837 BAILEY AVE. SITE

ERIE COUNTY

BUFFALO, NEW YORK

SITE MANAGEMENT PLAN

NYSDEC Site Number: C915298

Prepared for:

Near Dingens, LLC

271 Dingens St., Buffalo, New York 14206

Prepared by:

EnSol, Inc.

661 Main St., Niagara Falls, New York 14301

716-285-3920

Revisions to Final Approved Site Management Plan:

Revision No.	Date Submitted	Summary of Revision	NYSDEC Approval Date

DECEMBER 2019

CERTIFICATION STATEMENT

I, Brian D. Shiah, certify that I am currently a NYS registered professional engineer as defined in 6 NYCRR Part 375 and that this Site Management Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

_____ P.E. #079072

12/2/19 DATE

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SITE MANAGEMENT PLAN

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List of Acronyms

AS	Air Sparging
ASP	Analytical Services Protocol
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CAMP	Community Air Monitoring Plan
C/D	Construction and Demolition
CFR	Code of Federal Regulation
CLP	Contract Laboratory Program
COC	Certificate of Completion
CO2	Carbon Dioxide
CP	Commissioner Policy
DER	Division of Environmental Remediation
EC	Engineering Control
ECL	Environmental Conservation Law
ELAP	Environmental Laboratory Approval Program
ERP	Environmental Restoration Program
EWP	Excavation Work Plan
GHG	Green House Gas
GWE&T	Groundwater Extraction and Treatment
HASP	Health and Safety Plan
IC	Institutional Control
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYCRR	New York Codes, Rules and Regulations
O&M	Operation and Maintenance
OM&M	Operation, Maintenance and Monitoring
OSHA	Occupational Safety and Health Administration
OU	Operable Unit
PID	Photoionization Detector
PRP	Potentially Responsible Party
PRR	Periodic Review Report
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
RAO	Remedial Action Objective
RAWP	Remedial Action Work Plan
RCRA	Resource Conservation and Recovery Act
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RP	Remedial Party
RSO	Remedial System Optimization
SAC	State Assistance Contract
SCG	Standards, Criteria and Guidelines

SCO	Soil Cleanup Objective
SMP	Site Management Plan
SOP	Standard Operating Procedures
SOW	Statement of Work
SPDES	State Pollutant Discharge Elimination System
SSD	Sub-slab Depressurization
SVE	Soil Vapor Extraction
SVI	Soil Vapor Intrusion
TAL	Target Analyte List
TCL	Target Compound List
TCLP	Toxicity Characteristic Leachate Procedure
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VCA	Voluntary Cleanup Agreement
VCP	Voluntary Cleanup Program

ES EXECUTIVE SUMMARY

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

Site Identification: BCP Site No.C915298

837 Bailey Ave. Site

837 Bailey Ave., Buffalo, NY

Institutional Controls:	1. The property may be used for commercial or industrial use;
	2. All ICs must be maintained as specified in this SMP;
	3. All ECs must be operated and maintained as specified in this SMP;
	4. All ECs must be inspected at a frequency and in a manner defined in the SMP;
	4. Use of groundwater underlying the site is prohibited without necessary treatment/approvals per NYSDOH and/or Erie County DOH;
	5. Groundwater and other environmental or public health monitoring must be performed as defined in this SMP;
	6. Data and information pertinent to site management must be reported as defined in this SMP;
	7. All future activities that will disturb remaining contaminated material must be conducted in accordance with this SMP;
	8. Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in this SMP;
	7. Maintenance, inspection, and reporting of the cover system shall be performed as defined in this SMP;
	8. Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice, and;
	9. Vegetable gardens and farming on the site are prohibited.

Site Identification: BCP Site No.C915298
837 Bailey Ave. Site
837 Bailey Ave., Buffalo, NY

Engineering Controls:	1. Cover system	
Inspections:		Frequency
1. Cover inspection		Annually
Maintenance:		
1. Cover System		As needed
Reporting:		
1. Periodic Review Report		Annually

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

1.0 INTRODUCTION

1.1 General

This Site Management Plan (SMP) is a required element of the remedial program for the 837 Bailey Ave. Site located in Buffalo, New York (hereinafter referred to as the "Site"). See **Figure 1**, Vicinity Location Map. The Site is currently in the New York State (NYS) Brownfield Cleanup Program (BCP) Site No. C915298 which is administered by New York State Department of Environmental Conservation (NYSDEC).

Near Dingens, LLC (Near Dingens) entered into a Brownfield Cleanup Agreement (BCA) on February 4, 2016 with the NYSDEC to remediate the site. It should be noted that the original BCA included two adjacent properties; 837 Bailey Ave. and 79 Dingens Street. Based primarily upon the findings of the 2016 Remedial Investigation (RI) a BCA Amendment Application (Amendment) was submitted to the NYSDEC for the removal of the 79 Dingens Street parcel from the BCA. The Amendment was approved by the NYSDEC on March 16, 2017. A figure showing the site location and boundaries of this site is provided in **Figure 1**. The boundaries of the site are more fully described in the metes and bounds site description that is part of the Environmental Easement provided in **Appendix A**.

After completion of the remedial work, some contamination was left at this site, which is hereafter referred to as "remaining contamination". Institutional and Engineering Controls (ICs and ECs) have been incorporated into the site remedy to control exposure to remaining contamination to ensure protection of public health and the environment. An Environmental Easement granted to the NYSDEC, and recorded with the Erie County Clerk, requires compliance with this SMP and all ECs and ICs placed on the site.

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

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

It is important to note that:

- This SMP details the site-specific implementation procedures that are required by the 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);
- Failure to comply with this SMP is also a violation of Environmental Conservation Law, 6NYCRR Part 375 and the BCA (Index #C915298-11-15; Site #C915298) for the site, and thereby subject to applicable penalties.

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

This SMP was prepared by EnSol, Inc., on behalf of Near Dingens, in accordance with the requirements of the NYSDEC's DER-10 ("Technical Guidance for Site Investigation and Remediation"), dated May, 2010, and the guidelines provided by the NYSDEC. This SMP addresses the means for implementing the ICs and/or ECs that are required by the Environmental Easement for the site.

1.2 Revisions

Revisions to this plan will be proposed in writing to the NYSDEC's project manager. Revisions will be necessary upon, but not limited to, the following occurring: a change in media monitoring requirements, upgrades to or shut-down of a remedial system, post-remedial removal of contaminated sediment or soil, or other significant change to the site conditions. 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.

1.3 Notifications

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

- 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 field activity associated with the remedial program.
- 15-day advance notice of any proposed ground-intrusive activity pursuant to the Excavation Work Plan.
- Notice within 48-hours of any damage or defect to the foundation, structures or EC that reduces or has the potential to reduce the effectiveness of an EC, and likewise, any action to be taken to mitigate the damage or defect.
- Verbal notice by noon of the following day of any emergency, such as a fire; flood; or earthquake that reduces or has the potential to reduce the effectiveness of ECs in place at the site, with written confirmation within 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 submitted to the NYSDEC within 45 days describing and documenting actions taken to restore the effectiveness of the ECs.

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

- At least 60 days prior to the change, the NYSDEC will be notified in writing of the proposed change. This will include a certification that the prospective purchaser/Remedial Party has been provided with a copy of the Brownfield Cleanup Agreement (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 to the NYSDEC.

Table 1 below includes contact information for the above notification. The information on this table will be updated as necessary to provide accurate contact information. A full listing of site-related contact information is provided in **Appendix B**.

Table 1: Notifications*

Name	**Contact Information**
NYSDEC Project Manager; Jaspal Walia	716-851-7220; Jaspal.walia@dec.ny.gov
NYSDEC Regional HW Engineer; Chad Staniszewski	716-851-7220; chad.staniszewski@dec.ny.gov
NYSDEC Site Control; Kelly Lewandowski	518-402-9543; kelly.lewandowski@dec.ny.gov

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

2.0 SUMMARY OF PREVIOUS INVESTIGATIONS AND REMEDIAL ACTIONS

2.1 Site Location and Description

The site is located in Buffalo, Erie County, New York and is identified as Section 112.80 Block 1 and Lot 12.1 on the Erie County Tax Map (see **Figure 2**). The site is an approximately 8.74-acre area and is bounded by multiple residential and commercial properties to the north, multiple residential and commercial properties to the south, commercial properties to the east, and Bailey Avenue to the west (see **Figure 2** – Site Layout Map). The boundaries of the site are more fully described in **Appendix A** – Environmental Easement. The owner(s) of the site parcel(s) at the time of issuance of this SMP is/are:

Near Dingens, LLC

2.2 Physical Setting

2.2.1 Land Use

The Site is zoned commercial and is currently vacant with no on-site structures.

The properties adjoining the Site and in the neighborhood surrounding the Site primarily include a mixture of residential and commercial properties. The properties immediately south of the Site include primarily residential properties with a vacant commercial lot present at the eastern extent of the southern boundary. The properties immediately north of the Site include residential properties along the western portion of the northern boundary and commercial properties along the eastern portion of the northern boundary properties. The properties immediately east of the Site include a railroad berm and the New York State Department of Transportation (NYSDOT) equipment yard. The properties to the west of the Site include commercial properties across Bailey Avenue.

2.2.2 Geology

The geology at the site was investigated during the RI and is generally described as fill materials, mainly C&D, ash, and cinder overlying native lean clay. In general, native clay is present at an approximate depth of eight feet below grade (ftbg). Geologic cross sections are shown in Figures 3A-3C. Site specific boring logs are provided in **Appendix C**. During a geotechnical investigation conducted at the Site (March 2016), bedrock was encountered at a depth of approximately 27 ftbg; however, the measurement was collected at one location and the depth across the site may vary. All other borings had a maximum depth of 20 ftbg and bedrock was not encountered.

2.2.3 Hydrogeology

Based on the groundwater gauging completed during the RI, localized groundwater flow was determined to be south/southwest based on the depth to groundwater measurements. Regional groundwater flow is assumed to be southerly towards the Buffalo River. A groundwater contour map is shown in **Figure 4**. Groundwater elevation data is provided in **Table 1**. Groundwater monitoring well construction logs are provided in **Appendix D**. The average depth to groundwater prior to the installation of the cover system was approximately four feet below grade. There are no known private or public water supply wells on, or in the vicinity of, the site.

2.3 Investigation and Remedial History

The following narrative provides a remedial history timeline and a brief summary of the available project records to document key investigative and remedial milestones for the Site. Full titles for each of the reports referenced below are provided in Section 8.0 - References.

ASTM E1527-13 All Appropriate Inquiries Phase I Environmental Site Assessment Report for the Property Identified as: Vacant Commercial Property 837 Bailey Avenue and 79 Dingens Street Buffalo, New York (LCS, Inc., November 14, 2014)

The Phase I Environmental Site Assessment of 837 Bailey Avenue and 79 Dingens Street, Buffalo, New York was performed in conformance with the scope and limitations of ASTM Practice E 1527. This assessment has revealed no evidence of recognized environmental conditions in connection with the property except for the following:

- A large portion of the subject property is cleared/filled land with mounded materials (including bricks, concrete, tires, vegetation, auto parts, wood, plastic, etc.). Significant areas of staining were noted on exterior soil and gravel surfaces. Historic property use was as an automotive repair and salvage/wrecking yard.

- The subject property is currently vacant but appears to have been used as an automotive facility; significant staining was noted on concrete floors within the structure. A floor drain with an unknown discharge point was noted in a vehicle bay.

- The subject property was used as an auto salvage/wrecking facility from at least 1940 to 2014.

- Automotive repair operations were conducted on-Site from at least 1946 to 1986.

- A former structure was used as a tire recapping facility in at least 1950.

- A filling station was on-Site in at least 1946-1950; three 2,000-gallon tanks were installed in 1946.

- A previous environmental assessment of the subject property completed in 2013 recommended a subsurface investigation.

- During the LCS Site inspection, a suspect vent pipe was noted east adjacent to the subject structure.

- According to the EDR report, the subject property was identified as a Solid Waste Facility, classified as active vehicle dismantling (J & J Auto Parts).

Draft Limited and Focused Geophysical Survey and Subsurface Soil/Fill and Groundwater Investigation Report for the Property Identified as: Vacant Commercial Property 837 Bailey Avenue and 79 Dingens Street Buffalo, New York (LCS, Inc., February 18, 2015)

- Based on the analytical results, petroleum-impacted soil and groundwater at concentrations above commonly applied NYSDEC criteria exist over a portion of the eastern property, proximate to test pit TP20 and temporary groundwater monitoring well TPMW3. The extent and significance of the petroleum impact are not known.

- Surficial fill materials (≤4 fbgs) in areas investigated contain metals and SVOCs

at concentrations above commonly applied regulatory criteria for commercial and/or industrial Site use. It is not clear if these exceedances are due to the historic on-Site operations or are characteristic of the C&D fill material present within most of the test pits excavated.

- Cinder fill material in areas investigated contain metals and SVOCs at concentrations above commonly applied regulatory criteria for commercial and/or industrial Site use; in LCS' experience, these exceedances are likely characteristic of the cinder fill material. LCS observed this cinder fill material within most of the test pits completed.

- Based on the analytical results, the samples of native clay submitted for laboratory analysis had not been impacted by the presence of the fill materials, or by historic on-Site operations, at levels above commonly applied regulatory criteria for unrestricted Site use.

- Based on the investigation conducted, further investigation would be needed to identify the extent and significance of the chemical impact identified proximate to test pit TP20 and temporary groundwater monitoring well TPMW3.

- In LCS' experience, the exceedances of SVOCs and metals in the fill samples submitted for analysis, and the relatively slight exceedances of SVOCs and aroclors in the groundwater samples submitted for analysis, are not uncommon on older, previously developed properties with industrial-type historic uses.

- LCS recommends completing test pits and/or boreholes proximate to the two geophysical anomalies identified proximate to the existing building during a ground penetrating radar (GPR) survey. In addition, the vent pipe should be further investigated; such would likely involve removal of concrete proximate to this vent pipe.

Memorandum – Summary of Subsurface Investigation (Test Pits). 837 Bailey Ave./79 Dingens St., Buffalo, NY (EnSol, Inc., April 27, 2015)

- Based on the results of the 2015 LCS investigation, EnSol completed a subsurface investigation (SSI) at the referenced property to better characterize the extent of contamination and confirm results of the previous investigation. Additionally, EnSol sought to collect soil/fill samples from areas where elevated metals concentrations were previously found and complete Toxicity Leaching Characteristic Procedure (TCLP) analysis on select samples in order to determine if the soil/fill is characteristically hazardous. The SSI was also designed to investigate the two anomalies identified by the GPR survey.

- Test pits TP-001 through TP-006 were excavated at locations where the 2015 LCS investigation indicated the presence of metals at concentrations above SCOs. In general, the results of the test pitting at these located coincided with the

previously documented observations in the LCS report. All samples were analyzed for TCLP metals and two samples were selected for total metals analysis, based on the TCLP results.

- Test pit TP-007 was excavated in the northwestern corner of the property in order to fill in an apparent data gap from the 2015 LCS investigation. Subsurface lithology at this location consisted of a six-inch gravel drive underlain by tan to gray silt, with some sand and clay to a depth of approximately eight fbgs, the termination of the test pit. There were detections of various metals at concentrations below the respective NYSDEC Part 375 Unrestricted Use SCOs. There were no detections of SVOCs.

- Test pits TP-008 and TP-009 were excavated at the locations of the anomalies identified by the GPR survey, conducted during the 2015 LCS investigation. An abandoned in-place UST was encountered in TP-008 at the approximate location of the anomaly identified during the GPR survey. Inspection of an exposed fill port on the UST indicated that the UST is filled with concrete. A soil sample was collected from the native silt and clay located beneath the UST and was submitted for analysis of TCL VOCs, TCL SVOCs, and Total Metals. There were no VOCs or SVOCs reported above their respective laboratory method detection limits. There were multiple detections of metals and the reported concentration of arsenic (19.6 mg/kg) is above the respective Unrestricted Use (13 ppm), Restricted Commercial Use (16 ppm), and Industrial Use (16 ppm) SCOs. EnSol did not observe any signs of a UST at TP-009. Excavated materials from this location consisted primarily of brick. It is possible that the concentrated mass of brick resulted in a "false hit" on the GPR survey.

- All photo-ionization detector (PID) screening results were non-detect and there were no visual or olfactory indicators of petroleum impacts in any soil sample.

Remedial Investigation/Alternative Analysis (RI/AA) Report. 837 Bailey Ave., Buffalo, NY (EnSol, Inc., July, 2019)

- Remedial investigation activities were conducted in March-July 2016 and consisted of; installation of soil borings and the collection and analysis of soil samples (from each fill layer), installation of soil vapor monitoring points and the collection and analysis of soil vapor samples, installation of groundwater monitoring wells and the collection and analysis of groundwater samples (including from previously installed monitoring wells), and the collection and analysis of surface soil samples.

- Soil sample and surface soil sample analytical results indicated concentrations of SVOCs and/or metals (specifically lead, mercury, and arsenic) in excess of the Part 375 Commercial Use SCOs at multiple locations. As a result, Site-Specific SCOs for the compounds were promulgated in collaboration with the NYSDEC and are as follows:
    - Total SVOCs- 500 mg/kg

- Arsenic – 75 mg/kg
- Lead – 5,000 mg/kg
- Mercury – 5.7 mg/kg (Commercial SCO)

- Soil sample analytical data from ten soil borings exhibited contaminant concentration in excess of the Site-Specific SCOs. These locations are those that were the focus of the IRM as described below.

- All RI sample locations are depicted on **Figure 5** and a summary of all RI soil boring and surface soil analytical data is included as **Table 2**. For depictions of samples that exhibited exceedances of Commercial Use SCOs refer to **Figures 6A, 6B, and 6C** for shallow/C&D fill, deep/ash & cinder fill, and surface soil samples respectively.

- Groundwater samples exhibited concentrations of various SVOCs and Metals above GWQS values. A summary of groundwater analytical results is included as **Table 3**

- A summary of soil vapor analytical results is included as **Table 4**. None of the seven VOCs addressed under NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York (October 2006/June 25, 2007 Update Memo) were detected.

- Final remedial alternatives of No Further Action, Complete Soil/Fill Removal, and Fence Re-Location/Cover System Installation/SMP Implementation were evaluated.

- In conjunction with the IRM activities previously completed, and described below, the 3rd Altern ative of Fence Re-Location/Cover System Installation/SMP Implementation was selected. The former site perimeter fence was not installed on the property line abutting residential properties to the north along Dingens Street and to the south along Peru Place. In order to eliminate potential for public exposure to site soils, the fence was relocated to the actual property line. A one foot thick soil cover system was installed over the entire property to prevent public exposure to soil and surface soil contaminates remaining on-site.

Interim Remedial Measures (IRM) Report. 837 Bailey Ave., Buffalo, NY (EnSol, Inc., July, 2019)

- During the period of May through July 2016 all existing on-site debris piles were removed from the site and disposed. The following summarizes the disposal quantity and disposal facility by debris type:

Debris Disposal Summary:

Debris Type	Disposal Quantity	Disposal Facility
C&D	10.29 Tons	Battaglia Demolition

C&D	579.37 Tons	Modern Landfill
Concrete	195.77 Tons	Swift River Concrete
Wood Stumps	11 Truck Loads	Pariso Trucking
Tires	9 Truck Loads	Triple M Used Tires

- During the period of January through March 2017 additional subsurface investigations were performed in order to delineate areas of soil impacts above site-specific SCOs in the vicinity of the 10 soil boring locations identified by the RI.

- During the period of August through December 2017 IRM hot-spot excavations were completed to remove all impacted fill materials from the 10 locations identified by the RI.

- During the period of December 2018 through April 2019 additional subsurface investigation, hot-spot excavation, and material disposal activities were completed at SB-19:30'E.

- A total of 1,238 tons of contaminated fill materials were removed from the site during the IRM. All excavations were backfilled with clean clay obtained from the Town of Tonawanda general fill stockpile with approval from the NYSDEC.

- All IRM work locations are depicted on **Figure 7**. Analytical data summaries for each IRM hot-spot excavation area are included as **Tables 5 through 12** as well as **Figures 8A through 8E**.

2.4 Remedial Action Objectives

The Remedial Action Objectives (RAOs) for the Site as listed in the Decision Document dated July 2019 are as follows:

Groundwater

RAOs for Public Health Protection

- Prevent ingestion of, or contact with, groundwater with contaminant levels exceeding drinking water standards.

RAOs for Environmental Protection

- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.

RAOs for Environmental Protection

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

2.5 Remaining Contamination

2.5.1 Soil

Table 2 and **Figures 9A-9C** summarize the results of all soil samples collected that exceed the Unrestricted Use SCOs and the commercial Use SCOs at the site after completion of remedial action.

The following further describes remaining soil conditions following the completion of all remedial activities at the site:

- There are no identified impacts to native soils underlying the fill materials at the site.
- Surface soils and both the shallow C&D backfill layer and deeper ash and cinder backfill layer contain various SVOCs and Metals at concentrations exceeding Unrestricted and Commercial Use SCOs.
- There are no identified VOC, PCB, Pesticides or Herbicide impacts to any site soils.
- The elevations of the top of remaining soil contamination and the thickness of the remaining contamination are indicated on the cross sections included as **Figures 3A through 3C**.
- Assuming all remaining fill materials at the site exhibit some contamination above SCOs, there is approximately 186,000 cubic yards of contaminated material remaining below the cover system.
- A geotextile demarcation layer has been placed across the entire site between the underlying contaminated fill materials and the overlying one-foot thick soil cover system.

