J	ND	ND	ND	ND	--	0.22 J	2.1	--	ND	ND	ND	ND	ND	--	1.2	--	--	--					
Bis(2- ethylhexyl) phthalate	--	--	--	0.43	0.24 J	0.042 J	ND	0.08 J	ND	--	--	ND	ND	ND	ND	--	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	--	ND	ND	--	0.14 J	--	--					
Carbazole	--	--	--	--	ND	ND	ND	ND	0.16 J	ND	--	1	0.96 J	2.1 --	--	ND	ND	ND	ND	ND	--	0.2 J	0.14 J	--	ND	ND	ND	ND	ND	--	0.32	--	--	--					
Chrysene	1	3.9	56	ND	0.1 J	0.19	ND	0.44	ND	--	--	4.8	3.7	10 --	--	0.25	ND	0.052 J	ND	ND	--	0.57	1.6	--	ND	ND	ND	ND	ND	--	1.8	--	--	--					
Dibenz (a,h) anthracene	0.33	0.33	0.56	--	--	--	--	--	--	--	--	0.67	0.83 J	1.9 --	--	ND	ND	ND	ND	ND	--	ND	0.22 J	--	ND	ND	ND	ND	ND	--	0.28	--	--	--					
Dibenzofuran	7	350	100	ND	ND	ND	ND	0.12 J	--	--	--	0.67 J	0.53 J	1.9 --	--	ND	ND	ND	ND	ND	--	0.19 J	0.4 --	--	ND	ND	ND	ND	ND	--	0.057 J	--	--	--					
Fluorene	100	100	500	0.026 J	0.19	0.43	0.57 J	1.4	ND	--	--	1.3	4.6	24 --	--	ND	ND	1.1	0.072 J	0.68 J	--	1.4	2.4	--	ND	ND	ND	ND	ND	--	3.9	--	--	--					
Fluorene	30	100	500	ND	ND	ND	ND	0.18 J	ND	--	--	0.43 J	ND	2.6 --	--	ND	ND	ND	ND	ND	--	0.19 J	ND	--	ND	ND	ND	ND	ND	--	0.12 J	--	--	--					
Indeno (1,2,3- cd) pyrene	0.5	0.5	5.6	ND	ND	0.073 J	ND	0.21 J	ND	--	--	3.2	1.9	4 --	--	0.13 J	ND	ND	ND	ND	--	0.24 J	1.1	--	ND	ND	ND	ND	ND	--	1.4	--	--	--					
2- Methylanthracene	--	--	--	--	ND	ND	ND	ND	0.13 J	ND	--	--	ND	ND	1.3 J	--	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	--	ND	ND	--	--	--				
3-methylphenol(4-Methylphenol)	--	--	--	--	ND	ND	ND	ND	ND	5.48 --	--	--	ND	ND	--	--	ND	ND	0.26 J	ND	--	ND	ND	--	ND	ND	ND	ND	ND	--	ND	ND	--	--	--				
Naphthalene	10	10	500	ND	ND	ND	ND	0.27	ND	--	--	0.32 J	0.84 J	16.1 --	--	ND	ND	0.13 J	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	--	ND	ND	--	--	--				
Phenanthrene	100	100	500	0.02 J	0.15	0.33	0.74 J	1.4	ND	--	--	8.3	6.7	28 --	--	0.24	0.51	0.056 J	0.058 J	0.79 J	--	1.5	2.5	--	ND	ND	ND	ND	ND	--	2	--	--	--					
Pyrene	100	100	500	ND	0.14	0.37	0.48 J	1.1	ND	--	--	9.2	6.6	21 --	--	0.39	ND	0.1 J	0.062 J	0.49 J	--	1.1	3.1	--	ND	ND	ND	ND	ND	--	2.9	--	--	--					
Polychlorinated Biphenyls (PCBs), Pesticides, and Herbicides - mg/Kg																																							
Aroclor 1254	0.1	1	1	ND	0.00817 J	ND	ND	ND	ND	--	--	ND	ND	ND	ND	--	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	--	ND	ND	--	--	--				
Aroclor 1260	0.1	1	1	ND	ND	ND	ND	ND	ND	--	--	ND	ND	ND	ND	--	ND	ND	ND	ND	--	ND	0.0117 J	--	ND	ND	ND	ND	ND	--	0.0407	--	--	--	--				
Aroclor 1268	0.065	0.985	1.686	ND	ND	ND	ND	0.00388	ND	--	--	ND	ND	ND	ND	--	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	--	ND	ND	--	--	--				
Alpha-BHC	0.1	0.48	1	ND	ND	ND	ND	--	--	--	--	ND	ND	ND	ND	--	ND	0.00175	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	--	0.00084 P	--	--	--					
Beta-BHC	0.04	0.36	3	0.0206 P	0.00638 J	ND	ND	ND	ND	--	--	ND	ND	ND	ND	--	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	--	ND	ND	--	--	--				
Chlordane	0.094	4.2	24	ND	ND	ND	ND	ND	ND	--	--	ND	ND	ND	ND	--	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	--	0.199 J	--	--	--					
Endosulfan II	2.4	24	200	ND	ND	ND	ND	ND	ND	--	--	ND	ND	0.0106 JP	--	--	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	--	ND	ND	--	--					
Heptachlor	0.642	2.1	19	ND	ND	ND	ND	ND	ND	--	--	ND	ND	0.00915 J	--	--	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	--	ND	ND	--	--					
Indoxin	1.3	1.3	8.2	ND	ND	ND	ND	ND	ND	--	--	ND	ND	ND	ND	--	ND	0.000779	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	--	ND	ND	--	--					
Methoxychlor	--	--	--	--	ND	ND	ND	ND	ND	--	--	ND	0.0245 J	ND	--	--	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	--	ND	ND	--	--					
Trans-Chlordane	--	--	--	--	0.0135 J	ND	0.00735 JP	ND	ND	--	--	ND	ND	ND	ND	--	ND	ND	ND	ND	--	ND	ND	--	ND	ND	ND	ND	ND	--	0.00158 JP	--	0.00882 J	--	--				

Notes:

1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.

2. Values per NYSDEC Part 375 Soil Cleanup Objectives (December 2006).

3. Sample results were reported by the laboratory in micrograms per kilogram (ug/Kg) and converted to milligram per kilogram (mg/Kg) for comparison to SCOs.

4. Surface soil sample SS-1 was a composite sample from three grab samples (identified

5. Values per NYSDDEC Hazardous Waste Regulatory Limits for Toxicity Characteristic

5. Values per NYSDEC Hazardous Waste Regulatory Levels for Toxicity Characteristics.

Definitions:

- No SGG has been established for subject categories listed excluded for that category

ND = Parameter not detected above laboratory detection limit.

BOLD	Exceeds Part 375 Unrestricted SCOs.
BOLD	Exceeds Part 375 Restricted Residential SCOs.
BOLD	Exceeds Part 375 Commercial SCOs.

TABLE 1
RI SOIL ANALYTICAL DATA SUMMARY
Former Donovan Building
125 Main Street Site
Buffalo, New York

PARAMETER	Unrestricted (ppm) ¹	Restricted - Residential (ppm) ²	Restricted - Commercial (ppm) ³	Sample Locations																																		
				SVI SAMPLING WITHIN THE BUILDING (PARCEL D1)									PARCEL D1 RM AREA			PARCEL D2	PARCEL D3				PARCEL D1 RM AREA				PARCEL D3		PARCEL D2	PARCEL D1 NON-RM AREA		PARCEL D1 RM AREA		PARCEL D1 NON-RM AREA	PARCEL D1 RM AREA	NOTE 4	PARCEL D1 RM AREA			
				SB-1 (1-2)	SB-2 (1-2)	SB-3 (0-1)	SB-7 (15-17)	BH-2B (R) (13-17)	BH-2D (R) (17-20)	BH-2D R (E) (17-19)	TP-1 (15-17)	TP-2 (4-6)	TP-3 (4-6)	TP-3 (15-17)	TP-4 (2-7)	TP-5 (15-17)	TP-6 (3-9) [†]	TP-8 (10-12)	BCF MM-1 (4-6)	BCF MM-1 (12-14)	BCF MM-2 (5-7)	BCF MM-3 (2-4)	BCF MM-3 (14-16)	BCF MM-4 (8-16)	BCF MM-5 (4-6) [†]	BCF MM-6 (8-6) [†]	BCF MM-7 (8-16)	MM-2 (R) (2-4) [†]	MM-2 (R) (14-16)	SS-1 [†]	Waste Char 1 (5-11) [†]	Waste Char 2 (1-6) [†]	Waste Char 3 (1-3) [†]	Waste Char 4 (3-7) [†]				
Total Metals - mg/Kg	--	--	--	33000	25000	32000	8000	8600	8600	--	12000	18000	3700	--	14000	10000	5400	4000	13000	NA	4300	10000	NA	7000	30000	20000	12000	34000	NA	10000	--	--	--	--				
Aluminum	--	--	--	0.06 J	1.1 J	0.06 J	1.3 J	4.1 J	13	--	2.7 J	25.1	4.8 J	--	0.09 J	0.95 J	ND	1.3 J	17.1	NA	0.08 J	0.07 J	NA	1.2 J	2.1	2.8 J	ND	NA	1.5 J	--	--	--	--					
Arsenic	13	16	16	1.4	2.5	2	3.4	5.9	6.3	--	6.9	10	12	--	3	5.6	1.3	1.7	6	NA	3.2	2.6	NA	3.8	1.7	5.5	9.8	1.3	NA	5.4	--	--	--	--				
Barium	350	400	400	200	170	330	94	67	110	--	350	360	99	--	95	48	40	27	95	NA	29	160	NA	53	250	400	62	290	NA	65	--	--	--	--				
Beryllium	7.2	72	590	4.9	3.4	4.1	0.01	0.34 J	0.32 J	--	0.02	1	0.5	--	2.1	1.1	0.05	0.2 J	0.59	NA	0.22 J	2.2	NA	0.5	4.3	4	0.57	4.6	NA	0.45	--	--	--	--				
Cadmium	2.5	4.3	9.3	0.09	0.09 J	0.09 J	0.35 J	0.1 J	0.36 J	--	0.06 J	0.66 J	0.56 J	--	0.18 J	0.32 J	0.13 J	0.13 J	0.26 J	NA	0.17 J	0.16 J	NA	0.13 J	0.03 J	0.22 J	0.1 J	0.2 J	NA	0.48 J	--	--	--	--				
Calcium	--	--	--	220000	210000	190000	39000	280000	33000	--	140000	72000	110000	--	86000	73000	89000	23000	110000	NA	54000	100000	NA	60000	190000	190000	13000	200000	NA	7600	--	--	--	--				
Chromium	38	180	1900	14	--	11	--	11	7.2	--	14	20	6.8	--	8.1	2.5	4.1	8.2	15	NA	6.4	6.9	NA	8	7.2	5	40	16	NA	34	--	--	--	--				
Cobalt	--	--	--	0.68	1.2	0.7 J	2.7	3.2 J	4.1	--	4	6.9	9.1	--	2	5.1	1.5 J	2.8	4.2	NA	2.7	4	1.3 J	NA	2.9	0.22 J	4	14	0.36 J	NA	5.2	--	--	--	--			
Copper	50	270	270	5.2	8.2	1.5	40	44	24	79	--	17	37	150	--	28	30	9.1	9.8	34	NA	15	10	NA	14	2.3	14	40	1.1	NA	30	--	--	--	--			
Iron	--	--	--	4000	79000	42000	8500	8100	11000	--	9300	21000	40000	--	7300	13000	5000	7000	13000	NA	7800	6500	NA	9200	5400	51000	28000	4500	NA	15000	--	--	--	--				
Lead	63	400	1000	29	96	32	170	97	510	--	690	380	210	--	45	34	6.3	30	80	NA	41	41	NA	89	5.4	4.7	16	26	NA	120	--	--	--	--				
Magnesium	--	--	--	37000	29000	23000	10000	15000	8600	--	12000	7000	8200	--	20000	10000	28000	10000	12000	NA	18000	13000	NA	10000	29000	12000	6400	12000	NA	3200	--	--	--	--				
Manganese	1600	2000	19000	3100	200	200	810	300	300	--	270	180	160	--	1600	760	270	120	300	NA	240	1700	NA	400	2200	4000	530	2000	NA	600	--	--	--	--				
Mercury	0.18	0.21	2.5	-0.02	-0.02	0.66	0.84	2.5	1.1	--	0.09 J	0.09	0.82	--	0.3	0.34	ND	0.7	0.16	NA	0.66	0.06 J	NA	0.69	ND	0.03 J	ND	NA	0.07 J	--	--	--	--					
Nickel	30	310	310	1.8	4	2.2	9.5	9.7	11	--	10	15	18	--	5.1	19	3.6	6.4	12	NA	7.4	3.3	NA	7.2	0.89 J	6.7	49	0.65 J	NA	13	--	--	--	--				
Potassium	--	--	--	3600	3600	3500	1100	1800	1200	--	1800	2200	530	--	1600	1200	790	720	1400	NA	680	1400	NA	1200	2900	3100	1900	2400	NA	860	--	--	--	--				
Selenium	3.9	180	1500	4.6	3.1	4.8	1.3 J	0.87 J	0.74 J	--	0.37 J	0.42 J	ND	--	1.4 J	0.43 J	ND	ND	ND	NA	ND	2	NA	ND	4.4	4	ND	3.2	NA	0.95 J	--	--	--	--				
Silver	2	180	1500	0.48	0.32 J	0.43	0.24 J	0.26 J	0.77 J	--	0.3 J	0.25 J	0.27 J	--	0.19 J	0.16 J	ND	ND	ND	NA	ND	ND	NA	ND	0.98 J	0.52 J	ND	ND	NA	0.16 J	--	--	--	--				
Sodium	--	--	--	1000	1400	1300	1400	1100	2200	--	1400	2200	1100	--	1100	720	480	700	1100	NA	1100	870	NA	900	1400	1000	910	1200	NA	200	--	--	--	--				
Thallium	--	--	--	ND	ND	ND	0.74 J	ND	ND	--	ND	0.62	ND	--	ND	0.74 J	ND	ND	ND	NA	0.059 J	ND	ND	ND	ND	2	ND	ND	NA	ND	--	--	--	--				
Vanadium	--	--	--	8.7	10	9.1	15	15	11	--	24	28	14	--	9.1	11	6.2	8.4	18	NA	9.7	7.6	NA	13	5.7	23	21	6.1	NA	20	--	--	--	--				
Zinc	109	10000	10000	11	16	14	240	78	210	--	470	420	180	--	55	66	40	48	94	NA	66	47	NA	57	4.8	4.8	110	5	NA	110	--	--	--	--				
TCLP VOCs - mg/L [†]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
Total VOCs	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00	0.00	0.00	0.00			
TCLP SVOCs - mg/L [†]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00	0.00	0.00	0.00		
Total SVOCs	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00	0.00	0.00	0.00			
TCLP Metals - mg/L [†]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00	0.00	0.00	0.00		
Barium	--	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.48 J	0.27 J	0.2 J	0.32 J				
Lead	--	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.03 J	ND	ND	ND				
Silver	--	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02 J	ND	ND	ND				
Waste Characteristics [†]																																						
Ignitability			Ignitable	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	NI	NI	NI	NI		
pH (BU)			2 - 12.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8.6 J	10.4	11.1	9.4		
Sulfide, Reactive (mg/kg)				--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	43	ND		

Notes:

Only those parameters detected at minimum of one sample location are presented in this table; all other compounds were reported as non-detect.

2. Values per NYSDCP Part 375 Soil Cleanup Objectives (December 2006).

3. Sample results were reported by the laboratory in micrograms per kilogram (µg/kg) and converted to milligrams per kilogram (mg/kg) for comparison.

4. Surface soil sample SS-1 was a composite sample from three grab samples (identified as SS-1A, SS-1B, and SS-1C) collected across parcels D1 and D2.

5. Values per NYSDCP Hazardous Waste Remediation System (HWRS) Cleanup Objectives (December 2006).

6. Parcels D1 and D2 are included in the BP-6 (Parcel D3) excluded from the B-6 through a BICA modification application, which was approved by the EPA.

7. Soil fill material from sample locations TP-4 (3-5), BCP MW-6 (4-5), BCP MW-6 (6-8), and MW-2 (7) (2-4) was removed as part of the IRII activities.

Definitions:

-- = No SCO has been established for subject parameter / Not analyzed for that parameter.
 ND = Parameter not detected above laboratory detection limit.
 NI = Non Ignitable.
 J = Estimated value; result is less than the sample quantitation limit but greater than zero.
 P = Detected concentrations between the two GC columns is greater than 25%; lower value is reported and flagged (for CLP methodology only).

BOLD	Exceeds Part 375 Unrestricted SCOs.
BOLD	Exceeds Part 375 Restricted Residential SCOs.
BOLD	Exceeds Part 375 Commercial SCOs.

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
125 Main Street Site
Buffalo, New York

PARAMETER ¹	GWQS/ GV ²	BCP-MW-01	BCP-MW-02 ³	BCP-MW-02 ³	BCP-MW-02 ³	BCP-MW-03 ³	BCP-MW-03 ³	BCP-MW-03 ³	BCP-MW-04	BCP-MW-05	BCP-MW-06	BCP-MW-06 ³	BCP-MW-06 ³	MW-1	MW-1R ⁴	MW-1R ⁴	MW-2R
Volatile Organic Compounds (VOCs) - ug/L																	
Acetone	99	ND	0.2	ND	-	ND	ND	-	3.7	-	5	3.6 J	ND	-	ND	-	ND
Benzene	1.7	ND	ND	ND	-	ND	ND	-	ND	-	ND	ND	ND	-	ND	-	ND
Carbon disulfide	-	ND	ND	ND	-	ND	ND	-	ND	-	ND	ND	ND	-	ND	-	ND
1,2-Dichloroethene	0.6	ND	1.1	ND	-	ND	ND	-	ND	-	ND	ND	ND	-	ND	-	ND
2-Butanone	-	ND	ND	ND	-	ND	ND	-	ND	-	1.4 J	1.1 J	ND	-	ND	-	ND
2-Pentanone	99	ND	ND	ND	-	ND	ND	-	ND	-	4.1 J	3.4 J	ND	-	ND	-	ND
Toluene	5	ND	ND	ND	-	ND	ND	-	ND	-	ND	ND	ND	-	ND	-	ND
1,2,4-Trimethylbenzene	5	1.1 J	ND	ND	-	ND	ND	-	ND	-	ND	ND	ND	-	ND	-	ND
Semi-Volatile Organic Compounds (SVOCs) - ug/L																	
2-Methylnaphthalene	5	ND	0.07 J	ND	-	ND	ND	-	ND	-	0.48	0.25	ND	-	ND	-	0.07 J
Acenaphthene	99	ND	ND	ND	-	ND	ND	-	ND	-	1.9 J	1.1 J	ND	-	ND	-	ND
Acenaphthylene	99	ND	ND	ND	-	ND	ND	-	ND	-	ND	ND	ND	-	ND	-	ND
Benzo[a]anthracene	0.002	ND	ND	ND	-	ND	ND	-	ND	-	ND	ND	ND	-	0.04 J	-	ND
Benzo[a]pyrene	ND	ND	ND	ND	-	ND	ND	-	ND	-	ND	ND	ND	-	0.28 J	-	ND
Benzo[b]fluoranthene	0.002	ND	ND	ND	-	ND	ND	-	ND	-	ND	ND	ND	-	0.62	-	ND
Benzo[k]fluoranthene	0.002	ND	ND	ND	-	ND	ND	-	ND	-	ND	ND	ND	-	0.54	-	ND
Benzo[a]fluoranthene	0.002	ND	ND	ND	-	ND	ND	-	ND	-	ND	ND	ND	-	0.99	-	ND
Benzo[e]pyrene	-	ND	ND	ND	-	ND	ND	-	ND	-	ND	ND	ND	-	ND	-	ND
Benzo[g]perylene	5	ND	0.14	ND	-	ND	ND	-	2.3 J	-	9.5 J	7.7	ND	-	ND	-	3.7
Bis(2-ethylhexyl) phthalate	0.002	ND	ND	ND	-	ND	ND	-	ND	-	ND	ND	ND	-	ND	-	ND
Chrysene	5	ND	ND	ND	-	ND	ND	-	ND	-	0.88	0.88	ND	-	ND	-	ND
Di-n-butyl phthalate	-	ND	ND	ND	-	ND	ND	-	ND	-	0.09 J	0.09	ND	-	ND	-	0.09 J
Di-n-octyl phthalate	-	ND	ND	ND	-	ND	ND	-	ND	-	ND	ND	ND	-	ND	-	ND
Dibenz[a,h]anthracene	-	ND	ND	ND	-	ND	ND	-	ND	-	ND	ND	ND	-	ND	-	ND
Dibenz[a,j]anthracene	-	ND	ND	ND	-	ND	ND	-	ND	-	ND	ND	ND	-	ND	-	ND
Dibenzofuran	-	ND	ND	ND	-	ND	ND	-	ND	-	ND	ND	ND	-	ND	-	ND
Dihydro-1,4-naphthoquinone	-	ND	ND	ND	-	ND	ND	-	ND	-	ND	ND	ND	-	ND	-	ND
Dihydro-1,4-naphthoquinone	-	ND	ND	ND	-	ND	ND	-	ND	-	ND	ND	ND	-	ND	-	ND
Fluoranthene	99	ND	ND	ND	-	ND	ND	-	ND	-	0.66	0.66	ND	-	ND	-	ND
Fluorene	99	ND	0.13 J	ND	-	ND	ND	-	0.11 J	-	0.31	0.31	ND	-	ND	-	0.13 J
Indeno[1,2,3-cd]pyrene	0.002	ND	ND	ND	-	ND	ND	-	ND	-	ND	ND	ND	-	0.46	-	ND
Naphthalene	ND	ND	ND	ND	-	ND	ND	-	ND	-	ND	ND	ND	-	ND	-	ND
Phenanthrene	99	0.18 J	0.87	ND	-	0.3	ND	-	0.88	-	2.6	2.1	ND	-	0.33 J	-	0.86
Pyrene	99	ND	ND	ND	-	ND	ND	-	ND	-	ND	ND	ND	-	0.65	-	ND
Polychlorinated Biphenyls (PCBs) - ug/L																	
Total PCBs	0.09	ND	ND	-	-	ND	-	-	ND	-	ND	-	-	-	ND	-	ND
Pesticides and Herbicides - ug/L																	
Heptachlor	0.04	ND	0.009 J	-	-	ND	-	-	0.01 J	-	ND	-	-	-	ND	-	ND
Heptachlor epoxide	0.03	ND	0.005 JP	-	-	ND	-	-	0.001 JP	-	0.001 JP	-	-	-	ND	-	ND
Endrin	ND	0.017 J	0.046	-	-	0.022 J	-	-	0.001 JP	-	0.158 P	-	-	-	-	-	0.044 P
1,4-DCDE	0.2	ND	ND	-	-	ND	-	-	0.023 JP	-	0.018 JP	-	-	-	ND	-	ND
Total Metals - ug/L																	
Aluminum	-	-	-	-	7900	462	-	39900	614	-	-	-	178000	-	41200	-	878
Antimony	330	-	-	-	2.3 B	1.9 U	-	1.9 U	3.7 U	-	-	-	3.7 U	-	1.7	-	5.5 B
Arsenic	25	-	-	-	4.2	-	-	29.2	2.9 U	-	-	-	79.2	-	2.9 U	-	67.4
Barium	1000	-	-	-	188	121	-	302	55.5	-	-	-	82	-	873	-	22.4 B
Beryllium	3	-	-	-	0.30 B	0.25 U	-	1.9 B	0.25 U	-	-	-	0.9	-	4.4	-	0.28 U
Cadmium	5	-	-	-	0.50 B	0.50 U	-	1.7 B	0.50 U	-	-	-	10.3	-	0.50 U	-	0.50 U
Calcium	-	-	-	-	107000	107000	-	271000	107000	-	-	-	345000	-	851000	-	20200
Chromium	90	-	-	-	12	1.4 U	-	59.4 J	1.7 B	-	-	-	349	-	104	-	4.0 B
Cobalt	-	-	-	-	4.3 B	0.40 U	-	33.0 B	0.40 U	-	-	-	145	-	0.80 B	-	43.9 B
Copper	200	-	-	-	35.6	7.0 U	-	159	7.0 U	-	-	-	598	-	300	-	14.5 B
Iron	300	-	-	-	11700	675	-	94100	944	-	-	-	79000	-	3480	-	1230
Lead	25	-	-	-	27	1.4 U	-	114	1.8 B	-	-	-	579	-	210	-	33.8
Magnesium	35000	-	-	-	15600	8330	-	71200	14200	-	-	-	109000	-	63000	-	18300
Manganese	300	-	-	-	660	901	-	1390	21.6	-	-	-	5360	-	38.9	-	1660
Mercury	0.7	-	-	-	0.050 B	0.050 U	-	0.22	0.067 U	-	-	-	0.067 U	-	0.067 U	-	0.067 U
Nickel	100	-	-	-	11.3 B	1.5 B	-	63.7	0.90 B	-	-	-	262	-	3.5 B	-	5.6 B
Potassium	-	-	-	-	13000	13000	-	42000	28700	-	-	-	531000	-	30600	-	57000
Selenium	10	-	-	-	4.8 U	4.8 U	-	12.8	1.0 U	-	-	-	14.8 B	-	30.4	-	4.8 U
Silver	50	-	-	-	1.0 U	1.0 U	-	1.0 U	1.0 U	-	-	-	2.0 U	-	1.0 U	-	1.0 U
Sodium	20000	-	-	-	830000	830000	-	326000	374000	-	-	-	304000	-	416000	-	416000
Thallium	0.5	-	-	-	1.9 U	1.9 U	-	1.9 U	1.9 U	-	-	-	1.9 U	-	1.9 U	-	1.9 U
Vanadium	-	-	-	-	18.2	2.8 U	-	99.1	3.2 B	-	-	-	306	-	184	-	1.5 B
Zinc	2000	-	-	-	205	7.3 B	-	921	10.1 B	-	-	-	3280	-	47.2	-	42.4
Resolved Metals - ug/L																	
Aluminum	-	1300	2260	40 U	3770	40 U	40 U	2200	270	269	40 U	40 U	155	40 U	40 U	1130	1130
Antimony	330	0.8	1.9	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	ND	1.9 U	1.9 U	3.7	4.1 B	8.7	ND	ND
Arsenic	25	4.1	3.4	2.9 U	3.4	2.9 U	3.4	3.1 J	ND	ND	2.9 U	2.9 U	ND	2.9 U	2.9 U	ND	ND
Barium	1000	187.4	123	114	258.2	108	47.6 B	311.7	138.4	69.2	52.4	67.1	92.6	33.5 B	145.8	129.1	129.1
Beryllium	3	ND	0.25 U	ND	0.25 U	ND	0.25 U	ND	ND	ND	0.25 U	0.25 U	ND	0.25 U	0.25 U	ND	ND
Cadmium	5	0.2 J	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.7 J	0.50 U	ND	0.50 U	0.50 U	1.6 J	0.50 U	0.50 U	ND	ND
Calcium	-	145000	209	819000	819000	209000	117000	264000	495000	241000	365000	264000	264000	88200	215000	215000	215000
Chromium	90	3.7	1.4 U	1.4 U	7.1 J	ND	6.2 J	ND	1.4 U	ND	1.4 U	1.4 U	1.4 U	1.4 U	3.7 J	ND	ND
Cobalt	-	1.4	0.9	0.40 U	0.40 U	0.40 U	0.40 U	7.9	29.7	12.1	5.8 B	0.40 U	2.2 J	1.3 B	0.50 B	37.7	37.7
Copper	200	6.3	17.2	7.0 U	28.0	28.0	28.0	61.6	47.7	25.2	28.0	28.0	28.0	28.0	28.0	28.0	28.0
Iron	300	6490	16200	2010	21500	2010	3800	1728	3800	1728	2010	2010	469 J	21.5 B	26.5 B	2330	2330
Lead	25	7.1	38.1	1.7 U	46.7	1.7 U	34.7	96.5	34.7	25.2	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
Magnesium	35000	44700	43800	1820	66000	13100	61000	51600	51600	51600	74000	74000	42300	42300	17400	38600	38600
Manganese	300	328.4	912	480	773.7	396	1846	1474	1846	1474	1846	1846	117.8	146	26.4	993.2	993.2
Mercury	0.7	ND	0.067 U	ND	0.067 U	ND	0.067 U	ND	ND	ND	ND	ND	0.067 U	ND	0.067 U	ND	ND
Nickel	100	3.1	0.90 B	10.2	10.2	10.2	10.2	14.6	37.8	16.4	6.9 B	6.9 B	3.8 B	3.8 B	3.8 B	3.8 B	3.8 B
Potassium	-	74400	12000	13000	35300	24500	24500	57500	181000	37400	42000	42000	61000	60500	36000	36000	36000
Selenium	10	19	4.8 U	4.8 U	ND	11.3	ND	ND	24.6	4.1	24.6	24.6	4.1	4.1	4.1	4.1	4.1
Silver	50	ND	ND	1.0 U	1.0 U	1.0 U	1.0 U	ND	ND	ND	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Sodium	20000	446000	819000	819000	819000	819000	819000	819000	819000	819000	819000	819000	819000	819000	819000	819000	819000
Thallium	0.5	ND	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Vanadium	-	3.4 J															