- There are no point sources of contamination as the contaminants are generally present within all fill materials. Therefore, there are no known areas of the site where contamination is significantly higher than other areas.
- There are no active utility lines or other subsurface infrastructure present at the site.
- There is no remaining contamination that was not remediated due to the presence of buildings or critical infrastructure.

2.5.2 Site-Specific Soil SCOs

As discussed in Section 2.3 above, site-specific SCOs for SVOCs, lead, arsenic, and mercury were developed prior to execution of the IRM. These site-specific SCOs are as follows:

- Total SVOCs- 500 mg/kg
- Arsenic – 75 mg/kg
- Lead – 5,000 mg/kg
- Mercury – 5.7 mg/kg (Commercial SCO)

2.5.3 Groundwater

Table 3 summarizes the results of all samples of groundwater that exceed the SCGs after completion of the remedial action. As indicated on **Table 3**, groundwater at the site contains concentrations of various SVOCs and Metals above GWQS standards.

2.5.4 Soil Vapor

Table 4 summarizes the results of all samples of soil vapor collected during the RI. Soil vapor sampling locations are indicated on **Figure 5**. Soil vapor sampling was performed as per NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York (October 2006, 2007 Update Memo). As indicated on **Table 4** the levels for methyl ethyl ketone were elevated with the highest value being 1500 ug/m^3.

3.0 INSTITUTIONAL AND ENGINEERING CONTROL PLAN

3.1 General

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

This plan provides:

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

3.2 Institutional Controls

A series of ICs is required by the Decision Document to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to remaining contamination; and, (3) limit the use and development of the site to commercial or industrial uses only. Adherence to these ICs on the site is required by the Environmental

Easement and will be implemented under this SMP. ICs identified in the Environmental Easement may not be discontinued without an amendment to or extinguishment of the Environmental Easement. The IC boundaries are shown on Figure 2. These ICs are:

- The property may be used for : commercial and/or industrial use;
- All ECs must be operated and maintained as specified in this SMP;
- All ECs must be inspected at a frequency and in a manner defined in the SMP.
- 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.
- Groundwater and other environmental or public health monitoring must be performed as defined in this SMP;
- Data and information pertinent to site management must be reported at the frequency and in a manner as defined in this SMP;
- All future activities that will disturb remaining contaminated material must be conducted in accordance with this SMP;
- Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in this SMP;
- Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in this SMP;
- Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Environmental Easement.
- The potential for vapor intrusion must be evaluated for any buildings developed in the area within the IC boundaries noted on Figure 2, and any potential impacts that are identified must be monitored or mitigated; and
- Vegetable gardens and farming on the site are prohibited;

3.3 Engineering Controls

3.3.1 Cover (or Cap)

Exposure to remaining contamination at the site is prevented by a cover system placed over the site. This cover system is comprised of a minimum of 12 inches of clean soil. Over the entire site footprint the cover system consists of a demarcation layer overlain by a minimum of six inches clean barrier soil and six inches of soil of sufficient quality to maintain vegetation. **Figure 10** presents the location of the cover system and applicable demarcation layers. The Excavation Work Plan (EWP) provided 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 of this cover are provided in the Monitoring and Sampling Plan included in Section 4.0 of this SMP. Any work conducted pursuant to the EWP must also be conducted in accordance with the procedures defined in a Health and Safety Plan (HASP) and associated Community Air Monitoring Plan (CAMP) prepared for the site and provided in Appendix F.

3.3.2 Criteria for Completion of Remediation/Termination of Remedial Systems

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

3.3.2.1 - Cover (or Cap)

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

4.0 MONITORING AND SAMPLING PLAN

4.1 Site – wide Inspection

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

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

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

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

Reporting requirements are outlined in Section 7.0 of this plan.

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

4.2 Soil Vapor Intrusion Sampling

Soil vapor intrusion sampling must be performed prior to the construction of any buildings on the site. Prior to the execution of any soil vapor intrusion sampling, the NYSDEC must be consulted in order to determine sample locations and frequency based upon the proposed building(s) development plan.

Modification to the frequency or sampling requirements will require approval from the NYSDEC. The sampling frequency may only be modified with the approval of the NYSDEC. This SMP will be modified to reflect changes in sampling plans approved by the NYSDEC.

All soil vapor intrusion sampling results must be provided to the NYSDEC for review. If deemed necessary by the NYSDEC, building development plans must incorporate mitigation measures to address the potential for soil vapor intrusion exposures. Deliverables for the soil vapor intrusion sampling program are specified in Section 7.0 – Reporting Requirements.

4.3 Monitoring and Sampling Protocol

All sampling activities will be recorded in a field book and associated sampling log as provided in Appendix G - Site Management Forms. Other observations (e.g., groundwater monitoring well integrity, etc.) will be noted on the sampling log. The sampling log will serve as the inspection form for the monitoring network. Additional details regarding monitoring and sampling protocols are provided in the site-specific Field Sampling Plan provided as Appendix H of this document.

5.0 OPERATION AND MAINTENANCE PLAN

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

6.0 PERIODIC ASSESSMENTS/EVALUATIONS

6.1 Climate Change Vulnerability Assessment

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

As the only EC implemented at the site is the soil cover system, there are no mechanical systems that are reliant upon electrical power nor are there other structures present that would be susceptible to damage from severe weather events other than the cover system itself. As indicated in Section 4.0 above, off-schedule inspections of the cover system will be conducted in response to severe weather events if necessary.

6.2 Green Remediation Evaluation

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

As the only EC implemented at the site is the soil cover system, the site will not; generate additional waste, use energy, produce emissions, or affect any ecosystem. Water may be used to establish the final vegetative cover during construction of the cover system but it is not anticipated to require continued watering in order to maintain the vegetative cover once established.

7.0. REPORTING REQUIREMENTS

7.1 Site Management Reports

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

All applicable inspection forms and other records, including media sampling data and system maintenance reports, generated for the site during the reporting period will be provided in electronic format to the NYSDEC in accordance with the requirements of **Table 16** and summarized in the Periodic Review Report.

Table 16: Schedule of Interim Monitoring/Inspection Reports

Task/Report	**Reporting Frequency***
Cover System Inspection	Annually (or as needed due to severe weather events)
Periodic Review Report	Annually

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

All interim monitoring/inspections reports will include, at a minimum:

- Date of event or reporting period;
- Name, company, and position of person(s) conducting monitoring/inspection activities;
- Description of the activities performed;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet);
- Type of samples collected (e.g., sub-slab vapor, indoor air, outdoor air, etc);

- Copies of all field forms completed (e.g., inspection form); and
- Sampling results in comparison to appropriate standards/criteria;
- A figure illustrating sample type and sampling locations;
- Copies of all laboratory data sheets and the required laboratory data deliverables required for all points sampled (to be submitted electronically in the NYSDEC-identified format);
- Any observations, conclusions, or recommendations; and
- A determination as to whether contaminant conditions have changed since the last reporting event.

7.2 Periodic Review Report

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

- Identification, assessment and certification of all ECs/ICs required by the remedy for the site.
- Results of the required annual site inspections and severe condition inspections, if applicable.
- All applicable site management forms and other records generated for the site during the reporting period in the NYSDEC-approved electronic format, if not previously submitted.
- A summary of any discharge monitoring data and/or information generated during the reporting period, with comments and conclusions.

- Data summary tables and graphical representations of contaminants of concern by media (groundwater, soil vapor, etc.), which include a listing of all compounds analyzed, along with the applicable standards, with all exceedances highlighted. These will include a presentation of past data as part of an evaluation of contaminant concentration trends.

- Results of all analyses, copies of all laboratory data sheets, and the required laboratory data deliverables for all samples collected during the reporting period will be submitted in digital format as determined by the NYSDEC. Currently, data is supplied electronically and submitted to the NYSDEC EQuIS^{TM} database in accordance with the requirements found at this link: http://www.dec.ny.gov/chemical/62440.html.

- A site evaluation, which includes the following:

  – The compliance of the remedy with the requirements of the site-specific Decision Document;

  – The overall performance and effectiveness of the remedy.

7.2.1 Certification of Institutional and Engineering Controls

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

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

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

- *The institutional control and/or engineering control employed at this site is unchanged from the date the control was put in place, or last approved by the Department;*

- *Nothing has occurred that would impair the ability of the control to protect the public health and environment;*

- *Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control;*

- *Access to the site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;*

- *If a financial assurance mechanism is required under the oversight document for the site, the mechanism remains valid and sufficient for the intended purpose under the document;*

- *Use of the site is compliant with the environmental easement;*

- *The engineering control systems are performing as designed and are effective;*

- *To the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program; and*

- *The information presented in this report is accurate and complete.*

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

Additionally, the following certification will be added every five years:

- *The assumptions made in the qualitative exposure assessment remain valid.*

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

The Periodic Review Report will be submitted, in electronic format, to the NYSDEC Central Office, Regional Office in which the site is located and the NYSDOH Bureau of Environmental Exposure Investigation. The Periodic Review Report may need to be submitted in hard-copy format, as requested by the NYSDEC project manager.

7.3 Corrective Measures Work Plan

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

8.0 REFERENCES

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

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

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

ASTM E1527-13 All Appropriate Inquiries Phase I Environmental Site Assessment Report for the Property Identified as: Vacant Commercial Property 837 Bailey Avenue and 79 Dingens Street Buffalo, New York (LCS, Inc., November 14, 2014)

Draft Limited and Focused Geophysical Survey and Subsurface Soil/Fill and Groundwater Investigation Report for the Property Identified as: Vacant Commercial Property 837 Bailey Avenue and 79 Dingens Street Buffalo, New York (LCS, Inc., February 18, 2015)

Memorandum – Summary of Subsurface Investigation (Test Pits). 837 Bailey Ave./79 Dingens St., Buffalo, NY (EnSol, Inc., April 27, 2015)

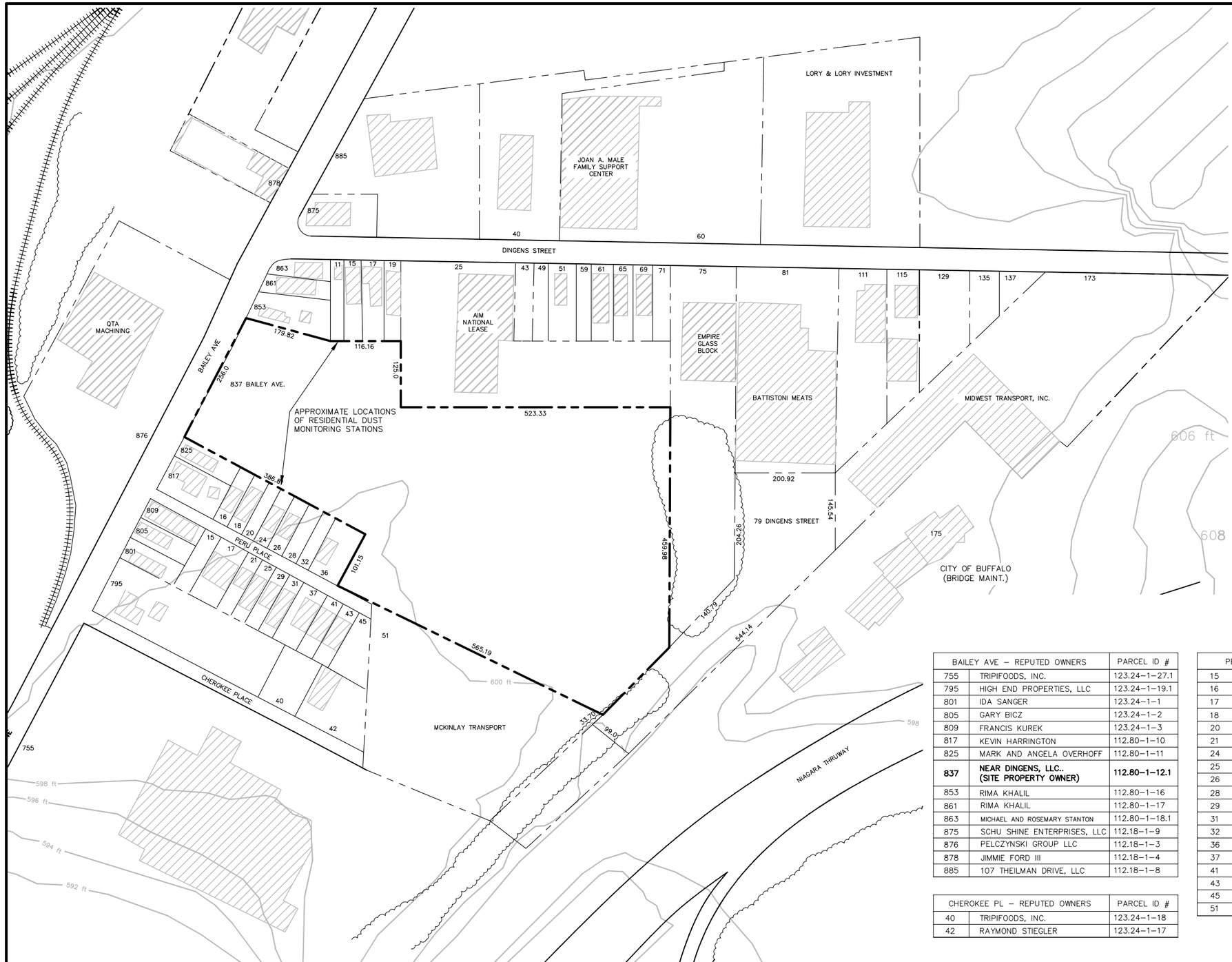
Remedial Investigation/Alternative Analysis (RI/AA) Report. 837 Bailey Ave., Buffalo, NY (EnSol, Inc., July, 2019)

Interim Remedial Measures (IRM) Report. 837 Bailey Ave., Buffalo, NY (EnSol, Inc., July, 2019)

FIGURES

NORTH

Project No.	15-0027-6	**EnSol, Inc.**	**VICINITY LOCATION MAP**
Date	July 2019	**Environmental Solutions** **661 Main St.** **Niagara Falls, NY 14301** **Phone:(716) 285-3920** **Fax: (716) 285-3928**	837 Bailey Ave. Site
Scale	NTS		Near Dingens, LLC — **Fig. 1**



LEGEND:

- PROPERTY LINE (BCP/IC BOUNDARY LINES)
- APPROXIMATE ADJACENT PROPERTY LINE
- EXISTING ROAD
- APPROXIMATED TREE LINE
- EX BUILDING/STRUCTURE

N

NOTES:

1. PROPERTY BOUNDARY INFORMATION BASED ON SURVEY BY THOMAS P. RYAN, L.S. P.C. TITLED "SURVEY A PART OF LOTS 10, 157 & 158 TOWNSHIP 10, RANGE 7, BCIR A PART OF OF SUBLOTS 21, 22, 23, L. 136, P. 109 CITY OF BUFFALO, ERIR COUNTY, NEW YORK" DATED OCTOBER 31, 2013 – JOB NO. 110053.
2. BOUNDING OWNER INFORMATION TAKEN FROM CITY OF BUFFALO REAL PROPERTY AND GIS MAPPING PARCEL VIEWER.
3. TOPOGRAPHIC AND PLANIMETRIC FEATURES FROM USGS 7.5–MINUTE QUADRANGLE MAP FOR CITY OF BUFFALO, DATED IN 2012.
4. EASEMENT GRANTED TO NIAGARA MOHAWK POWER CORPORATION AND NEW YORK TELEPHONE COMPANY BY INSTRUMENT DATES JUNE 13, 1963, AND RECORDED JUNE 24, 1963 IN LIBER 6897 OF DEEDS AT PAGE 140.
5. EASEMENTS, RESERVATIONS INCLUDING POSSIBLE RAILROAD TRACK RIGHTS CONTAINED IN QUIT CLAIM DEED DATES MARCH 20, 1985 AND RECORDED JULY 3, 1985 IN LIBER 9462 OF DEEDS AT PAGE 191
6. EASEMENT AGREEMENT BETWEEN BISON PRODUCTS CO., INC AND RICH SEAPAK CORPORATION BY INSTRUMENT DATED MARCH 15, 2005 AND RECORDED MARCH 15, 2005 IN LIBER 11092 OF DEEDS AT PAGE 2615; MODIFIED IN MODIFICATION OF EASEMENT AGREEMENT DATES FEBRUARY 10, 2010 AND RECORDED FEBRUARY 11, 2010 IN LIBER 11177 OF DEEDS AT PAGE 9255.

BAILEY AVE – REPUTED OWNERS		PARCEL ID #
755	TRIPIFOODS, INC.	123.24–1–27.1
795	HIGH END PROPERTIES, LLC	123.24–1–19.1
801	IDA SANGER	123.24–1–1
805	GARY BICZ	123.24–1–2
809	FRANCIS KUREK	123.24–1–3
817	KEVIN HARRINGTON	112.80–1–10
825	MARK AND ANGELA OVERHOFF	112.80–1–11
837	**NEAR DINGENS, LLC.. (SITE PROPERTY OWNER)**	**112.80–1–12.1**
853	RIMA KHALIL	112.80–1–16
861	RIMA KHALIL	112.80–1–17
863	MICHAEL AND ROSEMARY STANTON	112.80–1–18.1
875	SCHU SHINE ENTERPRISES, LLC	112.18–1–9
876	PELCZYNSKI GROUP LLC	112.18–1–3
878	JIMMIE FORD III	112.18–1–4
885	107 THEILMAN DRIVE, LLC	112.18–1–8

CHEROKEE PL – REPUTED OWNERS		PARCEL ID #
40	TRIPIFOODS, INC.	123.24–1–18
42	RAYMOND STIEGLER	123.24–1–17

PERU PL – REPUTED OWNERS		PARCEL ID #
15	FRANCIS KUREK	123.24–1–4
16	DAVID KRAFT	112.80–1–9
17	ADAM KOTARSKI	123.24–1–5.1
18	BEATA GRZEGOREK	112.80–1–8
20	BEATA GRZEGOREK	112.80–1–7
21	STEVEN JOBSON	123.24–1–7
24	ANNA PASTERNAK	112.80–1–6
25	FRANCIS LUCCA	123.24–1–8
26	KATHLEEN ERTEL	112.80–1–5
28	RONALD AND DENISE BARTNIK	112.80–1–4
29	ANDREA DASH–WERENSKI	123.24–1–9
31	STACY WROBLEWSKI	123.24–1–10.111
32	RONALD BARTNIK	112.80–1–3
36	RONALD BARTNIK	112.80–1–2
37	SUMAIA AKTHER	123.24–1–12.1
41	DANIEL WAGNER	123.24–1–13
43	ROBIN MCCALLUM	123.24–1–14
45	LETICIA CRUMP	123.24–1–15
51	MCKINLEY TRANSPORT	123.24–1–16

DINGENS ST – REPUTED OWNERS		PARCEL ID #
11	BRIAN AND DARLENE WEBER	112.80–1–19
15	LOUISE SNYDER	112.80–1–20
17	SHERRY FALTISCO	112.81–1–1
19	WILLIAM YOUNG	112.81–1–2
25	KETCH COURT, LLC	112.81–1–23.1
40	CITY OF BUFFALO	112.19–1–7.1
43	KETCH COURT, LLC	112.81–1–4.1
49	RONALD CANESTRO	112.81–1–6
51	CHRISTINE MARCUCCI	112.80–1–7
59	PETER PITTNER JR.	112.81–1–8
60	CITY OF BUFFALO	112.19–1–26.21
61	GEORGE SAILOR	112.81–1–9
65	JAMES COCRAN	112.81–1–10
69	WILLIAM LAZERATION	112.81–1–11
71	WILLIAM LAZERATION	112.81–1–12
75	STEBMAN PROPERTIES, LLC	112.81–1–13
79	NEAR DINGENS, LLC. (SITE PROPERTY OWNER)	112.81–1–14.11
81	81 DINGENS STREET, LLC	112.81–1–14.12
111	HABIB ISSA	112.81–1–15
115	115 DINGENS STREET, LLC	112.81–1–16
129	ANDREW LUKJANCZUK	112.81–1–17
135	GREGORY LUKJANCZUK	112.81–1–18
137	RENEE MACIUBA–SIBIGA	112.81–1–19
173	173 DINGENS ST, LLC	112.81–1–20.11
175	GLS LEASE CO, INC.	123.25–1–1.12
179	STATE OF NEW YORK	112.81–1–22

REVISION	BY	DATE
5		
4		
3		
2		
1		

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 AN ITEM IN ANY WAY.

JOHN B. BATTAGLIA, P.E.
NYSPE LICENSE NO. 070389

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

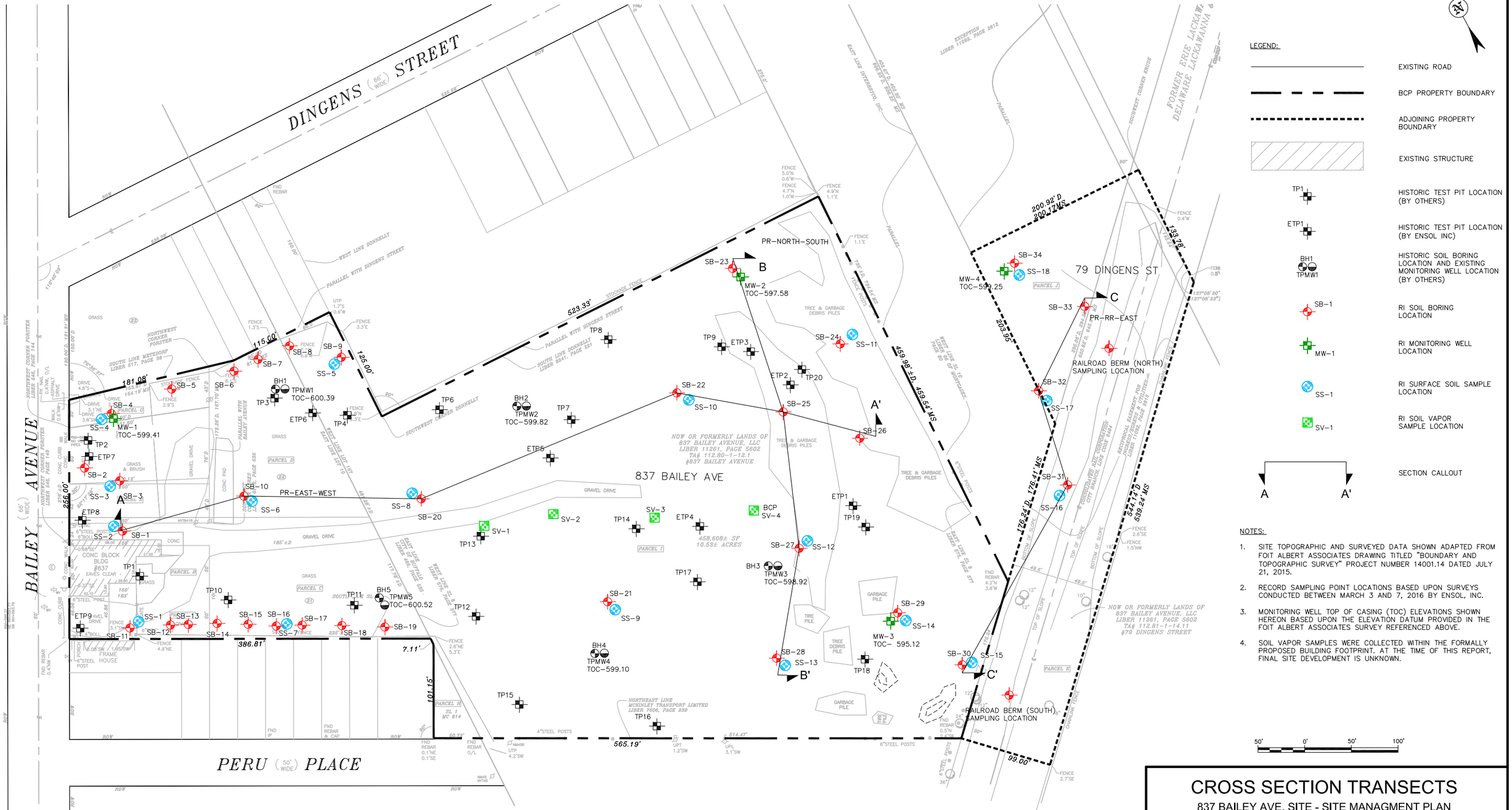
PROJECT NO: 15-0027-1
SCALE: 100' 0' 100' 200'
DWG: Fig2-Site Layout Map.dwg
DES. BY: TMF | DRW. BY: TMF | CHK. BY: DJP
DATE: JULY 2019

TITLE: SITE LAYOUT MAP
SITE MANAGEMENT PLAN

PROJECT: 837 BAILEY AVE. SITE
PREPARED FOR: NEAR DINGENS, LLC.
CITY OF BUFFALO | COUNTY OF ERIE | STATE OF NEW YORK

FIGURE 2

X:\AA0j\Buffalo Truck Center\15-0027 - 837 Bailey Ave, BCP\15-0027-9 SMP\Report\Figures\ACAD\Fig2-Site Layout Map.dwg, D01, 7/19/2019 1:41:08 PM, jsmith, Adobe PDF, Tabloid, 1:1



NOTES:

1. SITE TOPOGRAPHIC AND SURVEYED DATA SHOWN ADAPTED FROM FOIT ALBERT ASSOCIATES DRAWING TITLED "BOUNDARY AND TOPOGRAPHIC SURVEY" PROJECT NUMBER 14001.14 DATED JULY 21, 2015.
2. RECORD SAMPLING POINT LOCATIONS BASED UPON SURVEYS CONDUCTED BETWEEN MARCH 3 AND 7, 2016 BY ENSOL, INC.
3. MONITORING WELL TOP OF CASING (TOC) ELEVATIONS SHOWN HEREON BASED UPON THE ELEVATION DATUM PROVIDED IN THE FOIT ALBERT ASSOCIATES SURVEY REFERENCED ABOVE.
4. SOIL VAPOR SAMPLES WERE COLLECTED WITHIN THE FORMALLY PROPOSED BUILDING FOOTPRINT. AT THE TIME OF THIS REPORT, FINAL SITE DEVELOPMENT IS UNKNOWN.

CROSS SECTION TRANSECTS

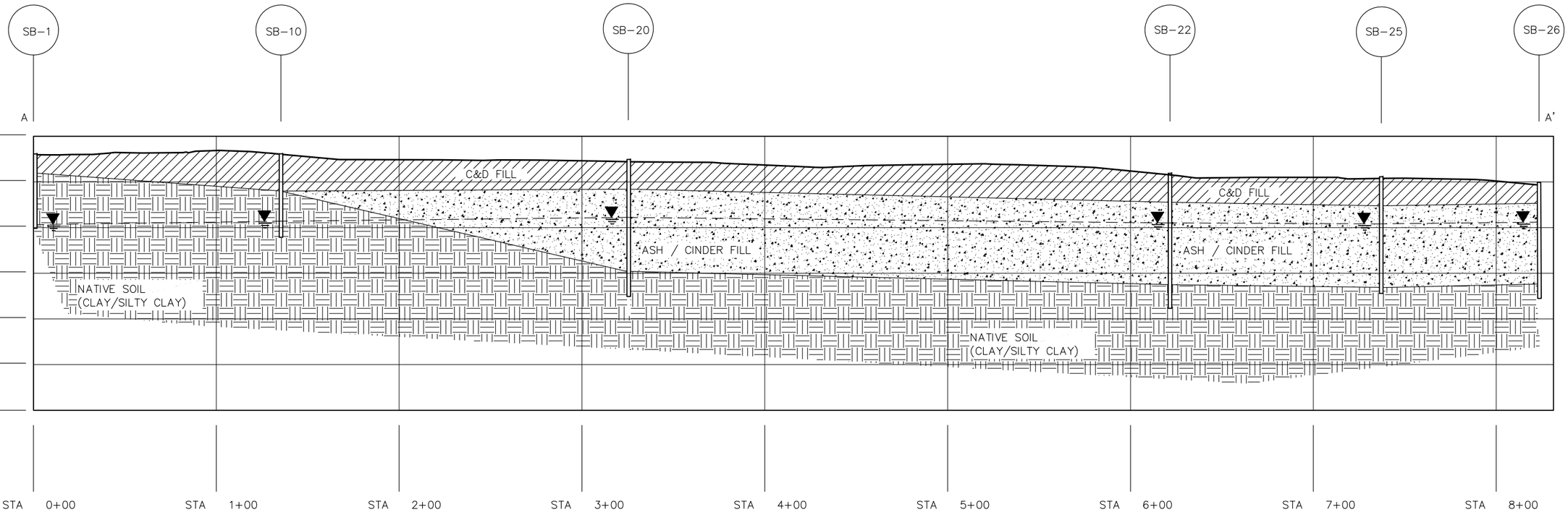
837 BAILEY AVE. SITE - SITE MANAGMENT PLAN

NEAR DINGENS, LLC.

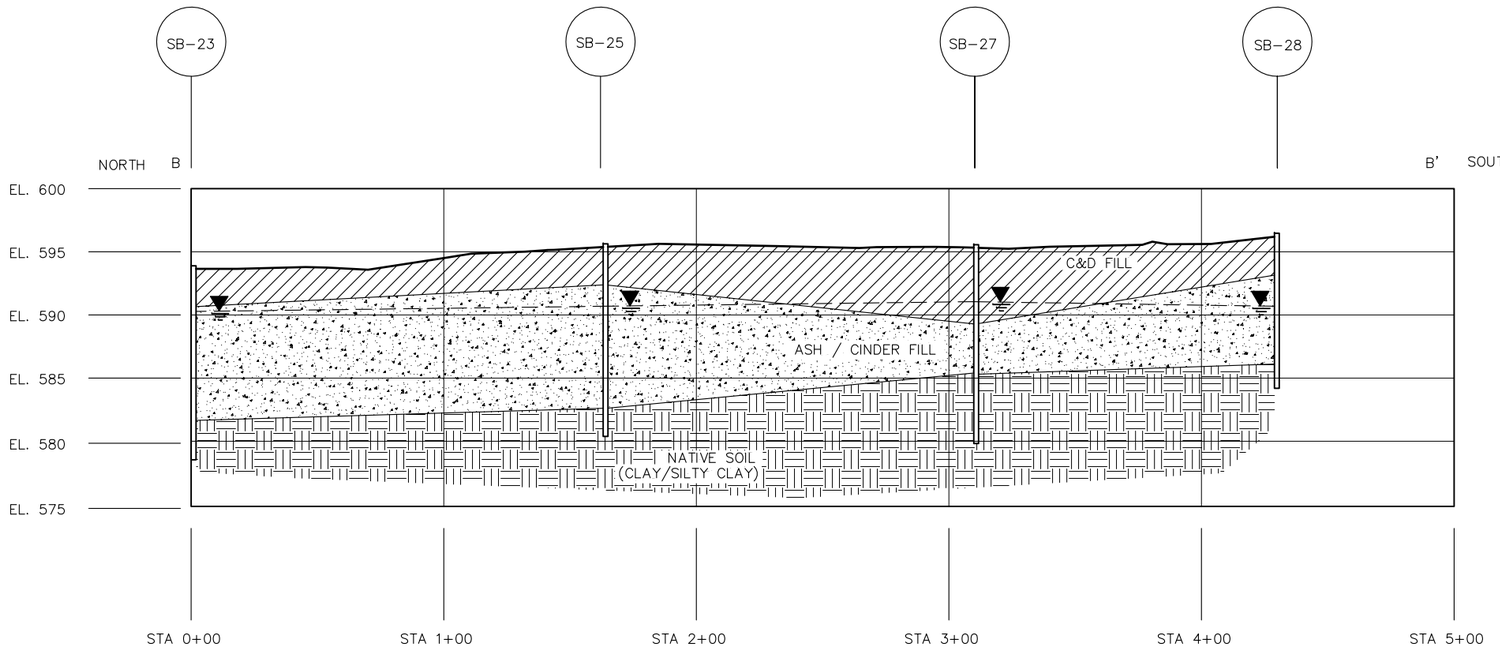
EnSol, Inc.
Environmental Solutions
661 MAIN STREET
NIAGARA FALLS, NY 14301
PHONE (716) 285-3920
FAX (716) 285-3928

JULY 2019 | PN: 15-0027-6

FIGURE 3A



CROSS SECTION A-A'
SCALE: AS NOTED



CROSS SECTION B-B'
SCALE: AS NOTED

NOTES:

1. SUBSURFACE LITHOLOGY TYPES AND DEPTHS DISPLAYED AS LOGGED DURING THE BCP RI FIELDWORK CONDUCTED ON MARCH 7TH THROUGH MARCH 10TH 2016.
2. EXISTING GROUND SURFACE BASED UPON TOPOGRAPHIC AND SURVEYED DATA SHOWN ADAPTED FROM FOIT ALBERT ASSOCIATES DRAWING TITLED "BOUNDARY AND TOPOGRAPHIC SURVEY" PROJECT NUMBER 14001.14 DATED JULY 21, 2015.
3. GROUND WATER ELEVATIONS BASED UPON MONITORING WELL SAMPLING DATA COLLECTED BY ENSOL, INC BETWEEN MARCH 14 & 15, 2016.

VERTICAL SCALE:
SCALE = 1" = 12'

HORIZONTAL SCALE:
SCALE = 1" = 60'

CROSS-SECTIONS A-A' AND B-B'

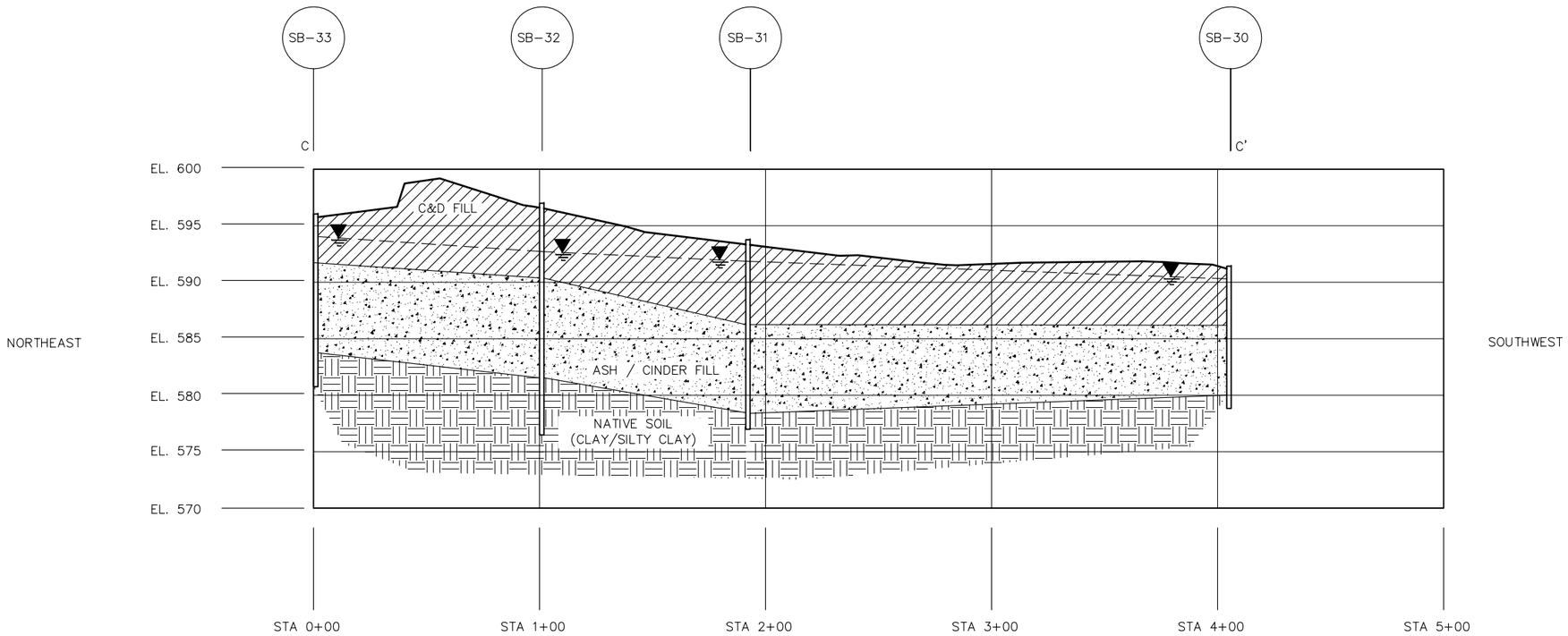
837 BAILEY AVE. SITE - SITE MANAGEMENT PLAN

NEAR DINGENS, LLC.

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

JULY 2019 | PN: 15-0027-6

FIGURE 3B



CROSS SECTION C-C'
SCALE: AS NOTED

VERTICAL SCALE:
SCALE = 1" = 12'

HORIZONTAL SCALE:
SCALE = 1" = 60'

NOTES:

1. SUBSURFACE LITHOLOGY TYPES AND DEPTHS DISPLAYED AS LOGGED DURING THE BCP RI FIELDWORK CONDUCTED ON MARCH 7TH THROUGH MARCH 10TH 2016.
2. EXISTING GROUND SURFACE BASED UPON TOPOGRAPHIC AND SURVEYED DATA SHOWN ADAPTED FROM FOIT ALBERT ASSOCIATES DRAWING TITLED "BOUNDARY AND TOPOGRAPHIC SURVEY" PROJECT NUMBER 14001.14 DATED JULY 21, 2015.
3. GROUND WATER ELEVATIONS BASED UPON MONITORING WELL SAMPLING DATA COLLECTED BY ENSOL. INC BETWEEN MARCH 14 & 15, 2016.

CROSS-SECTIONS C-C'

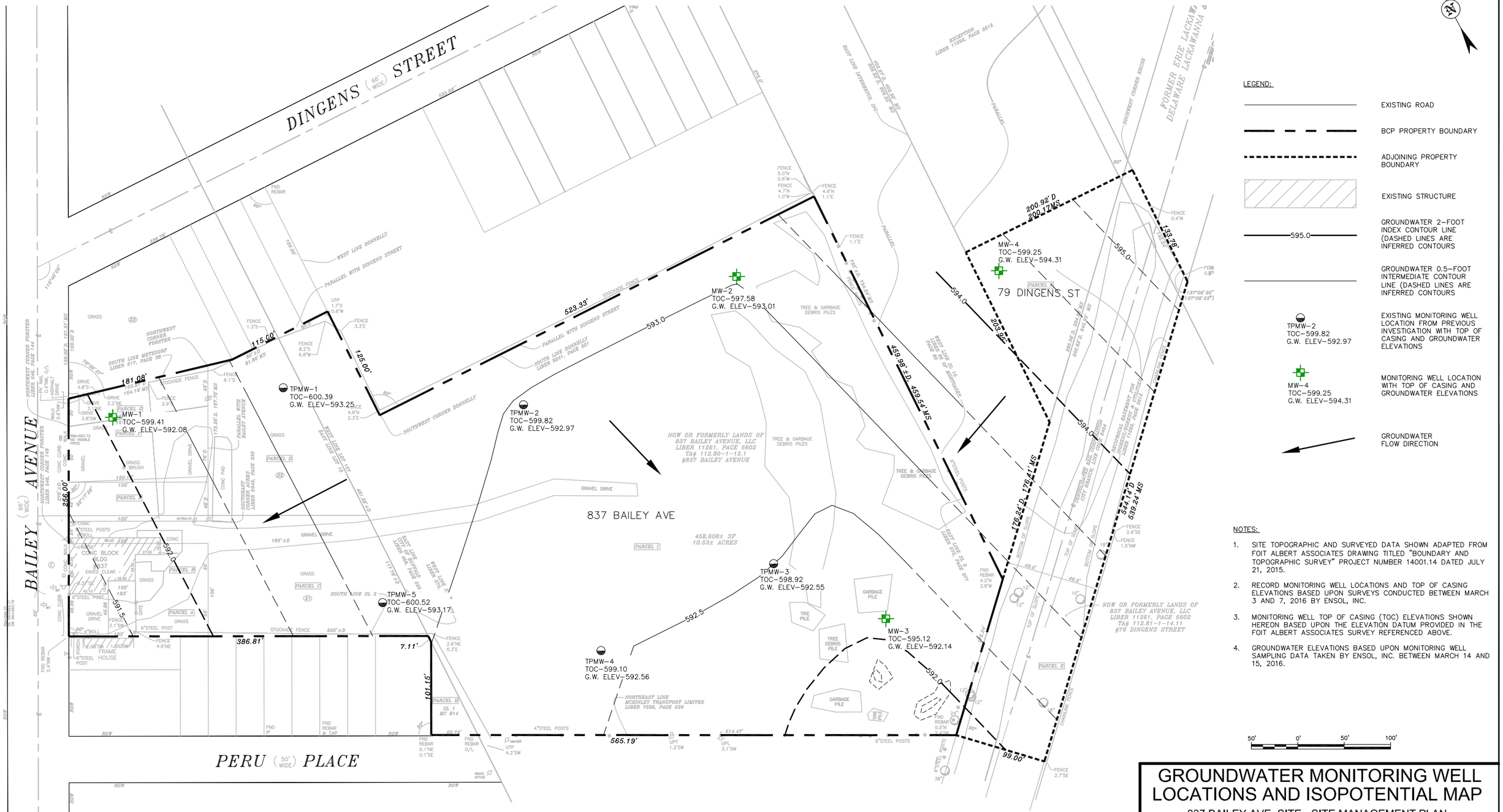
837 BAILEY AVE. SITE - SITE MANAGEMENT PLAN

NEAR DINGENS, LLC.

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

JULY 2019 | PN: 15-0027-6

FIGURE 3C



NOTES:

1. SITE TOPOGRAPHIC AND SURVEYED DATA SHOWN ADAPTED FROM FOIT ALBERT ASSOCIATES DRAWING TITLED "BOUNDARY AND TOPOGRAPHIC SURVEY" PROJECT NUMBER 14001.14 DATED JULY 21, 2015.
2. RECORD MONITORING WELL LOCATIONS AND TOP OF CASING ELEVATIONS BASED UPON SURVEYS CONDUCTED BETWEEN MARCH 3 AND 7, 2016 BY ENSOL, INC.
3. MONITORING WELL TOP OF CASING (TOC) ELEVATIONS SHOWN HEREON BASED UPON THE ELEVATION DATUM PROVIDED IN THE FOIT ALBERT ASSOCIATES SURVEY REFERENCED ABOVE.
4. GROUNDWATER ELEVATIONS BASED UPON MONITORING WELL SAMPLING DATA TAKEN BY ENSOL, INC. BETWEEN MARCH 14 AND 15, 2016.