TABLE 3
Soil Cleanup Objectives (SCO's)
125 Main Street Site
Buffalo, New York

PARAMETER	Unrestricted (ppm) ¹	Restricted - Residential (ppm) ¹	Restricted - Commercial (ppm) ¹
Semi-Volatile Organic Compounds (SVOCs)			
Acenaphthene	20	100	500
Acenaphthylene	100	100	500
Anthracene	100	100	500
Benzo (a) anthracene	1	1	5.6
Benzo (b) fluoranthene	1	1	5.6
Benzo (k) fluoranthene	0.8	3.9	56
Benzo (a) pyrene	1	1	1
Benzo (g,h,i) perylene	100	100	500
Chrysene	1	3.9	56
Dibenzo (a,h) anthracene	0.33	0.33	0.56
Dibenzofuran	7	59	350
Fluoranthene	100	100	500
Fluorene	30	100	500
Indeno (1,2,3 - cd) pyrene	0.5	0.5	5.6
Naphthalene	12	100	500
Phenanthrene	100	100	500
Pyrene	100	100	500
Total Metals			
Arsenic	13	16	16
Barium	350	400	400
Beryllium	7.2	72	590
Cadmium	2.5	4.3	9.3
Chromium	30	180	1500
Copper	50	270	270
Lead	63	400	1000
Manganese	1600	2000	10000
Mercury	0.18	0.81	2.8
Nickel	30	310	310
Selenium	3.9	180	1500
Silver	2	180	1500
Zinc	109	10000	10000

Notes:

1. Values per NYSDEC Part 375 Soil Cleanup Objectives (December 2006).

TABLE 3
Soil Cleanup Objectives (SCO's)
125 Main Street Site
Buffalo, New York

PARAMETER	Unrestricted (ppm) ¹	Restricted - Residential (ppm) ¹	Restricted - Commercial (ppm) ¹
PCBs/Pesticides			
2,4,5-TP Acid (Silvex)	3.8	100	500
4,4'-DDE	0.0033	8.9	62
4,4'-DDT	0.0033	7.9	47
4,4'-DDD	0.0033	13	92
Aldrin	0.005	0.097	0.097
alpha-BHC	0.02	0.48	3.4
beta-BHC	0.036	0.36	3
Chlordane (alpha)	0.094	4.2	24
delta-BHC	0.04	100	500
Dibenzofuran	7	59	350
Dieldrin	0.005	0.2	1.4
Endosulfan I	2.4	24	200
Endosulfan II	2.4	24	200
Endosulfan sulfate	2.4	24	200
Endrin	0.014	11	89
Heptachlor	0.042	2.1	15
Lindane	0.1	1.3	9.2
PCBs	0.1	1	1
Volatile Organic Compounds (VOCs)			
1,1,1-Trichloroethane	0.68	100	500
1,1-Dichloroethane	0.27	26	240
1,1-Dichloroethene	0.33	100	500
1,2-Dichlorobenzene	1.1	100	500
1,2-Dichloroethane	0.02	3.1	30
cis-1,2-Dichloroethene	0.25	100	500
trans-1,2-Dichloroethene	0.19	100	500
1,3-Dichlorobenzene	2.4	49	280
1,4-Dichlorobenzene	1.8	13	130
1,4-Dioxane	0.1	13	130
Acetone	0.05	100	500
Benzene	0.06	4.8	44
Butylbenzene	12	100	500
Carbon tetrachloride	0.76	2.4	22
Chlorobenzene	1.1	100	500
Chloroform	0.37	49	350
Ethylbenzene	1	41	390
Hexachlorobenzene	0.33	1.2	6
Methyl ethyl ketone	0.12	100	500
Methyl tert-butyl ether	0.93	100	500
Methylene chloride	0.05	100	500
n-Propylbenzene	3.9	100	500
sec-Butylbenzene	11	100	500
tert-Butylbenzene	5.9	100	500
Tetrachloroethene	1.3	19	150
Toluene	0.7	100	500
Trichloroethene	0.47	21	200
1,2,4-Trimethylbenzene	3.6	52	190
1,3,5-Trimethylbenzene	8.4	52	190
Vinyl Chloride	0.02	0.9	13
Xylene (mixed)	0.26	100	500

Notes:

1. Values per NYSDEC Part 375 Soil Cleanup Objectives (December 2006).

TABLE 4
SUMMARY OF POST-EXCAVATION LABORATORY ANALYTICAL DATA (NORTH WALL)

2012-2013 INTERIM REMEDIAL MEASURES

125 MAIN STREET SITE
BUFFALO, NY

Site ID: 125 Main Street Site, Buffalo NY		NYSDEC PART 375 UNRESTRICTED USE SCOs	NYSDEC PART 375 RESTRICTED RESIDENTIAL USE SCOs	NYSDEC PART 375 RESTRICTED COMMERCIAL USE SCOs	North Wall - 1	North Wall - 2	North Wall - 3	North Wall - 4	North Wall - 5	North Wall - 6
Lab ID: 130222					SOIL / FILL	SOIL / FILL	SOIL / FILL	SOIL / FILL	SOIL / FILL	SOIL / FILL
Date Sample Collected:1/14/13					1/14/13	1/14/13	1/14/13	1/14/13	1/14/13	1/14/13
Sample Depth: Excavation Wall										
Parameter										
	Units	mg/Kg	mg/Kg	mg/Kg	Concentration	Concentration	Concentration	Concentration	Concentration	Concentration
Semi Volatile Organics										
Acenaphthene	mg/Kg	20	100	500	< 0.320	< 0.320	< 0.320	< 0.330	< 0.340	< 0.330
Acenaphthylene	mg/Kg	100	100	500	< 0.320	< 0.320	< 0.320	< 0.330	< 0.340	< 0.330
Anthracene	mg/Kg	100	100	500	< 0.320	< 0.320	0.180 J	< 0.330	< 0.340	0.280 J
Benzo (a) anthracene	mg/Kg	1	1	5.6	0.180 J	< 0.320	0.390	< 0.330	< 0.340	0.650
Benao (a) pyrene	mg/Kg	1	1	1	0.210 J	< 0.320	0.330	< 0.330	< 0.340	0.550
Benzo (b) fluoranthene	mg/Kg	1	1	5.6	0.190 J	< 0.320	0.320 J	< 0.330	< 0.340	0.500
Benzo (g,h,i) perylene	mg/Kg	100	100	500	0.160 J	< 0.320	0.210 J	< 0.330	< 0.340	0.330
Benzo (k) fluoranthene	mg/Kg	0.8	3.9	56	< 0.320	< 0.320	0.240 J	< 0.330	< 0.340	0.440
Chrysene	mg/Kg	1	3.9	56	0.200 J	< 0.320	0.410	< 0.330	< 0.340	0.670
Dibenzo (a,h) anthracene	mg/Kg	0.33	0.33	0.56	< 0.320	< 0.320	< 0.320	< 0.330	< 0.340	< 0.330
Fluoranthene	mg/Kg	100	100	500	0.360	< 0.320	0.830	< 0.330	0.220 J	1.3
Fluorene	mg/Kg	30	100	500	< 0.320	< 0.320	< 0.320	< 0.330	< 0.340	< 0.330
Indeno (1,2,3 - cd) pyrene	mg/Kg	0.5	0.5	5.6	< 0.320	< 0.320	0.280 J	< 0.330	< 0.340	0.420
Napthalene	mg/Kg	12	100	500	< 0.320	< 0.320	< 0.320	< 0.330	< 0.340	< 0.330
Phenanthrene	mg/Kg	100	100	500	0.250 J	< 0.320	0.820	< 0.330	< 0.340	1.0
Pyrene	mg/Kg	100	100	500	0.340	< 0.320	0.730	< 0.330	0.180 J	1.2
TAL Metals										
Arsenic	mg/Kg	13	16	16	4.0	5.3	4.8	5.7	4.8	8.8
Barium	mg/Kg	350	400	400	28	27	29	24	23	120 D
Cadmium	mg/Kg	2.5	4.3	9.3	< 0.59	0.39	0.44	0.43	0.44	1.4 D
Chromium	mg/Kg	30	180	1,500	7.1	12	10	11	12	13
Lead	mg/Kg	63	400	1,000	86	26	8.6	10	23	340
Mercury	mg/Kg	0.18	0.81	2.8	0.40	0.38	0.026	0.021	0.0048	0.0068
Selenium	mg/Kg	3.9	180	1,500	< 1.2	< 1.2	< 1.0	< 1.2	< 1.1	< 1.1
Silver	mg/Kg	2	180	1,500	< 1.2	< 1.2	< 1.0	< 1.2	< 1.1	< 1.1

Notes:

	Exceedence of NYSDEC Part 375 UNRESTRICTED USE soil cleanup objective
	Exceedence of NYSDEC Part 375 RESTRICTED RESIDENTIAL USE soil cleanup objective
	Exceedence of NYSDEC Part 375 RESTRICTED COMMERCIAL USE soil cleanup objective
J	estimated value
D	Duplicate results outside QC limits. May indicate non-homogeneous matrix.
mg/Kg	Millograms/Kilogram (parts per million)

ENSOL, INC.

X:\AAApp\Benderson Development\12-0069 125 Main St. Buffalo, NY\Task 4 - SMP Preparation\3. Final with DEC Comments\Tables\Tables 4-7 - Post-Ex Soil

10/1/2013

TABLE 5
SUMMARY OF POST-EXCAVATION LABORATORY ANALYTICAL DATA (NORTH FLOOR)

2012-2013 INTERIM REMEDIAL MEASURES (IRM)
CONFIRMATORY SAMPLES

125 MAIN STREET
BUFFALO, NY

Site ID: 125 Main Street, Buffalo NY			NYSDEC PART 375 UNRESTRICTED USE SCO's	NYSDEC PART 375 RESTRICTED RESIDENTIAL USE SCO's	NYSDEC PART 375 RESTRICTED COMMERCIAL USE SCO's	North Floor - 1	North Floor - 2	North Floor - 3	North Floor - 3A	North Floor - 4	North Floor - 5	North Floor - 6	North Floor - 6A	North Floor - 7	North Floor - 8	North Floor - 8A	North Floor - 9	North Floor - 10	North Floor - 11	North Floor - 12	North Floor - 13			
Lab ID: 130222/130888						SOIL / FILL	SOIL / FILL	SOIL / FILL	SOIL / FILL	SOIL / FILL	SOIL / FILL	SOIL / FILL	SOIL / FILL	SOIL / FILL	SOIL / FILL	SOIL / FILL	SOIL / FILL	SOIL / FILL	SOIL / FILL	SOIL / FILL	SOIL / FILL	SOIL / FILL	SOIL / FILL	
Date Sample Collected: Various						1/15/13	1/15/13	1/15/13	3/12/13	1/15/13	1/15/13	1/15/13	3/12/13	1/15/13	1/15/13	3/12/13	1/15/13	1/15/13	1/15/13	1/15/13	1/15/13	1/15/13	1/15/13	1/15/13
Sample Depth: Excavation Floor																								
Parameter																								
	Units	mg/Kg	mg/Kg	mg/Kg	Concentration	Concentration	Concentration	Concentration	Concentration	Concentration	Concentration	Concentration	Concentration	Concentration	Concentration	Concentration	Concentration	Concentration	Concentration	Concentration	Concentration			
Semi Volatile Organics																								
Acenaphthene	mg/Kg	20	100	500	< 0.4	0.770	0.190 J	-	< 0.340	0.590	0.540	-	< 0.360	19	1	0.420	1.1 J	< 0.340	< 0.350	< 0.330				
Acenaphthylene	mg/Kg	100	100	500	< 0.4	0.270 J	0.250 J	-	< 0.340	< 0.350	< 0.340	-	< 0.360	< 17	0.50 J	< 0.360	< 1.7	< 0.340	< 0.350	< 0.330				
Anthracene	mg/Kg	100	100	500	< 0.4	1.8	0.540	-	< 0.340	0.920	0.920	-	< 0.360	49	2.6	0.790	2.4	< 0.340	0.250 J	0.170 J				
Benzo (a) anthracene	mg/Kg	1	1	5.6	0.210 J	2.9	1.7	-	0.210 J	1.4	1.6	-	< 0.360	78	3.8	1.6	4.9	0.250 J	0.700	0.630				
Benzo (a) pyrene	mg/Kg	1	1	1	< 0.4	2.3	1.6	-	< 0.340	1.1	1.4	-	< 0.360	58	3.1	1.3	3.9	0.230 J	0.640	0.650				
Benzo (b) fluoranthene	mg/Kg	1	1	5.6	< 0.4	2.2	1.8	-	< 0.340	0.980	1.3	-	< 0.360	55	2.7	1.2	4.1	0.240 J	0.730	0.740				
Benzo (g,h,i) perylene	mg/Kg	100	100	500	< 0.4	1.4	1.3	-	< 0.340	0.670	0.670	-	< 0.360	32	1.7	0.760	2.5	0.180 J	0.460	0.490				
Benzo (k) fluoranthene	mg/Kg	0.8	3.9	56	< 0.4	1.7	1.3	-	< 0.340	0.850	0.960	-	< 0.360	38	2.2	0.980	2.7	0.210 J	0.430	0.460				
Chrysene	mg/Kg	1	3.9	56	0.220 J	2.9	1.8	-	0.240 J	1.3	1.7	-	< 0.360	77	3.8	1.7	4.8	0.260 J	0.770	0.720				
Dibenzo (a,h) anthracene	mg/Kg	0.33	0.33	0.56	< 0.4	0.360 J	0.250 J	-	< 0.340	< 0.350	< 0.340	-	< 0.360	< 17	0.50 J	< 0.360	< 1.7	< 0.340	< 0.350	< 0.330				
Fluoranthene	mg/Kg	100	100	500	0.420	5.9	2.9	-	0.420	2.9	3.4	-	< 0.360	170	8.4	3.5	11.0	0.390	1.7	1.4				
Fluorene	mg/Kg	30	100	500	< 0.4	0.720	0.190 J	-	< 0.340	0.570	0.470	-	< 0.360	34	1.1	0.350 J	1.2 J	< 0.340	< 0.350	< 0.330				
Indeno (1,2,3 - cd) pyrene	mg/Kg	0.5	0.5	5.6	< 0.4	1.7	1.8	-	< 0.340	0.980	1.1	-	< 0.360	44	2.0	1.0	3.5	0.250 J	0.640	0.730				
Naphthalene	mg/Kg	12	100	500	< 0.4	0.500	< 0.360	-	< 0.340	0.510	0.540	-	< 0.360	28	0.99	< 0.360	2.1	< 0.340	< 0.350	< 0.330				
Phenanthrene	mg/Kg	100	100	500	0.460	6.1	2.1	-	0.380	3.6	3.5	-	< 0.360	210	9.4	3.3	9.7	0.220 J	1.0	0.770				
Pyrene	mg/Kg	100	100	500	0.360 J	5.2	2.5	-	0.350	2.6	3.0	-	< 0.360	140	7.2	3.2	9.4	0.350	1.4	1.2				
TAL Metals																								
Arsenic	mg/Kg	13	16	16	20	120	100	18	4.5	6.0	18	8	6.4	16	13	11	8.7	8.5	5.4	4.5				
Barium	mg/Kg	350	400	400	92	130	1900	130	66	200	210	260	81	350	290	140	270	250	150	110				
Cadmium	mg/Kg	2.5	4.3	9.3	0.84	19	16	<0.77	0.47 J	1.1	2.4	0.7	2.6	2.9	2.5	4.2	1.6	0.66	0.69	0.52				
Chromium	mg/Kg	30	180	1,500	15	19	38	18	15	11	12	17	17	15	23	9.4	8.9	19	13	12				
Lead	mg/Kg	63	400	1,000	290	530	70,000	180	110	140	1,600	540	26	2,400	4,500	510	900	180	350	79				
Mercury	mg/Kg	0.18	0.81	2.8	3.2	0.0091	5.7	0.21	1.5	< 0.0099	< 0.0092	<0.19	0.039	< 0.010	<0.17	0.87	< 0.0087	< 0.010	< 0.0098	< 0.0092				
Selenium	mg/Kg	3.9	180	1,500	1.2 J	< 1.5	14	<1.5	< 1.2	< 1.1	< 1.3	2.8	< 1.3	3.0	3.7	2.6	1.2	< 1.2	< 1.2	< 1.0				
Silver	mg/Kg	2	180	1,500	< 1.4	1.6	2.9	<1.5	< 1.2	1.0 J	3.8	2.6	< 1.3	0.85 J	3.1	0.72 J	< 1.2	1.4	0.60 J	< 1.0				

Notes:

Exceedence of NYSDEC Part 375 UNRESTRICTED USE soil cleanup objective
Exceedence of NYSDEC Part 375 RESTRICTED RESIDENTIAL USE soil cleanup objective
Exceedence of NYSDEC Part 375 RESTRICTED COMMERCIAL USE soil cleanup objective
J estimated value
mg/Kg Milligrams/Kilogram (parts per million)

A Samples were collected once overexcavation of the floor (approximately 6"-8") was complete. *A* samples were only analyzed for those parameters that significantly exceeded the Commercial Use SCO's during initial analysis.

TABLE 6
SUMMARY OF POST-EXCAVATION LABORATORY ANALYTICAL DATA (EAST FLOOR)

2012-2013 INTERIM REMEDIAL MEASURES (IRM)
CONFIRMATORY SAMPLES

125 MAIN STREET
BUFFALO, NY

Site ID: 125 Main Street, Buffalo NY Lab ID: 130287/130888 Date Sample Collected: Various		NYSDEC PART 375 UNRESTRICTED USE SCOs	NYSDEC PART 375 RESTRICTED RESIDENTIAL USE SCOs	NYSDEC PART 375 RESTRICTED COMMERCIAL USE SCOs	East Floor - 1	East Floor - 2	East Floor - 2A	East Floor - 3	East Floor - 4	East Floor - 5	East Floor - 6	East Floor - 7
					SOIL / FILL	SOIL / FILL	SOIL / FILL	SOIL / FILL	SOIL / FILL	SOIL / FILL	SOIL / FILL	
					1/18/13	1/18/13	3/12/13	1/18/13	1/18/13	1/18/13	1/18/13	
Sample Depth: Excavation Floor												
Parameter												
	Units	mg/Kg	mg/Kg	mg/Kg	Concentration	Concentration	Concentration	Concentration	Concentration	Concentration	Concentration	Concentration
Semi Volatile Organics												
Acenaphthene	mg/Kg	20	100	500	0.29 J,M	24	<0.35	0.23 J	1	<0.34	0.45	0.17 J
Acenaphthylene	mg/Kg	100	100	500	0.29 J	<8.1	<0.35	0.20 J	<0.67	<0.34	<0.31	<0.31
Anthracene	mg/Kg	100	100	500	0.90	33	0.28 J	0.6	2.3	<0.34	1.1	0.46
Benzo (a) anthracene	mg/Kg	1	1	5.6	2.20	38	0.71	1.3	4.2	0.36	1.9	0.67
Benao (a) pyrene	mg/Kg	1	1	1	2.00	25	0.58	1.1	3.1	0.33 J	1.6	0.54
Benzo (b) fluoranthene	mg/Kg	1	1	5.6	1.80	24	0.52	1.1	2.9	0.33 J	1.6	0.60
Benzo (g,h,i) perylene	mg/Kg	100	100	500	1.30	11	0.31 J	0.8	1.7	0.22 J	1.0	0.35
Benzo (k) fluoranthene	mg/Kg	0.8	3.9	56	1.50	17	0.50	0.8	2.4	0.23 J	1.2	0.35
Chrysene	mg/Kg	1	3.9	56	2.20	36	0.74	1.3	4.1	0.36	1.9	0.73
Dibenzo (a,h) anthracene	mg/Kg	0.33	0.33	0.56	0.29 J	<8.1	<0.35	<0.33	0.48 J	<0.34	0.23 J	<0.31
Fluoranthene	mg/Kg	100	100	500	4.20	87	1.50	2.6	7.9	0.94	4.3	1.6
Fluorene	mg/Kg	30	100	500	0.36	22	<0.35	0.27 J	0.97	<0.34	0.52	0.19 J
Indeno (1,2,3 - cd) pyrene	mg/Kg	0.5	0.5	5.6	1.80	18	0.56	0.9	2.3	0.32 J	1.4	0.45
Napthalene	mg/Kg	12	100	500	<3.4	17	<0.35	<0.33	0.50 J	<0.34	0.34	0.18 J
Phenanthrene	mg/Kg	100	100	500	3.40	120	1.20	2.2	7.8	0.71	4.1	1.5
Pyrene	mg/Kg	100	100	500	3.7 M	73	1.30	2.3	6.8	0.78	3.6	1.3
TAL Metals												
Arsenic	mg/Kg	13	16	16	24 D	19	29	7	11	1 J	4.6	2.3
Barium	mg/Kg	350	400	400	290 D	100	110	260	150	330	73	16
Cadmium	mg/Kg	2.5	4.3	9.3	3.1 D	2.3	1.1	0.49 J	1.50	<0.55	0.4	<0.58
Chromium	mg/Kg	30	180	1,500	20 D	11	12	9	13	17	7	<1.2
Lead	mg/Kg	63	400	1,000	920 D,M	1100	610	220	540	4	60	23
Mercury	mg/Kg	0.18	0.81	2.8	< 0.0095 M	1.3	13	<0.0098	< 0.0097	< 0.0092	< 0.0085	< 0.0090
Selenium	mg/Kg	3.9	180	1,500	4.2	2.2	1.2	<1.1	<1.2	<1.1	<1.2	<1.2
Silver	mg/Kg	2	180	1,500	1.2	1.1	1.7	0.58 J	0.80 J	1.8	<1.2	0.66 J
Volatile Organics												
1,2,4-Trimethylbenzene	mg/Kg	3.6	52	190	NA	NA	NA	NA	NA	NA	NA	<0.003
1,3,5-Trimethylbenzene	mg/Kg	8.4	52	190	NA	NA	NA	NA	NA	NA	NA	<0.003
Benzene	mg/Kg	0.06	4.8	44	NA	NA	NA	NA	NA	NA	NA	<0.003
Ethylbenzene	mg/Kg	1	41	390	NA	NA	NA	NA	NA	NA	NA	<0.003
Isopropylbenzene	mg/Kg	-	-	-	NA	NA	NA	NA	NA	NA	NA	<0.003
m,p-Xylene	mg/Kg	0.26	100	500	NA	NA	NA	NA	NA	NA	NA	<0.003
MTBE	mg/Kg	0.93	100	500	NA	NA	NA	NA	NA	NA	NA	<0.003
Napthalene	mg/Kg	-	-	-	NA	NA	NA	NA	NA	NA	NA	<0.0074
n-Propylbenzene	mg/Kg	3.9	100	500	NA	NA	NA	NA	NA	NA	NA	<0.003
n-Butylbenzene	mg/Kg	12	-	-	NA	NA	NA	NA	NA	NA	NA	<0.003
o-Xylene	mg/Kg	0.26	100	500	NA	NA	NA	NA	NA	NA	NA	<0.003
p-Isopropyltoluene	mg/Kg	-	-	-	NA	NA	NA	NA	NA	NA	NA	<0.003
sec-Butylbenzene	mg/Kg	11	100	500	NA	NA	NA	NA	NA	NA	NA	<0.003
tert-Butylbenzene	mg/Kg	5.9	100	500	NA	NA	NA	NA	NA	NA	NA	<0.003
Toluene	mg/Kg	0.7	100	500	NA	NA	NA	NA	NA	NA	NA	0.0021

Notes:

Exceedence of NYSDEC Part 375 UNRESTRICTED USE soil cleanup objective
Exceedence of NYSDEC Part 375 RESTRICTED RESIDENTIAL USE soil cleanup objective
Exceedence of NYSDEC Part 375 RESTRICTED COMMERCIAL USE soil cleanup objective
estimated value

J Duplicate results outside QC limits. May indicate non-homogeneous matrix.

M Matrix spike recoveries outside QC limits. May indicate non-homogeneous matrix

mg/Kg Milligrams/Kilogram (parts per million)

NA Parameter not analyzed

(-) No SCO available for this parameter

Sample location East Floor-7 represents the former 30,000 gallon fuel UST area. Remediation of this area was completed in December 2008.

"A" Samples were collected once overexcavation of the floor (approximately 6"-8") was complete. "A" samples were only analyzed for those parameters that significantly exceeded the Commercial Use SCO's during initial analysis.

TABLE 6
SUMMARY OF POST-EXCAVATION LABORATORY ANALYTICAL DATA (EAST FLOOR)

2012-2013 INTERIM REMEDIAL MEASURES (IRM)
CONFIRMATORY SAMPLES

125 MAIN STREET
BUFFALO, NY

Site ID: 125 Main Street, Buffalo NY		NYSDEC PART 375 UNRESTRICTED USE SCOs	NYSDEC PART 375 RESTRICTED RESIDENTIAL USE SCOs	NYSDEC PART 375 RESTRICTED COMMERCIAL USE SCOs	East Floor - 8	East Floor - 9	East Floor - 10	East Floor - 11	East Floor - 12	East Floor - 13	East Floor - 14	East Floor - 15
Lab ID:					SOIL / FILL	SOIL / FILL	SOIL / FILL	SOIL / FILL	SOIL / FILL	SOIL / FILL	SOIL / FILL	Soil/Fill
Date Sample Collected: 5/15/13					5/15/13	5/15/13	5/15/13	5/15/13	5/15/13	5/15/13	5/15/13	5/15/13
Sample Depth: Excavation Floor												
Parameter												
	Units	mg/Kg	mg/Kg	mg/Kg	Concentration	Concentration	Concentration	Concentration	Concentration	Concentration	Concentration	Concentration
Semi Volatile Organics												
Acenaphthene	mg/Kg	20	100	500	<0.317	<0.310	<0.317	<0.314	<0.298	0.163 J	<0.333	<0.317
Acenaphthylene	mg/Kg	100	100	500	<0.317	<0.310	<0.317	<0.314	<0.298	0.245 J	<0.333	<0.317
Anthracene	mg/Kg	100	100	500	<0.317	<0.310	<0.317	0.246 J	<0.298	0.618	0.206 J	0.331
Benzo (a) anthracene	mg/Kg	1	1	5.6	<0.317	0.306 J	<0.317	0.777	<0.298	1.800	0.563	0.850
Benao (a) pyrene	mg/Kg	1	1	1	<0.317	0.247 J	<0.317	0.710	<0.298	1.480	0.492	0.708
Benzo (b) fluoranthene	mg/Kg	1	1	5.6	<0.317	0.233 J	<0.317	1.350	<0.298	1.290	0.499	0.679
Benzo (g,h,i) perylene	mg/Kg	100	100	500	<0.317	<0.310	<0.317	0.514	<0.298	0.743	0.302 J	0.458
Benzo (k) fluoranthene	mg/Kg	0.8	3.9	56	<0.317	0.190 J	<0.317	1.240	<0.298	1.110	0.347	0.570
Chrysene	mg/Kg	1	3.9	56	<0.317	0.307 J	<0.317	0.927	<0.298	1.800	0.584	0.910
Dibenzo (a,h) anthracene	mg/Kg	0.33	0.33	0.56	<0.317	<0.310	<0.317	<0.314	<0.298	0.218 J	<0.333	<0.317
Fluoranthene	mg/Kg	100	100	500	<0.317	0.589	<0.317	2.030	<0.298	3.180	1.070	1.770
Fluorene	mg/Kg	30	100	500	<0.317	<0.310	<0.317	<0.314	<0.298	<0.326	<0.333	<0.317
Indeno (1,2,3 - cd) pyrene	mg/Kg	0.5	0.5	5.6	<0.317	0.426	<0.317	0.674	<0.298	0.960	0.552	0.706
Napthalene	mg/Kg	12	100	500	<0.317	<0.310	<0.317	<0.314	<0.298	<0.326	<0.333	<0.317
Phenanthrene	mg/Kg	100	100	500	<0.317	0.530	<0.317	1.260	<0.298	2.360	0.845	1.340
Pyrene	mg/Kg	100	100	500	<0.317	0.578	<0.317	1.810	<0.298	3.100	1.020	1.680
TAL Metals												
Arsenic	mg/Kg	13	16	16	3.01	4.97	0.551 J	2.43	1.73	5.26	13.3	3.51 D
Barium	mg/Kg	350	400	400	19.2	71.8	208	42.1	15.9	74.5	80.7	76.6
Cadmium	mg/Kg	2.5	4.3	9.3	0.277 J	0.302 J	<0.510	0.273 J	<0.511	0.426 J	0.376 J	0.269 J
Chromium	mg/Kg	30	180	1,500	9.29	9.54	12.7	10.3	3.59	8.84	10.4	8.69 D
Lead	mg/Kg	63	400	1,000	7.34	197	7.98	64.6	9.79	282	185	88.6 D
Mercury	mg/Kg	0.18	0.81	2.8	0.00967 J	1.21	<0.0162	0.297	0.0749	0.395	1.36	0.327 D
Selenium	mg/Kg	3.9	180	1,500	<1.10	0.548 J	0.594 J	0.582 J	<1.02	0.651 J	<1.16	<1.03
Silver	mg/Kg	2	180	1,500	0.846 J	0.972 J	1.6	1.14	<1.02	0.886 J	0.840 J	1.115

Notes:

	Exceedence of NYSDEC Part 375 UNRESTRICTED USE soil cleanup objective
	Exceedence of NYSDEC Part 375 RESTRICTED RESIDENTIAL USE soil cleanup objective
	Exceedence of NYSDEC Part 375 RESTRICTED COMMERCIAL USE soil cleanup objective
J	estimated value
D	Duplicate results outside QC limits. May indicate non-homogeneous matrix.
M	Matrix spike recoveries outside QC limits. May indicate non-homogeneous matrix
mg/Kg	Milligrams/Kilogram (parts per million)
NA	Parameter not analyzed
(-)	No SCO available for this parameter

TABLE 7
SUMMARY OF POST-EXCAVATION LABORATORY ANALYTICAL DATA (EAST WALL)

2012-2013 INTERIM REMEDIAL MEASURES

125 MAIN STREET SITE
BUFFALO, NY

Site ID: 125 Main Street Site, Buffalo NY		NYSDEC PART 375 UNRESTRICTED USE SCOs	NYSDEC PART 375 RESTRICTED RESIDENTIAL USE SCOs	NYSDEC PART 375 RESTRICTED COMMERCIAL USE SCOs	East Wall - 1	East Wall - 2	East Wall - 3	East Wall - 4
Lab ID: 130995					SOIL / FILL	SOIL / FILL	SOIL / FILL	SOIL / FILL
Date Sample Collected:3/21/13					3/21/13	3/21/13	3/21/13	3/21/13
Sample Depth: Excavation Wall								
Parameter								
	Units	mg/Kg	mg/Kg	mg/Kg	Concentration	Concentration	Concentration	Concentration
Semi Volatile Organics								
Acenaphthene	mg/Kg	20	100	500	<0.29	0.18 J	<0.34	<0.31
Acenaphthylene	mg/Kg	100	100	500	<0.29	<0.32	<0.34	<0.31
Anthracene	mg/Kg	100	100	500	<0.29	0.41	0.20 J	0.19 J
Benzo (a) anthracene	mg/Kg	1	1	5.6	<0.29	1.10	0.78	1.10
Benao (a) pyrene	mg/Kg	1	1	1	<0.29	1.10	0.72	0.91
Benzo (b) fluoranthene	mg/Kg	1	1	5.6	<0.29	1.00	0.67	0.82
Benzo (g,h,i) perylene	mg/Kg	100	100	500	<0.29	0.74	0.46	0.51
Benzo (k) fluoranthene	mg/Kg	0.8	3.9	56	<0.29	0.88	0.59	0.83
Chrysene	mg/Kg	1	3.9	56	<0.29	1.30	0.84	1.00
Dibenzo (a,h) anthracene	mg/Kg	0.33	0.33	0.56	<0.29	<0.32	<0.34	<0.31
Fluoranthene	mg/Kg	100	100	500	<0.29	2.50	1.60	1.60
Fluorene	mg/Kg	30	100	500	<0.29	0.20 J	<0.34	<0.31
Indeno (1,2,3 - cd) pyrene	mg/Kg	0.5	0.5	5.6	<0.29	0.83	0.60	0.70
Napthalene	mg/Kg	12	100	500	<0.29	0.25 J	<0.34	<0.31
Phenanthrene	mg/Kg	100	100	500	<0.29	1.70	0.85	0.43
Pyrene	mg/Kg	100	100	500	<0.29	2.10	1.40	1.40
TAL Metals								
Arsenic	mg/Kg	13	16	16	2.8	3.8	23.0	4.4
Barium	mg/Kg	350	400	400	44	66	120	33
Cadmium	mg/Kg	2.5	4.3	9.3	0.34 J	0.45 J	0.59 J	0.36 J
Chromium	mg/Kg	30	180	1,500	8.2	15.0	12.0	7.3
Lead	mg/Kg	63	400	1,000	140	120	200	54
Mercury	mg/Kg	0.18	0.81	2.8	0.60	0.27	0.39	0.25
Selenium	mg/Kg	3.9	180	1,500	<1.0	<1.1	<1.2	<1.1
Silver	mg/Kg	2	180	1,500	0.67 J	1.10	0.65 J	1.0 J

Notes:

	Exceedence of NYSDEC Part 375 UNRESTRICTED USE soil cleanup objective
	Exceedence of NYSDEC Part 375 RESTRICTED RESIDENTIAL USE soil cleanup objective
	Exceedence of NYSDEC Part 375 RESTRICTED COMMERCIAL USE soil cleanup objective
J	estimated value
D	Duplicate results outside QC limits. May indicate non-homogeneous matrix.
mg/Kg	Millograms/Kilogram (parts per million)

ENSOL, INC.