GROUNDWATER MONITORING WELL LOCATIONS AND ISOPOTENTIAL MAP

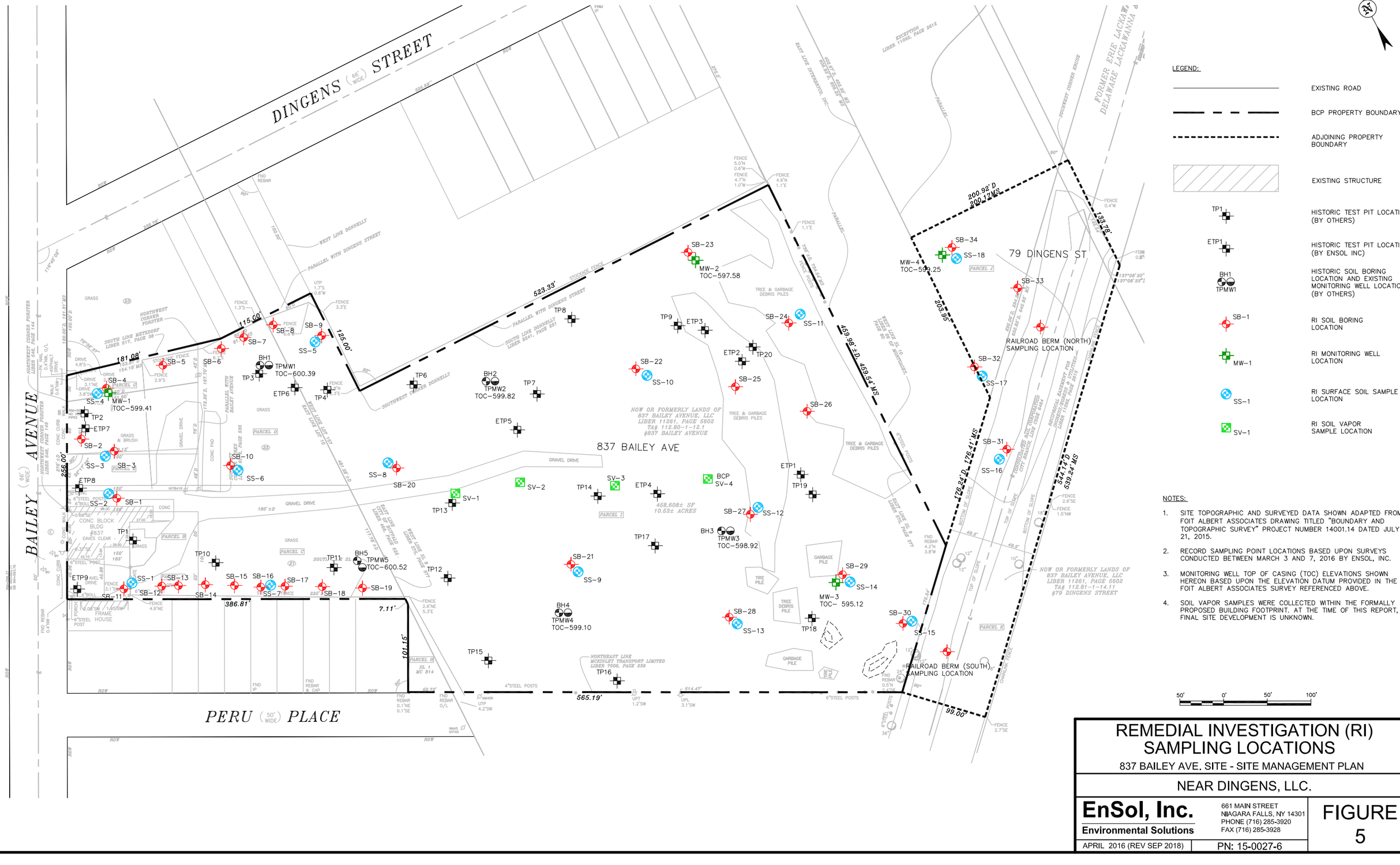
837 BAILEY AVE. SITE - SITE MANAGEMENT PLAN

NEAR DINGENS, LLC.

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

JUNE 2016 (REV SEP 2018) | PN: 15-0027-6

FIGURE 4



LEGEND:

- EXISTING ROAD
- BCP PROPERTY BOUNDARY
- ADJOINING PROPERTY BOUNDARY
- EXISTING STRUCTURE
- TP1 — HISTORIC TEST PIT LOCATION (BY OTHERS)
- ETP1 — HISTORIC TEST PIT LOCATION (BY ENSOL INC)
- BH1 TPMW1 — HISTORIC SOIL BORING LOCATION AND EXISTING MONITORING WELL LOCATION (BY OTHERS)
- SB-1 — RI SOIL BORING LOCATION
- MW-1 — RI MONITORING WELL LOCATION
- SS-1 — RI SURFACE SOIL SAMPLE LOCATION
- SV-1 — RI SOIL VAPOR SAMPLE LOCATION

NOTES:

1. SITE TOPOGRAPHIC AND SURVEYED DATA SHOWN ADAPTED FROM FOIT ALBERT ASSOCIATES DRAWING TITLED "BOUNDARY AND TOPOGRAPHIC SURVEY" PROJECT NUMBER 14001.14 DATED JULY 21, 2015.
2. RECORD SAMPLING POINT LOCATIONS BASED UPON SURVEYS CONDUCTED BETWEEN MARCH 3 AND 7, 2016 BY ENSOL, INC.
3. MONITORING WELL TOP OF CASING (TOC) ELEVATIONS SHOWN HEREON BASED UPON THE ELEVATION DATUM PROVIDED IN THE FOIT ALBERT ASSOCIATES SURVEY REFERENCED ABOVE.
4. SOIL VAPOR SAMPLES WERE COLLECTED WITHIN THE FORMALLY PROPOSED BUILDING FOOTPRINT. AT THE TIME OF THIS REPORT, FINAL SITE DEVELOPMENT IS UNKNOWN.

50' 0' 50' 100'

REMEDIAL INVESTIGATION (RI) SAMPLING LOCATIONS

837 BAILEY AVE. SITE - SITE MANAGEMENT PLAN

NEAR DINGENS, LLC.

EnSol, Inc.
Environmental Solutions
661 MAIN STREET
NIAGARA FALLS, NY 14301
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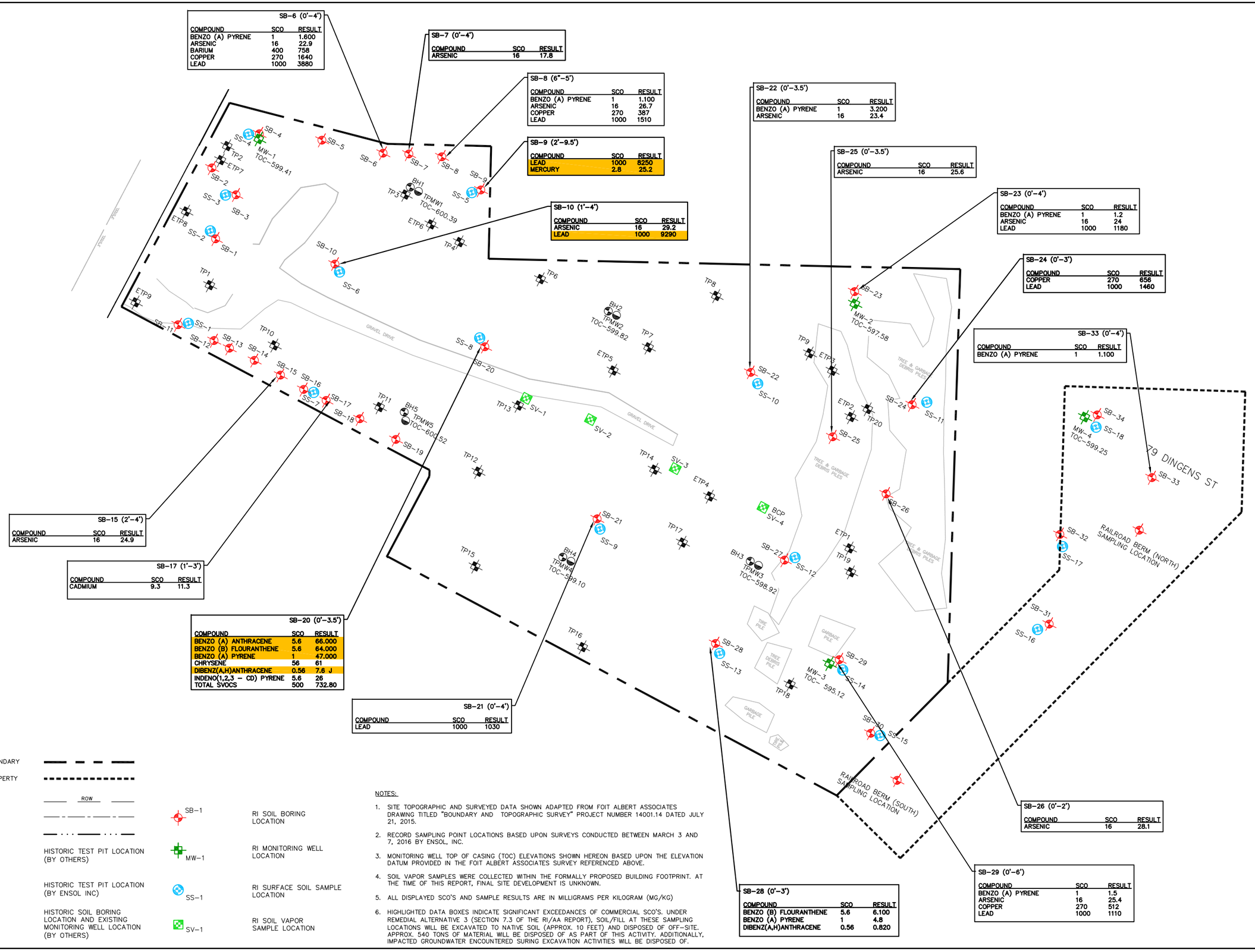
APRIL 2016 (REV SEP 2018) | PN: 15-0027-6

FIGURE 5



LEGEND:

PROPERTY BOUNDARY			
ADJACENT PROPERTY BOUNDARY			
RIGHT OF WAY	ROW		
CENTERLINE		SB-1	RI SOIL BORING LOCATION
SWALE		MW-1	RI MONITORING WELL LOCATION
TP1	HISTORIC TEST PIT LOCATION (BY OTHERS)	SS-1	RI SURFACE SOIL SAMPLE LOCATION
ETP1	HISTORIC TEST PIT LOCATION (BY ENSOL INC)	SV-1	RI SOIL VAPOR SAMPLE LOCATION
BH1 TPMW1	HISTORIC SOIL BORING LOCATION AND EXISTING MONITORING WELL LOCATION (BY OTHERS)		

NOTES:

1. SITE TOPOGRAPHIC AND SURVEYED DATA SHOWN ADAPTED FROM FOIT ALBERT ASSOCIATES DRAWING TITLED "BOUNDARY AND TOPOGRAPHIC SURVEY" PROJECT NUMBER 14001.14 DATED JULY 21, 2015.
2. RECORD SAMPLING POINT LOCATIONS BASED UPON SURVEYS CONDUCTED BETWEEN MARCH 3 AND 7, 2016 BY ENSOL, INC.
3. MONITORING WELL TOP OF CASING (TOC) ELEVATIONS SHOWN HEREON BASED UPON THE ELEVATION DATUM PROVIDED IN THE FOIT ALBERT ASSOCIATES SURVEY REFERENCED ABOVE.
4. SOIL VAPOR SAMPLES WERE COLLECTED WITHIN THE FORMALLY PROPOSED BUILDING FOOTPRINT. AT THE TIME OF THIS REPORT, FINAL SITE DEVELOPMENT IS UNKNOWN.
5. ALL DISPLAYED SCO'S AND SAMPLE RESULTS ARE IN MILLIGRAMS PER KILOGRAM (MG/KG)
6. HIGHLIGHTED DATA BOXES INDICATE SIGNIFICANT EXCEEDANCES OF COMMERCIAL SCO'S. UNDER REMEDIAL ALTERNATIVE 3 (SECTION 7.3 OF THE RI/AA REPORT), SOIL/FILL AT THESE SAMPLING LOCATIONS WILL BE EXCAVATED TO NATIVE SOIL (APPROX. 10 FEET) AND DISPOSED OF OFF-SITE. APPROX. 540 TONS OF MATERIAL WILL BE DISPOSED OF AS PART OF THIS ACTIVITY. ADDITIONALLY, IMPACTED GROUNDWATER ENCOUNTERED SURING EXCAVATION ACTIVITIES WILL BE DISPOSED OF.

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CLIENT:
BUFFALO TRUCK CENTER, INC.

SITE:
837 BAILEY AVE
CITY OF BUFFALO
COUNTY OF ERIE
STATE OF NEW YORK

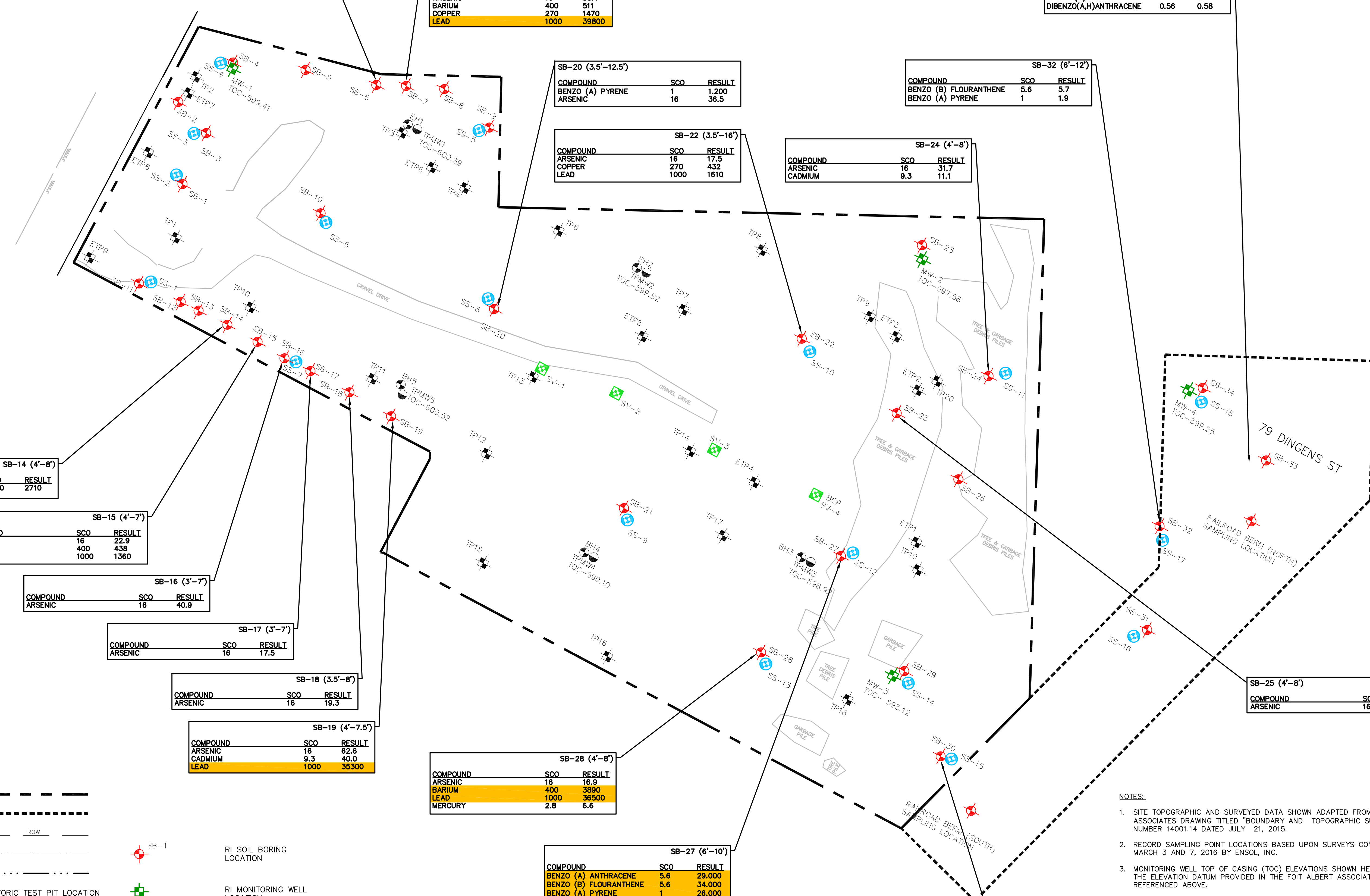
PROJECT:
SITE MANAGEMENT PLAN

TITLE:
SOIL DATA SUMMARY EXCEEDANCES OF COMMERCIAL SCO (SHALLOW / C&D FILL)

ISSUED FOR:

DES:	DRN:	CHK:
TMF	TMF	JBB

PROJECT NO: 15-0027-6
DATE: JULY 2019
GRAPHIC SCALE: 0' 50' 100'
FILE: Fig6-RI Soil Data Summary.dwg
REV NO: 1
FIGURE NO: 6A



SB-6 (4'-8')

COMPOUND	SCO	RESULT
BENZO (A) PYRENE	1	1.300
ARSENIC	16	45.3
COPPER	270	704
LEAD	1000	2790
MERCURY	2.8	3.0

SB-7 (4'-8')

COMPOUND	SCO	RESULT
BENZO (A) ANTHRACENE	5.6	5.900
BENZO (B) FLOURANTHENE	5.6	6.200
BENZO (A) PYRENE	1	5.300
ARSENIC	16	30.4
BARIUM	400	511
COPPER	270	1470
LEAD	1000	39800

SB-33 (6'-12')

COMPOUND	SCO	RESULT
BENZO (A) PYRENE	1	1.2
DIBENZO(A,H)ANTHRACENE	0.56	0.58

SB-20 (3.5'-12.5')

COMPOUND	SCO	RESULT
BENZO (A) PYRENE	1	1.200
ARSENIC	16	36.5

SB-32 (6'-12')

COMPOUND	SCO	RESULT
BENZO (B) FLOURANTHENE	5.6	5.7
BENZO (A) PYRENE	1	1.9

SB-22 (3.5'-16')

COMPOUND	SCO	RESULT
ARSENIC	16	17.5
COPPER	270	432
LEAD	1000	1610

SB-24 (4'-8')

COMPOUND	SCO	RESULT
ARSENIC	16	31.7
CADMIUM	9.3	11.1

SB-14 (4'-8')

COMPOUND	SCO	RESULT
LEAD	1000	2710

SB-15 (4'-7')

COMPOUND	SCO	RESULT
ARSENIC	16	22.9
BARIUM	400	438
LEAD	1000	1360

SB-16 (3'-7')

COMPOUND	SCO	RESULT
ARSENIC	16	40.9

SB-17 (3'-7')

COMPOUND	SCO	RESULT
ARSENIC	16	17.5

SB-18 (3.5'-8')

COMPOUND	SCO	RESULT
ARSENIC	16	19.3

SB-19 (4'-7.5')

COMPOUND	SCO	RESULT
ARSENIC	16	62.6
CADMIUM	9.3	40.0
LEAD	1000	35300

SB-28 (4'-8')

COMPOUND	SCO	RESULT
ARSENIC	16	16.9
BARIUM	400	3890
LEAD	1000	36500
MERCURY	2.8	6.6

SB-25 (4'-8')

COMPOUND	SCO	RESULT
ARSENIC	16	21.3

SB-27 (6'-10')

COMPOUND	SCO	RESULT
BENZO (A) ANTHRACENE	5.6	29.000
BENZO (B) FLOURANTHENE	5.6	34.000
BENZO (A) PYRENE	1	26.000
DIBENZO(A,H)ANThRACENE	0.56	4.000 J
INDENO(1,2,3-CD)PYRENE	5.6	14.000
TOTAL SVOCS	500	435.20
ARSENIC	16	95.7
BARIUM	400	1570
CADMIUM	9.3	16.4
COPPER	270	519
LEAD	1000	6540
MERCURY	2.8	6.8

SB-30 (4'-8')

COMPOUND	SCO	RESULT
ARSENIC	16	20.8
BARIUM	400	462
LEAD	1000	6110

LEGEND:

- PROPERTY BOUNDARY
- ADJACENT PROPERTY BOUNDARY
- RIGHT OF WAY (ROW)
- CENTERLINE
- SWALE
- TP1 — HISTORIC TEST PIT LOCATION (BY OTHERS)
- ETP1 — HISTORIC TEST PIT LOCATION (BY ENSOL INC)
- BH1 TPMW1 — HISTORIC SOIL BORING LOCATION AND EXISTING MONITORING WELL LOCATION (BY OTHERS)
- SB-1 — RI SOIL BORING LOCATION
- MW-1 — RI MONITORING WELL LOCATION
- SS-1 — RI SURFACE SOIL SAMPLE LOCATION
- SV-1 — RI SOIL VAPOR SAMPLE LOCATION

NOTES:

1. SITE TOPOGRAPHIC AND SURVEYED DATA SHOWN ADAPTED FROM FOIT ALBERT ASSOCIATES DRAWING TITLED "BOUNDARY AND TOPOGRAPHIC SURVEY" PROJECT NUMBER 14001.14 DATED JULY 21, 2015.
2. RECORD SAMPLING POINT LOCATIONS BASED UPON SURVEYS CONDUCTED BETWEEN MARCH 3 AND 7, 2016 BY ENSOL, INC.
3. MONITORING WELL TOP OF CASING (TOC) ELEVATIONS SHOWN HEREON BASED UPON THE ELEVATION DATUM PROVIDED IN THE FOIT ALBERT ASSOCIATES SURVEY REFERENCED ABOVE.
4. SOIL VAPOR SAMPLES WERE COLLECTED WITHIN THE FORMALLY PROPOSED BUILDING FOOTPRINT. AT THE TIME OF THIS REPORT, FINAL SITE DEVELOPMENT IS UNKNOWN.
5. ALL DISPLAYED SCO'S AND SAMPLE RESULTS ARE IN MILLIGRAMS PER KILOGRAM (MG/KG)
6. HIGHLIGHTED DATA BOXES INDICATE SIGNIFICANT EXCEEDANCES OF COMMERCIAL SCO'S. UNDER REMEDIAL ALTERNATIVE 3 (SECTION 7.3 OF THE RI/AA REPORT), SOIL/FILL AT THESE SAMPLING LOCATIONS WILL BE EXCAVATED TO NATIVE SOIL (APPROX. 10 FEET) AND DISPOSED OF OFF-SITE. APPROX. 540 TONS OF MATERIAL WILL BE DISPOSED OF AS PART OF THIS ACTIVITY. ADDITIONALLY, IMPACTED GROUNDWATER ENCOUNTERED SURING EXCAVATION ACTIVITIES WILL BE DISPOSED OF.