X:\AAApj\Benderson Development\12-0069 125 Main St. Buffalo, NY\Task 4 - SMP Preparation\3. Final with DEC Comments\Tables\Tables 4-7 - Post-Ex Soil

10/1/2013

TABLE 8
SUMMARY OF POST-EXCAVATION SOIL ANALYTICAL RESULTS (BEHIND STEEL SHEETING)
125 MAIN STREET SITE
BUFFALO, NEW YORK

Parameter ¹	Residential SCOs ²	Restricted Residential SCOs ²	Commercial SCOs ²	Sample Locations							
				Post Exc 1	Post Exc 2	Post Exc 3	Post Exc 4	Post Exc 5	Post Exc 6	Post Exc 7	Post Exc 8
				9/5/2012	9/5/2012	9/5/2012	9/5/2012	9/5/2012	9/5/2012	9/5/2012	9/5/2012
Semi-Volatile Organic Compounds (SVOCs) - mg/Kg											
2-Chloronaphthalene	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	--	--	--	ND	ND	0.94 J	ND	ND	ND	ND	ND
Acenaphthene	100	100	500	ND	ND	1.9	0.29 J	ND	ND	ND	ND
Acenaphthylene	100	100	500	ND	11	ND	0.32 J	1.2	ND	ND	ND
Anthracene	100	100	500	0.45 J	6.3	4.4	0.79	3.8	0.82 J	ND	0.26 J
Benzo(a)anthracene	1	1	5.6	1.7	14	6.2	2	6	2.1	0.038 J	0.9
Benzo(a)pyrene	1	1	1	1.7	15	5.3	1.8	4.7	2	ND	0.91
Benzo(b)fluoranthene	1	1	5.6	2.5	27	6.8	2.5	6.2	3	0.064 J	1.3
Benzo(k)fluoranthene	1	3.9	56	0.93	9.1	2.7	0.94	2.8	1 J	ND	0.47 J
Chrysene	1	3.9	56	1.9	19	5.8	2.1	5.8	2.2	0.044 J	1
Indeno(1,2,3-cd)pyrene	0.5	0.5	5.6	1.3	12	3.2	1.2	2.7	1.5	ND	0.68 J
Dibenzo(a,h)anthracene	0.33	0.33	0.56	0.26 J	2.6	0.85 J	0.28 J	ND	ND	ND	ND
Benzo(g,h,i)perylene	100	100	500	1.2	11	2.6	1.1	2.3	1.3 J	ND	0.61 J
Fluoranthene	100	100	500	4.6	31	14	4.5	15	5.8	0.085 J	2.3
Fluorene	100	100	500	ND	ND	2.3	0.34 J	1.5	0.37 J	ND	ND
Naphthalene	100	100	500	ND	1.5 J	1.6 J	ND	ND	ND	ND	ND
Phenanthrene	100	100	500	2.3	7.1	15	3.1	14	3.6	ND	1.1
Pyrene	100	100	500	3.6	27	12	3.8	12	4.5	0.071 J	1.8
Total SVOCs	--	--	--	22.44	193.6	85.59	25.06	78	28.19	0.302	11.33
Total Metals - mg/Kg											
Arsenic	16	16	16	4.4	2.8	10	10	4.7	4.8	1.3	3.8
Barium	350	400	400	85	290	230	140	120	160	17	110
Cadmium	2.5	4.3	9.3	0.49	0.3 J	1.6 J	0.8	0.43	0.81	0.24 J	0.49
Chromium	36	180	1500	13	11	23	15	11	19	4.2	13
Lead	400	400	1000	73	70	460	640	120	82	9.3	61
Mercury	0.81	0.81	2.8	0.27	0.1	0.06 J	2.8	0.67	0.27	ND	0.18
Selenium	36	180	1500	1	3.6	0.76 J	0.98	1.2	1.6	0.28 J	1.3
Silver	36	180	1500	0.1 J	0.2 J	0.3 J	0.44 J	0.17 J	0.16 J	ND	ND

Notes:

1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detected.
2. Values per 6NYCRR Part 375 Soil Cleanup Objectives
3. Sample results were reported by the laboratory in ug/kg and converted to mg/kg for comparison to SCOs.

Definitions:

ND = Parameter not detected above laboratory detection limit.

J = Estimated value; result is less than the sample quantitation limit but greater than zero.

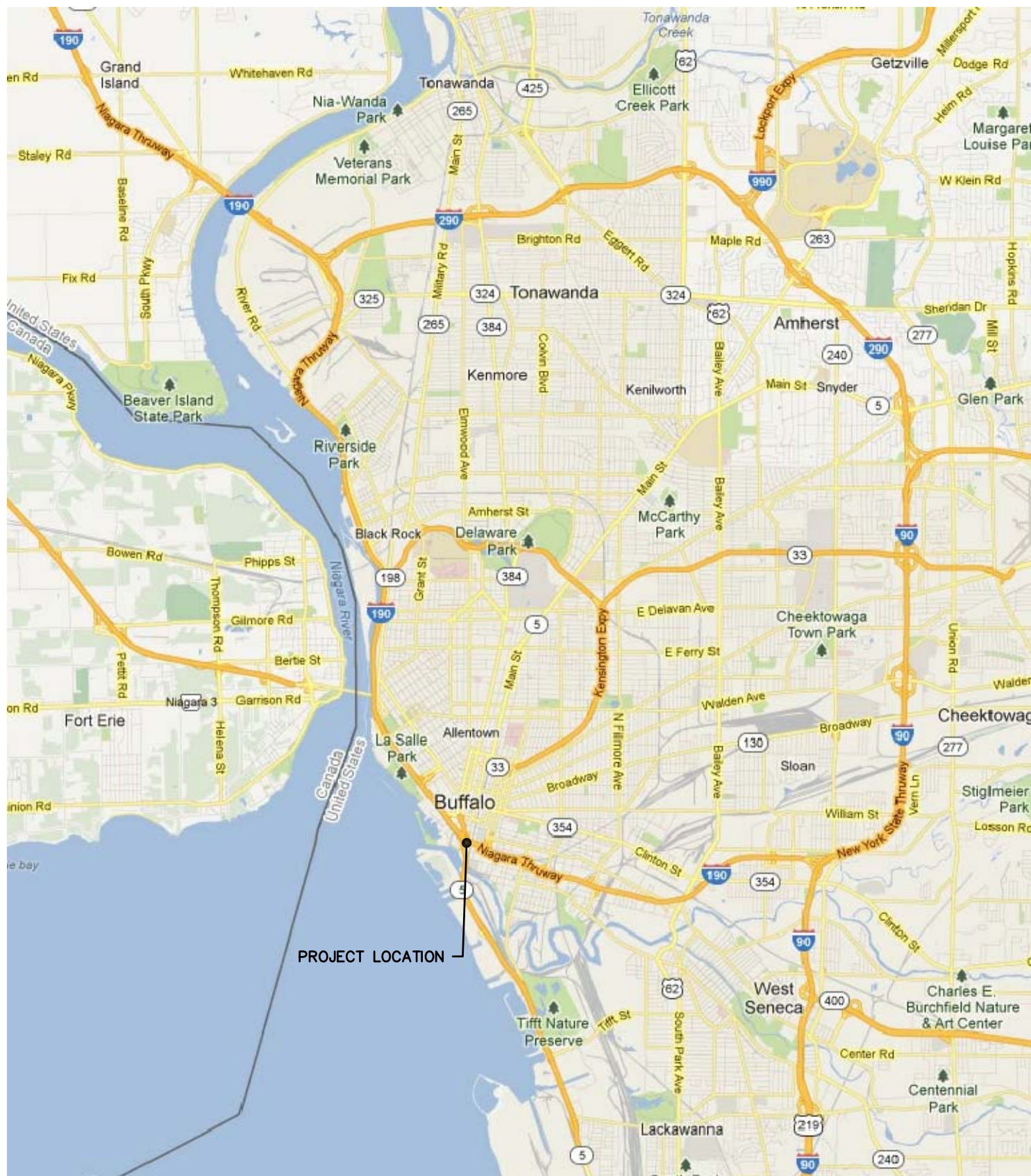
Exceeds Residential SCO
Exceeds Restricted Residential SCO
Exceeds Commercial SCO

Figures

EnSol, Inc. *Environmental Solutions*

professional engineering - business consulting

X:\AA\Benderson Development\12-0069 125 Main St. Buffalo, NY\Task 3 - RI\RM-AAR Preparation\RI\RM-AAR Report\ACAD\12-0069-F01-Regional Location Map.dwg, 8.5x11-portrait, 7/16/2013 1:52:09 PM, J. Daifling



NOTES:

1. SOURCE: GOOGLE MAPS



SCALE: 4500' 0' 4500' 9000'

REGIONAL LOCATION MAP

125 MAIN STREET SITE

HARBOR DISTRICT ASSOCIATES, LLC

CITY OF BUFFALO, STATE OF NEW YORK

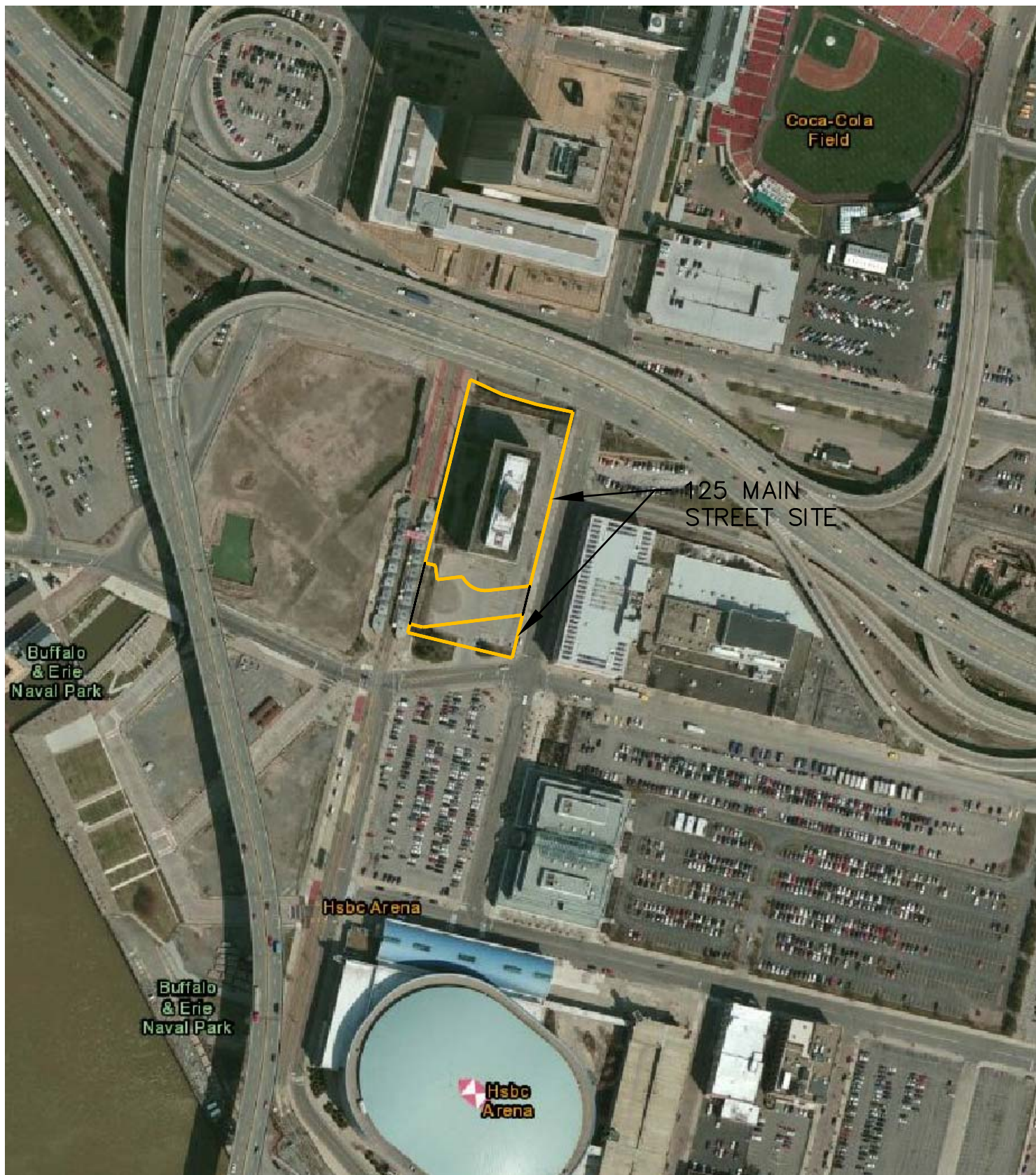
EnSol, Inc.
Environmental Solutions

661 MAIN STREET
NIAGARA FALLS, NY 14301
PHONE (716) 285-3920
FAX (716) 285-3928

FIGURE
1

MAY 2013

PN: 12-0069-3



NOTES:

1. SOURCE: U.S. FISH AND WILDLIFE SERVICES

LEGEND:

- PARCEL BOUNDARY
— BCP BOUNDARY

SCALE: 125' 0' 125' 250'



VICINITY LOCATION MAP

125 MAIN STREET SITE

HARBOR DISTRICT ASSOCIATES, LLC

CITY OF BUFFALO, STATE OF NEW YORK

EnSol, Inc.
Environmental Solutions

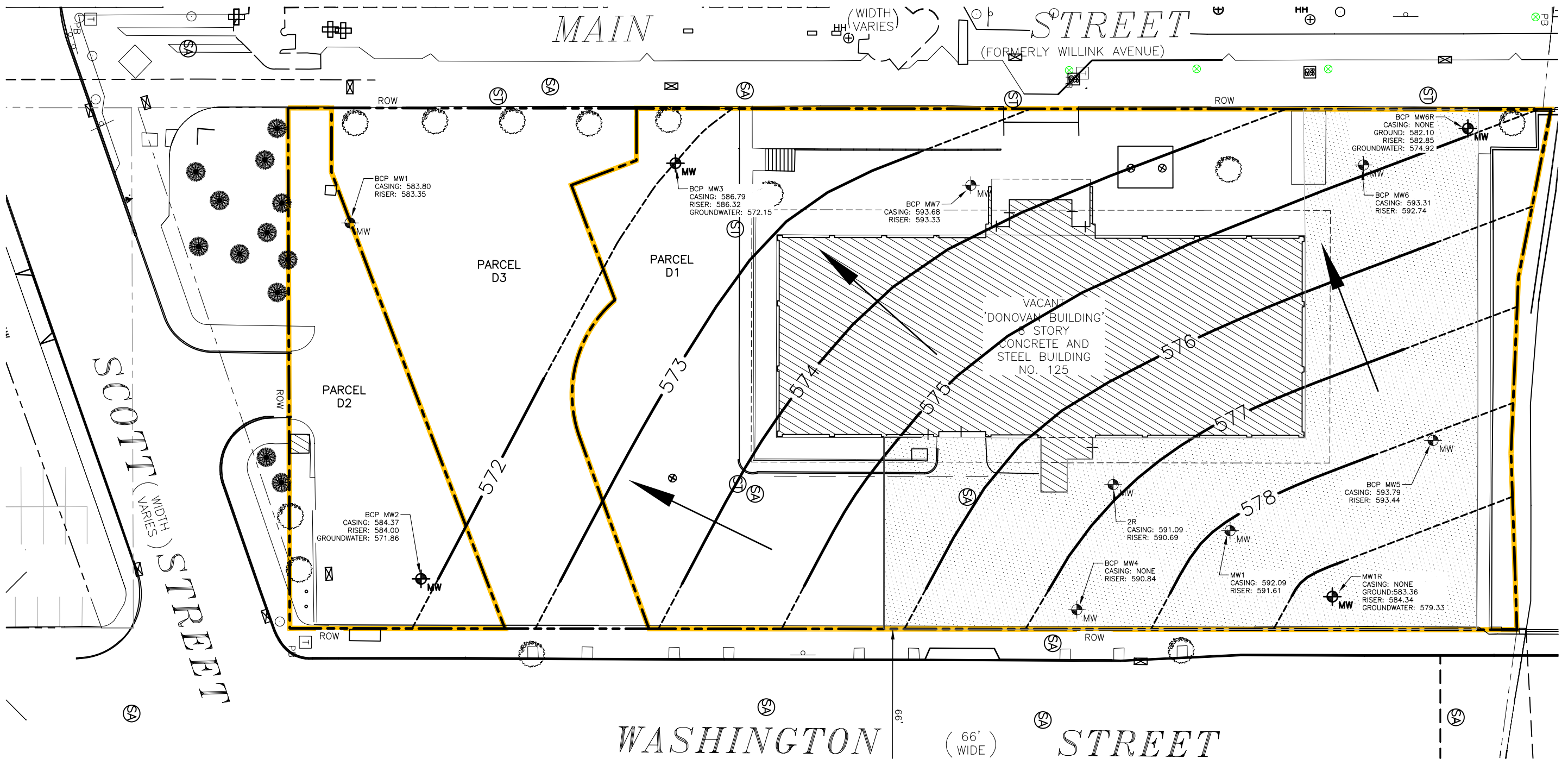
661 MAIN STREET
NIAGARA FALLS, NY 14301
PHONE (716) 285-3920
FAX (716) 285-3928

FIGURE
2

MAY 2013


PN: 12-0069-3

X:\AAAp\Benderson Development\12-0069 125 Main St. Buffalo, NY\Task 4 - SMP Preparation\ACAD\12-0069-F03-MON WELL AND GW ISO PLAN.dwg, 7/30/2013 11:06:39 AM, Jeremiah Smith, Ensol Inc.









REVISION	BY	DATE

EnSol, Inc.
Environmental Solutions
661 MAIN STREET
NIAGARA FALLS, NY 14301
PHONE (716) 285-3920 FAX (716) 285-3928

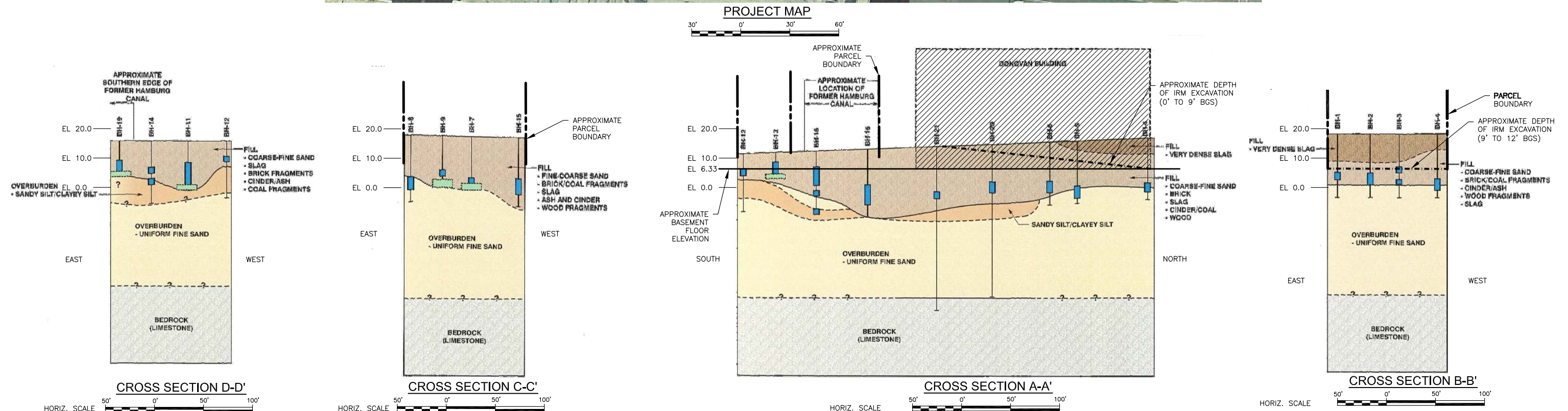
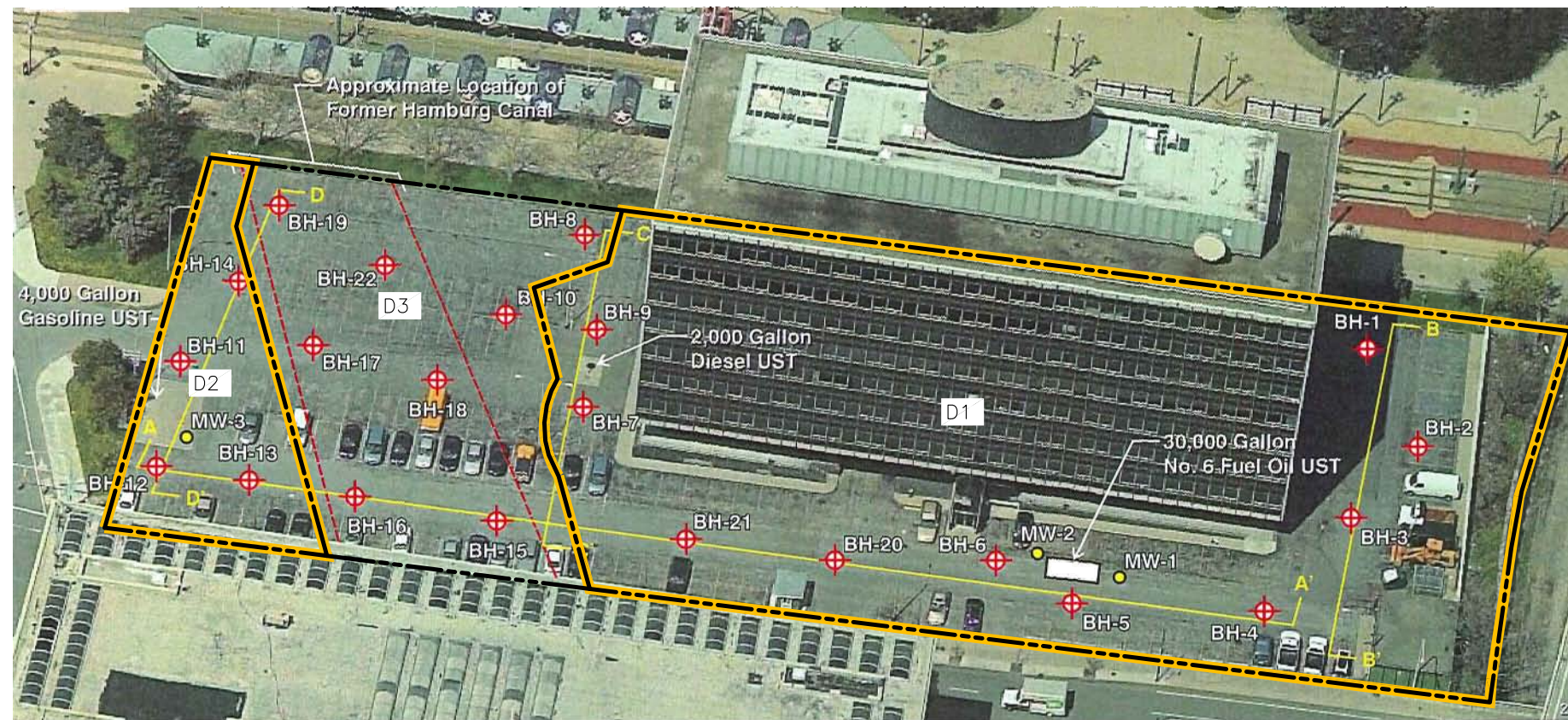
PROJECT NO:		12-0069-4	
SCALE:			
DWG: 12-0069-F03-MON WELL AND GW ISO PLAN.dwg			
DES. BY: CAC		DRW. BY: AMW	CHK. BY: DJP
DATE:		AUGUST 2013	

TITLE:	GROUNDWATER MONITORING WELL LOCATIONS AND ISOPOTENTIAL MAP		
PROJECT:	125 MAIN STREET SITE BUFFALO, NEW YORK		
PREPARED FOR:	HARBOR DISTRICT ASSOCIATES, LLC		
CITY OF BUFFALO	COUNTY OF ERIE	STATE OF NEW YORK	

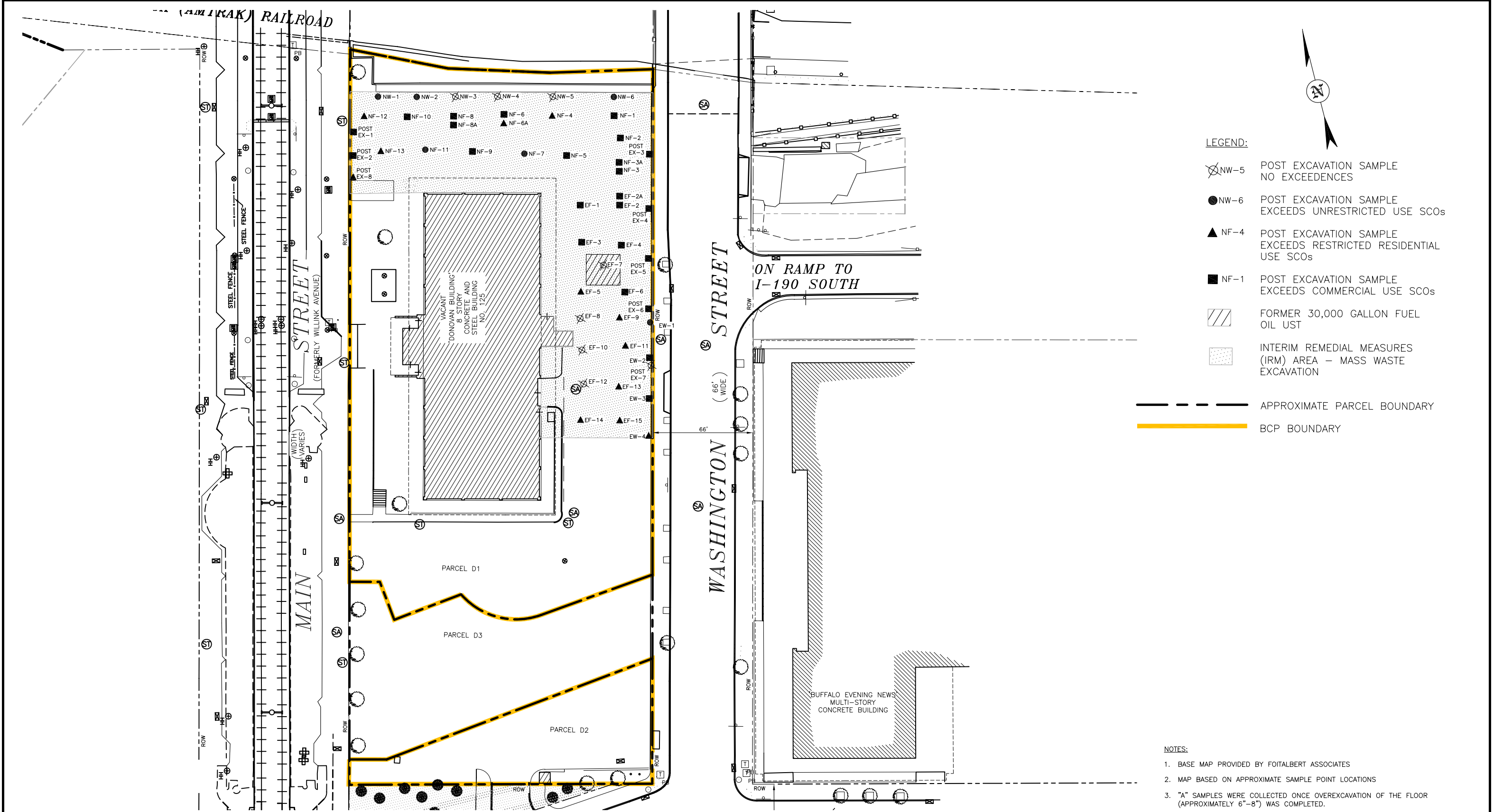
FIGURE
3

EL 20.0	ELEVATION
	APPROXIMATE BASEMENT FLOOR ELEVATION
	APPROXIMATE IRM EXCAVATION
	APPROXIMATE PARCEL BOUNDARY
	BCP BOUNDARY
D1	PARCEL IDENTIFICATION
	ENVIRONMENTAL SAMPLES COLLECTED
	AUGER REFUSAL (POSSIBLE FOUNDATION)

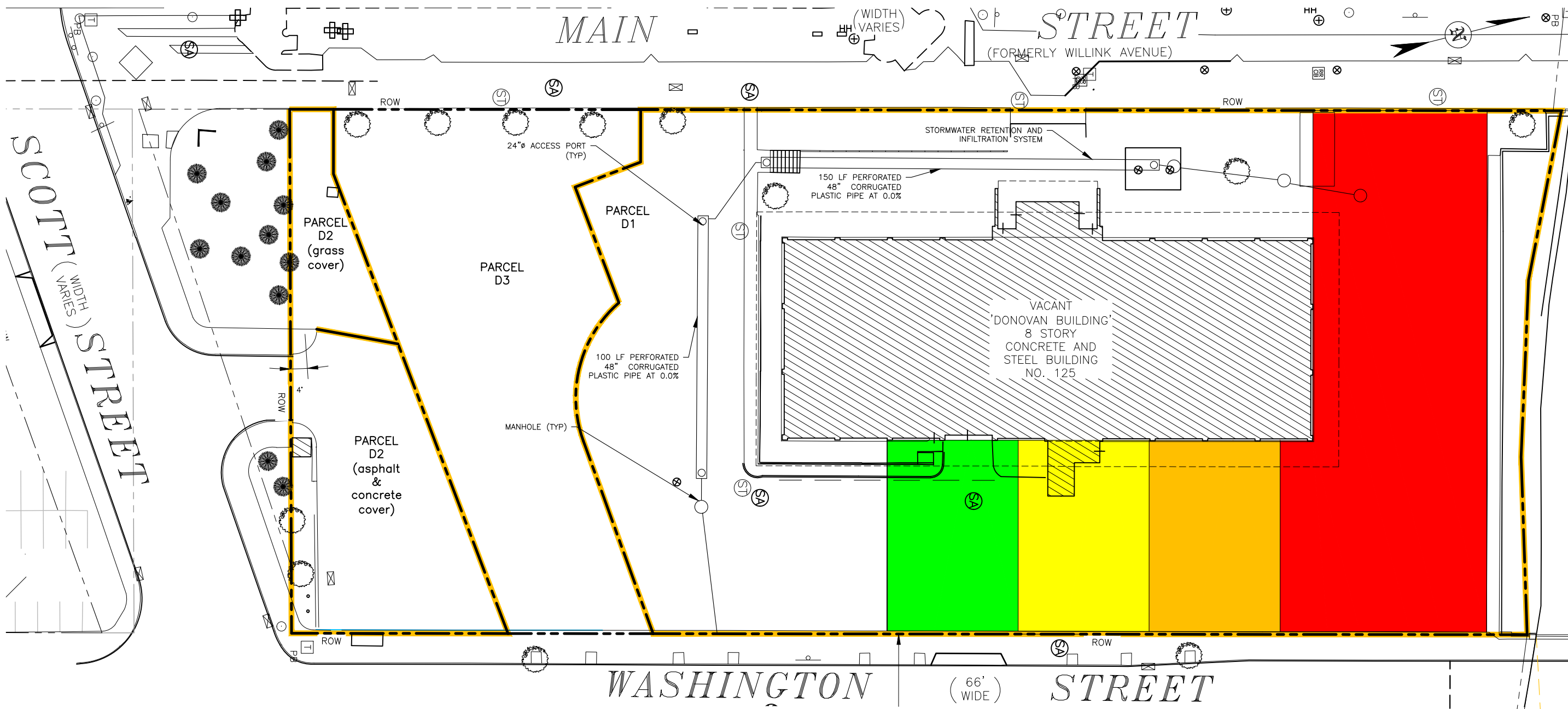
1. BASE MAP PROVIDED MICROSOFT VIRTUAL EARTH.
2. PARCELS BOUNDARY LINES SHOWN HEREON ARE APPROXIMATE AND FOR REFERENCE ONLY.
3. ORIGINAL FIGURES FROM URS PHASE II INVESTIGATION (NOVEMBER 2007).
4. BASEMENT FLOOR ELEVATION IS BASED OFF OF DRAWING 61 OF 101: PLOT AND GRADING (INCLUDING IMPROVEMENTS OF GROUNDS) AND FOUNDATION INVESTIGATION DATED APRIL 5, 1961 BY THE STATE OF NEW YORK, DEPARTMENT OF PUBLIC WORKS, DIVISION OF ARCHITECTURE.



REVISION		BY	DATE	<div><div>EnSol, Inc.</div><div>Environmental Solutions</div><div>661 MAIN STREET NIAGARA FALLS, NY 14301 PHONE (716) 285-3920 FAX (716) 285-3928</div></div>	PROJECT NO: 12-0069-4		TITLE: SOIL BORING LOCATION PLAN AND CROSS SECTIONS DETAILS					
					SCALE: AS SHOWN							
					DWG: 12-0069-F04-Soil Boring.dwg		PROJECT: 125 MAIN STREET SITE BUFFALO, NEW YORK			FIGURE 4		
					DES. BY: JCD	DRW. BY: JCD	CHK. BY: DJP	PREPARED FOR: HARBOR DISTRICT ASSOCIATES, LLC				
					DATE: AUGUST 2013		CITY OF BUFFALO		COUNTY OF ERIE			STATE OF NEW YORK
IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, ARTICLE 145 SECTION 7209, FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR TO ALTER ANY ITEM IN ANY WAY.												



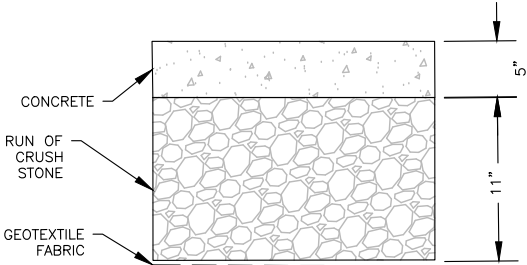
REVISION		BY	DATE	<div>EnSol, Inc.</div> <div>Environmental Solutions</div> <div>661 MAIN STREET NIAGARA FALLS, NY 14301 PHONE (716) 285-3920 FAX (716) 285-3928</div>	PROJECT NO: 12-0069-4		TITLE: IRM EXCAVATION LIMITS & POST-EXCAVATION CONFIRMATORY SAMPLE LOCATIONS				
					SCALE: <div><div>30'</div><div>0'</div><div>30'</div><div>60'</div></div>		2012-2013 INTERIM REMEDIAL MEASURES				
					DWG: 12-0069-F05-Post Ex Sample Location Map.dwg		PROJECT: 125 MAIN STREET SITE BUFFALO, NEW YORK			FIGURE 5	
					DES. BY: CAC	DRW. BY: CAC	CHK. BY: DJP	PREPARED FOR: HARBOR DISTRICT ASSOCIATES, LLC			
					DATE: AUGUST 2013		CITY OF BUFFALO		COUNTY OF ERIE		STATE OF NEW YORK
IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, ARTICLE 145 SECTION 700b, FOR ANY PERSON UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR TO ALTER ANY ITEM IN ANY WAY.											



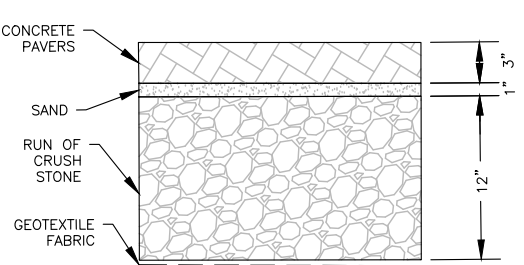
- LEGEND:**
- APPROXIMATE PARCEL BOUNDARY
 - BCP BOUNDARY
- NOTES:**
1. BASE MAP PROVIDED BY FOIT ALBERT ASSOCIATES.
 2. PROPERTY BOUNDARY LINES SHOWN HEREON ARE APPROXIMATE AND FOR REFERENCE ONLY.

APPROXIMATE IRM EXCAVATION DEPTH (BELOW GROUND SURFACE)

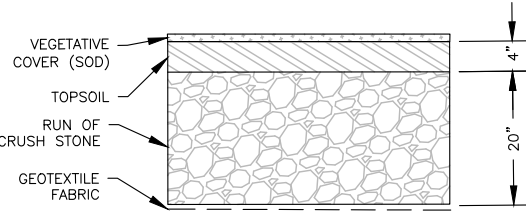
0'-3'
3'-6'
6'-9'
9'-12'



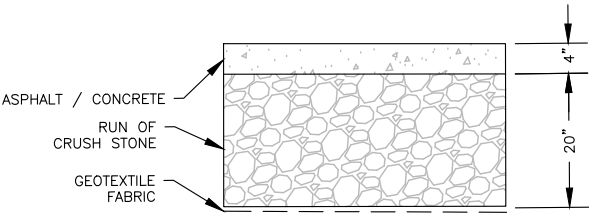
PARCEL D1 (IRM AREA)



PARCEL D1 (NON-IRM AREA)



PARCEL D2 (WEST HALF)



PARCEL D2 (EAST HALF)

COVER SYSTEMS

REVISION	BY	DATE
REVISE PARCEL D2 COVER SYSTEM DETAILS	JMS	8/18/20
REVISE PARCEL D2 COVER SYSTEM DETAILS	AMW	10/22/13

EnSol, Inc.
Environmental Solutions

661 MAIN STREET
NIAGARA FALLS, NY 14301
PHONE (716) 285-3920 FAX (716) 285-3928

PROJECT NO:	12-0069-5
SCALE:	20' 0' 20' 40'
DWG:	12-0069-F06-IRM And Cover Systems Details.dwg
DES. BY:	JCD
DRW. BY:	JCD
CHK. BY:	DJP
DATE:	AUGUST 2013

TITLE:	IRM AND COVER SYSTEM DETAILS		
PROJECT:	125 MAIN STREET SITE BUFFALO, NEW YORK		
PREPARED FOR:	HARBOR DISTRICT ASSOCIATES, LLC		
CITY OF BUFFALO	COUNTY OF ERIE	STATE OF NEW YORK	

Appendix A

EnSol, Inc. *Environmental Solutions*

professional engineering - business consulting

Metes and Bounds

SCHEDULE A

PARCEL 1:

ALL THAT TRACT OR PARCEL OF LAND situate in the City of Buffalo, County of Erie and State of New York, being part of Inner Lots Nos. 1, 2 and 215 and part of Outer Lot No. 83 and being a portion of lands now or formerly conveyed to the Erie Canal Harbor Development Corporation by deed recorded in the Erie County Clerks Office in Liber 11140 of Deeds at Page 8014, and as shown on a map entitled "Parcel Map" prepared by Foit-Albert Associates Architecture, Engineering and Surveying, P.C., Buffalo, NY, dated November 17, 2011 and revised February 25, 2013, and being more particularly bounded and described as follows:

COMMENCING at a point on the east line of Main Street (width varies) at its intersection with the north line of Scott Street (width varies), said point being the southwest corner of lands conveyed to the Erie Canal Harbor Development Corporation by deed recorded in the Erie County Clerks Office in Liber 11140 of Deeds at Page 8014;

Thence N 13° 54' 34" E along the said east line of Main Street, a distance of 133.70 feet to the POINT OF BEGINNING;

Thence continuing N 13° 54' 34" E along the said east line of Main Street, a distance of 350.73 feet to the northwest corner of said lands conveyed to the Erie Canal Harbor Development Corporation;

Thence easterly along the north line of said lands conveyed to the Erie Canal Harbor Development Corporation, the following three (3) courses and distances:

1. S 65° 11' 12" E, a distance of 65.70 feet to a point;
2. S 73° 45' 17" E, a distance of 67.42 feet to a point;
3. S 78° 05' 06" E, a distance of 67.70 feet to the west line of Washington Street (66' wide), said point also being the northeast corner of said lands conveyed to the Erie Canal Harbor Development Corporation;

Thence S 13° 54' 32" W along the said west line of Washington Street, a distance of 332.93 feet to a point;

Thence S 83° 56' 11" W, a distance of 78.12 feet to a point;

Thence on a curve to the right having a radius of 48.11 feet, an arc length of 57.74 feet, a chord bearing of N 61° 40' 57" W, a chord length of 54.34 feet to a point;

Thence S 83° 02' 04" W, a distance of 47.10 feet to a point;

Thence N 06° 57' 56" W, a distance of 26.72 feet to a point;

Thence S 76° 03' 40" W, a distance of 19.97 feet to the POINT OR PLACE OF BEGINNING, containing 70,266 square feet or 1.61 acres of land, more or less.

PARCEL 2:

ALL THAT TRACT OR PARCEL OF LAND situate in the City of Buffalo, County of Erie and State of New York, being part of part of Outer Lot No. 83 and being a portion of lands now or formerly conveyed to the Erie Canal Harbor Development Corporation by deed recorded in the Erie County Clerks Office in Liber 11140 of Deeds at Page 8014 and as shown on a map entitled "Parcel Map" prepared by Foit-Albert Associates Architecture, Engineering and Surveying, P.C., Buffalo, NY, dated November 17, 2011 and revised February 25, 2013, and being more particularly bounded and described as follows:

BEGINNING at a point on the east line of Main Street (width varies) at its intersection with the north line of Scott Street (width varies), said point being the southwest corner of lands conveyed to the Erie Canal Harbor Development Corporation by deed recorded in the Erie County Clerks Office in Liber 11140 of Deeds at Page 8014;

Thence N 13° 54' 34" E along the said east line of Main Street, a distance of 16.69 feet to a point;

Thence S 76° 05' 28" E, a distance of 24.60 feet to a point;

Thence N 83° 02' 03" E, a distance of 187.23 feet to the west line of Washington Street (66' wide);

Thence S 13° 54' 32" W along the said west line of Washington Street, a distance of 82.49 feet to the said north line of Scott Street;

Thence N 76° 21' 21" W along the said north line of Scott Street, a distance of 199.54 feet to the POINT OR PLACE OF BEGINNING, containing 9,074 square feet or 0.21 acre of land, more or less.

Appendix B

EnSol, Inc. *Environmental Solutions*

professional engineering – business consulting

Environmental Easement

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

THIS INDENTURE made this 6th day of December, 2013 between Owner(s) Erie Canal Harbor Development Corporation [Fee Owner], having an office at 95 Perry Street, 5th Floor, Buffalo, NY 14203, Harbor District Associates, LLC [Beneficial Owner] having an office at 570 Delaware Avenue, Buffalo, New York, NY 14202, and Harbor Lodging, LLC having an office at 570 Delaware Avenue, Buffalo, New York, NY 14202 [Lessee] (collectively the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233.

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

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

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

WHEREAS, Grantor, is the owner of real property located at the address of One Canalside, 125 Main Street in the City of Buffalo, County of Erie and State of New York, known and designated on the tax map of the Erie County Clerk as tax map parcel numbers: Section 111.17 Block 7 Lot 1, being a portion of lands now or formerly conveyed to Erie Canal Harbor Development Corporation by deed dated February 8, 2008 recorded in the Erie County Clerk's Office in Book 11140 Page 8014 and Sale, Purchase and Development Agreement deed dated December 14, 2011, recorded in the Erie County Clerk's Office in Book 11214 Page 6718. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 1.82 +/- acres, and is hereinafter more fully described in the Land Title Survey dated May 13, 2013, recently updated on August 28, 2013 prepared by FoitAlbert Associates, which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

FILED

[10/12]

DEC 13 2013

WHEREAS, the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation established for the Controlled Property until such time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36; and

NOW THEREFORE, in consideration of the mutual covenants contained herein and the terms and conditions of Brownfield Cleanup Agreement Index Number: C915262-05-12, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement")

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

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

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

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

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

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

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

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

(6) Data and information pertinent to Site Management of the Controlled

Property must be reported at the frequency and in a manner defined in the SMP;

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

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

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

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

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

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

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

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

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

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

Environmental Conservation Law.

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

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

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

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

(i) are in-place;

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

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

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

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

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

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

(7) the information presented is accurate and complete.

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

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

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

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

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against

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

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

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

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

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

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

Parties shall address correspondence to: Site Number: C915262
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

With a copy to: Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, NY 12233

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

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of [10/12]

this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

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

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

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

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

Grantor: Erie Canal Harbor Development Corporation

By: [Signature]

Print Name: Thomas Rao

Title: President Date: 11-25-13

Grantor's Acknowledgment

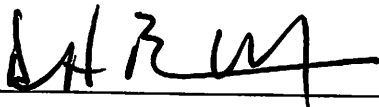
STATE OF NEW YORK)
) ss:
COUNTY OF)

On the 25 day of November, in the year 2013, before me, the undersigned, personally appeared Thomas Rao, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

[Signature]
Notary Public - State of New York

STEPHEN F. GAWLIK
Notary Public, State of New York
Qualified in Erie County
My Commission Expires March 9, 2014


Grantor: Harbor District Associates, LLC

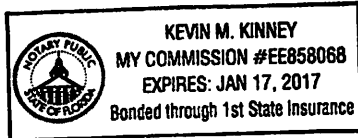
By:  *KNW*Print Name: DAVID H. BALDAUFTitle: MANAGER Date: 11-26-2013

Grantor's Acknowledgment

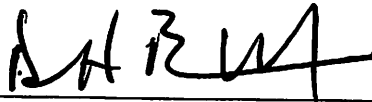
STATE OF ^{Florida} ~~NEW YORK~~)
COUNTY OF ^{Manatee} ~~Manatee~~) ss:

On the 26 day of Nov., in the year 20 13, before me, the undersigned, personally appeared DAVID H. BALDAUF, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.


Notary Public - State of ~~New York~~ ^{FLORIDA}



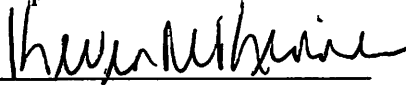
Grantor: Harbor Lodging, LLC

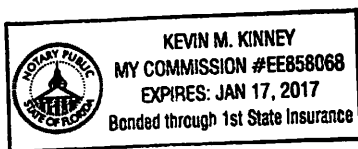
By:  ^{name}Print Name: DAVID H. BALDAUFTitle: MANAGER Date: 11-26-2013

Grantor's Acknowledgment

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

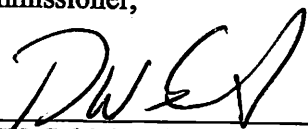
On the 26 day of Nov., in the year 2013, before me, the undersigned, personally appeared DAVID H. BALDAUF, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.


Notary Public - State of ~~New York~~
Florida



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

By:


Robert W. Schick, Director
Division of Environmental Remediation

Grantee's Acknowledgment

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

On the 6th day of December in the year 2013, before me, the undersigned, personally appeared Robert W. Schick, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.


Notary Public - State of New York

ANDREW O. GUGLIELMI
Notary Public - State of New York
No. 02GU6177593
Qualified in Albany County
My Commission Expires November 13, 2015

SCHEDULE "A"
ENVIRONMENTAL EASEMENT
PROPERTY DESCRIPTION

PARCEL 1:

ALL THAT TRACT OR PARCEL OF LAND situate in the City of Buffalo, County of Erie and State of New York, being part of Inner Lots Nos. 1, 2 and 215 and part of Outer Lot No. 83 and being a portion of lands now or formerly conveyed to the Erie Canal Harbor Development Corporation by deed recorded in the Erie County Clerk's Office in Liber 11140 of Deeds at Page 8014, and as shown on a map entitled "Parcel Map" prepared by Foit-Albert Associates Architecture, Engineering and Surveying, P.C., Buffalo, NY, dated November 17, 2011 and revised February 25, 2013, and being more particularly bounded and described as follows:

COMMENCING at a point on the east line of Main Street (width varies) at its intersection with the north line of Scott Street (width varies), said point being the southwest corner of lands conveyed to the Erie Canal Harbor Development Corporation by deed recorded in the Erie County Clerk's Office in Liber 11140 of Deeds at Page 8014;

Thence N 13° 54' 34" E along the said east line of Main Street, a distance of 133.70 feet to the POINT OF BEGINNING;

Thence continuing N 13° 54' 34" E along the said east line of Main Street, a distance of 350.73 feet to the northwest corner of said lands conveyed to the Erie Canal Harbor Development Corporation;

Thence easterly along the north line of said lands conveyed to the Erie Canal Harbor Development Corporation, the following three (3) courses and distances:

1. S 65° 11' 12" E, a distance of 65.70 feet to a point;

2. S 73° 45' 17" E, a distance of 67.42 feet to a point;

3. S 78° 05' 06" E, a distance of 67.70 feet to the west line of Washington Street (66' wide), said point also being the northeast corner of said lands conveyed to the Erie Canal Harbor Development Corporation;

Thence S 13° 54' 32" W along the said west line of Washington Street, a distance of 332.93 feet to a point;

Thence S 83° 56' 11" W, a distance of 78.12 feet to a point;

Thence on a curve to the right having a radius of 48.11 feet, an arc length of 57.74 feet, a chord bearing of N 61° 40' 57" W, a chord length of 54.34 feet to a point;

Thence S 83° 02' 04" W, a distance of 47.10 feet to a point;

Thence N 06° 57' 56" W, a distance of 26.72 feet to a point;

Thence S 76° 03' 40" W, a distance of 19.97 feet to the POINT OR PLACE OF BEGINNING, containing 70,266 square feet or 1.61 acres of land, more or less.

PARCEL 2:

ALL THAT TRACT OR PARCEL OF LAND situate in the City of Buffalo, County of Erie and State of New York, being part of part of Outer Lot No. 83 and being a portion of lands now or formerly conveyed to the Erie Canal Harbor Development Corporation by deed recorded in the Erie County Clerk's Office in Liber 11140 of Deeds at Page 8014 and as shown on a map entitled "Parcel Map" prepared by Foit-Albert Associates Architecture, Engineering and Surveying, P.C., Buffalo, NY, dated November 17, 2011 and revised February 25, 2013, and being more particularly bounded and described as follows:

BEGINNING at a point on the east line of Main Street (width varies) at its intersection with the north line of Scott Street (width varies), said point being the southwest corner of lands conveyed to the Erie Canal Harbor Development Corporation by deed recorded in the Erie County Clerks Office in Liber 11140 of Deeds at Page 8014;

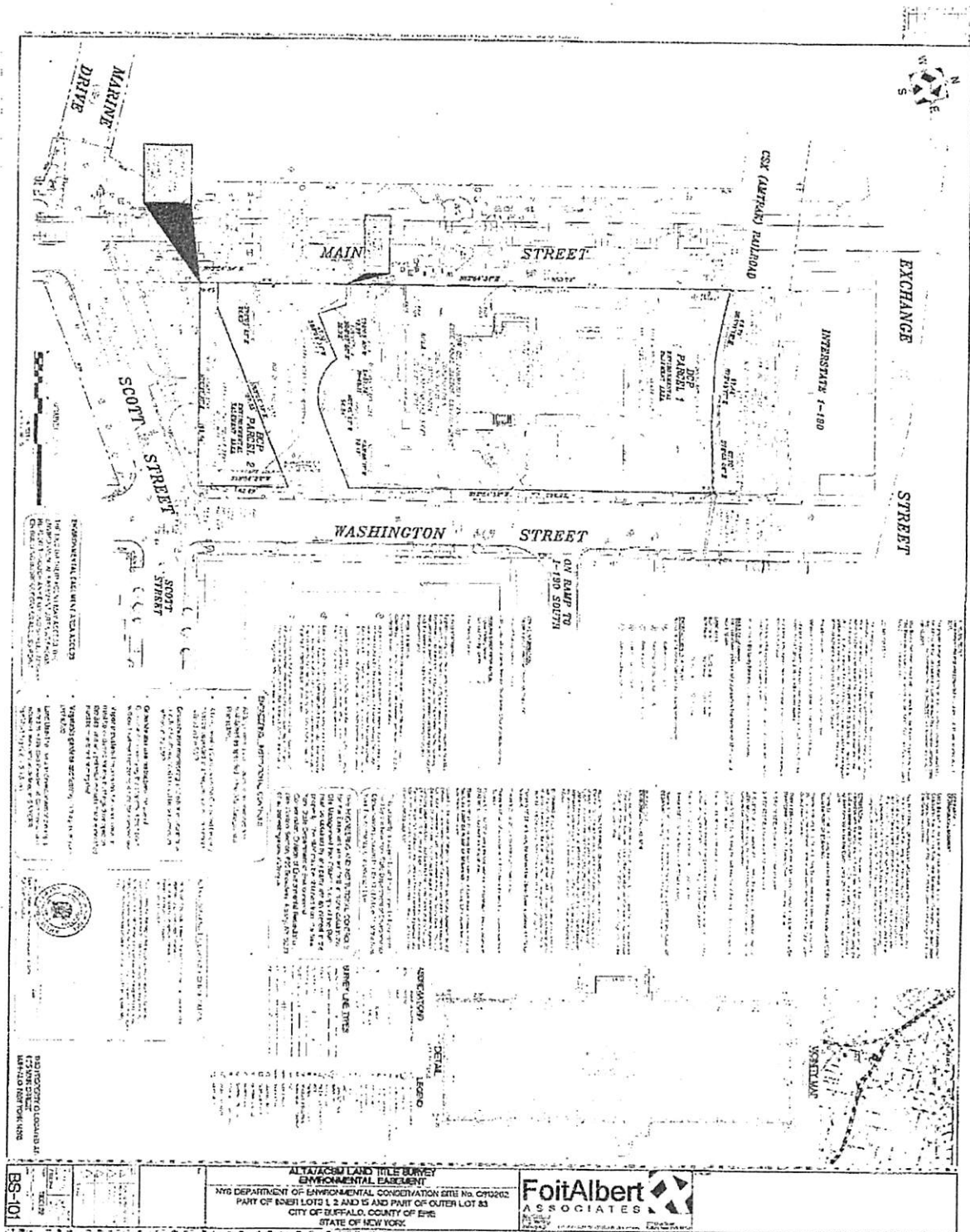
Thence N 13° 54' 34" E along the said east line of Main Street, a distance of 16.69 feet to a point;

Thence S 76° 05' 28" E, a distance of 24.60 feet to a point;

Thence N 83° 02' 03" E, a distance of 187.23 feet to the west line of Washington Street (66' wide);

Thence S 13° 54' 32" W along the said west line of Washington Street, a distance of 82.49 feet to the said north line of Scott Street;

Thence N 76° 21' 21" W along the said north line of Scott Street, a distance of 199.54 feet to the POINT OR PLACE OF BEGINNING, containing 9,074 square feet or 0.21 acre of land, more or less.

SURVEY

Schedule B – Real estate transfer tax return (Tax Law, Article 31)**Part I – Computation of tax due**

- 1 Enter amount of consideration for the conveyance (if you are claiming a total exemption from tax, check the exemption claimed box, enter consideration and proceed to Part III) ☐ **Exemption claimed**
- 2 Continuing lien deduction (see instructions if property is taken subject to mortgage or lien)
- 3 Taxable consideration (subtract line 2 from line 1)
- 4 Tax: \$2 for each \$500, or fractional part thereof, of consideration on line 3
- 5 Amount of credit claimed for tax previously paid (see instructions and attach Form TP-584.1, Schedule G)
- 6 Total tax due* (subtract line 5 from line 4)

1.		
2.		
3.		
4.		
5.		
6.		

Part II – Computation of additional tax due on the conveyance of residential real property for \$1 million or more

- 1 Enter amount of consideration for conveyance (from Part I, line 1)
- 2 Taxable consideration (multiply line 1 by the percentage of the premises which is residential real property, as shown in Schedule A) ...
- 3 Total additional transfer tax due* (multiply line 2 by 1% (.01))

1.		
2.		
3.		