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CLIENT: BUFFALO TRUCK CENTER, INC.

SITE: 837 BAILEY AVE
CITY OF BUFFALO
COUNTY OF ERIE
STATE OF NEW YORK

PROJECT: SITE MANAGEMENT PLAN

TITLE: SOIL DATA SUMMARY EXCEEDANCES OF COMMERCIAL SCO (DEEP/CINDER FILL)

ISSUED FOR:

DES: TMF | DRN: TMF | CHK: JBB

PROJECT NO: 15-0027-6 | DATE: JULY 2019

GRAPHIC SCALE: 0' 50' 100'

FILE: Fig6-RI Soil Data Summary.dwg

REV NO: 1 | FIGURE NO: 6B

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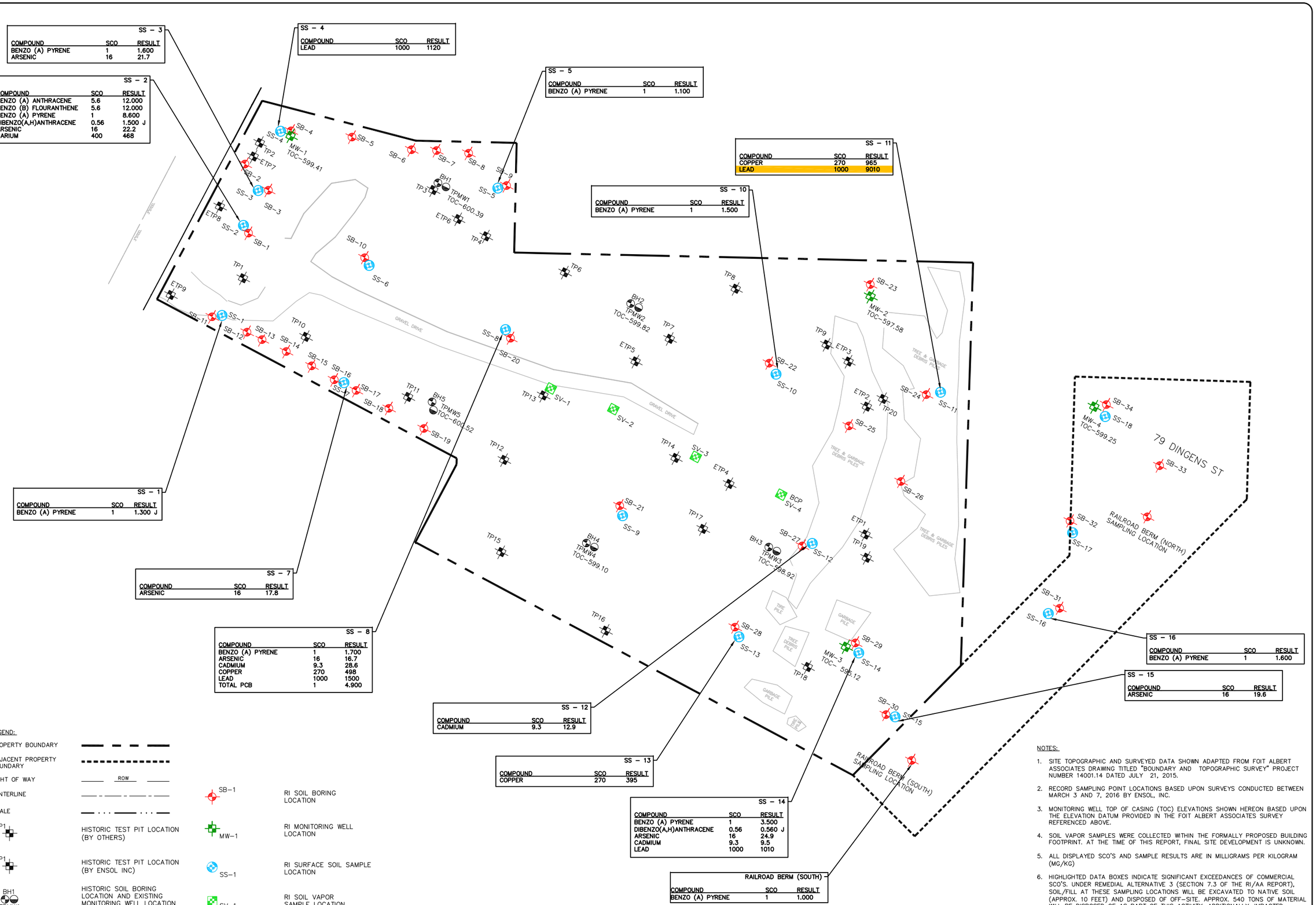

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CLIENT:
BUFFALO TRUCK CENTER, INC.

SITE:
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CITY OF BUFFALO
COUNTY OF ERIE
STATE OF NEW YORK

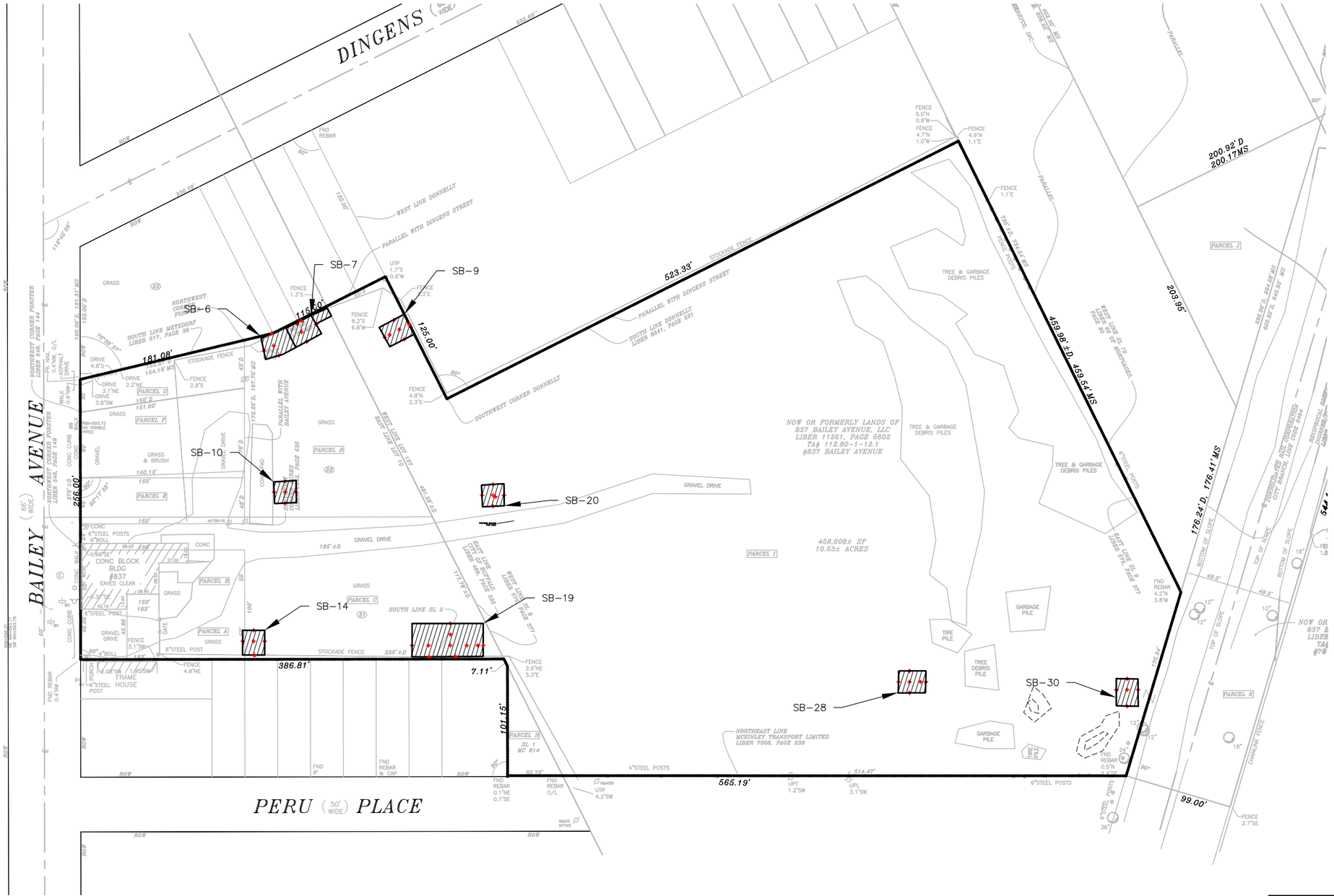
PROJECT:
SITE MANAGEMENT REPORT

TITLE:
SOIL DATA SUMMARY EXCEEDANCES OF COMMERCIAL SCO (SURFACE SOIL)

ISSUED FOR:

DES:	DRN:	CHK:
TMF	TMF	JBB

PROJECT NO: 15-0027-6
DATE: JULY 2019
GRAPHIC SCALE: 0' 50' 100'
FILE: Fig6-RI Soil Data Summary.dwg
REV NO: 1
FIGURE NO: 6C



LEGEND:

- PROPERTY LINE
- EXCAVATION LIMITS (FINAL)
- RI SOIL BORING LOCATION ("HOT SPOT")
- IRM DELINEATION SOIL BORING (END POINT SAMPLE)
- IRM EXCAVATION CONFIRMATORY SAMPLE

NOTES:

1. SITE TOPOGRAPHIC AND SURVEYED DATA SHOWN ADAPTED FROM FOIT ALBERT ASSOCIATES DRAWING TITLED "BOUNDARY AND TOPOGRAPHIC SURVEY" PROJECT NUMBER 14001.14 DATED JULY 21, 2015.
2. RECORD SAMPLING POINT LOCATIONS BASED UPON SURVEYS CONDUCTED BETWEEN MARCH 3 AND 7, 2016 BY ENSOL, INC.
3. THE IRM INCLUDED THE EXCAVATION OF SIGNIFICANTLY IMPACTED SOIL/FILL MATERIAL AT INDICATED LOCATION ("HOT SPOTS"). ONLY SPECIFIC ZONES (i.e., C&D LAYER, ASH/CINDER LAYER) WERE TARGETED FOR REMOVAL BASED UPON CHARACTERIZATION DATA.
4. SOIL VAPOR SAMPLES WERE COLLECTED WITHIN THE FORMALLY PROPOSED BUILDING FOOTPRINT. AT THE TIME OF THIS REPORT, FINAL SITE DEVELOPMENT IS UNKNOWN.
5. SB-27 WAS ORIGINALLY INCLUDED IN THE IRM EXCAVATION SCOPE BUT WAS SUBSEQUENTLY REMOVED FROM THE IRM, WITH NYSDEC APPROVAL, BASED UPON; LOCALIZED SHALLOW WATER TABLE, DEPTH TO IMPACTED MATERIALS, MINOR EXCEEDANCES OF SITE SPECIFIC SCOs, AND PROPOSED COVER SYSTEM COVERAGE.

IRM WORK LOCATIONS

837 BAILEY AVE. SITE - SITE MANAGEMENT PLAN

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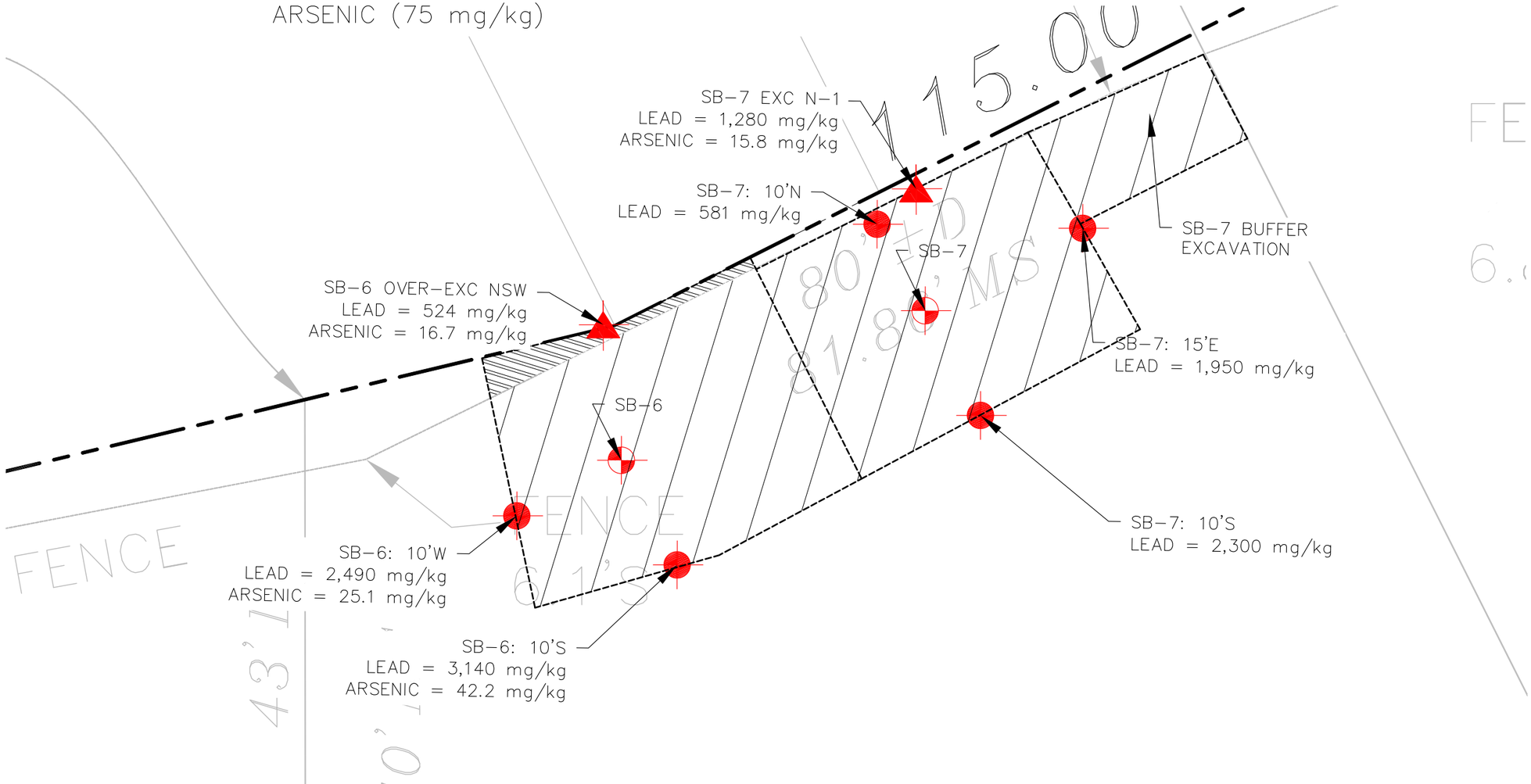
JULY 2019 | PN: 15-0027-6

FIGURE 7

SOIL BORING SB–6 EXCAVATION
SOIL/FILL REMOVAL DEPTH:
0–8'
CONTAMINANT & SITE–SPECIFIC SCO:
LEAD (5,000 mg/kg)
ARSENIC (75 mg/kg)

SOIL BORING SB–7 EXCAVATION
SOIL/FILL REMOVAL DEPTH:
4–8'
CONTAMINANT & SITE–SPECIFIC SCO:
LEAD (5,000 mg/kg)



LEGEND:

- ORIGINAL IRM EXCAVATION (COMPLETED 8/29/17)
- IRM OVER–EXCAVATION (COMPLETED 10/30/17
- PROPERTY LINE
- EXCAVATION LIMITS (FINAL)
- RI SOIL BORING LOCATION ("HOT SPOT")
- IRM DELINEATION SOIL BORING (END POINT SAMPLE)
- IRM EXCAVATION CONFIRMATORY SAMPLE

NOTES:

1. SITE TOPOGRAPHIC AND SURVEYED DATA SHOWN ADAPTED FROM FOIT ALBERT ASSOCIATES DRAWING TITLED "BOUNDARY AND TOPOGRAPHIC SURVEY" PROJECT NUMBER 14001.14 DATED JULY 21, 2015.
2. RECORD RI SOIL BORING SAMPLING POINT LOCATIONS BASED UPON SURVEYS CONDUCTED BETWEEN MARCH 3 AND 7, 2016 BY ENSOL, INC. SUBSEQUENT IRM SAMPLE LOCATIONS FIELD MEASURED FROM ORIGINAL SURVEYED SOIL BORING LOCATION.
3. IRM EXCAVATIONS INCLUDED THE EXCAVATION OF SIGNIFICANTLY IMPACTED SOIL/FILL MATERIAL AT SELECT SOIL BORING LOCATIONS ("HOT SPOTS"). ONLY SPECIFIC ZONES (i.e., C&D LAYER, ASH/CINDER LAYER) AT SAMPLING LOCATIONS SIGNIFICANTLY IMPACTED, PRIMARILY WITH SVOCs OR METALS (ARSENIC, LEAD, AND MERCURY), WERE TARGETED FOR REMOVAL.

IRM END POINT SAMPLE RESULTS

837 BAILEY AVE. SITE - SITE MANAGEMENT PLAN

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JULY 2019 | PN: 15-0027-6

FIGURE 8-A

SOIL BORING SB–9 EXCAVATION
SOIL/FILL REMOVAL DEPTH:
2–9.5'
CONTAMINANT & SITE–SPECIFIC SCO:
LEAD (5,000 mg/kg)
MERCURY (5.7 mg/kg)
(**BOLD** VALUES EXCEED SITE–SPECIFIC SCO)

SB–9 ESW
LEAD = 566 mg/kg
MERCURY = 0.97 mg/kg

SB–9: 10'N
LEAD = 1,480 mg/kg
MERCURY = 0.16 mg/kg

SB–9: 15'W
LEAD = 4,770 mg/kg

SB–9

SB–9: 10'W
LEAD = **9,210** mg/kg
MERCURY = 0.55 mg/kg
(NOTE 4)

SB–9: 10'S
LEAD = 351 mg/kg
MERCURY = 0.66 mg/kg

FENCE

5' 0' 5' 10'

SOIL BORING SB–10 EXCAVATION
SOIL/FILL REMOVAL DEPTH:
0–4'
CONTAMINANT & SITE–SPECIFIC SCO:
LEAD (5,000 mg/kg)

SB–10: 10'N
LEAD = 757 mg/kg

SB–10

SB–10: 10'E
LEAD = 524 mg/kg

SB–10: 10'W
LEAD = 293 mg/kg

SB–10: 10'S
LEAD = 2,560 mg/kg

CONC PAD

5' 0' 5' 10'

LEGEND:

- PROPERTY LINE
- EXCAVATION LIMITS (FINAL)
- RI SOIL BORING LOCATION ("HOT SPOT")
- IRM DELINEATION SOIL BORING (END POINT SAMPLE)
- IRM EXCAVATION CONFIRMATORY SAMPLE

NOTES:

1. SITE TOPOGRAPHIC AND SURVEYED DATA SHOWN ADAPTED FROM FOIT ALBERT ASSOCIATES DRAWING TITLED "BOUNDARY AND TOPOGRAPHIC SURVEY" PROJECT NUMBER 14001.14 DATED JULY 21, 2015.
2. RECORD RI SOIL BORING SAMPLING POINT LOCATIONS BASED UPON SURVEYS CONDUCTED BETWEEN MARCH 3 AND 7, 2016 BY ENSOL, INC. SUBSEQUENT IRM SAMPLE LOCATIONS FIELD MEASURED FROM ORIGINAL SURVEYED SOIL BORING LOCATION.
3. IRM EXCAVATIONS INCLUDED THE EXCAVATION OF SIGNIFICANTLY IMPACTED SOIL/FILL MATERIAL AT SELECT SOIL BORING LOCATIONS ("HOT SPOTS"). ONLY SPECIFIC ZONES (i.e., C&D LAYER, ASH/CINDER LAYER) AT SAMPLING LOCATIONS SIGNIFICANTLY IMPACTED, PRIMARILY WITH SVOCs OR METALS (ARSENIC, LEAD, AND MERCURY), WERE TARGETED FOR REMOVAL.
4. WITH NYSDEC APPROVAL, INDIVIDUAL CONTAMINANTS THAT PASSED SITE–SPECIFIC SCOs AT INNER SAMPLING INTERVALS WERE NO LONGER INCLUDED IN SAMPLE ANALYSIS AT REMAINING OUTER SAMPLING INTERVALS.

IRM END POINT SAMPLE RESULTS

837 BAILEY AVE. SITE - SITE MANAGEMENT PLAN

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JULY 2019 | PN: 15-0027-6

FIGURE 8-B

SOIL BORING SB-19 EXCAVATION
SOIL/FILL REMOVAL DEPTH:
4-7.5'
CONTAMINANT & SITE-SPECIFIC SCO:
LEAD (5,000 mg/kg)
ARSENIC (75 mg/kg)
(**BOLD** VALUES EXCEED SITE-SPECIFIC SCO)

SOUTH LINE SL 2

SB-19: 25'E
ARSENIC = **85.2** mg/kg

SB-19: 20'N
LEAD = 727 mg/kg

SB-19: 10'N
LEAD = **22,700** mg/kg
ARSENIC = 46.3 mg/kg
(NOTE 4)

SB-19: 20'W
LEAD = **10,400** mg/kg
ARSENIC = 68.9 mg/kg
(NOTE 4)

SB-19: 35'W
LEAD = 4,970 mg/kg

SB-19: 30'E
ARSENIC = 12.7 mg/kg

SB-19

SB-19 SSW-2(W)
LEAD = 14.3 mg/kg
ARSENIC = 6.62 mg/kg

SB-19 SSW-1(E)
LEAD = 14.6 mg/kg
ARSENIC = 6.74 mg/kg

SB-19: 15'E
LEAD = 4,610 mg/kg
ARSENIC = 69.9 mg/kg
(NOTE 4)

5' 0' 5' 10'

LEGEND:

- PROPERTY LINE
- EXCAVATION LIMITS (FINAL)
- RI SOIL BORING LOCATION ("HOT SPOT")
- IRM DELINEATION SOIL BORING (END POINT SAMPLE)
- IRM EXCAVATION CONFIRMATORY SAMPLE

NOTES:

1. SITE TOPOGRAPHIC AND SURVEYED DATA SHOWN ADAPTED FROM FOIT ALBERT ASSOCIATES DRAWING TITLED "BOUNDARY AND TOPOGRAPHIC SURVEY" PROJECT NUMBER 14001.14 DATED JULY 21, 2015.
2. RECORD RI SOIL BORING SAMPLING POINT LOCATIONS BASED UPON SURVEYS CONDUCTED BETWEEN MARCH 3 AND 7, 2016 BY ENSOL, INC. SUBSEQUENT IRM SAMPLE LOCATIONS FIELD MEASURED FROM ORIGINAL SURVEYED SOIL BORING LOCATION.
3. IRM EXCAVATIONS INCLUDED THE EXCAVATION OF SIGNIFICANTLY IMPACTED SOIL/FILL MATERIAL AT SELECT SOIL BORING LOCATIONS ("HOT SPOTS"). ONLY SPECIFIC ZONES (i.e., C&D LAYER, ASH/CINDER LAYER) AT SAMPLING LOCATIONS SIGNIFICANTLY IMPACTED, PRIMARILY WITH SVOCs OR METALS (ARSENIC, LEAD, AND MERCURY), WERE TARGETED FOR REMOVAL.
4. WITH NYSDEC APPROVAL, INDIVIDUAL CONTAMINANTS THAT PASSED SITE-SPECIFIC SCOs AT INNER SAMPLING INTERVALS WERE NO LONGER INCLUDED IN SAMPLE ANALYSIS AT REMAINING OUTER SAMPLING INTERVALS.

IRM END POINT SAMPLE RESULTS

837 BAILEY AVE. SITE - SITE MANAGEMENT PLAN

NEAR DINGENS, LLC.

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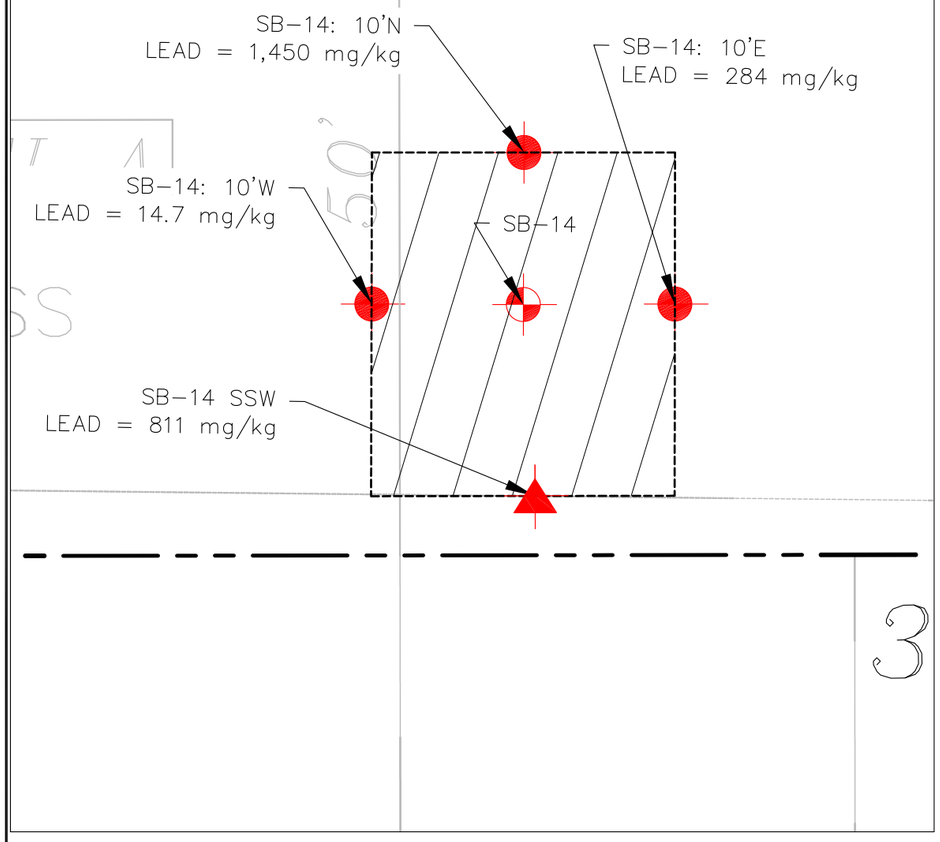
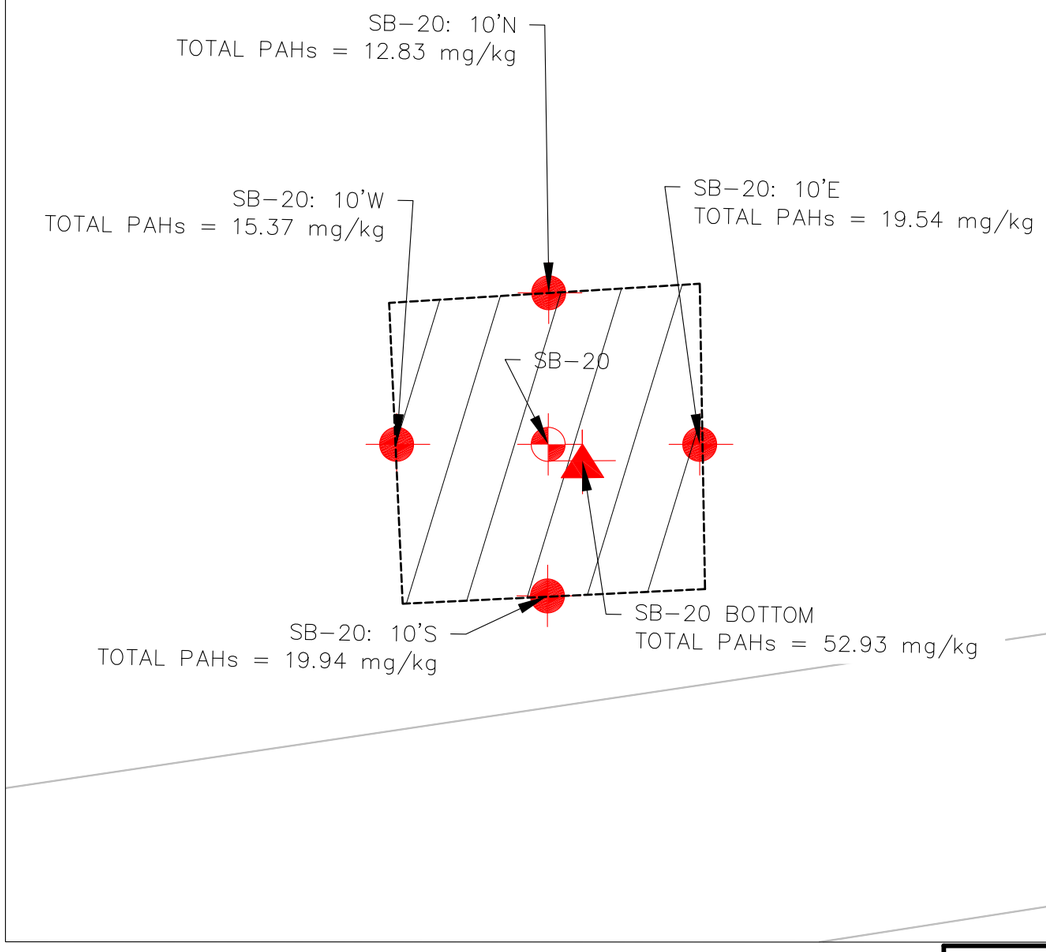
JULY 2019 | PN: 15-0027-6

FIGURE 8-C

SOIL BORING SB–14 EXCAVATION
SOIL/FILL REMOVAL DEPTH:
4–8'
CONTAMINANT & SITE–SPECIFIC SCO:
LEAD (5,000 mg/kg)



SOIL BORING SB–20 EXCAVATION
SOIL/FILL REMOVAL DEPTH:
0–4'
CONTAMINANT & SITE–SPECIFIC SCO:
TOTAL PAHs (500 mg/kg)



LEGEND:

- PROPERTY LINE
- EXCAVATION LIMITS (FINAL)
- RI SOIL BORING LOCATION ("HOT SPOT")
- IRM DELINEATION SOIL BORING (END POINT SAMPLE)

NOTES:

1. SITE TOPOGRAPHIC AND SURVEYED DATA SHOWN ADAPTED FROM FOIT ALBERT ASSOCIATES DRAWING TITLED "BOUNDARY AND TOPOGRAPHIC SURVEY" PROJECT NUMBER 14001.14 DATED JULY 21, 2015.
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3. IRM EXCAVATIONS INCLUDED THE EXCAVATION OF SIGNIFICANTLY IMPACTED SOIL/FILL MATERIAL AT SELECT SOIL BORING LOCATIONS ("HOT SPOTS"). ONLY SPECIFIC ZONES (i.e., C&D LAYER, ASH/CINDER LAYER) AT SAMPLING LOCATIONS SIGNIFICANTLY IMPACTED, PRIMARILY WITH SVOCs OR METALS (ARSENIC, LEAD, AND MERCURY), WERE TARGETED FOR REMOVAL.

IRM END POINT SAMPLE RESULTS

837 BAILEY AVE. SITE - SITE MANAGEMENT PLAN

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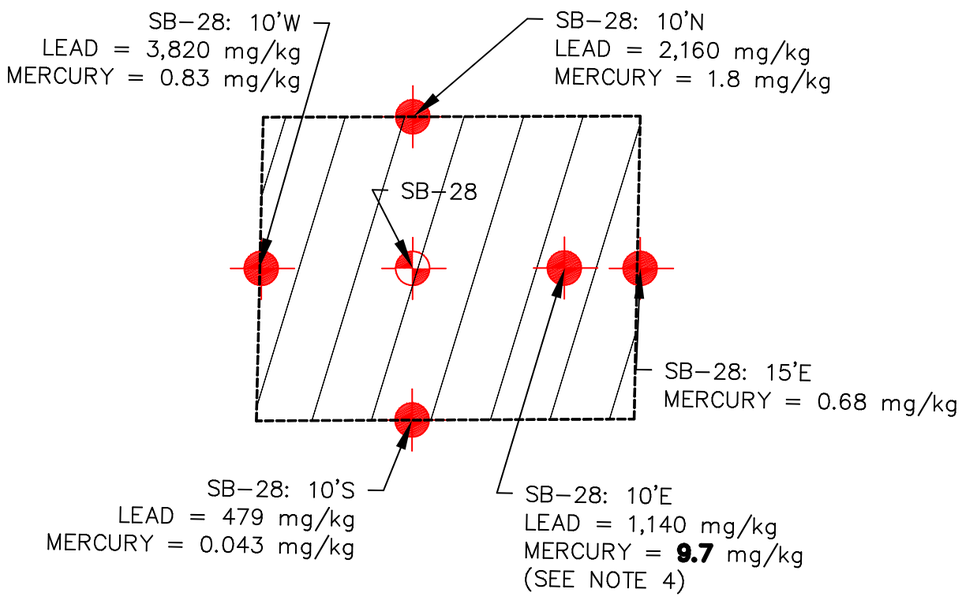
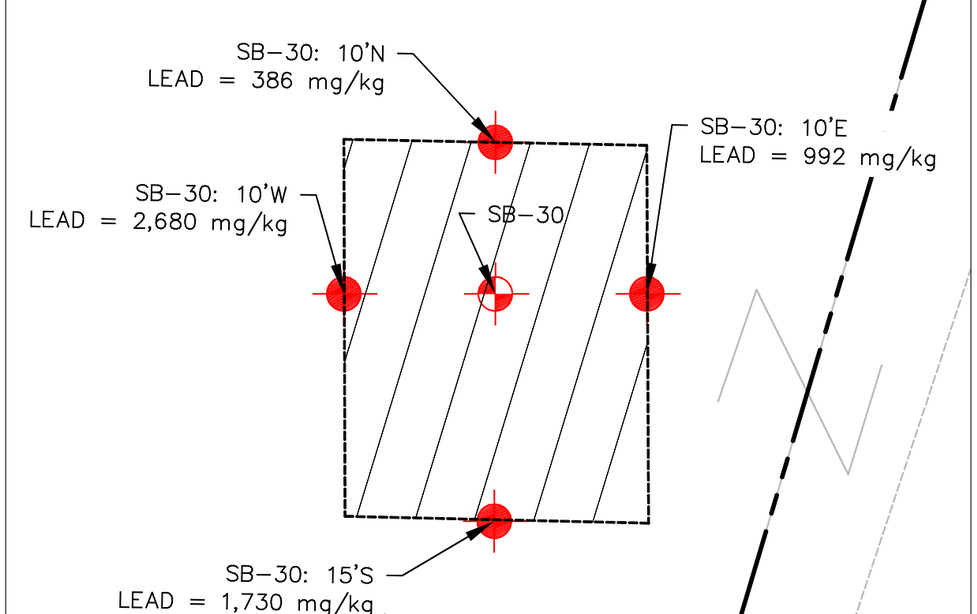
JULY 2019 | PN: 15-0027-6

FIGURE 8-D

SOIL BORING SB–28 EXCAVATION
SOIL/FILL REMOVAL DEPTH:
4–8'
CONTAMINANT & SITE–SPECIFIC SCO:
LEAD (5,000 mg/kg)
MERCURY (5.7 mg/kg)
(**BOLD** VALUES EXCEED SITE–SPECIFIC SCO)



SOIL BORING SB–30 EXCAVATION
TARGET DEPTH:
4–8'
CONTAMINANT & SITE–SPECIFIC SCO:
LEAD (5,000 mg/kg)



LEGEND:

- PROPERTY LINE
- EXCAVATION LIMITS (FINAL)
- RI SOIL BORING LOCATION ("HOT SPOT")
- IRM DELINEATION SOIL BORING (END POINT SAMPLE)
- IRM EXCAVATION CONFIRMATORY SAMPLE

NOTES:

1. SITE TOPOGRAPHIC AND SURVEYED DATA SHOWN ADAPTED FROM FOIT ALBERT ASSOCIATES DRAWING TITLED "BOUNDARY AND TOPOGRAPHIC SURVEY" PROJECT NUMBER 14001.14 DATED JULY 21, 2015.
2. RECORD RI SOIL BORING SAMPLING POINT LOCATIONS BASED UPON SURVEYS CONDUCTED BETWEEN MARCH 3 AND 7, 2016 BY ENSOL, INC. SUBSEQUENT IRM SAMPLE LOCATIONS FIELD MEASURED FROM ORIGINAL SURVEYED SOIL BORING LOCATION.
3. IRM EXCAVATIONS INCLUDED THE EXCAVATION OF SIGNIFICANTLY IMPACTED SOIL/FILL MATERIAL AT SELECT SOIL BORING LOCATIONS ("HOT SPOTS"). ONLY SPECIFIC ZONES (i.e., C&D LAYER, ASH/CINDER LAYER) AT SAMPLING LOCATIONS SIGNIFICANTLY IMPACTED, PRIMARILY WITH SVOCs OR METALS (ARSENIC, LEAD, AND MERCURY), WERE TARGETED FOR REMOVAL.
4. WITH NYSDEC APPROVAL, INDIVIDUAL CONTAMINANTS THAT PASSED SITE–SPECIFIC SCOs AT INNER SAMPLING INTERVALS WERE NO LONGER INCLUDED IN SAMPLE ANALYSIS AT REMAINING OUTER SAMPLING INTERVALS.

5' 0' 5' 10'

5' 0' 5' 10'

IRM END POINT SAMPLE RESULTS
837 BAILEY AVE. SITE - SITE MANAGEMENT PLAN

NEAR DINGENS, LLC.

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

JULY 2019 | PN: 15-0027-6

FIGURE 8-E

LEGEND:

PROPERTY BOUNDARY

TP1 — HISTORIC TEST PIT LOCATION (BY OTHERS) – USCO EXCEEDED IN AT LEAST ONE SAMPLE

BH2 / TPMW2 — HISTORIC SOIL BORING LOCATION AND EXISTING MONITORING WELL LOCATION (BY OTHERS) – USCO EXCEEDED IN AT LEAST ONE SAMPLE

SB-3 — RI SOIL BORING LOCATION – USCO NOT EXCEEDED IN ANY SAMPLE

SB-6 — RI SOIL BORING LOCATION – USCO EXCEEDED IN AT LEAST ONE SAMPLE

NOTES:

1. SITE TOPOGRAPHIC AND SURVEYED DATA SHOWN ADAPTED FROM FOIT ALBERT ASSOCIATES DRAWING TITLED "BOUNDARY AND TOPOGRAPHIC SURVEY" PROJECT NUMBER 14001.14 DATED JULY 21, 2015.
2. RECORD SAMPLING POINT LOCATIONS BASED UPON SURVEYS CONDUCTED BETWEEN MARCH 3 AND 7, 2016 BY ENSOL, INC.

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CLIENT:
BUFFALO TRUCK CENTER, INC.

SITE:
837 BAILEY AVE
CITY OF BUFFALO
COUNTY OF ERIE
STATE OF NEW YORK

PROJECT:
SITE MANAGEMENT PLAN

TITLE:
SOIL DATA SUMMARY EXCEEDANCES OF COMMERCIAL SCO (SHALLOW / C&D FILL)

ISSUED FOR:

DES:	DRN:	CHK:
STS	STS	JBB

PROJECT NO: 15-0027-6
DATE: JULY 2019
GRAPHIC SCALE: 0' 50' 100'
FILE: Fig9-Areas Of Remaining Cont..dwg
REV NO: 0
FIGURE NO: 9A

LEGEND:

PROPERTY BOUNDARY

TP16 — HISTORIC TEST PIT LOCATION (BY OTHERS) – USCO NOT EXCEEDED IN ANY SAMPLE

TP4 — HISTORIC TEST PIT LOCATION (BY OTHERS) – USCO EXCEEDED IN AT LEAST ONE SAMPLE

ETP7 — HISTORIC TEST PIT LOCATION (BY ENSOL INC) – USCO NOT EXCEEDED IN ANY SAMPLE

ETP3 — HISTORIC TEST PIT LOCATION (BY ENSOL INC) – USCO EXCEEDED IN AT LEAST ONE SAMPLE

BH1 / TPMW1 — HISTORIC SOIL BORING LOCATION AND EXISTING MONITORING WELL LOCATION (BY OTHERS) – USCO NOT EXCEEDED IN ANY SAMPLE

BH3 / TPMW3 — HISTORIC SOIL BORING LOCATION AND EXISTING MONITORING WELL LOCATION (BY OTHERS) – USCO EXCEEDED IN AT LEAST ONE SAMPLE

SB-10 — RI SOIL BORING LOCATION – USCO NOT EXCEEDED IN ANY SAMPLE

SB-1 — RI SOIL BORING LOCATION – USCO EXCEEDED IN AT LEAST ONE SAMPLE

NOTES:

1. SITE TOPOGRAPHIC AND SURVEYED DATA SHOWN ADAPTED FROM FOIT ALBERT ASSOCIATES DRAWING TITLED "BOUNDARY AND TOPOGRAPHIC SURVEY" PROJECT NUMBER 14001.14 DATED JULY 21, 2015.
2. RECORD SAMPLING POINT LOCATIONS BASED UPON SURVEYS CONDUCTED BETWEEN MARCH 3 AND 7, 2016 BY ENSOL, INC.

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CLIENT:
BUFFALO TRUCK CENTER, INC.