Part III – Explanation of exemption claimed on Part I, line 1 (check any boxes that apply)

The conveyance of real property is exempt from the real estate transfer tax for the following reason:

- a. Conveyance is to the United Nations, the United States of America, the state of New York, or any of their instrumentalities, agencies, or political subdivisions (or any public corporation, including a public corporation created pursuant to agreement or compact with another state or Canada) a ☐
- b. Conveyance is to secure a debt or other obligation..... b ☐
- c. Conveyance is without additional consideration to confirm, correct, modify, or supplement a prior conveyance..... c ☐
- d. Conveyance of real property is without consideration and not in connection with a sale, including conveyances conveying realty as bona fide gifts d ☐
- e. Conveyance is given in connection with a tax sale..... e ☐
- f. Conveyance is a mere change of identity or form of ownership or organization where there is no change in beneficial ownership. (This exemption cannot be claimed for a conveyance to a cooperative housing corporation of real property comprising the cooperative dwelling or dwellings.) Attach Form TP-584.1, Schedule F..... f ☐
- g. Conveyance consists of deed of partition..... g ☐
- h. Conveyance is given pursuant to the federal Bankruptcy Act h ☐
- i. Conveyance consists of the execution of a contract to sell real property, without the use or occupancy of such property, or the granting of an option to purchase real property, without the use or occupancy of such property i ☐
- j. Conveyance of an option or contract to purchase real property with the use or occupancy of such property where the consideration is less than \$200,000 and such property was used solely by the grantor as the grantor's personal residence and consists of a one-, two-, or three-family house, an individual residential condominium unit, or the sale of stock in a cooperative housing corporation in connection with the grant or transfer of a proprietary leasehold covering an individual residential cooperative apartment..... j ☐
- k. Conveyance is not a conveyance within the meaning of Tax Law, Article 31, section 1401(e) (attach documents supporting such claim) k ☐

*The total tax (from Part I, line 6 and Part II, line 3 above) is due within 15 days from the date conveyance. Please make check(s) payable to the county clerk where the recording is to take place. If the recording is to take place in the New York City boroughs of Manhattan, Bronx, Brooklyn, or Queens, make check(s) payable to the **NYC Department of Finance**. If a recording is not required, send this return and your check(s) made payable to the **NYS Department of Taxation and Finance**, directly to the NYS Tax Department, RETT Return Processing, PO Box 5045, Albany NY 12205-5045.

Schedule D - Certification of exemption from the payment of estimated personal income tax (Tax Law, Article 22, section 663)

Complete the following only if a fee simple interest or a cooperative unit is being transferred by an individual or estate or trust.

If the property is being conveyed by a referee pursuant to a foreclosure proceeding, proceed to Part II, and check the second box under *Exemptions for nonresident transferor(s)/seller(s)* and sign at bottom.

Part I - New York State residents

If you are a New York State resident transferor(s)/seller(s) listed in Schedule A of Form TP-584 (or an attachment to Form TP-584), you must sign the certification below. If one or more transferors/sellers of the real property or cooperative unit is a resident of New York State, **each** resident transferor/seller must sign in the space provided. If more space is needed, please photocopy this Schedule D and submit as many schedules as necessary to accommodate all resident transferors/sellers.

Certification of resident transferor(s)/seller(s)

This is to certify that at the time of the sale or transfer of the real property or cooperative unit, the transferor(s)/seller(s) as signed below was a resident of New York State, and therefore is not required to pay estimated personal income tax under Tax Law, section 663(a) upon the sale or transfer of this real property or cooperative unit.

Signature	Print full name	Date
Signature	Print full name	Date
Signature	Print full name	Date
Signature	Print full name	Date

Note: A resident of New York State may still be required to pay estimated tax under Tax Law, section 685(c), but not as a condition of recording a deed.

Part II - Nonresidents of New York State

If you are a nonresident of New York State listed as a transferor/seller in Schedule A of Form TP-584 (or an attachment to Form TP-584) but are not required to pay estimated personal income tax because one of the exemptions below applies under Tax Law, section 663(c), check the box of the appropriate exemption below. If any one of the exemptions below applies to the transferor(s)/seller(s), that transferor(s)/seller(s) is not required to pay estimated personal income tax to New York State under Tax Law, section 663. **Each** nonresident transferor/seller who qualifies under one of the exemptions below must sign in the space provided. If more space is needed, please photocopy this Schedule D and submit as many schedules as necessary to accommodate all nonresident transferors/sellers.

If none of these exemption statements apply, you must complete Form IT-2663, *Nonresident Real Property Estimated Income Tax Payment Form*, or Form IT-2664, *Nonresident Cooperative Unit Estimated Income Tax Payment Form*. For more information, see *Payment of estimated personal income tax*, on page 1 of Form TP-584-I.

Exemption for nonresident transferor(s)/seller(s)

This is to certify that at the time of the sale or transfer of the real property or cooperative unit, the transferor(s)/seller(s) (grantor) of this real property or cooperative unit was a nonresident of New York State, but is not required to pay estimated personal income tax under Tax Law, section 663 due to one of the following exemptions:

- ☐ The real property or cooperative unit being sold or transferred qualifies in total as the transferor's/seller's principal residence (within the meaning of Internal Revenue Code, section 121) from _____ Date _____ to _____ Date _____ (see *Instructions*).
- ☐ The transferor/seller is a mortgagor conveying the mortgaged property to a mortgagee in foreclosure, or in lieu of foreclosure with no additional consideration.
- ☐ The transferor or transferee is an agency or authority of the United States of America, an agency or authority of the state of New York, the Federal National Mortgage Association, the Federal Home Loan Mortgage Corporation, the Government National Mortgage Association, or a private mortgage insurance company.

Signature	Print full name	Date
Signature	Print full name	Date
Signature	Print full name	Date
Signature	Print full name	Date

Schedule C – Credit Line Mortgage Certificate (Tax Law, Article 11)**Complete the following only if the interest being transferred is a fee simple interest.**I (we) certify that: *(check the appropriate box)*

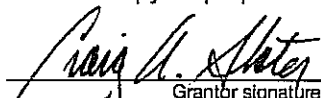
1. ☐ The real property being sold or transferred is not subject to an outstanding credit line mortgage.
 2. ☐ The real property being sold or transferred is subject to an outstanding credit line mortgage. However, an exemption from the tax is claimed for the following reason:
 - ☐ The transfer of real property is a transfer of a fee simple interest to a person or persons who held a fee simple interest in the real property (whether as a joint tenant, a tenant in common or otherwise) immediately before the transfer.
 - ☐ The transfer of real property is (A) to a person or persons related by blood, marriage or adoption to the original obligor or to one or more of the original obligors or (B) to a person or entity where 50% or more of the beneficial interest in such real property after the transfer is held by the transferor or such related person or persons (as in the case of a transfer to a trustee for the benefit of a minor or the transfer to a trust for the benefit of the transferor).
 - ☐ The transfer of real property is a transfer to a trustee in bankruptcy, a receiver, assignee, or other officer of a court.
 - ☐ The maximum principal amount secured by the credit line mortgage is \$3,000,000 or more, and the real property being sold or transferred is **not** principally improved nor will it be improved by a one- to six-family owner-occupied residence or dwelling.

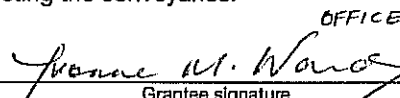
Please note: for purposes of determining whether the maximum principal amount secured is \$3,000,000 or more as described above, the amounts secured by two or more credit line mortgages may be aggregated under certain circumstances. See TSB-M-96(6)-R for more information regarding these aggregation requirements.

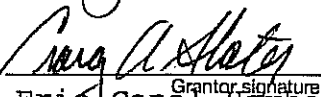
 - ☐ Other *(attach detailed explanation)*.
3. ☐ The real property being transferred is presently subject to an outstanding credit line mortgage. However, no tax is due for the following reason:
 - ☐ A certificate of discharge of the credit line mortgage is being offered at the time of recording the deed.
 - ☐ A check has been drawn payable for transmission to the credit line mortgagee or his agent for the balance due, and a satisfaction of such mortgage will be recorded as soon as it is available.
 4. ☐ The real property being transferred is subject to an outstanding credit line mortgage recorded in _____ (insert liber and page or reel or other identification of the mortgage). The maximum principal amount of debt or obligation secured by the mortgage is _____. No exemption from tax is claimed and the tax of _____ is being paid herewith. *(Make check payable to county clerk where deed will be recorded or, if the recording is to take place in New York City but not in Richmond County, make check payable to the NYC Department of Finance.)*

Signature (both the grantor(s) and grantee(s) must sign)

The undersigned certify that the above information contained in schedules A, B, and C, including any return, certification, schedule, or attachment, is to the best of his/her knowledge, true and complete, and authorize the person(s) submitting such form on their behalf to receive a copy for purposes of recording the deed or other instrument effecting the conveyance.

 **Attorney in Fact / With Authority**
 Grantor signature Title
 Harbor District Associates, LLC

 **SENIOR ATTORNEY**
 Grantee signature Title
 NYS Department of Environmental Conservation

 **Attorney in Fact / With Authority**
 Grantor signature Title
 Erie Canal Harbor Development Corporation

 Grantee signature Title

Reminder: Did you complete all of the required information in Schedules A, B, and C? Are you required to complete Schedule D? If you checked e, f, or g in Schedule A, did you complete Form TP-584.1? Have you attached your check(s) made payable to the county clerk where recording will take place or, if the recording is in the New York City boroughs of Manhattan, Bronx, Brooklyn, or Queens, to the **NYC Department of Finance**? If no recording is required, send your check(s), made payable to the **Department of Taxation and Finance**, directly to the NYS Tax Department, RETT Return Processing, PO Box 5045, Albany NY 12205-5045.

TP-584

**Combined Real Estate Transfer Tax Return, Credit Line Mortgage
Certificate, and Certification of Exemption from the Payment of
Estimated Personal Income Tax**

Schedule 1

**The following entity is an additional Grantee of the Easement referenced in
the completed TP-584:**

Name:	Erie Canal Harbor Corporation
Type of Entity:	Corporation
Mailing Address:	95 Perry Street Buffalo, New York 14203
Federal EIN:	13-2624287

Appendix C

EnSol, Inc. *Environmental Solutions*

professional engineering – business consulting

***December 2009, Phase 1B Cultural
Resources Assessment***

Appendix D

EnSol, Inc. *Environmental Solutions*

professional engineering - business consulting

May 20, 2013 Soil Vapor Intrusion Letter from NYSDOH

Nirav R. Shah, M.D., M.P.H.
Commissioner

NEW YORK
state department of
HEALTH

Sue Kelly
Executive Deputy Commissioner

May 20, 2013

David Locey
NYSDEC Region 9 Office
270 Michigan Avenue
Buffalo, NY 14203

Re: 125 Main Street
SVI Response Letter
Site # C915262
Buffalo, Erie County

Dear Mr. Locey,

On April 22, 2013 I received a letter from the consultant for the 125 Main Street site detailing the results of on-site soil and groundwater sampling. The letter was in response to the DOH's signed Interim Remedial Measure concurrence letter where we stated that the potential for soil vapor intrusion to occur should be evaluated should volatile organic compound (VOC) contamination be identified at the site.

Based on this transmittal, some low-level VOCs and petroleum-related VOCs were identified on the site at concentrations that we do not believe present a soil vapor intrusion concern. Based on my evaluation of the letter and the data contained therein, soil vapor intrusion does not appear to be a concern for the 125 Main Street site.

If you have any questions, please contact me at 1-518-402-7860.

Sincerely,



Scarlett McLaughlin
Public Health Specialist
Bureau of Environmental Exposure Investigation

Enclosure

ec: A. Salame-Alfie
K. Anders / D. Ripstein / W. Kuehner / S. McLaughlin / File
M. Doster – NYSDEC Region 9
D. Funke - ErieCounty DOH

Appendix E

EnSol, Inc. *Environmental Solutions*

professional engineering – business consulting

Excavation Work Plan

APPENDIX E – EXCAVATION WORK PLAN

E-1 NOTIFICATION

At least 15 days prior to the start of any activity that is anticipated to encounter remaining contamination, the site owner or their representative will notify the Department. Currently, this notification will be made to:

Ms. Andrea Caprio
Regional Hazardous Waste Remediation Engineer
NYSDEC – Region 9
270 Michigan Ave
Buffalo NY, 14203-2999
andrea.caprio@dec.ny.gov

This notification will include:

- A detailed description of the work to be performed, including the location and areal extent, plans for site re-grading, intrusive elements or utilities to be installed below the soil cover, estimated volumes of contaminated soil to be excavated and any work that may impact an engineering control;
- A summary of environmental conditions anticipated in the work areas, including the nature and concentration levels of contaminants of concern, potential presence of grossly contaminated media, and plans for any pre-construction sampling;
- A schedule for the work, detailing the start and completion of all intrusive work;
- A summary of the applicable components of this EWP;
- A statement that the work will be performed in compliance with this EWP and 29 CFR 1910.120;
- A copy of the contractor's health and safety plan, in electronic format, if it differs from the HASP provided in Appendix D of this document;
- Identification of disposal facilities for potential waste streams; and
- Identification of sources of any anticipated backfill, along with all required chemical testing results.

E-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 contaminated material (remaining contamination). Soil screening will be performed regardless of when the invasive work is done and will include all excavation and invasive work performed during development, such as excavations for foundations and utility work, after issuance of the COC.

Soils will be segregated based on previous environmental data and screening results into material that requires off-site disposal, material that requires testing, material that can be returned to the subsurface, and material that can be used as cover soil.

E-3 STOCKPILE METHODS

Soil stockpiles will be continuously encircled with a berm and/or silt fence. Hay bales will be used as needed near catch basins, surface waters and other discharge points.

Stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced.

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

E-4 MATERIALS EXCAVATION AND LOAD OUT

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

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

The presence of utilities and easements on the site will be investigated by the qualified environmental professional. It will be determined whether a risk or impediment to the planned work under this SMP is posed by utilities or easements on the site.

Loaded vehicles leaving the site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and NYSDOT requirements (and all other applicable transportation requirements).

A truck wash will be operated on-site, if deemed necessary by the Department. The qualified environmental professional will be responsible for ensuring that all

outbound trucks will be washed at the truck wash before leaving the site until the activities performed under this section are complete.

Locations where vehicles enter or exit the site shall be inspected daily for evidence of off-site soil tracking.

The qualified environmental professional will be responsible for ensuring that all egress points for truck and equipment transport from the site are clean of dirt and other materials derived from the site during intrusive excavation activities. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to site-derived materials.

E-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. The site owner and/or remedial party are responsible for reviewing and approving the waste disposal documentation for materials transported off site.

Material transported by trucks exiting the site will be secured with tight-fitting covers. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used.

If deemed appropriate, all trucks will be washed prior to leaving the site. Truck wash waters will be collected and disposed of off-site in an appropriate manner.

All trucks loaded with site materials will exit the vicinity of the site using only approved truck routes (to be determined). Truck routes will take into account: (a) limiting transport through residential areas and past sensitive sites; (b) use of city mapped truck routes; (c) prohibiting off-site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport; (g) community input (where necessary).

Trucks will be prohibited from stopping and idling in the neighborhood outside the project site.

Egress points for truck and equipment transport from the site will be kept clean of dirt and other materials during site remediation and development.

Queuing of trucks will be performed on-site in order to minimize off-site disturbance. Off-site queuing will be prohibited.

E-6 MATERIALS DISPOSAL OFF-SITE

All soil/fill/solid waste excavated and removed from the site will be treated as contaminated and regulated material and will be transported and disposed in accordance with all local, State (including 6NYCRR Part 360) and Federal regulations. If disposal of soil/fill from this site is proposed for unregulated off-site disposal (i.e. clean soil removed for development purposes), a formal request with an associated plan will be made to the NYSDEC. Unregulated off-site management of materials from this site will not occur without formal NYSDEC approval.

Off-site disposal locations for excavated soils will be identified in the pre-excavation notification. This will include estimated quantities and a breakdown by class of disposal facility if appropriate, i.e. hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, C/D recycling facility, etc. Actual disposal quantities and associated documentation will be reported to the NYSDEC in the Periodic Review Report. This documentation will include: waste profiles, test results, facility acceptance letters, manifests, bills of lading and facility receipts.

Non-hazardous historic fill and contaminated soils taken off-site will be handled, at minimum, as a Municipal Solid Waste per 6NYCRR Part 360-1.2. Material that does not meet Track 1 unrestricted SCOs is prohibited from being taken to a New York State recycling facility (6NYCRR Part 360-16 Registration Facility).

E-7 MATERIALS REUSE ON-SITE

Soils and other materials used in the site cover system, located above the demarcation layer, may be used on site or off site without restriction.

Historic fill and other site soils with no evidence of contamination is acceptable for reuse on site below the demarcation layer, and will not be used within the site cover system, within landscaping berms or as backfill for subsurface utility lines. Historic fill and other site soils with evidence of petroleum impacts as determined by the qualified environmental professional will not be reused on site unless PID screening results and chemical testing is reviewed and allowed by the Department. The frequency and chemical parameters of analytical testing may vary depending on the type of reuse but should be discussed with NYSDEC after reporting the evidence of a petroleum release and prior to sampling.

The following guidelines are also provided:

- Sampling may be omitted for soils which are not obviously petroleum contaminated and which will be reused below the demarcation layer or for soils which will be disposed of off-site. Any sampling required by the disposal facility will still need to be conducted.
- In order for the soil to be reused off-site, it would have to meet the requirements of 6 NYCRR 375-6.7(d) (i.e., not comprised of solid waste) and

meet the unrestricted soil cleanup objectives (SCOs) as defined by 6 NYCRR 372-6.8(a).

- In order for the soil to be used as part of the cover system, it would have to meet the requirements of 6 NYCRR 375-6.7(d) and the lower of the SCOs for the protection of human health for restricted residential use and the SCOs for protection of groundwater as defined by 6 NYCRR 375-6.8(b).
- Soil which is sampled, but does not meet the requirements of the previous two bullets and is not obviously petroleum, may be reused below the demarcation layer or disposed off-site.
- Soils which are obviously petroleum contaminated must be treated and/or disposed of off-site. If treated soils are reused, sampling would be necessary to determine appropriate reuse.

Any demolition material proposed for reuse on-site will be sampled for asbestos and the results will be reported to the NYSDEC for acceptance. Concrete crushing or processing on-site will not be performed without prior NYSDEC approval.

E-8 FLUIDS MANAGEMENT

All liquids to be removed from the site, including excavation dewatering and groundwater monitoring well purge and development waters, will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations. Dewatering, purge and development fluids will not be recharged back to the land surface or subsurface of the site, but will be managed off-site.

Discharge of water generated during large-scale construction activities to surface waters (i.e. a local pond, stream or river) will be performed under a SPDES permit.

E-9 COVER SYSTEM RESTORATION

After the completion of soil removal and any other invasive activities the cover system will be restored in a manner that complies with this Site Management Plan and the Site's Decision Document. The demarcation layer, consisting of woven geotextile fabric material or equivalent material will be replaced to provide a visual reference to the top of the 'Remaining Contamination Zone', the zone that requires adherence to special conditions for disturbance of remaining contaminated soils defined in this Site Management Plan. If the type of cover system changes from that which exists prior to the excavation (i.e., a soil cover is replaced by asphalt), this will constitute a modification of the cover element of the remedy and the upper surface of the 'Remaining Contamination. A figure showing the modified surface will be included in the subsequent Periodic Review Report and in any updates to the Site Management Plan.

E-10 BACKFILL FROM OFF-SITE SOURCES

The source of the imported material will be documented. Imported material shall be deemed clean by analytical testing. Imported material will be analyzed according to

the schedule outlined in Table 5.4(e) of DER-10, Technical Guidance for Site Investigation and Remediation (May 2010), entitled *Recommended Number of Soil Samples for Soil Imported To or Exported From a Site*.

All materials proposed for import onto the site will be approved by the qualified environmental professional and will be in compliance with provisions in this SMP prior to receipt at the site.

Material from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated sites will not be imported to the site.

All imported soils will meet the backfill and cover soil quality standards established in 6NYCRR 375-6.7(d). Based on an evaluation of the land use, protection of groundwater and protection of ecological resources criteria, the resulting soil quality standards are listed in Table 3 of the SMP. Soils that meet 'exempt' fill requirements under 6 NYCRR Part 360, but do not meet backfill or cover soil objectives for this site, will not be imported onto the site without prior approval by NYSDEC. Solid waste will not be imported onto the site.

Trucks entering the site with imported soils will be securely covered with tight fitting covers. Imported soils will be stockpiled separately from excavated materials and covered to prevent dust releases.

E-11 STORMWATER POLLUTION PREVENTION

If construction activities disturb more than 1 acre of land, barriers and hay bale checks will be installed and inspected once a week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the site and available for inspection by NYSDEC. All necessary repairs shall be made immediately.

Accumulated sediments will be removed as required to keep the barrier and hay bale check functional.

All undercutting or erosion of the silt fence toe anchor shall be repaired immediately with appropriate backfill materials.

Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

Erosion and sediment control measures identified in the SMP shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.

Silt fencing or hay bales will be installed around the entire perimeter of the construction area.

E-12 CONTINGENCY PLAN

If underground tanks or other previously unidentified contaminant sources are found during post-remedial subsurface excavations or development related construction, excavation activities will be suspended until sufficient equipment is mobilized to address the condition.

Sampling will be performed on product, sediment and surrounding soils, etc. as necessary to determine the nature of the material and proper disposal method. Chemical analysis will be performed for full 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.

E-13 COMMUNITY AIR MONITORING PLAN

As no volatile organic compounds (VOCs) were identified at the Site during the remedial investigation, the community air monitoring program shall only include airborne particulate monitoring. Continuous monitoring will be required for all ground intrusive activities. Continuous monitoring will not be required during placement of clean soil cover or asphalt cover, once the base layer of the clean material or demarcation layer is placed over the site.

Special requirements will be necessary for ground intrusive work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDEC and NYSDOH.

For any site work which requires community air monitoring, respirable (PM-10) particulate monitoring will be performed on a continuous basis at the downwind perimeter of the exclusion zone. The monitoring will be performed using real-time monitoring equipment capable of measuring less than PM-10 and integrating over a period of 15-minutes for comparison to the airborne particulate action levels. The equipment will be equipped with an audible alarm to indicated exceedance of the action level. In addition, fugitive dust migration will be visually assessed during all work activities. All readings will be recorded and will be available for NYSDEC and NYSDOH review. Readings will be interpreted as follows:

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (ug/m^3) greater than the background reading for the 15-minute period or if airborne dust observed leaving the work area, then dust suppression techniques

must be employed. Work may continue with dust suppression provided that the downwind PM-10 particulate levels do not exceed 150 ug/m³ above the background level and that visible dust is not migrating from the work area.

- If, after implementation of dust suppression techniques downwind PM-10 levels are greater than 150 ug/m³ above the background level, work activities must be stopped and dust suppression controls re-evaluated. Work can resume provided that supplemental dust suppression measures and/or other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 ug/m³ of the background level and in preventing visible dust migration.

The location of air sampling stations will be based on generally prevailing wind conditions. These locations will be adjusted on a daily or more frequent basis based on actual wind directions to provide upwind and downwind monitoring stations.

Exceedances of action levels listed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers.

E-14 ODOR CONTROL PLAN

This odor control plan is capable of controlling emissions of nuisance odors both on and off-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 all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of any other complaints about the project. Implementation of all 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.

All necessary means will be employed to prevent on- and off-site nuisances. At a minimum, these measures will 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.

If nuisance odors develop during intrusive work that cannot be corrected, or where the control of nuisance odors cannot otherwise be achieved due to on-site conditions or close proximity to sensitive receptors, odor control will be achieved by sheltering the excavation and handling areas in a temporary containment structure equipped with appropriate air venting/filtering systems.

E-15 DUST CONTROL PLAN

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

- Dust suppression will be achieved through 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.

E-16 OTHER NUISANCES

If necessary, a plan for rodent control will be developed and utilized by the contractor prior to and during site clearing and site grubbing, and during all remedial work.

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

Appendix F

EnSol, Inc. *Environmental Solutions*

professional engineering – business consulting

Site Health and Safety Plan (Turnkey, February 2012)

APPENDIX F – HEALTH & SAFETY PLAN CURRENT CONTACT INFORMATION

It should be noted that the contact information presented on this page is the current information for all required health and safety related notifications. The contact information presented in the following pages is outdated.

Site Owner's Representative

Benderson Development
Mr. Adam Harris
(P) 716-878-9603
(C) 716-886-1026

Environmental Consultant / Health & Safety Officer

EnSol, Inc.
Mr. Brian D. Shiah, P.E.
(P) 716-285-3920
(C) 716-579-9898

SITE HEALTH AND SAFETY PLAN
for
BROWNFIELD CLEANUP PROGRAM
RI/IRM ACTIVITIES

125 MAIN STREET SITE
BUFFALO, NEW YORK

February 2012

0105-012-001

Prepared for:

Harbor District Associates, LLC.
570 Delaware Avenue
Buffalo, New York 14202

**125 MAIN STREET SITE
HEALTH AND SAFETY PLAN FOR RI/IRM ACTIVITIES**

ACKNOWLEDGEMENT

Plan Reviewed by (initial):

Corporate Health and Safety Director: _____ Thomas H. Forbes, P.E. _____

Project Manager: _____ Michael Lesakowski _____

Designated Site Safety and Health Officer: _____ Bryan C. Hann _____

Acknowledgement:

I acknowledge that I have reviewed the information contained in this site-specific Health and Safety Plan, and understand the hazards associated with performance of the field activities described herein. I agree to comply with the requirements of this plan.

NAME (PRINT)	SIGNATURE	DATE
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

**125 MAIN STREET SITE
HEALTH AND SAFETY PLAN FOR RI/IRM ACTIVITIES**

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1.0 INTRODUCTION

1.1 General

In accordance with OSHA requirements contained in 29 CFR 1910.120, this Health and Safety Plan (HASP) describes the specific health and safety practices and procedures to be employed by TurnKey Environmental Restoration, LLC and Benchmark Environmental Engineering & Science, PLLC employees (referred to jointly hereafter as “TurnKey-Benchmark”) during Remedial Investigation (RI) and Interim Remedial Measures (IRM) activities at the 125 Main Street Site located in the City of Buffalo, Erie County, New York. This HASP presents procedures for TurnKey-Benchmark employees who will be involved with RI/IRM field activities; it does not cover the activities of other contractors, subcontractors or other individuals on the Site. These firms will be required to develop and enforce their own HASPs as discussed in Section 2.0. TurnKey-Benchmark accepts no responsibility for the health and safety of contractor, subcontractor or other personnel.

This HASP presents information on known Site health and safety hazards using available historical information, and identifies the equipment, materials and procedures that will be used to eliminate or control these hazards. Environmental monitoring will be performed during the course of field activities to provide real-time data for on-going assessment of potential hazards.

1.2 Background

The Site is an approximately 2.185-acre parcel located in the historic canal district of the City of Buffalo, Erie County, New York (see Figures 1 and 2). The parcel is currently improved with one vacant eight story commercial office building and one small maintenance garage in the northeast corner of the property. The Site is bound by Interstate 190 to the north, Scott Street to the south, Washington Street and Buffalo News building to the east, and Main Street to the west.

The Site was historically utilized for various commercial and industrial purposes since at least the early 1800s, including commercial storefronts, restaurants, hotel, the Lehigh Valley Railroad Passenger Station, contractor’s yard, junk yard, former Quay Street, A. Krauss Hide and Wool Warehouse, Forbush and Brown Boot and Shoe manufacturing company, tin shop, paint shop, Patent medicine manufacturer, wire works, and the former

Hamburg Canal. The Site was utilized as the General William J Donovan State Office Building from approximately 1961 through 2008 and is currently vacant.

A 2007 Phase I Environmental Site Assessment Report (dated May 2007) and subsequent Phase II Environmental Site Assessment Report (dated November 2007), were completed on the former General William J Donovan State Office Building (i.e., 125 Main Street) by URS Corporation (see Appendix B of the RI/IRM Work Plan). The Phase II investigation revealed evidence of subsurface contamination, including elevated levels of semi-volatile organic compounds (SVOCs), particularly polycyclic aromatic hydrocarbon (PAHs) exceeding NYSDEC Part 375 Commercial soil cleanup objectives (SCOs). The volatile organic compound (VOC) acetone was detected in excess of technical and operational guidance series (TOGS) water quality standards on the north end of the Site. Three underground storage tanks (USTs) were removed from the Site in 2008.

In fall 2011, additional subsurface data collected by Benchmark revealed elevated concentrations of PAHs and metals above NYSDEC Part 375 Commercial SCOs Site-wide.

1.3 Known and Suspected Environmental Conditions

URS Corporation. (URS) conducted an Environmental Site Assessment of the subject property (May 2007), and the findings are summarized below:

- Miscellaneous hazardous materials observed at the subject property include paints, water treatment chemicals (e.g. aquacides, acids, etc.), solvents, coolants, compressor oil, diesel fuel, and gasoline.
- Mercury-containing gauges were reported to be observed on site.
- Suspect asbestos-containing materials (ACM) observed at the subject property included: vinyl asbestos floor tiles, floor tile mastic, cove base molding, cove base molding mastic, spray on ceiling fire proofing, thermal insulation on boilers and pipes, window glazing, window caulking, built-up roofing, and flashing.
- PCB-containing fluorescent light ballasts may still be present on Site.
- Two active underground storage tanks (USTs) containing petroleum products associated with the Site. One inactive UST is known to be on Site.
- Based on the age of site development (1961), there may be lead-based paint (LBP) on surfaces at the subject property.

- One off-site property, The Buffalo News, located upgradient of the subject property and is listed in the Leaking Tanks (LTANKS), historic leaking tanks (HIST LTANK), spills (SPILLS), and historic spills (HIST SPILLS) databases. With potential for migrated onto the subject property.
- The former Hamburg Canal, which runs through the current south parking lot, was filled between 1899 and 1925. The source and nature of the fill material is not known.

Although not specifically identified in the URS Phase I ESA, historic Sanborn maps from 1889 to 1951 show former on-Site operations including: Wire works (weaving and painting), paint shop, tin shop, junk yard/storage, contractor's yard, medicine manufacturing, a bit brace factory (including machine shop) and a boot and shoe manufacturer.

URS Corporation (URS) also conducted an Environmental Site Investigation of the subject property (November 2007), including 22 soil borings, soil sampling for VOCs, SVOCs, PCBs and/or metals, and groundwater sampling from three existing monitoring wells. The findings are summarized below:

- Certain PAHs were found to exceed NYSDEC Part 375 Commercial SCOs.
- Acetone detected in groundwater exceeded TOGS water quality standards.

Lender Consulting Services conducted an UST Closure on the subject property (December 2008), and the findings are summarized below:

- One diesel fuel Day Tank for emergency generator was removed.
- One (1) 1,000 gallon diesel fuel UST removed.
- One (1) 4,000 gallon gasoline UST removed.
- One (1) 30,000 gallon #6 fuel oil UST removed.

Benchmark Environmental Engineering and Science, PLLC (Benchmark) conducted a Supplementary Phase II Subsurface Investigation of the subject property (November 2011), and the findings are summarized below:

- SVOCs were found to exceed NYDEC Part 375 Commercial SCOs.

- Barium and Arsenic was found in concentrations exceeding NYSDEC Part 375 Commercial SCOs.
- Chromium, Lead, and Mercury were found in concentrations exceeding Unrestricted SCOs.

The site is listed on the NYSDEC Petroleum Bulk Storage Record under the names NYS Office of General Services and General William J. Donovan State Office Building (PBS No. 9-387495 & 9-387746) respectively. The Site is said to have contained at least four (4) underground storage tanks (USTs). The Site is also listed on the NYSDEC Spills Database including at least 7 spill events between 1987 and 2008.

1.4 Parameters of Interest

Based on the previous investigations, constituents of potential concern (COPCs) in soil and, potentially groundwater, at the Site include:

- **Volatile Organic Compounds (VOCs)** – VOCs present at elevated concentration may include acetone.
- **Semi-Volatile Organic Compounds (SVOCs)** – SVOCs, in particular PAHs, which are byproducts of incomplete combustion and impurities in petroleum products, are present above NYSDEC Part 375 Commercial SCOs.
- **Metals** – Metals present above NYSDEC Part 375 Commercial SCOs include arsenic and barium.

1.5 Overview of RI/IRM Activities

TurnKey-Benchmark personnel will be on-site to observe and perform RI and IRM activities. The field activities to be completed as part of the RI and IRM are described below.

Remedial Investigation Activities

1. **Subsurface Soil Sampling:** TurnKey-Benchmark will advance seven (7) soil borings, and seven (7) test pits, collecting subsurface soil samples from borings and test pits for the purpose of determining the nature and extent of potential COPC impacts.
2. **Monitoring Well Installation/Development and Sampling:** TurnKey-Benchmark will observe the installation of seven (7) on-site groundwater monitoring wells, develop the wells, and collect groundwater samples for the purpose of determining the nature and extent of potential COPC impacts.

Planned IRM Activities

1. **Soil Excavation:** The remediation contractor would perform soil excavation activities with TurnKey-Benchmark oversight.
2. **Verification Sampling:** TurnKey-Benchmark would collect soil samples from the sidewalls and bottom of the excavations using a backhoe to verify that cleanup objectives have been met.
3. **Backfilling:** The remediation contractor would coordinate and perform backfilling activities.
4. **Groundwater and Surface Management:** The remediation contractor would direct groundwater/surface water collection during soil excavation activities and coordinate disposal of the collected water.

2.0 ORGANIZATIONAL STRUCTURE

This section of the HASP describes the lines of authority, responsibility and communication as they pertain to health and safety functions at the Site. The purpose of this chapter is to identify the personnel who impact the development and implementation of the HASP and to describe their roles and responsibilities. This chapter also identifies other contractors and subcontractors involved in work operations and establishes the lines of communications among them for health and safety matters. The organizational structure described in this chapter is consistent with the requirements of 29 CFR 1910.120(b)(2). This section will be reviewed by the Project Manager and updated as necessary to reflect the current organizational structure at this Site.

2.1 Roles and Responsibilities

All Turnkey-Benchmark personnel on the Site must comply with the minimum requirements of this HASP. The specific responsibilities and authority of management, safety and health, and other personnel on this Site are detailed in the following paragraphs.

2.1.1 Corporate Health and Safety Director

The TurnKey-Benchmark Corporate Health and Safety Director is ***Mr. Thomas H. Forbes, P.E.*** The Corporate Health and Safety Director responsible for developing and implementing the Health and Safety program and policies for Benchmark Environmental Engineering & Science, PLLC and TurnKey Environmental Restoration, LLC, and consulting with corporate management to ensure adequate resources are available to properly implement these programs and policies. The Corporate Health and Safety Director coordinates TurnKey-Benchmark's Health and Safety training and medical monitoring programs and assists project management and field staff in developing site-specific health and safety plans.

2.1.2 Project Manager

The Project Manager for this Site is ***Mr. Michael Lesakowski.*** The Project Manager has the responsibility and authority to direct all TurnKey-Benchmark work operations at the Site. The Project Manager coordinates safety and health functions with the Site Safety and Health Officer, and bears ultimate responsibility for proper implementation

of this HASP. He may delegate authority to expedite and facilitate any application of the program, including modifications to the overall project approach as necessary to circumvent unsafe work conditions. Specific duties of the Project Manager include:

- Preparing and coordinating the Site work plan.
- Providing TurnKey-Benchmark workers with work assignments and overseeing their performance.
- Coordinating health and safety efforts with the Site Safety and Health Officer (SSHO).
- Reviewing the emergency response coordination plan to assure its effectiveness.
- Serving as the primary liaison with Site contractors and the property owner.

2.1.3 Site Safety and Health Officer

The Site Safety and Health Officer (SSHO) for this Site is ***Mr. Bryan C. Hann***. The qualified alternate SSHO is ***Mr. Nathan Munley***. The SSHO reports to the Project Manager. The SSHO is on-site or readily accessible to the Site during all work operations and has the authority to halt Site work if unsafe conditions are detected. The specific responsibilities of the SSHO are:

- Managing the safety and health functions for TurnKey-Benchmark personnel on the Site.
- Serving as the point of contact for safety and health matters.
- Ensuring that TurnKey-Benchmark field personnel working on the Site have received proper training (per 29 CFR Part 1910.120(e)), that they have obtained medical clearance to wear respiratory protection (per 29 CFR Part 1910.134), and that they are properly trained in the selection, use and maintenance of personal protective equipment, including qualitative respirator fit testing.
- Performing or overseeing Site monitoring as required by the HASP.
- Assisting in the preparation and review of the HASP.

- Maintaining site-specific safety and health records as described in this HASP.
- Coordinating with the Project Manager, Site Workers, and Contractor's SSHO as necessary for safety and health efforts.

2.1.4 Site Workers

Site workers are responsible for: complying with this HASP or a more stringent HASP, if appropriate (i.e., Contractor and Subcontractor's HASP); using proper PPE; reporting unsafe acts and conditions to the SSHO; and following the safety and health instructions of the Project Manager and SSHO.

2.1.5 Other Site Personnel

Other Site personnel who will have health and safety responsibilities will include the Drilling Contractor, who will be responsible for developing, implementing and enforcing a Health and Safety Plan equally stringent or more stringent than TurnKey-Benchmark's HASP. TurnKey-Benchmark assumes no responsibility for the health and safety of anyone outside its direct employ. Each Contractor's HASP shall cover all non-TurnKey/Benchmark Site personnel. Each Contractor shall assign a SSHO who will coordinate with TurnKey-Benchmark's SSHO as necessary to ensure effective lines of communication and consistency between contingency plans.

In addition to TurnKey-Benchmark and Contractor personnel, other individuals who may have responsibilities in the work zone include subcontractors and governmental agencies performing Site inspection work (i.e., the New York State Department of Environmental Conservation). The Contractor shall be responsible for ensuring that these individuals have received OSHA-required training (29 CFR 1910.120(e)), including initial, refresher and site-specific training, and shall be responsible for the safety and health of these individuals while they are on-site.

3.0 HAZARD EVALUATION

Due to the presence of certain contaminants at the Site, the possibility exists that workers will be exposed to hazardous substances during field activities. The principal points of exposure would be through direct contact with and incidental ingestion of soil, and through the inhalation of contaminated particles or vapors. Other points of exposure may include direct contact with groundwater. In addition, the use of drilling and/or medium to large-sized construction equipment (e.g., excavator) will also present conditions for potential physical injury to workers. Further, since work will be performed outdoors, the potential exists for heat/cold stress to impact workers, especially those wearing protective equipment and clothing. Adherence to the medical evaluations, worker training relative to chemical hazards, safe work practices, proper personal protection, environmental monitoring, establishment work zones and Site control, appropriate decontamination procedures and contingency planning outlined herein will reduce the potential for chemical exposures and physical injuries.

3.1 Chemical Hazards

As discussed in Section 1.3, historic activities have potentially resulted in impacts to Site soils and groundwater. Historical analytic data indicates a potential VOC (acetone) impact to Site groundwater. In addition to VOCs, soil and groundwater may be impacted by SVOCs (PAHs), and metals due to historic Site use. Table 1 lists exposure limits for airborne concentrations of the COPCs identified in Section 1.4 of this HASP. Brief descriptions of the toxicology of the prevalent COPCs and related health and safety guidance and criteria are provided below.

- **Acetone (CAS # 67-64-1)** is a colorless and highly flammable liquid commonly used as a solvent. Acute exposure predominantly results in irritation of the respiratory tract, eyes and skin
- **Arsenic (CAS #7440-38-2)** is a naturally occurring element and classified by the EPA as a Group A human carcinogen. Acute high-level inhalation exposure to arsenic dust or fumes has resulted in gastrointestinal effects including nausea, diarrhea, and abdominal pain. Chronic inhalation exposure to inorganic arsenic in humans is associated with irritation of the skin and mucous membranes. Chronic oral exposure has resulted in gastrointestinal effects, anemia, peripheral

neuropathy, skin lesions, hyperpigmentation, and liver or kidney damage in humans. Inorganic arsenic exposure in humans, by the inhalation route, has been shown to be strongly associated with lung cancer, while ingestion of inorganic arsenic in humans has been linked to a form of skin cancer and also to bladder, liver, and lung cancer.

- **Barium (CAS #7440-39-3)** is an alkaline earth metal naturally occurring in almost all surface water. Acute exposure predominantly results in gastrointestinal disturbances and muscular weakness. Chronic exposure has the potential to cause hypertension.
- **Polycyclic Aromatic Hydrocarbons (PAHs)** are formed as a result of the pyrolysis and incomplete combustion of organic matter such as fossil fuel. PAH aerosols formed during the combustion process disperse throughout the atmosphere, resulting in the deposition of PAH condensate in soil, water and on vegetation. In addition, several products formed from petroleum processing operations (e.g., roofing materials and asphalt) also contain elevated levels of PAHs. Hence, these compounds are widely dispersed in the environment. PAHs are characterized by a molecular structure containing three or more fused, unsaturated carbon rings. Seven of the PAHs are classified by USEPA as probable human carcinogens (USEPA Class B2). These are: benzo(a)pyrene; benzo(a)anthracene; benzo(b)fluoranthene; benzo(k)fluoranthene; chrysene; dibenzo(a,h)anthracene; and indeno(1,2,3-cd)pyrene. The primary route of exposure to PAHs is through incidental ingestion and inhalation of contaminated particulates. PAHs are characterized by an organic odor, and exist as oily liquids in pure form. Acute exposure symptoms may include acne-type blemishes in areas of the skin exposed to sunlight.

With respect to the anticipated RI/IRM activities discussed in Section 1.5, possible routes of exposure to the above-mentioned contaminants are presented in Table 2. The use of proper respiratory equipment, as outlined in Section 7.0 of this HASP, will minimize the potential for exposure to airborne contamination. Exposure to contaminants through dermal and other routes will also be minimized through the use of protective clothing (Section 7.0), safe work practices (Section 6.0), and proper decontamination procedures (Section 12.0).

3.2 Physical Hazards

RI/IRM field activities at the 125 Main Street Site may present the following physical hazards:

- The potential for physical injury during heavy construction equipment use, such as backhoes, excavators and drilling equipment.
- The potential for heat/cold stress to employees during the summer/winter months (see Section 10.0).
- The potential for slip and fall injuries due to rough, uneven terrain and/or open excavations.

These hazards represent only some of the possible means of injury that may be present during RI/IRM operations and sampling activities at the Site. Since it is impossible to list all potential sources of injury, it shall be the responsibility of each individual to exercise proper care and caution during all phases of the work.

4.0 TRAINING

4.1 Site Workers

All personnel performing RI/IRM activities at the Site (such as, but not limited to, equipment operators, general laborers, and drillers) and who may be exposed to hazardous substances, health hazards, or safety hazards and their supervisors/managers responsible for the Site shall receive training in accordance with 29 CFR 1910.120(e) before they are permitted to engage in operations in the exclusion zone or contaminant reduction zone. This training includes an initial 40-hour Hazardous Waste Site Worker Protection Course, an 8-hour Annual Refresher Course subsequent to the initial 40-hour training, and 3 days of actual field experience under the direct supervision of a trained, experienced supervisor. Additional site-specific training shall also be provided by the SSHO prior to the start of field activities. A description of topics to be covered by this training is provided below.

4.1.1 Initial and Refresher Training

Initial and refresher training is conducted by a qualified instructor as specified under OSHA 29 CFR 1910.120(e)(5), and is specifically designed to meet the requirements of OSHA 29 CFR 1910.120(e)(3) and 1910.120(e)(8). The training covers, as a minimum, the following topics:

- OSHA HAZWOPER regulations.
- Site safety and hazard recognition, including chemical and physical hazards.
- Medical monitoring requirements.
- Air monitoring, permissible exposure limits, and respiratory protection level classifications.
- Appropriate use of personal protective equipment (PPE), including chemical compatibility and respiratory equipment selection and use.
- Work practices to minimize risk.
- Work zones and Site control.

- Safe use of engineering controls and equipment.
- Decontamination procedures.
- Emergency response and escape.
- Confined space entry procedures.
- Heat and cold stress monitoring.
- Elements of a Health and Safety Plan.
- Spill containment.

Initial training also incorporates workshops for PPE and respiratory equipment use (Levels A, B and C), and respirator fit testing. Records and certification received from the course instructor documenting each employee's successful completion of the training identified above are maintained on file at TurnKey-Benchmark's Buffalo, NY office. Contractors and Subcontractors are required to provide similar documentation of training for all their personnel who will be involved in on-site work activities.

Any employee who has not been certified as having received health and safety training in conformance with 29 CFR 1910.120(e) is prohibited from working in the exclusion and contamination reduction zones, or to engage in any on-site work activities that may involve exposure to hazardous substances or wastes.

4.1.2 Site Training

Site workers are given a copy of the HASP and provided a site-specific briefing prior to the commencement of work to ensure that employees are familiar with the HASP and the information and requirements it contains. The Site briefing shall be provided by the SSHO prior to initiating field activities and shall include:

- Names of personnel and alternates responsible for Site safety and health.
- Safety, health and other hazards present on the Site.
- The site lay-out including work zones and places of refuge.

- The emergency communications system and emergency evacuation procedures.
- Use of PPE.
- Work practices by which the employee can minimize risks from hazards.
- Safe use of engineering controls and equipment on the site.
- Medical surveillance, including recognition of symptoms and signs of over-exposure as described in Chapter 5 of this HASP.
- Decontamination procedures as detailed in Chapter 12 of this HASP.
- The emergency response plan as detailed in Chapter 15 of this HASP.
- Confined space entry procedures, if required, as detailed in Chapter 13 of this HASP.
- The spill containment program as detailed in Chapter 9 of this HASP.
- Site control as detailed in Chapter 11 of this HASP.

Supplemental health and safety briefings will also be conducted by the SSHO on an as-needed basis during the course of the work. Supplemental briefings are provided as necessary to notify employees of any changes to this HASP as a result of information gathered during ongoing Site characterization and analysis. Conditions for which the SSHO may schedule additional briefings include, but are not limited to: a change in Site conditions (e.g., based on monitoring results); changes in the work schedule/plan; newly discovered hazards; and safety incidents occurring during Site work.

4.2 Supervisor Training

On-site safety and health personnel who are directly responsible for or who supervise the safety and health of workers engaged in hazardous waste operations (i.e., SSHO) shall receive, in addition to the appropriate level of worker training described in Section 4.1, above, 8 additional hours of specialized supervisory training, in compliance with 29 CFR 1910.120(e)(4).

4.3 Emergency Response Training

Emergency response training is addressed in Attachment A of this HASP, Emergency Response Plan.

4.4 Site Visitors

Each Contractor's SSHO will provide a site-specific briefing to all Site visitors and other non-TurnKey/Benchmark personnel who enter the Site beyond the Site entry point. The site-specific briefing will provide information about Site hazards, the Site layout including work zones and places of refuge, the emergency communications system and emergency evacuation procedures, and other pertinent safety and health requirements as appropriate.

Site visitors will not be permitted to enter the exclusion zone or contaminant reduction zones unless they have received the level of training required for Site workers as described in Section 4.1.

5.0 MEDICAL MONITORING

Medical monitoring examinations are provided to TurnKey-Benchmark employees as stipulated under 29 CFR Part 1910.120(f). These exams include initial employment, annual and employment termination physicals for all TurnKey-Benchmark employees involved in hazardous waste site field operations. Post-exposure examinations are also provided for employees who may have been injured, received a health impairment, or developed signs or symptoms of over-exposure to hazardous substances or were accidentally exposed to substances at concentrations above the permissible exposure limits without necessary personal protective equipment. Such exams are performed as soon as possible following development of symptoms or the known exposure event.

Medical evaluations are performed by Health Works, an occupational health care provider under contract with TurnKey-Benchmark. Health Works is located in Seneca Square Plaza, 1900 Ridge Road, West Seneca, New York 14224. The facility can be reached at (716) 823-5050 to schedule routine appointments or post-exposure examinations.

Medical evaluations are conducted according to the TurnKey-Benchmark Medical Monitoring Program and include an evaluation of the workers' ability to use respiratory protective equipment. The examinations include:

- Occupational/medical history review.
- Physical exam, including vital sign measurement.
- Spirometry testing.
- Eyesight testing.
- Audio testing (minimum baseline and exit, annual for employees routinely exposed to greater than 85db).
- EKG (for employees >40 yrs age or as medical conditions dictate).
- Chest X-ray (baseline and exit, and every 5 years).
- Blood biochemistry (including blood count, white cell differential count, serum multiplastic screening).
- Medical certification of physical requirements (i.e., sight, musculoskeletal,

cardiovascular) for safe job performance and to wear respiratory protection equipment.

The purpose of the medical evaluation is to determine an employee's fitness for duty on hazardous waste sites; and to establish baseline medical data.

In conformance with OSHA regulations, TurnKey-Benchmark will maintain and preserve medical records for a period of 30 years following termination of employment. Employees are provided a copy of the physician's post-exam report, and have access to their medical records and analyses.

6.0 SAFE WORK PRACTICES

All TurnKey-Benchmark employees shall conform to the following safe work practices during all on-site work activities conducted within the exclusion and contamination reduction zones:

- Eating, drinking, chewing gum or tobacco, smoking, or any practice that increases the probability of hand-to-mouth contact is strictly prohibited.
- The hands and face must be thoroughly washed upon leaving the work area and prior to engaging in any activity indicated above.
- Respiratory protective equipment and clothing must be worn by all personnel entering the Site as required by the HASP or as modified by the Site safety officer. Excessive facial hair (i.e., beards, long mustaches or sideburns) that interferes with the satisfactory respirator-to-face seal is prohibited.
- Contact with surfaces/materials either suspected or known to be contaminated will be avoided to minimize the potential for transfer to personnel, cross contamination and need for decontamination.
- Medicine and alcohol can synergize the effects of exposure to toxic chemicals. Due to possible contraindications, use of prescribed drugs should be reviewed with the TurnKey-Benchmark occupational physician. Alcoholic beverage and illegal drug intake are strictly forbidden during the workday.
- All personnel shall be familiar with standard operating safety procedures and additional instructions contained in this Health and Safety Plan.
- On-site personnel shall use the “buddy” system. No one may work alone (i.e., out of earshot or visual contact with other workers) in the exclusion zone.
- Personnel and equipment in the contaminated area shall be minimized, consistent with effective Site operations.
- All employees have the obligation to immediately report and if possible, correct unsafe work conditions.
- Use of contact lenses on-site will not be permitted. Spectacle kits for insertion into full-face respirators will be provided for TurnKey-Benchmark employees, as requested and required.

The recommended specific safety practices for working around the contractor's equipment (e.g., backhoes, bulldozers, excavators, drill rigs etc.) are as follows:

- Although the Contractor and subcontractors are responsible for their equipment and safe operation of the Site, TurnKey-Benchmark personnel are also responsible for their own safety.
- Subsurface work will not be initiated without first clearing underground utility services.
- Heavy equipment should not be operated within 20 feet of overhead wires. This distance may be increased if windy conditions are anticipated or if lines carry high voltage. The Site should also be sufficiently clear to ensure the project staff can move around the heavy machinery safely.
- Care should be taken to avoid overhead wires when moving heavy-equipment from location to location.
- Hard hats, safety boots and safety glasses should be worn at all times in the vicinity of heavy equipment. Hearing protection is also recommended.
- The work Site should be kept neat. This will prevent personnel from tripping and will allow for fast emergency exit from the Site.
- Proper lighting must be provided when working at night.
- Construction activities should be discontinued during an electrical storm or severe weather conditions.
- The presence of combustible gases should be checked before igniting any open flame.
- Personnel shall stand upwind of any construction operation when not immediately involved in sampling/logging/observing activities.
- Personnel will not approach the edge of an unsecured trench/excavation closer than 2 feet.

7.0 PERSONAL PROTECTIVE EQUIPMENT

7.1 Equipment Selection

Personal protective equipment (PPE) will be donned when work activities may result in exposure to physical or chemical hazards beyond acceptable limits, and when such exposure can be mitigated through appropriate PPE. The selection of PPE will be based on an evaluation of the performance characteristics of the PPE relative to the requirements and limitations of the Site, the task-specific conditions and duration, and the hazards and potential hazards identified at the Site.

Equipment designed to protect the body against contact with known or suspect chemical hazards are grouped into four categories according to the degree of protection afforded. These categories, designated A through D consistent with United States Environmental Protection Agency (USEPA) Level of Protection designation, are:

- **Level A:** Should be selected when the highest level of respiratory, skin and eye protection is needed.
- **Level B:** Should be selected when the highest level of respiratory protection is needed, but a lesser level of skin protection is required. Level B protection is the minimum level recommended on initial Site entries until the hazards have been further defined by on-site studies. Level B (or Level A) is also necessary for oxygen-deficient atmospheres.
- **Level C:** Should be selected when the types of airborne substances are known, the concentrations have been measured and the criteria for using air-purifying respirators are met. In atmospheres where no airborne contaminants are present, Level C provides dermal protection only.
- **Level D:** Should not be worn on any Site with elevated respiratory or skin hazards. This is generally a work uniform providing minimal protection.

OSHA requires the use of certain PPE under conditions where an immediate danger to life and health (IDLH) may be present. Specifically, OSHA 29 CFR 1910.120(g)(3)(iii) requires use of a positive pressure self-contained breathing apparatus, or positive pressure air-line respirator equipped with an escape air supply when chemical exposure levels present a substantial possibility of immediate serious injury, illness or death, or impair the ability to

escape. Similarly, OSHA 29 CFR 1910.120(g)(3)(iv) requires donning totally-encapsulating chemical protective suits (with a protection level equivalent to Level A protection) in conditions where skin absorption of a hazardous substance may result in a substantial possibility of immediate serious illness, injury or death, or impair the ability to escape.

In situations where the types of chemicals, concentrations, and possibilities of contact are unknown, the appropriate level of protection must be selected based on professional experience and judgment until the hazards can be further characterized. The individual components of clothing and equipment must be assembled into a full protective ensemble to protect the worker from site-specific hazards, while at the same time minimizing hazards and drawbacks of the personal protective gear itself. Ensemble components are detailed below for levels A/B, C, and D protection.

7.2 Protection Ensembles

7.2.1 Level A/B Protection Ensemble

Level A/B ensembles include similar respiratory protection, however Level A provides a higher degree of dermal protection than Level B. Use of Level A over Level B is determined by: comparing the concentrations of identified substances in the air with skin toxicity data, and assessing the effect of the substance (by its measured air concentrations or splash potential) on the small area of the head and neck unprotected by Level B clothing.

The recommended PPE for level A/B is:

- Pressure-demand, full-face piece self-contained breathing apparatus (MSHA/-NIOSH approved) or pressure-demand supplied-air respirator with escape self-contained breathing apparatus (SCBA).
- Chemical-resistant clothing. For Level A, clothing consists of totally-encapsulating chemical resistant suit. Level B incorporates hooded one-or two-piece chemical splash suit.
- Inner and outer chemical resistant gloves.
- Chemical-resistant safety boots/shoes.
- Hardhat.

7.2.2 Level C Protection Ensemble

Level C protection is distinguished from Level B by the equipment used to protect the respiratory system, assuming the same type of chemical-resistant clothing is used. The main selection criterion for Level C is that conditions permit wearing an air-purifying device. The device (when required) must be an air-purifying respirator (MSHA/NIOSH approved) equipped with filter cartridges. Cartridges must be able to remove the substances encountered. Respiratory protection will be used only with proper fitting, training and the approval of a qualified individual. In addition, an air-purifying respirator can be used only if: oxygen content of the atmosphere is at least 19.5% in volume; substances are identified and concentrations measured; substances have adequate warning properties; the individual passes a qualitative fit-test for the mask; and an appropriate cartridge/canister is used, and its service limit concentration is not exceeded.

Recommended PPE for Level C conditions includes:

- Full-face piece, air-purifying respirator equipped with MSHA and NIOSH approved organic vapor/acid gas/dust/mist combination cartridges or as designated by the SSHO.
- Chemical-resistant clothing (hooded, one or two-piece chemical splash suit or disposable chemical-resistant one-piece suit).
- Inner and outer chemical-resistant gloves.
- Chemical-resistant safety boots/shoes.
- Hardhat.

An air-monitoring program is part of all response operations when atmospheric contamination is known or suspected. It is particularly important that the air be monitored thoroughly when personnel are wearing air-purifying respirators. Continual surveillance using direct-reading instruments is needed to detect any changes in air quality necessitating a higher level of respiratory protection.

7.2.3 Level D Protection Ensemble

As indicated above, Level D protection is primarily a work uniform. It can be worn in areas where only boots can be contaminated, where there are no inhalable toxic substances

and where the atmospheric contains at least 19.5% oxygen.

Recommended PPE for Level D includes:

- Coveralls.
- Safety boots/shoes.
- Safety glasses or chemical splash goggles.
- Hardhat.
- Optional gloves; escape mask; face shield.

7.2.4 Recommended Level of Protection for Site Tasks

Based upon current information regarding both the contaminants suspected to be present at the Site and the various tasks that are included in the remedial activities, the minimum required levels of protection for these tasks shall be as identified in Table 3.

8.0 EXPOSURE MONITORING

8.1 General

Based on the results of historic sample analysis and the nature of the proposed work activities at the Site, the possibility exists that organic vapors and/or particulates may be released to the air during intrusive construction activities. Ambient breathing zone concentrations may at times, exceed the permissible exposure limits (PELs) established by OSHA for the individual compounds (see Table 1), in which case respiratory protection will be required. Respiratory and dermal protection may be modified (upgraded or downgraded) by the SSHO based upon real-time field monitoring data.

8.1.1 On-Site Work Zone Monitoring

TurnKey-Benchmark personnel will conduct routine, real-time air monitoring during all intrusive construction phases such as excavation, backfilling, drilling, etc. The work area will be monitored at regular intervals using a photo-ionization detector (PID). Observed values will be recorded and maintained as part of the permanent field record.

8.1.2 Off-Site Community Air Monitoring

In addition to on-site monitoring within the work zone(s), monitoring at the downwind portion of the Site perimeter will be conducted. This will provide a real-time method for determination of vapor and/or particulate releases to the surrounding community as a result of ground intrusive investigation work.

Ground intrusive activities are defined by NYSDOH Appendix 1A Generic Community Air Monitoring Plan and included as Attachment C. Ground intrusive activities include soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells. Non-intrusive activities include the collection of soil and sediment samples or the collection of groundwater samples from existing wells. Continuous monitoring is required for ground intrusive activities and periodic monitoring is required for non-intrusive activities. Periodic monitoring consists of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring while bailing a well, and taking a reading prior to leaving a sampling location. This may be upgraded to continuous if the sampling location is in close proximity to individuals not

involved in the Site activity (i.e., on a curb of a busy street). The action levels below will be used during periodic monitoring.

8.2 Monitoring Action Levels

8.2.1 On-Site Work Zone Action Levels

The PID, or other appropriate instrument(s), will be used by TurnKey-Benchmark personnel to monitor organic vapor concentrations as specified in this HASP. In addition, fugitive dust/particulate concentrations will be monitored during major soil intrusion (viz., well/boring installation) using a real-time particulate monitor as specified in this plan. In the absence of such monitoring, appropriate respiratory protection for particulates shall be donned. Sustained readings obtained in the breathing zone may be interpreted (with regard to other Site conditions) as follows for TurnKey-Benchmark personnel:

- Total atmospheric concentrations of unidentified vapors or gases ranging from 0 to 1 ppm above background on the PID) - Continue operations under Level D (see Attachment A).
- Total atmospheric concentrations of unidentified vapors or gases yielding sustained readings from >1 ppm to 5 ppm above background on the PID (vapors not suspected of containing high levels of chemicals toxic to the skin) - Continue operations under Level C (see Attachment A).
- Total atmospheric concentrations of unidentified vapors or gases yielding sustained readings of >5 ppm to 50 ppm above background on the PID - Continue operations under Level B (see Attachment 1), re-evaluate and alter (if possible) construction methods to achieve lower vapor concentrations.
- Total atmospheric concentrations of unidentified vapors or gases above 50 ppm on the PID - Discontinue operations and exit the work zone immediately.