SITE:
837 BAILEY AVE
CITY OF BUFFALO
COUNTY OF ERIE
STATE OF NEW YORK

PROJECT:
SITE MANAGEMENT PLAN

TITLE:
SOIL DATA SUMMARY EXCEEDANCES OF COMMERCIAL SCO (DEEP/CINDER FILL)

ISSUED FOR:

DES:	DRN:	CHK:
STS	STS	JBB

PROJECT NO: 15-0027-6
DATE: JULY 2019
GRAPHIC SCALE: 0' 50' 100'
FILE: Fig9-Areas Of Remaining Cont..dwg
REV NO: 0
FIGURE NO: 9B

LEGEND:

PROPERTY BOUNDARY

SS-1 — RI SURFACE SOIL SAMPLE LOCATION – USCO EXCEEDED IN AT LEAST ONE SAMPLE

NOTES:

1. SITE TOPOGRAPHIC AND SURVEYED DATA SHOWN ADAPTED FROM FOIT ALBERT ASSOCIATES DRAWING TITLED "BOUNDARY AND TOPOGRAPHIC SURVEY" PROJECT NUMBER 14001.14 DATED JULY 21, 2015.
2. RECORD SAMPLING POINT LOCATIONS BASED UPON SURVEYS CONDUCTED BETWEEN MARCH 3 AND 7, 2016 BY ENSOL, INC.

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CLIENT:
BUFFALO TRUCK CENTER, INC.

SITE:
837 BAILEY AVE
CITY OF BUFFALO
COUNTY OF ERIE
STATE OF NEW YORK

PROJECT:
SITE MANAGEMENT PLAN

TITLE:
SOIL DATA SUMMARY EXCEEDANCES OF COMMERCIAL SCO (SURFACE SOIL)

ISSUED FOR:

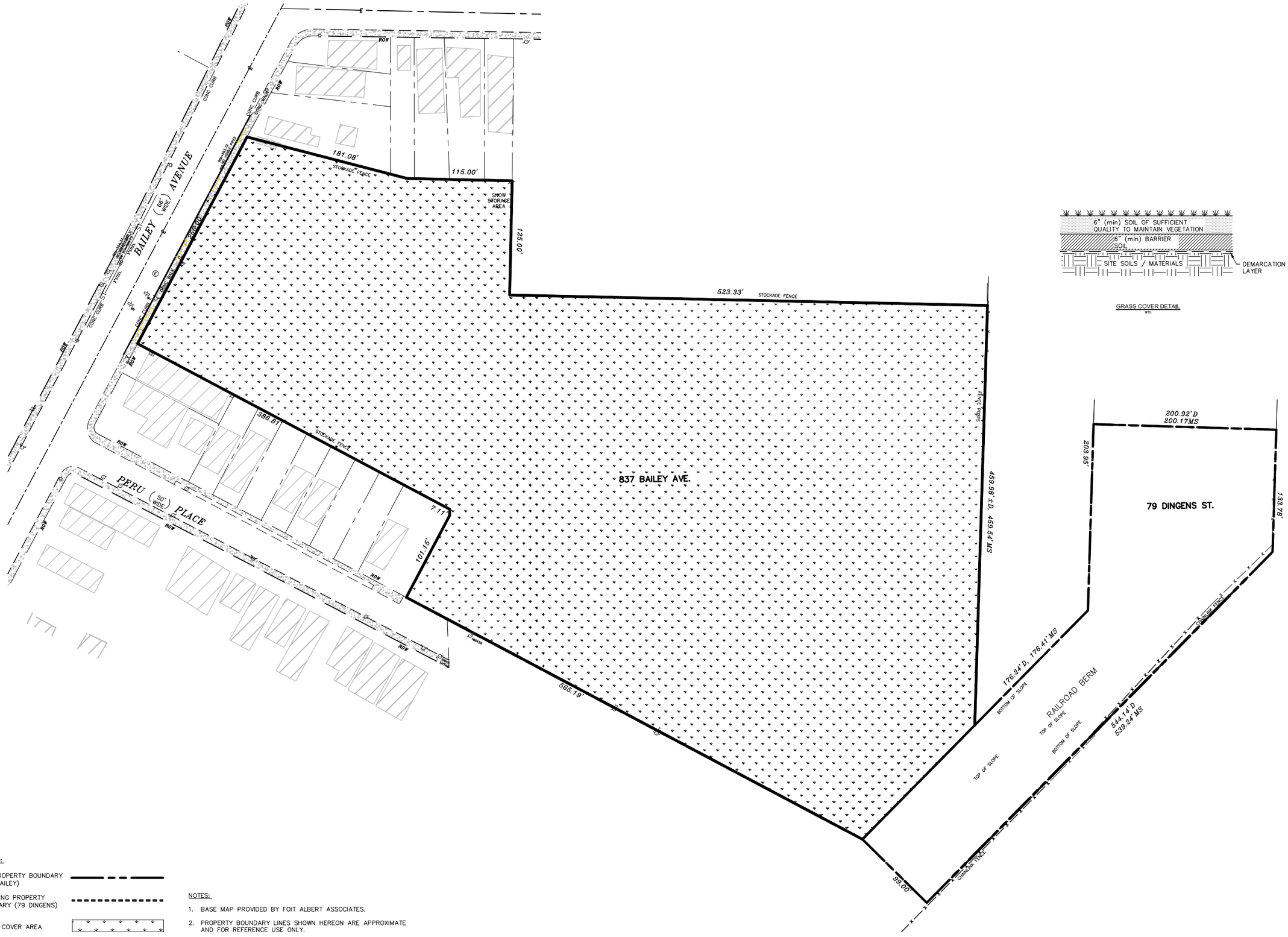
DES:	DRN:	CHK:
STS	STS	JBB

PROJECT NO: 15-0027-6
DATE: JULY 2019

GRAPHIC SCALE: 0' 50' 100'

FILE: Fig9-Areas Of Remaining Cont..dwg

REV NO: 0
FIGURE NO: 9C



GRASS COVER DETAIL
NTS

LEGEND:

BCP PROPERTY BOUNDARY (837 BAILEY)

ADJOINING PROPERTY BOUNDARY (79 DINGENS)

GRASS COVER AREA

NOTES:

1. BASE MAP PROVIDED BY FOIT ALBERT ASSOCIATES.
2. PROPERTY BOUNDARY LINES SHOWN HEREON ARE APPROXIMATE AND FOR REFERENCE USE ONLY.

EnSol, Inc.
Environmental Solutions
661 MAIN STREET
NIAGARA FALLS, NY 14301
PHONE (716) 285-3920
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CLIENT:
NEAR DINGENS, LLC

SITE:
837 BAILEY AVE

CITY OF	BUFFALO
COUNTY OF	ERIE
STATE OF	NEW YORK

PROJECT:
SITE MANAGEMENT PLAN

TITLE:
COVER SYSTEM DETAILS

ISSUED FOR:
REVIEW

DES:	DRN:	CHK:
KFP	KFP	JBB

PROJECT NO:	DATE:
15-0027-6	JULY 2019

GRAPHIC SCALE:
0' 40' 80'

FILE:
Fig10 - Cover System.dwg

REV NO:	FIGURE NO:
2	10

TABLES

TABLE 1
SUMMARY OF GROUNDWATER ELEVATION DATA
SITE MANAGEMENT PLAN
837 Bailey Ave. Site
Buffalo, New York

Well	Top Of Casing Elevation	Date	Depth To Water	Grounwater Elevation
TPMW-1[(1)]	600.39	3/14/2016	7.14	593.25
		6/1/2016	8.35	592.04
TPMW-2[(1)]	599.82	3/14/2016	6.85	592.97
		6/1/2016	8.21	591.61
TPMW-3[(1)]	598.92	3/14/2016	6.37	592.55
		6/1/2016	7.79	591.13
TPMW-4[(1)]	599.10	3/14/2016	6.54	592.56
		6/1/2016	7.96	591.14
TPMW-5[(1)]	600.52	3/14/2016	7.35	593.17
		6/1/2016	8.53	591.99
MW-1[(2)]	599.41	3/14/2016	7.33	592.08
		6/1/2016	10.02	589.39
MW-2[(2)]	597.58	3/14/2016	4.57	593.01
		6/1/2016	6.08	591.50
MW-3[(2)]	595.12	3/14/2016	2.98	592.14
		6/1/2016	4.11	591.01

Notes:
1. Monitoring wells installed by LCS as part of the 2015 Subsurface Investigation
2. Monitoring wells installed by EnSol as part of the 2016 Remedial Investigation

TABLE 2
RI SOIL BORING (SB) AND SURFACE SOIL (SS) ANALYTICAL DATA SUMMARY
SITE MANAGEMENT PLAN
837 BAILEY AVE. SITE
BUFFALO, NEW YORK

						Sample Locations																													
						Soil Borings																															
PARAMETER[1]	**Unrestricted (ppm)** [2]	**Residential (ppm)** [2]	**Commercial (ppm)** [2]	**Industrial (ppm)** [2]	**Site-Specific (ppm)**[(2)]	**SB-1 (4"-2')**	**SB-2 (1'-4')**	**SB-3 (1'-2')**	**SB-4 (1'-4')**	**SB-5 (6"-2')**	**SB-6 (0'-4')**	**SB-6 (4'-8')**	**SB-7 (0'-4')**	**SB-7 (4'-8')**	**SB-8 (6"-5')**	**SB-9 (2'-9.5')**	**SB-10 (1'-4')**	**SB-10 (5'-6')**	**SB-11 (1.5'-2')**	**Dupe 1 (SB-11)**	**SB-12 (6"-2')**	**Dupe 2 (SB-12)**	**SB-13 (6"-2')**	**SB-14 (2'-4')**	**SB-14 (4'-8')**	**SB-15 (2'-4')**	**SB-15 (4'-7')**	**SB-16 (0'-3')**	**SB-16 (3'-7')**	**SB-17 (1'-3')**	**SB-17 (3'-8')**	**SB-18 (0'-3.5')**	**SB-18 (3.5'-8')**	**SB-19 (0'-2')**	**SB-19 (4'-7.5')**	**SB-20 (0'-3.5')**	**SB-20 (3.5'-12.5')**
Volatile Organic Compounds (VOCs) - mg/Kg [3]																																			
2-Butanone (MEK)	**0.12**	**100**	**500**	**1000**	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0071	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	**0.05**	**100**	**500**	**1000**	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.029	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichloromethane	--	--	--	--	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0015 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Semi-Volatile Organic Compounds (SVOCs) - mg/Kg [3]																																			
Acenaphthene	**20**	**100**	**500**	**1000**	--	ND	ND	ND	ND	ND	ND	ND	ND	0.350 J	0.084 J	ND	ND	0.100 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.000 J	0.085 J
Acenaphthylene	**100**	**100**	**500**	**1000**	--	ND	ND	ND	ND	ND	ND	0.130 J	ND	0.500 J	0.130 J	0.120 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.000 J	0.170 J
Anthracene	**100**	**100**	**500**	**1000**	--	ND	ND	ND	ND	ND	0.760 J	0.860	ND	2.500	0.360 J	0.210 J	ND	ND	ND	ND	ND	ND	ND	0.088 J	ND	ND	ND	ND	ND	ND	ND	0.088 J	ND	ND	ND	29.000	0.650
Benzo (a) anthracene	**1**	**1**	**5.6**	**11**	--	0.099 J	ND	ND	ND	ND	**2.100**	**1.800**	0.370 J	**5.900**	**1.200**	0.670	0.078 J	ND	ND	ND	ND	ND	0.160 J	0.250 J	ND	0.130 J	ND	0.067 J	0.110 J	ND	0.086 J	0.300 J	ND	0.130 J	ND	**66.000**	**1.600**
Benzo (b) fluoranthene	**1**	**1**	**5.6**	**11**	--	0.180 J	ND	ND	ND	ND	**2.000**	**1.500**	0.580	**6.200**	**1.400**	0.770	0.087 J	ND	ND	ND	ND	ND	0.180 J	0.310 J	ND	0.140 J	0.085 J	0.093 J	0.180 J	ND	0.089 J	0.390 J	ND	0.260 J	ND	**64.000**	**1.600**
Benzo (k) fluoranthene	**0.8**	**1**	**56**	**110**	--	ND	ND	ND	ND	ND	**0.850 J**	0.560 J	0.180 J	**2.200**	0.540	0.260 J	ND	ND	ND	ND	ND	ND	0.068 J	0.096 J	ND	ND	ND	ND	ND	ND	ND	0.110 J	ND	0.092 J	ND	**24.000**	0.550
Benzo (a) pyrene	**1**	**1**	**1**	**1.1**	--	0.110 J	ND	ND	ND	ND	**1.600**	**1.300**	0.400 J	**5.300**	**1.100**	0.610	ND	ND	ND	ND	ND	ND	0.120 J	0.240 J	ND	0.100 J	ND	ND	0.130 J	ND	ND	0.290 J	ND	0.150 J	ND	**47.000**	**1.200**
Benzo (g,h,i) perylene	**100**	**100**	**500**	**1000**	--	0.120 J	ND	ND	ND	ND	0.920 J	0.610	0.310 J	3.100	0.700	0.360 J	0.072 J	ND	ND	ND	ND	ND	0.096 J	0.180 J	ND	0.085 J	ND	ND	0.110 J	ND	ND	0.230 J	ND	0.210 J	ND	22.000	0.680
Bis(2 - ethylhexyl) phthalate	--	--	--	--	--	0.160 BJ	0.130 BJ	0.290 BJ	0.099 J	0.180 BJ	0.270 BJ	0.480 BJ	0.230 BJ	0.330 BJ	1.100 B	0.470 BJ	0.170 BJ	0.290 BJ	0.400 B	0.160 BJ	0.150 BJ	0.130 BJ	0.190 BJ	0.180 BJ	0.130 BJ	0.230 BJ	0.140 BJ	0.320 BJ	0.330 BJ	0.150 BJ	0.290 BJ	0.260 BJ	0.170 BJ	0.400 B	0.190 BJ	ND	0.260 BJ
Butyl Benzyl Phthalate	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.220 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbazole	--	--	--	--	--	ND	ND	ND	ND	ND	ND	0.100 J	ND	1.000 J	0.210 J	0.120 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10.000	0.260 J
Chrysene	**1**	**1**	**56**	**110**	--	0.140 J	ND	ND	ND	ND	**1.800**	**1.400**	0.410	**5.400**	**1.200**	0.670	0.073 J	ND	ND	ND	ND	ND	0.150 J	0.240 J	ND	0.150 J	ND	0.069 J	0.150 J	ND	0.078 J	0.300 J	ND	0.160 J	ND	**61.000**	**1.500**
Di-n-butyl Phthalate	--	--	--	--	--	0.120 BJ	ND	0.370 BJ	0.100 J	ND	ND	0.280 BJ	0.130 BJ	ND	0.130 BJ	0.330 BJ	ND	0.160 BJ	0.095 BJ	0.120 BJ	0.097 BJ	ND	ND	0.870 B	ND	0.120 BJ	0.130 BJ	0.250 BJ	0.220 BJ	ND	0.190 BJ	0.170 BJ	ND	0.220 BJ	ND	ND	0.200 BJ
Dibenz(a,h)anthracene	**0.33**	**0.33**	**0.56**	**1.1**	--	ND	ND	ND	ND	ND	0.280 J	0.200 J	0.098 J	0.750 J	0.180 J	0.092 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**7.600 J**	0.210 J
Dibenzofuran	**7**	**14**	**350**	**1000**	--	ND	ND	ND	ND	ND	ND	ND	ND	0.310 J	ND	ND	ND	0.110 J	ND	ND	ND	ND	ND	ND	ND	0.280 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.200 J	0.120 J
Diethy Phthalate	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	**100**	**100**	**500**	**1000**	--	0.170 J	ND	ND	ND	ND	4.100	3.400	0.480	15.000	2.400	1.600	0.150 J	ND	ND	ND	ND	ND	0.250 J	0.510	ND	0.240 J	0.120 J	0.120 J	0.320 J	ND	0.130 J	0.560	ND	0.290 J	ND	**140.000**	3.700
Fluorene	**30**	**100**	**500**	**1000**	--	ND	ND	ND	ND	ND	ND	0.220 J	ND	0.620 J	0.120 J	0.082 J	ND	0.140 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11.000	0.250 J
Indeno (1,2,3 - cd) pyrene	**0.5**	**0.5**	**5.6**	**11**	--	0.110 J	ND	ND	ND	ND	**0.940 J**	**0.610**	0.310 J	**3.100**	**0.690**	0.370 J	ND	ND	ND	ND	ND	ND	0.092 J	0.170 J	ND	0.068 J	ND	ND	0.110 J	ND	ND	ND	ND	0.180 J	ND	**26.000**	**0.710**
Isophorone	--	--	--	--	--	ND	ND	ND	0.410 B	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2 - Methylnaphthalene	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.100 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-methylphenol/4-Methylphenol	--	-	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3- and 4-Methylphenol Coelution	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.320 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	**12**	**100**	**500**	**1000**	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.120 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.710	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	**0.8**		**6.7**	**55**	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	**100**	**100**	**500**	**1000**	--	0.120 J	ND	ND	ND	ND	1.900	2.500	0.310 J	9.900	1.600	1.100	0.140 J	0.220 J	ND	ND	ND	ND	0.092 J	0.380 J	ND	0.540	ND	ND	0.220 J	ND	0.120 J	ND	ND	0.180 J	ND	**110.000**	2.600
Phenol	**0.33**		**500**	**1000**	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	**100**	**100**	**500**	**1000**	--	0.130 J	ND	ND	ND	ND	3.300	3.100	0.420	12.000	2.200	1.500	0.140 J	ND	ND	ND	ND	ND	0.220 J	0.460	ND	0.220 J	ND	0.110 J	0.290 J	ND	0.120 J	ND	ND	0.260 J	ND	**100.000**	2.700
Total PAHs					***500***	*1.18*	*0.13*	*0.00*	*0.00*	*0.00*	*20.55*	*18.74*	*3.87*	*73.82*	*14.23*	*8.53*	*0.74*	*0.46*	*0.00*	*0.00*	*0.00*	*0.00*	*1.43*	*2.92*	*0.00*	*2.38*	*0.21*	*0.46*	*1.62*	*0.00*	*0.62*	*2.27*	*0.00*	*1.92*	*0.00*	***726.60***	*18.47*
Total Metals - mg/Kg																																			
Aluminum	--	--	--	--	--	14,400	16,800	9,080	13,500	10,500	7,670	6,300	4,600	7,340	7,030	6,780	7,510	12,000	13,400	13,400	13,000	14,500	11,200	12,600	4,210	8,210	11,300	3,250	9,280	11,500	8,210	11,100	3,090	4,340	870	6,700	5,390
Antimony	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	9.7	ND	ND	11.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	10.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	**13**	**16**	**16**	**16**	**50**	10.1	10.3	8.2	9.7	5.3	**22.9**	**45.3**	**17.8**	**30.4**	**26.7**	**13.3**	**29.2**	7.4	8.1	9.1	6.1	10.2	8.1	11.7	8.6	**24.9**	**22.9**	6.1	**17.5**	11.2	**40.9**	**13.8**	**19.3**	6.9	**62.6**	**13.3**	**36.5**
Barium	**350**	**350**	**400**	**10000**	--	115	100	62.0	98.7	124	**758**	309	163	**511**	319	275	202	72.4	129	94.9	83.5	95.7	117	158	115	262	**438**	43.3	328	100	313	145	94.8	56.4	81.0	182	136
Beryllium	**7.2**	**14**	**590**	**2700**	--	0.686	0.754	0.424	0.614	0.458	0.813	ND	0.469	0.613	0.689	0.525	0.370	0.509	0.704	0.637	0.560	0.688	0.543	0.651	0.463	0.765	0.697	ND	1.2	0.548	0.802	0.599	0.371	ND	ND	0.391	ND
Cadmium	**2.5**	**2.5**	**9.3**	**60**	--	ND	ND	ND	ND	ND	**3.3**	1.3	**2.8**	2.0	2.3	0.772	ND	ND	ND	ND	ND	ND	ND	ND	0.735	0.790	4.2	1.1	ND	**11.3**	ND	0.695	ND	**5.3**	**40.0**	1.8	ND
Calcium	--	--	--	--	--	14,500	33,300	4,220	45,700	3,560	11,000	2,750	4,730	9,630	19,300	15,300	6,160	44,800	2,290	55,300	54,200	54,700	26,900	5,330	17,600	7,240	10,300	39,800	10,500	27,200	6,880	8,480	3,210	30,300	4,820	12,800	2,230
Chromium	**30**	**36**	**1500**	**6800**	--	19.4	21.8	13.0	19.0	11.4	22.8	**38.9**	12.4	27.5	24.1	16.3	17.8	16.6	17.7	20.3	18.3	21.8	15.9	18.7	10.4	24.3	19.1	9.3	16.5	16.5	18.9	19.2	7.9	15.2	16.9	11.8	9.1
Cobalt	--	--	--	--	--	11.0	13.1	11.6	17.2	ND	7.8	15.1	6.6	12.4	ND	ND	18.5	9.7	14.3	13.6	10.7	12.9	7.9	11.7	ND	7.6	7.8	ND	13.8	17.2	10.5	8.9	ND	ND	18.6	ND	ND
Copper	**50**	**270**	**270**	**10000**	--	36.3	33.5	25.4	32.0	23.5	**1,640**	**704**	**58.0**	**1,470**	**387**	**138**	**116**	27.3	14.4	31.3	29.1	31.5	37.0	43.4	36.3	**63.5**	**179**	30.7	99.5	33.2	**54.1**	**240**	37.4	**52.0**	**168.0**	**187**	**221**
Cyanide	**27**	**27**	**27**	**10000**	--	0.13	ND	ND	ND	0.17	0.48	0.18	0.63	0.84	0.37	0.33	0.90	ND	ND	ND	ND	ND	ND	0.14	ND	ND	0.86	0.12	0.44	ND	0.27	0.22	ND	ND	0.29	0.32	0.13
Iron	--	--	--	--	--	30,200	32,400	22,700	30,400	18,200	29,000	280,000	16,200	70,700	33,900	22,000	165,000	26,600	35,000	29,900	26,700	32,300	23,000	29,000	37,600	20,000	46,900	11,600	10,500	26,600	13,700	25,100	16,600	34,400	424,000	19,500	22,900
Lead	**63**	**400**	**1000**	**3900**	**5000**	**87.2**	16.3	13.2	15.2	**259**	**3,880**	**2,790**	**244**	**39,800**	**1,510**	**8,250**	**9,290**	44.3	13.1	15.6	13.0	14.3	**141**	**132**	**2,710**	**530**	**1,360**	**65.8**	**716**	21.6	**474**	**322**	**73.7**	**143**	**35,300**	**540**	**190**
Magnesium	--	--	--	--	--	5,950	12,900	3,970	13,300	1,420	1,460	598	506	1,090	4,000	2,530	2,860	13,900	2,540	15,800	14,200	15,700	8,790	4,240	589	1,290	1,210	2,010	447	12,600	510	4,150	172	5,260	1,020	6,890	250
Manganese	**1600**	**2000**	**10000**	**10000**	--	401	534	863	947	346	620	630	211	552	518	298	926	454	498	561	437	526	287	660	276	422	644	359	517	1,430	223	571	100	343	1,420	471	96.8
Mercury	**0.18**	**0.81**	**2.8**	**5.7**	**5.7**	**0.223**	ND	ND	ND	**0.205**	**0.834**	**3.0**	**0.472**	**1.1**	**2.1**	**25.2**	**1.4**	ND	0.104	ND	ND	ND	0.119	ND	0.126	0.177	**1.5**	0.065	0.133	ND	**0.19**	**0.343**	**0.271**	0.163	**2.7**	**2.0**	**0.238**
Nickel	**30**	**140**	**310**	**10000**	--	27.1	**34.8**	27.4	**43.3**	10.7	10.8	**35.3**	13.3	16.7	22.7	14.5	**50.8**	24.2	18.5	**31.9**	27.0	**33.3**	22.9	**30.7**	12.9	19.2	23.0	7.1	22.4	**43.2**	22.5	28.9	12.3	19.4	**37.7**	9.0	8.7
Potassium	--	--	--	--	--	1,860	1,670	913	1,850	967	1,040	691	647	917	1,230	867	1,100	2,110	1,290	1,980	2,700	3,310	1,830	1,450	371	1,700	2,880	513	756	1,730	673	1,510	377	571	ND	915	1,750
Selenium	**3.9**	**36**	**1500**	**6800**	--	ND	ND	ND	ND	ND	1.9	**7.6**	ND	**5.0**	ND	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.8	ND	ND	ND	ND	ND	ND	ND	**6.9**	ND	3.3
Silver	**2**	**36**	**1500**	**6800**	--	ND	ND	ND	ND	ND	ND	ND	ND	**2.7**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	--	--	--	--	--	ND	168	ND	ND	ND	650	ND	191	292	200	334	ND	ND	127	172	122	160	ND	ND	175	379	486	ND	513	ND	295	ND	198	ND	ND	ND	ND	498
Thallium	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	--	--	--	--	--	28.3	29.6	19.2	23.9	18.3	32.3	49.1	34.3	27.6	24.1	27.8	25.0	23.3	26.8	26.2	21.3	28.3	21.8	25.4	23.2	24.7	36.3	8.5	45.7	24.1	42.4	25.4	49.1	9.2	ND	16.5	32.2
Zinc	**109**	**2200**	**10000**	**10000**	--	100	73.1	52.4	71.8	92.4	**915**	**4,290**	**1,000**	**1,290**	**855**	**378**	**316**	73.6	80.6	70.5	68.1	76.4	**174**	**163**	**349**	**458**	**1,510**	90.7	**135**	**750**	**396**	**616**	**123**	**201**	**352**	**1,100**	**267**