The explosimeter may be used to monitor levels of both combustible gases and oxygen during RI/IRM activities. Action levels based on the instrument readings shall be as follows:

- Less than 10% LEL - Continue engineering operations with caution.

- 10-25% LEL - Continuous monitoring with extreme caution, determine source/cause of elevated reading.
- Greater than 25% LEL - Explosion hazard, evaluate source and leave the Work Zone.
- 19.5% - 21% oxygen - proceed with extreme caution; attempt to determine potential source of oxygen displacement.
- Less than 19.5% oxygen - leave work zone immediately.
- 21-25% oxygen - Continue engineering operations with caution.
- Greater than 25% oxygen - Fire hazard potential, leave Work Zone immediately.

The particulate monitor will be used to monitor respirable dust concentrations during all intrusive activities and during handling of Site soil/fill. Action levels based on the instrument readings shall be as follows:

- Less than 50 mg/m³ - Continue field operations.
- 50-150 mg/m³ - Don dust/particulate mask or equivalent
- Greater than 150 mg/m³ - Don dust/particulate mask or equivalent. Initiate engineering controls to reduce respirable dust concentration (viz., wetting of excavated soils or tools at discretion of Site Health and Safety Officer).

Readings with the organic vapor analyzer, combustible gas meter, and particulate monitor will be recorded and documented on the appropriate Project Field Forms. All instruments will be calibrated before use on a daily basis and the procedure will be documented on the appropriate Project Field Forms.

8.2.2 Community Air Monitoring Action Levels

In addition to the action levels prescribed in Section 8.2.1 for TurnKey-Benchmark personnel on-site, the following criteria shall also be adhered to for the protection of downwind receptors consistent with NYSDOH requirements (see Attachment C):

o **ORGANIC VAPOR PERIMETER MONITORING:**

- If the sustained ambient air concentration of organic vapors at the downwind perimeter of the exclusion zone exceeds 5 ppm above background for the 15-minute average, work activities will be temporarily halted and monitoring continued. If the sustained organic vapor decreases below 5 ppm over background, work activities can resume but more frequent intervals of monitoring, as directed by the Site Health and Safety Officer, must be conducted.
- If the sustained ambient air concentration of organic vapors at the downwind perimeter of the exclusion zone are greater than 5 ppm over background but less than 25 ppm for the 15-minute average, activities can resume provided that: the organic vapor level 200 feet downwind of the working site or half the distance to the nearest off-site residential or commercial structure, whichever is less, is below 5 ppm over background; and more frequent intervals of monitoring, as directed by the Site Health and Safety Officer, are conducted.
- If the sustained organic vapor level is above 25 ppm at the perimeter of the exclusion zone for the 15-minute average, the Site Health and Safety Officer must be notified and work activities shut down. The Site Health and Safety Officer will determine when re-entry of the exclusion zone is possible and will implement downwind air monitoring to ensure vapor emissions do not impact the nearest off-site residential or commercial structure at levels exceeding those specified in the ***Organic Vapor Contingency Monitoring Plan*** below. All readings will be recorded and will be available for New York State Department of Environmental Conservation (DEC) and Department of Health (DOH) personnel to review.

o **ORGANIC VAPOR CONTINGENCY MONITORING PLAN:**

- If the sustained organic vapor level is greater than 5 ppm over background 200 feet downwind from the work area or half the distance to the nearest off-site residential or commercial property, whichever is less, all work activities must be halted.
- If, following the cessation of the work activities or as the result of an emergency, sustained organic levels persist above 5 ppm above background 200 feet downwind or half the distance to the nearest off-site residential or commercial property from the work area, then the air quality must be

monitored within 20 feet of the perimeter of the nearest off-site residential or commercial structure (20-foot zone).

- If efforts to abate the emission source are unsuccessful and if sustained organic vapor levels approach or exceed 5 ppm above background within the 20-foot zone for more than 30 minutes, or are sustained at levels greater than 10 ppm above background for longer than one minute, then the ***Major Vapor Emission Response Plan*** (see below) will automatically be placed into effect.

o **MAJOR VAPOR EMISSION RESPONSE PLAN:**

Upon activation, the following activities will be undertaken:

1. All Emergency Response Contacts as listed in this Health and Safety Plan and the Emergency Response Plan (Attachment A) will be advised.
2. The local police authorities will immediately be contacted by the Site Health and Safety Officer and advised of the situation.
3. Frequent air monitoring will be conducted at 30-minute intervals within the 20-foot zone. If two sustained successive readings below action levels are measured, air monitoring may be halted or modified by the Site Health and Safety Officer.

The following personnel are to be notified in the listed sequence in the event that a Major Vapor Emission Plan is activated:

Responsible Person	Contact	Phone Number
SSHO	Police	911
SSHO	State Emergency Response Hotline	(800) 457-7362

Additional emergency numbers are listed in the Emergency Response Plan included as Attachment A.

o **EXPLOSIVE VAPORS:**

- Sustained atmospheric concentrations of greater than 10% LEL in the work area - Initiate combustible gas monitoring at the downwind portion of the Site perimeter.

- Sustained atmospheric concentrations of greater than 10% LEL at the downwind Site perimeter – Halt work and contact local Fire Department.

o **AIRBORNE PARTICULATE COMMUNITY AIR MONITORING**

Respirable (PM-10) particulate monitoring will be performed on a continuous basis at the upwind and downwind perimeter of the exclusion zone. The monitoring will be performed using real-time monitoring equipment capable of measuring PM-10 and integrating over a period of 15-minutes for comparison to the airborne particulate action levels. The equipment will be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration will be visually assessed during all work activities. All readings will be recorded and will be available for NYSDEC and NYSDOH review. Readings will be interpreted as follows:

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (ug/m^3) greater than the background (upwind perimeter) reading for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression provided that the downwind PM-10 particulate levels do not exceed 150 ug/m^3 above the upwind level and that visible dust is not migrating from the work area.
- If, after implementation of dust suppression techniques downwind PM-10 levels are greater than 150 ug/m^3 above the upwind level, work activities must be stopped and dust suppression controls re-evaluated. Work can resume provided that supplemental dust suppression measures and/or other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 ug/m^3 of the upwind level and in preventing visible dust migration.

Pertinent emergency response information including the telephone number of the Fire Department is included in the Emergency Response Plan (Attachment A).

9.0 SPILL RELEASE/RESPONSE

This chapter of the HASP describes the potential for and procedures related to spills or releases of known or suspected petroleum and/or hazardous substances on the Site. The purpose of this Section of the HASP is to plan appropriate response, control, counter-measures and reporting, consistent with OSHA requirements in 29 CFR 1910.120(b)(4)(ii)(J) and (j)(1)(viii). The spill containment program addresses the following elements:

- Potential hazardous material spills and available controls.
- Initial notification and evaluation.
- Spill response.
- Post-spill evaluation.

9.1 Potential Spills and Available Controls

An evaluation was conducted to determine the potential for hazardous material and oil/petroleum spills at this Site. For the purpose of this evaluation, hazardous materials posing a significant spill potential are considered to be:

- CERCLA Hazardous Substances as identified in 40 CFR Part 302, where such materials pose the potential for release in excess of their corresponding Reportable Quantity (RQ).
- Extremely Hazardous Substances as identified in 40 CFR Part 355, Appendix A, where such materials pose the potential for release in excess of their corresponding Reportable Quantity (RQ).
- Hazardous Chemicals as defined under Section 311(e) of the Emergency Planning and Community Right-To-Know Act of 1986, where such chemicals are present or will be stored in excess of 10,000 lbs.
- Toxic Chemicals as defined in 40 CFR Part 372, where such chemicals are present or will be stored in excess of 10,000 lbs.
- Chemicals regulated under 6NYCRR Part 597, where such materials pose the potential for release in excess of their corresponding Reportable Quantity (RQ).

Oil/petroleum products are considered to pose a significant spill potential whenever the following situations occur:

- The potential for a “harmful quantity” of oil (including petroleum and non-petroleum-based fuels and lubricants) to reach navigable waters of the U.S. exists (40 CFR Part 112.4). Harmful quantities are considered by USEPA to be volumes that could form a visible sheen on the water or violate applicable water quality standards.
- The potential for any amount of petroleum to reach any waters of NY State, including groundwater, exists. Petroleum, as defined by NY State in 6NYCRR Part 612, is a petroleum-based heat source, energy source, or engine lubricant/maintenance fluid.
- The potential for any release, to soil or water, of petroleum from a bulk storage facility regulated under 6NYCRR Part 612. A regulated petroleum storage facility is defined by NY State as a site having stationary tank(s) and intra-facility piping, fixtures and related equipment with an aggregate storage volume of 1,100 gallons or greater.

The evaluation indicates that, based on Site history and decommissioning records, a hazardous material spill and/or a petroleum product spill is not likely to occur during RI/IRM efforts.

9.2 Initial Spill Notification and Evaluation

Any worker who discovers a hazardous substance or oil/petroleum spill will immediately notify the Project Manager and SSHO. The worker will, to the best of his/her ability, report the material involved, the location of the spill, the estimated quantity of material spilled, the direction/flow of the spill material, related fire/explosion incidents, if any, and any associated injuries. The Emergency Response Plan presented in Attachment A of this HASP will immediately be implemented if an emergency release has occurred.

Following initial report of a spill, the Project Manager will make an evaluation as to whether the release exceeds RQ levels. If an RQ level is exceeded, the Project Manager will notify the Site owner and NYSDEC at 1-800-457-7362 within 2 hours of spill discovery. The Project Manager will also determine what additional agencies (e.g., USEPA) are to be contacted regarding the release, and will follow-up with written reports as required by the applicable regulations.

9.3 Spill Response

For all spill situations, the following general response guidelines will apply:

- Only those personnel involved in overseeing or performing containment operations will be allowed within the spill area. If necessary, the area will be roped, ribboned, or otherwise blocked off to prevent unauthorized access.
- Appropriate PPE, as specified by the SSHO, will be donned before entering the spill area.
- Ignition points will be extinguished/removed if fire or explosion hazards exist.
- Surrounding reactive materials will be removed.
- Drains or drainage in the spill area will be blocked to prevent inflow of spilled materials or applied materials.

For minor spills, the Contractor will maintain a Spill Control and Containment Kit in the Field Office or other readily accessible storage location. The kit will consist of, at a minimum, a 50 lb. bag of “speedy dry” granular absorbent material, absorbent pads, shovels, empty 5-gallon pails and an empty open-top 55-gallon drum. Spilled materials will be absorbed, and shoveled into a 55-gallon drum for proper disposal (NYSDEC approval will be secured for on-site treatment of the impacted soils/absorbent materials, if applicable). Impacted soils will be hand-excavated to the point that no visible signs of contamination remains, and will be drummed with the absorbent.

In the event of a major release or a release that threatens surface water, a spill response contractor will be called to the Site. The response contractor may use heavy equipment (e.g., excavator, backhoe, etc.) to berm the soils surrounding the spill Site or create diversion trenching to mitigate overland migration or release to navigable waters. Where feasible, pumps will be used to transfer free liquid to storage containers. Spill control/cleanup contractors in the Western New York area that may be contacted for assistance include:

- The Environmental Service Group of NY, Inc.: (716) 695-6720
- Environmental Products and Services, Inc.: (716) 447-4700
- Op-Tech: (716) 873-7680

9.4 Post-Spill Evaluation

If a reportable quantity of hazardous material or oil/petroleum is spilled as determined by the Project Manager, a written report will be prepared as indicated in Section 9.2. The report will identify the root cause of the spill, type and amount of material released, date/time of release, response actions, agencies notified and/or involved in cleanup, and procedures to be implemented to avoid repeat incidents. In addition, all re-useable spill cleanup and containment materials will be decontaminated, and spill kit supplies/disposable items will be replenished.

10.0 HEAT/COLD STRESS MONITORING

Since some of the work activities at the Site will be scheduled for both the summer and winter months, measures will be taken to minimize heat/cold stress to TurnKey-Benchmark employees. The Site Safety and Health Officer and/or his or her designee will be responsible for monitoring TurnKey-Benchmark field personnel for symptoms of heat/cold stress.

10.1 Heat Stress Monitoring

Personal protective equipment may place an employee at risk of developing heat stress, a common and potentially serious illness often encountered at construction, landfill, waste disposal, industrial or other unsheltered sites. The potential for heat stress is dependent on a number of factors, including environmental conditions, clothing, workload, physical conditioning and age. Personal protective equipment may severely reduce the body's normal ability to maintain temperature equilibrium (via evaporation and convection), and require increased energy expenditure due to its bulk and weight.

Proper training and preventive measures will mitigate the potential for serious illness. Heat stress prevention is particularly important because once a person suffers from heat stroke or heat exhaustion, that person may be predisposed to additional heat related illness. To avoid heat stress, the following steps should be taken:

- Adjust work schedules.
- Modify work/rest schedules according to monitoring requirements.
- Mandate work slowdowns as needed.
- Perform work during cooler hours of the day if possible or at night if adequate lighting can be provided.
- Provide shelter (air-conditioned, if possible) or shaded areas to protect personnel during rest periods.
- Maintain worker's body fluids at normal levels. This is necessary to ensure that the cardiovascular system functions adequately. Daily fluid intake must approximately equal the amount of water lost in sweat (i.e., eight fluid ounces must be ingested for approximately every 1 lb of weight lost). The normal thirst

mechanism is not sensitive enough to ensure that enough water will be consumed to replace lost perspiration. When heavy sweating occurs, workers should be encouraged to drink more.

- Train workers to recognize the symptoms of heat related illness.

Heat-Related Illness - Symptoms:

- Heat rash may result from continuous exposure to heat or humid air.
- Heat cramps are caused by heavy sweating with inadequate electrolyte replacement. Signs and symptoms include: muscle spasms; pain in the hands, feet and abdomen.
- Heat exhaustion occurs from increased stress on various body organs including inadequate blood circulation due to cardiovascular insufficiency or dehydration. Signs and symptoms include: pale, cool, moist skin; heavy sweating; dizziness; nausea; fainting.
- Heat stroke is the most serious form of heat stress. Temperature regulation fails and the body temperature rises to critical levels. Immediate action must be taken to cool the body before serious injury and death occur. Competent medical help must be obtained. Signs and symptoms are: red, hot, usually dry skin; lack of or reduced perspiration; nausea; dizziness and confusion; strong, rapid pulse; coma.

The monitoring of personnel wearing protective clothing should commence when the ambient temperature is 70 degrees Fahrenheit or above. For monitoring the body's recuperative ability to excess heat, one or more of the following techniques should be used as a screening mechanism.

- Heart rate may be measured by the radial pulse for 30 seconds as early as possible in the resting period. The rate at the beginning of the rest period should not exceed 100 beats per minute. If the rate is higher, the next work period should be shortened by 10 minutes (or 33%), while the length of the rest periods stay the same. If the pulse rate is 100 beats per minute at the beginning of the next rest period, the following work cycle should be further shortened by 33%.
- Body temperature may be measured orally with a clinical thermometer as early as possible in the resting period. Oral temperature at the beginning of the rest period

should not exceed 99.6 degrees Fahrenheit. If it does, the next work period should be shortened by 10 minutes (or 33%), while the length of the rest period remains the same. However, if the oral temperature exceeds 99.6 degrees Fahrenheit at the beginning of the next period, the work cycle may be further shortened by 33%. Oral temperature should be measured at the end of the rest period to make sure that it has dropped below 99.6 degrees Fahrenheit. No TurnKey-Benchmark employee will be permitted to continue wearing semi-permeable or impermeable garments when his/her oral temperature exceeds 100.6 degrees Fahrenheit.

10.2 Cold Stress Monitoring

Exposure to cold conditions may result in frostbite or hypothermia, each of which progresses in stages as shown below.

- **Frostbite** occurs when body tissue (usually on the extremities) begins to freeze. The three states of frostbite are:
 - 1) **Frost nip** - This is the first stage of the freezing process. It is characterized by a whitened area of skin, along with a slight burning or painful sensation. Treatment consists of removing the victim from the cold conditions, removal of boots and gloves, soaking the injured part in warm water (102 to 108 degrees Fahrenheit) and drinking a warm beverage. Do not rub skin to generate friction/ heat.
 - 2) **Superficial Frostbite** - This is the second stage of the freezing process. It is characterized by a whitish gray area of tissue, which will be firm to the touch but will yield little pain. The treatment is identical for Frost nip.
 - 3) **Deep Frostbite** - In this final stage of the freezing process the affected tissue will be cold, numb and hard and will yield little to no pain. Treatment is identical to that for Frost nip.
- **Hypothermia** is a serious cold stress condition occurring when the body loses heat at a rate faster than it is produced. If untreated, hypothermia may be fatal. The stages of hypothermia may not be clearly defined or visible at first, but generally include:
 - 1) Shivering
 - 2) Apathy (i.e., a change to an indifferent or uncaring mood)

- 3) Unconsciousness
- 4) Bodily freezing

Employees exhibiting signs of hypothermia should be treated by medical professionals. Steps that can be taken while awaiting help include:

- 1) Remove the victim from the cold environment and remove wet or frozen clothing. (Do this carefully as frostbite may have started.)
- 2) Perform active re-warming with hot liquids for drinking (Note: do not give the victim any liquid containing alcohol or caffeine) and a warm water bath (102 to 108 degrees Fahrenheit).
- 3) Perform passive re-warming with a blanket or jacket wrapped around the victim.

In any potential cold stress situation, it is the responsibility of the Site Health and Safety Officer to encourage the following:

- Education of workers to recognize the symptoms of frostbite and hypothermia.
- Workers should dress warmly, with more layers of thin clothing as opposed to one thick layer.
- Personnel should remain active and keep moving.
- Personnel should be allowed to take shelter in a heated areas, as necessary.
- Personnel should drink warm liquids (no caffeine or alcohol if hypothermia has set in).
- For monitoring the body's recuperation from excess cold, oral temperature recordings should occur:
 - At the Site Safety Technicians discretion when suspicion is based on changes in a worker's performance or mental status.
 - At a workers request.
 - As a screening measure, two times per shift, under unusually hazardous conditions (e.g., wind chill less than 20 degrees Fahrenheit or wind chill

less than 30 degrees Fahrenheit with precipitation).

- As a screening measure, whenever anyone worker on-site develops hypothermia.

Any person developing moderate hypothermia (a core body temperature of 92 degrees Fahrenheit) will not be allowed to return to work for 48 hours without the recommendation of a qualified medical doctor.

11.0 WORK ZONES AND SITE CONTROL

Work zones around the areas designated for construction activities will be established on a daily basis and communicated to all employees and other Site users by the SSHO. It shall be each Contractor's Site Safety and Health Officer's responsibility to ensure that all Site workers are aware of the work zone boundaries and to enforce proper procedures in each area. The zones will include:

- Exclusion Zone ("Hot Zone") - The area where contaminated materials may be exposed, excavated or handled and all areas where contaminated equipment or personnel may travel. Flagging tape will delineate the zone. All personnel entering the Exclusion Zone must wear the prescribed level of personal protective equipment identified in Section 7.
- Contamination Reduction Zone - The zone where decontamination of personnel and equipment takes place. Any potentially contaminated clothing, equipment and samples must remain in the Contamination Reduction Zone until decontaminated.
- Support Zone - The part of the site that is considered non-contaminated or "clean." Support equipment will be located in this zone, and personnel may wear normal work clothes within this zone.

In the absence of other task-specific work zone boundaries established by the SSHO, the following boundaries will apply to all investigation and construction activities involving disruption or handling of Site soils or groundwater:

- Exclusion Zone: 50 foot radius from the outer limit of the sampling/construction activity.
- Contaminant Reduction Zone: 100 foot radius from the outer limit of the sampling/construction activity.
- Support Zone: Areas outside the Contaminant Reduction Zone.

Access of non-essential personnel to the Exclusion and Contamination Reduction Zones will be strictly controlled by the SSHO. Only personnel who are essential to the

completion of the task will be allowed access to these areas and only if they are wearing the prescribed level of protection. Entrance of all personnel must be approved by the SSHO.

The SSHO will maintain a Health and Safety Logbook containing the names of TurnKey-Benchmark workers and their level of protection. The zone boundaries may be changed by the SSHO as environmental conditions warrant, and to respond to the necessary changes in work locations on-site.

12.0 DECONTAMINATION

12.1 Decontamination for TurnKey-Benchmark Employees

The degree of decontamination required is a function of a particular task and the environment within which it occurs. The following decontamination procedure will remain flexible, thereby allowing the decontamination crew to respond appropriately to the changing environmental conditions that may arise at the Site. All TurnKey-Benchmark personnel on-site shall follow the procedure below, or the Contractor's procedure (if applicable), whichever is more stringent.

Station 1 - Equipment Drop: Deposit visibly contaminated (if any) re-useable equipment used in the contamination reduction and exclusion zones (tools, containers, monitoring instruments, radios, clipboards, etc.) on plastic sheeting.

Station 2 - Boots and Gloves Wash and Rinse: Scrub outer boots and outer gloves. Deposit tape and gloves in waste disposal container.

Station 3 - Tape, Outer Boot and Glove Removal: Remove tape, outer boots and gloves. Deposit tape and gloves in waste disposal container.

Station 4 - Canister or Mask Change: If worker leaves exclusive zone to change canister (or mask), this is the last step in the decontamination procedure. Worker's canister is exchanged, new outer gloves and boot cover donned, and worker returns to duty.

Station 5 - Outer Garment/Face Piece Removal: Protective suit removed and deposited in separate container provided by Contractor. Face piece or goggles are removed if used. Avoid touching face with fingers. Face piece and/or goggles deposited on plastic sheet. Hard hat removed and placed on plastic sheet.

Station 6 - Inner Glove Removal: Inner gloves are the last personal protective equipment to be removed. Avoid touching the outside of the gloves with bare fingers. Dispose of these gloves in waste disposal container.

Following PPE removal, personnel shall wash hands, face and forearms with absorbent wipes. If field activities proceed for duration of 6 consecutive months or longer, shower facilities will be provided for worker use in accordance with OSHA 29 CFR 1910.120(n).

12.2 Decontamination for Medical Emergencies

In the event of a minor, non-life threatening injury, personnel should follow the decontamination procedures as defined, and then administer first-aid.

In the event of a major injury or other serious medical concern (e.g., heat stroke), immediate first-aid is to be administered and the victim transported to the hospital in lieu of further decontamination efforts unless exposure to a Site contaminant would be considered “Immediately Dangerous to Life or Health.”

12.3 Decontamination of Field Equipment

The Contractor in accordance with his approved Health and Safety Plan in the Contamination Reduction Zone will conduct decontamination of heavy equipment. As a minimum, this will include manually removing heavy soil contamination, followed by steam cleaning on an impermeable pad.

TurnKey-Benchmark personnel will conduct decontamination of all tools used for sample collection purposes. It is expected that all tools will be constructed of nonporous, nonabsorbent materials (i.e., metal), which will aid in the decontamination effort. Any tool or part of a tool made of porous, absorbent material (i.e., wood) will be placed into suitable containers and prepared for disposal.

Decontamination of bailers, split-spoons, spatula knives, and other tools used for environmental sampling and examination shall be as follows:

- Disassemble the equipment
- Water wash to remove all visible foreign matter.
- Wash with detergent.
- Rinse all parts with distilled-deionized water.
- Allow to air dry.
- Wrap all parts in aluminum foil or polyethylene.

13.0 CONFINED SPACE ENTRY

OSHA 29 CFR 1910.146 identifies a confined space as a space that is large enough and so configured that an employee can physically enter and do assigned work, has limited or restricted means for entry and exit, and is not intended for continuous employee occupancy. Confined spaces include, but are not limited to, trenches, storage tanks, process vessels, pits, sewers, tunnels, underground utility vaults, pipelines, sumps, wells, and excavations.

Confined space entry by TurnKey-Benchmark employees is not anticipated to be necessary to complete the RI/IRM activities identified in Section 2.0. In the event that the scope of work changes or confined space entry appears necessary, the Project Manager will be consulted to determine if feasible engineering alternatives to confined space entry can be implemented. If confined space entry by TurnKey-Benchmark employees cannot be avoided through reasonable engineering measures, task-specific confined space entry procedures will be developed and a confined-space entry permit will be issued through TurnKey-Benchmark's corporate Health and Safety Director. TurnKey-Benchmark employees shall not enter a confined space without these procedures and permits in place.

14.0 FIRE PREVENTION AND PROTECTION

14.1 General Approach

Recommended practices and standards of the National Fire Protection Association (NFPA) and other applicable regulations will be followed in the development and application of Project Fire Protection Programs. When required by regulatory authorities, the project management will prepare and submit a Fire Protection Plan for the approval of the contracting officers, authorized representative or other designated official. Essential considerations for the Fire Protection Plan will include:

- Proper Site preparation and safe storage of combustible and flammable materials.
- Availability of coordination with private and public fire authorities.
- Adequate job-site fire protection and inspections for fire prevention.
- Adequate indoctrination and training of employees.

14.2 Equipment and Requirements

Fire extinguishers will be provided by each Contractor and are required on all heavy equipment and in each field trailer. Fire extinguishers will be inspected, serviced, and maintained in accordance with the manufacturer's instructions. As a minimum, all extinguishers shall be checked monthly and weighed semi-annually, and recharged if necessary. Recharge or replacement shall be mandatory immediately after each use.

14.3 Flammable and Combustible Substances

All storage, handling or use of flammable and combustible substances will be under the supervision of qualified persons. All tanks, containers and pumping equipment, whether portable or stationary, used for the storage and handling of flammable and combustible liquids, will meet the recommendations of the National Fire Protection Association.

14.4 Hot Work

If the scope of work necessitates welding or blowtorch operation, the hot work permit presented in Attachment B will be completed by the SSHO and reviewed/issued by the Project Manager.

15.0 EMERGENCY INFORMATION

In accordance with OSHA 29 CFR Part 1910, an Emergency Response Plan is attached to this HASP as Attachment A. The hospital route map is presented within Attachment A as Figure 1.

16.0 REFERENCES

1. New York State Department of Health. 2002. *Generic Community Air Monitoring Plan, Appendix 1A, Draft DER-10 Technical Guidance for Site Investigation and Remediation*. December.

TABLES



TABLE 1
TOXICITY DATA FOR CONSTITUENTS OF POTENTIAL CONCERN
100 MGD SUPERFUND
REMEDIATION PROJECT

Parameter	Synonyms	CAS #	Concentration Limits ¹		
			PEL	TLV	IDLH
Volatile Organic Compounds (VOCs): ppm					
Acetone	none	67-64-1	1000 mg/m ³	500 mg/m ³	2,500 mg/m ³
Semi-volatile Organic Compounds (SVOCs) ² : ppm					
Benzo(a)anthracene	none	56-55-3	--	--	--
Benzo(a)pyrene	none	50-32-8	--	--	--
Benzo(b)fluoranthene	none	205-99-2	--	--	--
Chrysene	none	218 01 9	--	--	--
Indeno(1,2,3-cd)pyrene	none	193-39-5	--	--	--
Inorganic Compounds: mg/m ²					
Arsenic	none	7440-38-2	0.5 mg/m ³	0.01 mg/m ³	5 mg/m ³
Barium	none	7440-39-3	0.5 mg/m ³	0.5 mg/m ³	50 mg/m ³

Notes:

1. Concentration limits as reported by NIOSH Pocket Guide to Chemical Hazards, February 2004 (NIOSH Publication No. 97-140, fourth printing with changes and updates).
2. "--" = concentration limit not available; exposure should be minimized to the extent feasible through appropriate engineering controls & PPE.

Explanation:

IDLH = Immediately Dangerous to Life or Health.

ND indicates that an IDLH has not as yet been determined.

TLV = Threshold Limit Value, established by American Conference of Industrial Hygienists (ACGIH), equals the maximum exposure concentration allowable for 8 hours/day @ 40 hours/week.

TLVs are the amounts of chemicals in the air that almost all healthy adult workers are predicted to be able to tolerate without adverse effects. There are three types.

TLV-TWA (TLV-Time-Weighted Average) which is averaged over the normal eight-hour day/forty-hour work week. (Most TLVs.)

TLV-C or Ceiling limits are the concentration that should not be exceeded during any part of the working exposure.

Unless the initials "STEL" or "C" appear in the Code column, the TLV value should be considered to be the eight-hour TLV-TWA.

PEL = Permissible Exposure Limit, established by OSHA, equals the maximum exposure concentration allowable for 8 hours per day @ 40 hours per week



TABLE 2

**POTENTIAL ROUTES OF EXPOSURE TO THE
CONSTITUENTS OF POTENTIAL CONCERN**

**125 Main Street Site
Buffalo, New York**

Activity ¹	Direct Contact with Soil/Fill	Inhalation of Vapors or Dust	Direct Contact with Groundwater
Remedial Investigation Tasks			
1. Subsurface Soil Sampling	x	x	
2. Monitoring Well Installation/Development and Sampling	x	x	x
Interim Remedial Measures Tasks			
1. Soil Excavation	x	x	
2. Backfilling	x	x	
3. Verification Sampling	x	x	
4. Groundwater and Surface Water Management	x		x

Notes:

1. Activity as described in Section 1.5 of the Health and Safety Plan.



TABLE 3
REQUIRED LEVELS OF PROTECTION
FOR RI/IRM TASKS

125 Main Stree Site
Buffalo, New York

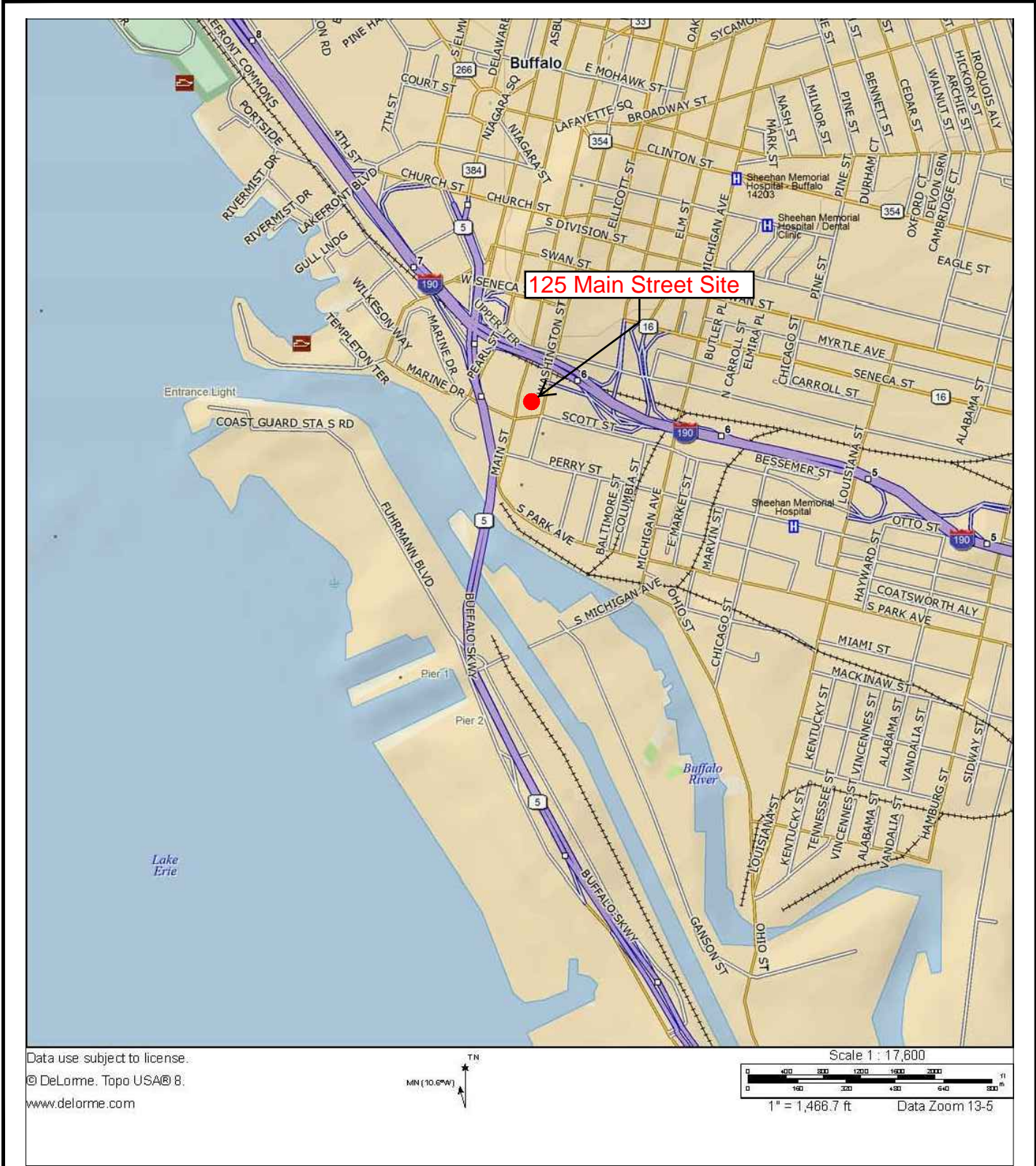
Activity	Respiratory Protection ¹	Clothing	Gloves ²	Boots ^{2,3}	Other Required PPE/Modifications ^{2,4}
Remedial Investigation Tasks					
1. Subsurface Soil Sampling	Level D (upgrade to Level C if necessary)	Work Uniform or Tyvek	L/N	outer: L inner: STSS	HH SGSS
2. Monitoring Well Installation/Development and Sampling	Level D (upgrade to Level C if necessary)	Work Uniform or Tyvek	L/N	outer: L inner: STSS	SGSS
Interim Remedial Measures Tasks					
1. Soil Excavation	Level D (upgrade to Level C if necessary)	Work Uniform or Tyvek	L/N	outer: L inner: STSS	HH SGSS
2. Backfilling	Level D (upgrade to Level C if necessary)	Work Uniform or Tyvek	L/N	outer: L inner: STSS	HH SGSS
3. Verification Sampling	Level D (upgrade to Level C if necessary)	Work Uniform or Tyvek	L/N	outer: L inner: STSS	HH SGSS
4. Groundwater and Surface Water Management	Level D (upgrade to Level C if necessary)	Work Uniform or Tyvek	L/N	outer: L inner: STSS	HH SGSS

Notes:

1. Respiratory equipment shall conform to guidelines presented in Section 7.0 of this HASP. The Level C requirement is an air-purifying respirator equipped with organic compound/acid gas/dust cartridge.
2. HH = hardhat; L= Latex; L/N = latex inner glove, nitrile outer glove; N = Nitrile; S = Saranex; SG = safety glasses; SGSS = safety glasses with sideshields; STSS = steel toe safety shoes.
3. Latex outer boot (or approved overboot) required whenever contact with contaminated materials may occur. SSHO may downgrade to STSS (steel-toed safety shoes) if contact will be limited to cover/replacement soils.
4. Dust masks shall be donned as directed by the SSHO (site safety and health officer) or site safety technician whenever potentially contaminated airborne particulates (i.e., dust) are present in significant amounts in the breathing zone. Goggles may be substituted with safety glasses w/side-shields whenever contact with contaminated liquids is not anticipated.

FIGURES

FIGURE 1



2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0635

SITE LOCATION AND LOCATION MAP

125 MAIN STREET SITE

BUFFALO, NEW YORK

PREPARED FOR

HARBOR DISTRICT ASSOCIATES, LLC.

PROJECT NO.: 0105-012-001

DATE: FEBRUARY 2012

DRAFTED BY: JGT



Base Image per Bing Maps

— Parcel Boundary per GIS (Approximate)

Not to Scale



2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0635

SITE PLAN ☐ AERIAL ☐

125 MAIN STREET SITE

BUFFALO, NEW YORK

PREPARED FOR

HARBOR DISTRICT ASSOCIATES, LLC.

PROJECT NO.: 0105-012-001

DATE: FEBRUARY 2012

DRAFTED BY: JGT

FIGURE



ATTACHMENT A

EMERGENCY RESPONSE PLAN

EMERGENCY RESPONSE PLAN
for
BROWNFIELD CLEANUP PROGRAM
RI/IRM ACTIVITIES

125 MAIN STREET SITE
BUFFALO, NEW YORK

February 2012

0105-012-001

Prepared for:

Harbor District Associates, LLC.
570 Delaware Avenue
Buffalo, New York 14202

125 MAIN STREET SITE
HEALTH AND SAFETY PLAN FOR RI/IRM ACTIVITIES
APPENDIX A: EMERGENCY RESPONSE PLAN

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1.0 GENERAL

This report presents the site-specific Emergency Response Plan (ERP) referenced in the Site Health and Safety Plan (HASP) prepared for Remedial Investigation (RI) and Interim Remedial Measures (IRM) activities at the 125 Main Street Site in Buffalo, New York. This appendix of the HASP describes potential emergencies that may occur at the Site; procedures for responding to those emergencies; roles and responsibilities during emergency response; and training all workers must receive in order to follow emergency procedures. This ERP also describes the provisions this Site has made to coordinate its emergency response planning with other contractors on-site and with off-site emergency response organizations.

This ERP is consistent with the requirements of 29 CFR 1910.120(l) and provides the following site-specific information:

- Pre-emergency planning.
- Personnel roles, lines of authority, and communication.
- Emergency recognition and prevention.
- Safe distances and places of refuge.
- Evacuation routes and procedures.
- Decontamination procedures.
- Emergency medical treatment and first aid.
- Emergency alerting and response procedures.
- Critique of response and follow-up.
- Emergency personal protective equipment (PPE) and equipment.

2.0 PRE-EMERGENCY PLANNING

This Site has been evaluated for potential emergency occurrences, based on site hazards, the required work tasks, the site topography, and prevailing weather conditions. The results of that evaluation indicate the potential for the following site emergencies to occur at the locations indicated.

Type of Emergency:

1. Medical, due to physical injury

Source of Emergency:

1. Slip/trip/fall

Location of Source:

1. Non-specific

3.0 ON-SITE EMERGENCY RESPONSE EQUIPMENT

Emergency procedures may require specialized equipment to facilitate worker rescue, contamination control and reduction, or post-emergency clean up. Emergency response equipment available on the Site is listed below. The equipment inventory and storage locations are based on the potential emergencies described above. This equipment inventory is designed to meet on-site emergency response needs and any specialized equipment needs that off-site responders might require because of the hazards at this Site but not ordinarily stocked.

Any additional personal protective equipment (PPE) required and stocked for emergency response is also listed in below. During an emergency, the Emergency Response Coordinator (ERC) is responsible for specifying the level of PPE required for emergency response. At a minimum, PPE used by emergency responders will comply with Section 7.0, Personal Protective Equipment, of this HASP. Emergency response equipment is inspected at regular intervals and maintained in good working order. The equipment inventory is replenished as necessary to maintain response capabilities.

Emergency Equipment	Quantity	Location
First Aid Kit	1	Site Vehicle
Chemical Fire Extinguisher	2 (minimum)	All heavy equipment and Site Vehicle

Emergency PPE	Quantity	Location
Full-face respirator	1 for each worker	Site Vehicle
Chemical-resistant suits	4 (minimum)	Site Vehicle

4.0 EMERGENCY PLANNING MAPS

An area-specific map of the Site will be developed on a daily basis during performance of field activities. The map will be marked to identify critical on-site emergency planning information, including: emergency evacuation routes, a place of refuge, an assembly point, and the locations of key site emergency equipment. Site zone boundaries will be shown to alert responders to known areas of contamination. There are no major topographical features, however the direction of prevailing winds/weather conditions that could affect emergency response planning are also marked on the map. The map will be posted at site-designated place of refuge and inside the TurnKey personnel field vehicle.

5.0 EMERGENCY CONTACTS

The following identifies the emergency contacts for this ERP.

Emergency Telephone Numbers:

Project Manager: *Michael Lesakowski*

Work: (716) 856-0599

Mobile: (716) 818-3954

Corporate Health and Safety Director: *Thomas H. Forbes*

Work: (716) 856-0599

Mobile: (716) 864-1730

Site Safety and Health Officer (SSHO): *Bryan C. Hann*

Work: (716) 856-0635

Mobile: (716) 870-1165

Alternate SSHO: *Nathan Munley*

Work: (716) 856-0635

Mobile: (716) 289-1072

Buffalo General Hospital (ER): (716) 856-3600

FIRE: 911

AMBULANCE: 911

BUFFALO POLICE: 911

STATE EMERGENCY RESPONSE HOTLINE: (800) 457-7362

NATIONAL RESPONSE HOTLINE: (800) 424-8802

NYSDOH: (716) 847-4385

NYSDEC: (716) 851-7220

NYSDEC 24-HOUR SPILL HOTLINE: (800) 457-7252

The Site location is:

125 Main Street Site

125 Main Street

Buffalo, New York 14203

Site Phone Number: (Insert Cell Phone or Field Trailer): _____

6.0 EMERGENCY ALERTING & EVACUATION

Internal emergency communication systems are used to alert workers to danger, convey safety information, and maintain site control. Any effective system can be employed. Two-way radio headsets or field telephones are often used when work teams are far from the command post. Hand signals and air-horn blasts are also commonly used. Every system must have a backup. It shall be the responsibility of each contractor's Site Health and Safety Officer to ensure all personnel entering the site understand an adequate method of internal communication. Unless all personnel are otherwise informed, the following signals shall be used.

- 1) Emergency signals by portable air horn, siren, or whistle: two short blasts, personal injury; continuous blast, emergency requiring site excavation.
- 2) Visual signals: hand gripping throat, out of air/cannot breathe; hands on top of head, need assistance; thumbs up, affirmative/ everything is OK; thumbs down, no/negative; grip partner's wrist or waist, leave area immediately.

If evacuation notice is given, site workers leave the worksite with their respective buddies, if possible, by way of the nearest exit. Emergency decontamination procedures detailed in Section 12.0 of the HASP are followed to the extent practical without compromising the safety and health of site personnel. The evacuation routes and assembly area will be determined by conditions at the time of the evacuation based on wind direction, the location of the hazard source, and other factors as determined by rehearsals and inputs from emergency response organizations. Wind direction indicators are located so that workers can determine a safe up wind or cross wind evacuation route and assembly area if not informed by the emergency response coordinator at the time the evacuation alarm sounds. Since work conditions and work zones within the site may be changing on daily basis, it shall be the responsibility of the construction Site Health and Safety Officer to review evacuation routes and procedures as necessary and to inform all TurnKey-Benchmark workers of any changes.

Personnel exiting the site will gather at a designated assembly point. To determine that everyone has successfully exited the site, personnel will be accounted for at the assembly

HEALTH & SAFETY PLAN
APPENDIX A: EMERGENCY RESPONSE PLAN

site. If any worker cannot be accounted for, notification is given to the SSHO (***Bryan Hann*** or ***Nathan Munley***) so that appropriate action can be initiated. Contractors and subcontractors on this site have coordinated their emergency response plans to ensure that these plans are compatible and that source(s) of potential emergencies are recognized, alarm systems are clearly understood, and evacuation routes are accessible to all personnel relying upon them.

7.0 EXTREME WEATHER CONDITIONS

In the event of adverse weather conditions, the Site Safety and Health Officer in conjunction with the Contractor's SSHO will determine if engineering operations can continue without sacrificing the health and safety of site personnel. Items to be considered prior to determining if work should continue include but are not limited to:

- Potential for heat/cold stress.
- Weather-related construction hazards (e.g., flooding or wet conditions producing undermining of structures or sheeting, high wind threats, etc).
- Limited visibility.
- Potential for electrical storms.
- Limited site access/egress (e.g., due to heavy snow)

8.0 EMERGENCY MEDICAL TREATMENT & FIRST AID

Personnel Exposure:

The following general guidelines will be employed in instances where health impacts threaten to occur acute exposure is realized:

- **Skin Contact:** Use copious amounts of soap and water. Wash/rinse affected area for at least 15 minutes. Decontaminate and provide medical attention. Eyewash stations will be provided on site. If necessary, transport to Buffalo General Hospital.
- **Inhalation:** Move to fresh air and, if necessary, transport to Hospital.
- **Ingestion:** Decontaminate and transport to Hospital.

Personal Injury:

Minor first-aid will be applied on-site as deemed necessary. In the event of a life threatening injury, the individual should be transported to Hospital via ambulance. The Site Health and Safety Officer will supply available chemical specific information to appropriate medical personnel as requested.

First aid kits will conform to Red Cross and other applicable good health standards, and shall consist of a weatherproof container with individually sealed packages for each type of item. First aid kits will be fully equipped before being sent out on each job and will be checked weekly by the SSHO to ensure that the expended items are replaced.

Directions to Mercy Hospital of Buffalo (see Figure 1):

The following directions describe the best route from the Site to Buffalo General Hospital:

- Travel east on Scott Street (266 feet)
- Turn left onto Washington Street (0.3 miles)
- Turn right onto Swan Street (335 feet)
- Turn left onto Ellicott Street (1.3 miles)
- Turn right onto High Street (210 feet)
- Hospital on the left (100 High Street)

9.0 EMERGENCY RESPONSE CRITIQUE & RECORD KEEPING

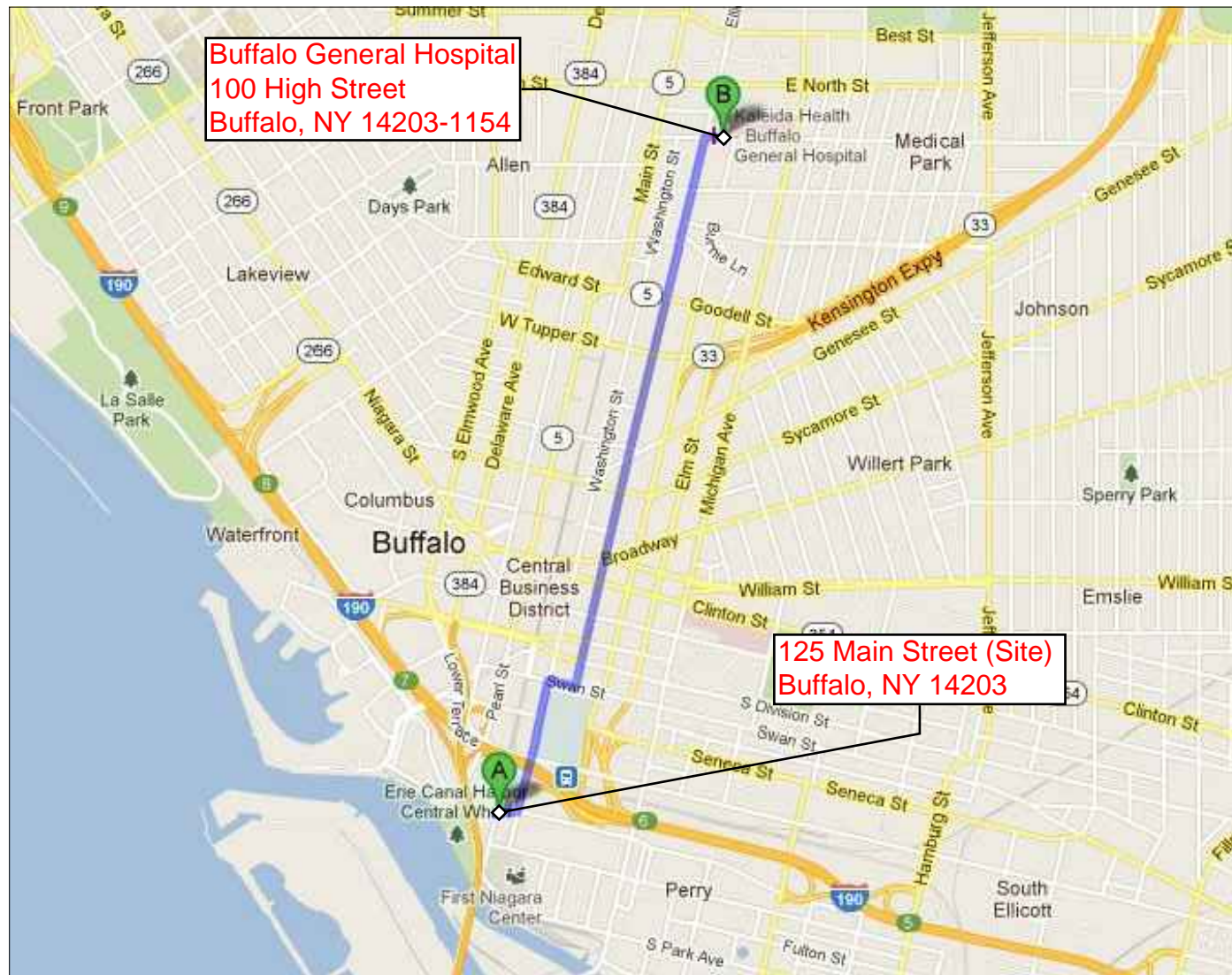
Following an emergency, the SSHO and Project Manager shall review the effectiveness of this Emergency Response Plan (ERP) in addressing notification, control and evacuation requirements. Updates and modifications to this ERP shall be made accordingly. It shall be the responsibility of each contractor to establish and assure adequate records of the following:

- Occupational injuries and illnesses.
- Accident investigations.
- Reports to insurance carrier or State compensation agencies.
- Reports required by the client.
- Records and reports required by local, state, federal and/or international agencies.
- Property or equipment damage.
- Third party injury or damage claims.
- Environmental testing logs.
- Explosive and hazardous substances inventories and records.
- Records of inspections and citations.
- Safety training.

10.0 EMERGENCY RESPONSE TRAINING

All persons who enter the worksite, including visitors, shall receive a site-specific briefing about anticipated emergency situations and the emergency procedures by the SSHO. Where this site relies on off-site organizations for emergency response, the training of personnel in those off-site organizations has been evaluated and is deemed adequate for response to this site.

FIGURES



Buffalo General Hospital:
From Site:

- Head East on Scott Street.
 - Turn Left onto Washington Street.
 - Turn Right onto Swan Street.
 - Turn Left onto Ellicott Street.
 - Turn Right onto High Street.
 - Hospital on Left
- (1.8 - Miles from Site)



2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0635

PROJECT NO.: 0105-012-001

DATE: FEBRUARY 2012

DRAFTED BY: JGT

HOSPITAL ROUTE MAP

EMERGENCY RESPONSE PLAN

125 MAIN STREET SITE

BUFFALO, NEW YORK

PREPARED FOR

HARBOR DISTRICT ASSOCIATES, LLC.

FIGURE 1

ATTACHMENT B

HOT WORK PERMIT FORM



HOT WORK PERMIT

PART 1 - INFORMATION

Issue Date:

Date Work to be Performed: Start:

Finish (permit terminated):

Performed By:

Work Area:

Object to be Worked On:

PART 2 - APPROVAL

(for 1, 2 or 3: mark Yes, No or NA)*

Will working be on or in:

Finish (permit terminated):

1. Metal partition, wall, ceiling covered by combustible material? yes no

2. Pipes, in contact with combustible material? yes no

3. Explosive area? yes no

* = If any of these conditions exist (marked "yes"), a permit will not be issued without being reviewed and approved by Thomas H. Forbes (Corporate Health and Safety Director). Required Signature below.

PART 3 - REQUIRED CONDITIONS**

(Check all conditions that must be met)

PROTECTIVE ACTION		PROTECTIVE EQUIPMENT	
<input type="checkbox"/>	Specific Risk Assessment Required	<input type="checkbox"/>	Goggles/visor/welding screen
<input type="checkbox"/>	Fire or spark barrier	<input type="checkbox"/>	Apron/fireproof clothing
<input type="checkbox"/>	Cover hot surfaces	<input type="checkbox"/>	Welding gloves/gauntlets/other:
<input type="checkbox"/>	Move movable fire hazards, specifically	<input type="checkbox"/>	Wellintons/Knee pads
<input type="checkbox"/>	Erect screen on barrier	<input type="checkbox"/>	Ear protection: Ear muffs/Ear plugs
<input type="checkbox"/>	Restrict Access	<input type="checkbox"/>	B.A.: SCBA/Long Breather
<input type="checkbox"/>	Wet the ground	<input type="checkbox"/>	Respirator: Type:
<input type="checkbox"/>	Ensure adequate ventilation	<input type="checkbox"/>	Cartridge:
<input type="checkbox"/>	Provide adequate supports	<input type="checkbox"/>	Local Exhaust Ventilation
<input type="checkbox"/>	Cover exposed drain/floor or wall cracks	<input type="checkbox"/>	Extinguisher/Fire blanket
<input type="checkbox"/>	Fire watch (must remain on duty during duration of permit)	<input type="checkbox"/>	Personal flammable gas monitor
<input type="checkbox"/>	Issue additional permit(s):	<input type="checkbox"/>	

Other precautions:

** Permit will not be issued until these conditions are met.

SIGNATURES

Originating Employee:

Date:

Project Manager:

Date:

Part 2 Approval:

Date:

ATTACHMENT C-1

NYSDOH GENERIC COMMUNITY AIR MONITORING PLAN

Appendix C1
New York State Department of Health
Generic Community Air Monitoring Plan

Overview

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical- specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate DEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. "Periodic" monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or

overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.
2. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.
3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.
4. All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed $150 \text{ mcg}/\text{m}^3$ above the upwind level and provided that no visible dust is migrating from the work area.

2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than $150 \text{ mcg}/\text{m}^3$ above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within $150 \text{ mcg}/\text{m}^3$ of the upwind level and in preventing visible dust migration.

3. All readings must be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

December 2009

ATTACHMENT C-2

FUGITIVE DUST

Appendix C2

Fugitive Dust and Particulate Monitoring

A program for suppressing fugitive dust and particulate matter monitoring at hazardous waste sites is a responsibility on the remedial party performing the work. These procedures must be incorporated into appropriate intrusive work plans. The following fugitive dust suppression and particulate monitoring program should be employed at sites during construction and other intrusive activities which warrant its use:

1. Reasonable fugitive dust suppression techniques must be employed during all site activities which may generate fugitive dust.
2. Particulate monitoring must be employed during the handling of waste or contaminated soil or when activities on site may generate fugitive dust from exposed waste or contaminated soil. Remedial activities may also include the excavation, grading, or placement of clean fill. These control measures should not be considered necessary for these activities.
3. Particulate monitoring must be performed using real-time particulate monitors and shall monitor particulate matter less than ten microns (PM10) with the following minimum performance standards:
 - (a) Objects to be measured: Dust, mists or aerosols;
 - (b) Measurement Ranges: 0.001 to 400 mg/m³ (1 to 400,000 :ug/m³);
 - (c) Precision (2-sigma) at constant temperature: +/- 10 :g/m³ for one second averaging; and +/- 1.5 g/m³ for sixty second averaging;
 - (d) Accuracy: +/- 5% of reading +/- precision (Referred to gravimetric calibration with SAE fine test dust (mmd= 2 to 3 :m, g= 2.5, as aerosolized);
 - (e) Resolution: 0.1% of reading or 1g/m³, whichever is larger;
 - (f) Particle Size Range of Maximum Response: 0.1-10;
 - (g) Total Number of Data Points in Memory: 10,000;
 - (h) Logged Data: Each data point with average concentration, time/date and data point number
 - (i) Run Summary: overall average, maximum concentrations, time/date of maximum, total number of logged points, start time/date, total elapsed time (run duration), STEL concentration and time/date occurrence, averaging (logging) period, calibration factor, and tag number;
 - (j) Alarm Averaging Time (user selectable): real-time (1-60 seconds) or STEL (15 minutes), alarms required;
 - (k) Operating Time: 48 hours (fully charged NiCd battery); continuously with charger;
 - (l) Operating Temperature: -10 to 50° C (14 to 122° F);
 - (m) Particulate levels will be monitored upwind and immediately downwind at the working site and integrated over a period not to exceed 15 minutes.
4. In order to ensure the validity of the fugitive dust measurements performed, there must be appropriate Quality Assurance/Quality Control (QA/QC). It is the responsibility of the remedial party to adequately supplement QA/QC Plans to include the following critical features: periodic instrument calibration, operator training, daily instrument performance (span) checks, and a record keeping plan.
5. The action level will be established at 150 ug/m³ (15 minutes average). While conservative,

this short-term interval will provide a real-time assessment of on-site air quality to assure both health and safety. If particulate levels are detected in excess of 150 ug/m³, the upwind background level must be confirmed immediately. If the working site particulate measurement is greater than 100 ug/m³ above the background level, additional dust suppression techniques must be implemented to reduce the generation of fugitive dust and corrective action taken to protect site personnel and reduce the potential for contaminant migration. Corrective measures may include increasing the level of personal protection for on-site personnel and implementing additional dust suppression techniques (see paragraph 7). Should the action level of 150 ug/m³ continue to be exceeded work must stop and DER must be notified as provided in the site design or remedial work plan. The notification shall include a description of the control measures implemented to prevent further exceedances.

6. It must be recognized that the generation of dust from waste or contaminated soil that migrates off-site, has the potential for transporting contaminants off-site. There may be situations when dust is being generated and leaving the site and the monitoring equipment does not measure PM₁₀ at or above the action level. Since this situation has the potential to allow for the migration of contaminants off-site, it is unacceptable. While it is not practical to quantify total suspended particulates on a real-time basis, it is appropriate to rely on visual observation. If dust is observed leaving the working site, additional dust suppression techniques must be employed. Activities that have a high dusting potential--such as solidification and treatment involving materials like kiln dust and lime--will require the need for special measures to be considered.

7. The following techniques have been shown to be effective for the controlling of the generation and migration of dust during construction activities:

- (a) Applying water on haul roads;
- (b) Wetting equipment and excavation faces;
- (c) Spraying water on buckets during excavation and dumping;
- (d) Hauling materials in properly tarped or watertight containers;
- (e) Restricting vehicle speeds to 10 mph;
- (f) Covering excavated areas and material after excavation activity ceases; and
- (g) Reducing the excavation size and/or number of excavations.

Experience has shown that the chance of exceeding the 150ug/m³ action level is remote when the above-mentioned techniques are used. When techniques involving water application are used, care must be taken not to use excess water, which can result in unacceptably wet conditions. Using atomizing sprays will prevent overly wet conditions, conserve water, and provide an effective means of suppressing the fugitive dust.

8. The evaluation of weather conditions is necessary for proper fugitive dust control. When extreme wind conditions make dust control ineffective, as a last resort remedial actions may need to be suspended. There may be situations that require fugitive dust suppression and particulate monitoring requirements with action levels more stringent than those provided above. Under some circumstances, the contaminant concentration and/or toxicity may require additional monitoring to protect site personnel and the public. Additional integrated sampling and chemical analysis of the dust may also be in order. This must be evaluated when a health and safety plan is developed and when appropriate suppression and monitoring requirements are established for protection of health and the environment.

Appendix G

EnSol, Inc. *Environmental Solutions*

professional engineering – business consulting

Site-Wide Inspection Form

SITE WIDE INSPECTION FORM

PROJECT:	DATE:
CLIENT:	SHEET NO. OF PROJECT NO.:
LOCATION:	DAY OF WEEK: S M T W T F S
REPORT BY:	
WEATHER: Wind from: N NE E SE S SW W NW at ____ mph Sunny Partly Sunny Partly Cloudy Cloudy Overcast Sprinkles Showers Thunderstorms Other _____	TEMPERATURE: LOW HIGH

GENERAL SITE CONDITIONS:
COMPLIANCE WITH / EVALUATION OF I.C.s and E.C.s:
SITE MANAGEMENT ACTIVITIES (sampling, H&S Inspection, etc.):
COMPLIANCE WITH PERMITS AND O&M PLAN:
RECORDS COMPLIANCE:
GENERAL COMMENTS:
INSPECTION COMPLETED BY: (signature and date)