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) or as approved by the NYSDEC (Site-specific value).
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. At the time of this draft report, soil vapor results are not available. The final results will be included in the final report.

Definitions:

-- = No SCO has been established for subject parameter./ Not analyzed for that parameter.
ND = Parameter not detected above laboratory detection limit.
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 Residential SCOs.
BOLD	Exceeds Part 375 Commercial SCOs.
BOLD	Exceeds Part 375 Industrial SCOs.
BOLD	Exceeds Site-specific SCO, as approved by the NYSDEC.

TABLE 2
RI SOIL BORING (SB) AND SURFACE SOIL (SS) ANALYTICAL DATA SUMMARY
SITE MANAGEMENT PLAN
837 BAILEY AVE. SITE
BUFFALO, NEW YORK

						Sample Locations																										
						Soil Borings																			Surface Soil								
PARAMETER[1]	Unrestricted (ppm) [2]	Residential (ppm) [2]	Commercial (ppm) [2]	Industrial (ppm) [2]	Site-Specific (ppm) [2]	SB-21 (0'-4')	SB-21 (4'-12')	SB-22 (0'-3.5')	SB-22 (3.5'-16')	SB-23 (0'-4')	SB-23 (6'-10')	SB-24 (0'-3')	SB-24 (4'-8')	SB-25 (0'-3.5')	SB-25 (4'-8')	SB-26 (0'-2')	SB-26 (4'-8')	SB-27 (0'-4')	SB-27 (6'-10')	SB-28 (0'-3')	SB-28 (4'-8')	SB-29 (0'-6')	SB-30 (0'-4')	SB-30 (4'-8')	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9
Volatile Organic Compounds (VOCs) - mg/Kg [3]																																
Acetone	**0.05**	**100**	**500**	**1000**	--	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0056 J	ND	ND	ND	ND	0.0084	ND	ND	ND
Benzene	**0.06**	**2.9**	**44**	**89**	--	NA	NA	NA	NA	NA	NA	0.00091 J	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	**0.12**	**100**	**500**	**1000**	--	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	0.0070 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	**0.05**	**100**	**500**	**1000**	--	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	0.027	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	**0.06**	**2.9**	**44**	**89**	--	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0019 J	0.00048 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane	--	--	--	--	--	NA	NA	NA	NA	NA	NA	0.0052 J	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	0.0016 J	0.0012 BJ	0.0036 J	0.0021 BJ	ND	0.001 BJ	0.0017 J	0.0019 J	0.00094 BJ	0.0022 J
Ethylbenzene	**1**	**30**	**390**	**780**	--	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	0.00040 J	ND	0.00091 J	ND	ND	ND	ND	ND	ND	ND
Methyl tert-Butyl Ether	**0.93**	**500**	**1000**	**89**	--	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	0.011	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methy Acetate	--	-	--	--	--	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	0.0023 J	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	**0.7**	**100**	**500**	**1000**	--	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0017 J	ND	ND	0.0031 J	ND	ND	ND	ND	0.0013 J	ND	ND
Trichloroethene (TCE)	**0.47**	**10**	**200**	**400**	--	NA	NA	NA	NA	NA	NA	0.014	0.0039 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0066 J	ND	0.0035 J	0.020	0.0054 J	0.0027 J	0.0043 J	0.017	0.015	0.0018 J	0.017
Xylene, Total	**0.26**	**100**	**500**	**1000**	--	NA	NA	NA	NA	NA	NA	0.00061 J	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	0.0049 J	ND	ND	ND	ND	0.0028 J	ND	0.00061 J
Semi-Volatile Organic Compounds (SVOCs) - mg/Kg [3]																																
Acenaphthene	**20**	**100**	**500**	**1000**	--	ND	ND	0.480 J	ND	0.120 J	ND	ND	ND	ND	ND	0.081 J	ND	ND	2.400 J	0.670 J	ND	0.130 J	ND	ND	ND	0.640 J	0.150 J	ND	0.300 J	0.120 J	ND	ND	ND
Acenaphthylene	**100**	**100**	**500**	**1000**	--	ND	ND	0.320 J	ND	0.100 J	ND	ND	0.230 J	ND	ND	0.098 J	ND	ND	3.700 J	0.330 J	ND	0.180 J	ND	ND	ND	ND	0.230 J	0.079 J	0.120 J	0.077 J	0.078 J	ND	ND
Anthracene	**100**	**100**	**500**	**1000**	--	0.082 J	ND	1.500	0.260 J	0.410 J	ND	ND	0.170 J	0.220 J	ND	0.320 J	ND	0.240 J	10.000	2.100	ND	0.580	0.170 J	0.120 J	ND	2.400	0.500	0.160 J	0.730	0.250 J	0.140 J	0.560 J	ND
Benzo (a) anthracene	**1**	**1**	**5.6**	**11**	--	0.300 J	0.200 J	**3.800**	0.540	**1.300**	ND	0.350 J	0.750	0.600	0.091 J	**1.100**	0.075 J	0.480 J	**29.000**	**5.300**	0.140 J	**1.700**	0.610	0.500	**1.200 J**	**12.000**	**1.700**	0.610	**1.300**	0.540	0.430	**1.700**	0.220 J
Benzo (b) fluoranthene	**1**	**1**	**5.6**	**11**	--	0.410 J	0.230 J	**4.000**	0.620	**1.700**	ND	0.530 J	0.990	0.710	0.110 J	**1.200**	ND	0.550 J	**34.000**	**6.100**	0.250 J	**2.000**	0.860	0.580	**1.800 J**	**12.000**	**2.200**	**1.000**	**1.300**	0.950	0.700	**2.300**	0.400
Benzo (k) fluoranthene	**0.8**	**1**	**56**	**110**	--	0.140 J	ND	**1.400**	0.220 J	0.590	ND	ND	0.340 J	0.240 J	ND	0.440	ND	0.200 J	**14.000**	**2.100**	ND	0.730	0.290 J	0.200 J	0.680 J	**4.800**	0.790	0.320 J	0.500	0.290 J	0.250 J	**0.820 J**	0.130 J
Benzo (a) pyrene	**1**	**1**	**1.1**	**1.1**	--	0.300 J	0.160 J	**3.200**	0.510	**1.200**	ND	0.360 J	0.760	0.500	0.085 J	0.990	ND	0.430 J	**26.000**	**4.800**	0.160 J	**1.500**	0.580	0.440 J	**1.300 J**	**8.600**	**1.600**	0.640	**1.100**	0.550	0.470	**1.700**	0.240 J
Benzo (g,h,i) perylene	**100**	**100**	**500**	**1000**	--	0.280 J	0.120 J	1.900	0.340 J	0.950	ND	0.610 J	0.470	0.460	ND	0.660	ND	0.280 J	13.000	2.600	0.180 J	0.930	0.400 J	0.360 J	1.200 J	5.100	1.100	0.440	0.620	0.440 J	0.380 J	1.200 J	0.210 J
Bis(2 - ethylhexyl) phthalate	--	--	--	--	--	0.440 B	0.230 BJ	0.240 J	0.100 J	0.650	0.740	25.000	0.230 BJ	0.290 BJ	0.190 BJ	0.200 BJ	0.220 BJ	0.930 B	ND	1.200	ND	1.000	0.066 J	0.410 BJ	8.700	0.860 BJ	1.800	4.000	0.300 J	3.600	0.690 B	0.400 J	0.840
Butyl Benzyl Phthalate	--	--	--	--	--	ND	ND	0.280 J	ND	ND	ND	0.800 J	ND	0.260 J	ND	ND	ND	ND	ND	0.200 J	ND	0.120 J	ND	ND	ND	0.440 J	ND	0.480	ND	0.350 J	ND	ND	0.240 J
Carbazole	--	--	--	--	--	ND	ND	0.790 J	0.097 J	0.280 J	ND	ND	ND	0.076 J	ND	0.110 J	ND	ND	8.000	0.840	ND	0.230 J	0.089 J	ND	ND	2.000 J	0.470	0.100 J	0.300 J	0.140 J	0.082 J	0.320 J	ND
Chrysene	**1**	**1**	**56**	**110**	--	0.300 J	0.190 J	**3.700**	0.540	**1.300**	ND	0.340 J	0.760	0.600	0.093 J	**1.200**	ND	0.470 J	**33.000**	**4.800**	0.140 J	**1.600**	0.650	0.500	**1.400 J**	**11.000**	**1.900**	0.780	**1.200**	0.600	0.490	**1.600**	0.290 J
Di-n-butyl Phthalate	--	--	--	--	--	0.160 BJ	0.150 BJ	ND	ND	ND	ND	ND	0.180 BJ	0.240 BJ	0.130 BJ	ND	0.130 BJ	ND	ND	0.320 J	ND	0.160 J	ND	ND	ND	ND	0.290 BJ	ND	ND	0.160 J	0.410 B	ND	0.150 J
Di-n-octyl Phthalate	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.500
Dibenzo (a,h) anthracene	**0.33**	**0.33**	**0.56**	**1.1**	--	0.074 J	ND	**0.540 J**	0.086 J	0.260 J	ND	ND	0.150 J	0.098 J	ND	0.170 J	ND	ND	**4.000 J**	**0.820**	ND	0.270 J	0.110 J	0.081 J	ND	**1.500 J**	0.290 BJ	0.110 J	0.170 J	0.100 J	0.094 J	**0.280 J**	0.054 J
Dibenzofuran	**7**	**14**	**350**	**1000**	--	ND	ND	0.470 J	0.088 J	0.120 J	ND	ND	ND	ND	ND	0.095 J	ND	ND	4.900 J	0.550 J	ND	0.120 J	ND	ND	ND	ND	0.160 J	ND	0.250 J	0.083 J	ND	ND	ND
Dimethyl Phthalate	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.100	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.090 J	ND	ND	ND	ND	ND
Fluoranthene	**100**	**100**	**500**	**1000**	--	0.550	0.380 J	8.100	1.200	3.000	ND	0.600 J	1.100	1.100	0.170 J	2.300	0.170 J	ND	84.000	10.000	0.230 J	3.400	1.300	0.900	2.700 J	25.000	4.200	1.300	2.700	1.200	0.970	3.500	0.440
Fluorene	**30**	**100**	**500**	**1000**	--	ND	ND	0.600 J	ND	0.140 J	ND	ND	ND	ND	ND	0.087 J	ND	ND	7.500	0.760 J	ND	0.220 J	ND	ND	ND	0.530 J	0.210 J	ND	0.350 J	0.120 J	ND	0.220 J	ND
Indeno (1,2,3 - cd) pyrene	**0.5**	**0.5**	**5.6**	**11**	--	0.250 J	0.110 J	**1.900**	0.330 J	**0.910**	ND	0.430 J	**0.550**	0.380	ND	0.660	ND	0.280 J	**14.000**	**2.700**	0.170 J	**0.860**	0.400 J	0.360 J	**1.000 J**	**5.300**	**1.100**	0.420 J	0.570	0.440 J	0.360 J	**1.100 J**	0.190 J
Isophorone	--	--	--	--	--	ND	ND	0.370 BJ	0.380 BJ	0.490 B	0.350 BJ	ND	ND	ND	ND	ND	ND	ND	ND	0.350 BJ	1.200 B	0.370 BJ	0.900 B	ND	ND	ND	ND	0.420 BJ	0.340 BJ	0.340 BJ	ND	0.350 BJ	0.600 B
2 - Methylnaphthalene	--	--	--	--	--	ND	ND	0.350 J	ND	0.260 J	ND	0.570 J	0.100 J	0.690	ND	0.230 J	ND	ND	1.400 J	0.400 J	ND	0.079 J	0.210 J	ND	ND	ND	ND	0.120 J	ND	0.210 J	0.130 J	0.096 J	ND	0.066 J
4-Nitroaniline	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	**12**	**100**	**500**	**1000**	--	ND	ND	0.420 J	0.089 J	0.240 J	ND	ND	0.098 J	0.380	ND	0.180 J	ND	ND	4.300 J	0.470 J	ND	0.110 J	0.260 J	0.070 J	ND	ND	0.210 J	ND	0.270 J	0.140 J	0.082 J	ND	ND
Phenanthrene	**100**	**100**	**500**	**1000**	--	0.300 J	0.250 J	6.600	0.900	2.100	ND	ND	0.380 J	0.760	0.100 J	1.300	0.160 J	0.810	77.000	7.400	0.140 J	2.300	0.780	0.480 J	1.500 J	11.000	3.000	0.540	2.500	0.870	0.540	2.100	0.260 J
Pyrene	**100**	**100**	**500**	**1000**	--	0.520	0.330 J	6.400	0.960	2.500	ND	0.590 J	0.980	0.950	0.140 J	2.100	0.140 J	0.840	65.000	8.500	0.200 J	2.800	1.100	0.810	2.200 J	21.000	3.500	1.100	2.400	0.990	0.780	2.900	0.390
Total PAHs					**500**	*3.51*	*1.97*	*45.65*	*6.69*	*17.10*	*0.00*	*3.81*	*7.73*	*7.07*	*0.79*	*13.00*	*0.55*	*4.58*	*428.90*	*60.29*	*1.61*	*19.54*	*7.60*	*5.40*	*15.08*	*122.87*	*23.15*	*7.60*	*16.43*	*7.82*	*5.84*	*20.30*	*2.82*
Total Metals - mg/Kg																																
Aluminum	--	--	--	--	--	5,910	6,940	6,810	5,650	5,920	2,940	6,060	3,330	5,950	4,890	8,500	4,260	7,230	7,660	3,970	5,230	4,750	13,300	4,880	3,200	24,500	7,930	8,610	7,160	5,390	3,700	8,080	2,640
Antimony	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	78.8	ND
Arsenic	**13**	**16**	**16**	**16**	**50**	**13.6**	**14.4**	**23.4**	**17.5**	**24.4**	10.4	11.9	**31.7**	**25.6**	**21.3**	**28.1**	4.4	9.8	**95.7**	12.1	**16.9**	**25.4**	4.9	**20.8**	5.1	**22.2**	**21.7**	11.7	9.5	9.7	**17.8**	**16.7**	7.2
Barium	**350**	**350**	**400**	**10000**	--	201	220	140	268	232	140	218	228	237	168	330	79.4	143	**1,570**	144	**3,890**	**392**	171	**462**	82.9	**468**	157	159	**396**	144	188	**352**	59.1
Beryllium	**7.2**	**14**	**590**	**2700**	--	0.594	0.639	0.478	0.639	0.693	ND	ND	0.409	0.454	0.485	0.814	ND	0.489	0.826	ND	ND	ND	0.755	ND	ND	3.3	0.645	0.556	ND	ND	ND	0.428	ND
Cadmium	**2.5**	**2.5**	**9.3**	**60**	--	0.831	0.799	1.2	0.702	**4.8**	ND	**5.0**	**11.1**	**3.9**	1.0	**5.0**	ND	2.0	**16.4**	**5.3**	2.2	**4.5**	ND	1.4	1.9	**3.2**	**2.6**	**2.5**	**2.7**	**7.3**	11.8	**28.6**	2.1
Calcium	--	--	--	--	--	4,200	7,720	35,900	14,500	9,920	7,320	37,500	3,990	41,600	11,500	48,100	2,660	82,700	63,900	40,800	18,000	24,800	2,770	31,100	129,000	141,000	13,800	20,400	81,100	55,100	19,300	46,700	113,000
Chromium	**30**	**36**	**1500**	**6800**	--	**41.1**	14.9	25.0	**388**	29.1	12.0	**71.2**	13.4	21.1	18.0	**63.2**	7.1	29.3	**57.3**	**58.6**	**83.0**	**176**	16.9	26.4	**32.8**	**114**	23.9	23.4	28.3	**37.6**	**68.1**	**69.0**	18.9
Cobalt	--	--	--	--	--	9.1	7.0	ND	6.3	8.2	8.2	9.6	12.3	5.8	8.8	9.6	ND	7.4	ND	ND	ND	12.7	8.1	ND	ND	ND	ND	7.8	ND	ND	7.9	7.8	ND
Copper	**50**	**270**	**270**	**10000**	--	**67.2**	**90.9**	**156**	**432**	**155**	45.3	**656**	**91.6**	**118**	**81.4**	**169**	**62.5**	**113**	**519**	**132**	**220**	**512**	17.4	**112**	**156**	**105**	**116**	**85.7**	**57.4**	**262**	**146**	**498**	**108**
Cyanide	**27**	**27**	**27**	**10000**	--	0.19	0.49	0.46	ND	0.98	0.15	ND	0.43	ND	ND	0.64	ND	0.27	2.35	0.22	1.83	0.49	0.20	0.24	0.12	1.49	0.27	ND	0.15	0.55	0.43	ND	ND
Iron	--	--	--	--	--	30,100	22,700	39,100	31,400	53,900	16,100	156,000	176,000	36,100	61,700	129,000	7,880	32,700	118,000	61,500	70,900	159,000	26,700	21,300	27,700	61,700	37,300	29,900	26,000	40,600	88,700	79,900	33,500
Lead	**63**	**400**	**1000**	**3900**	**5000**	**1,030**	**516**	**538**	**1,610**	**1,180**	**459**	**1,460**	**380**	**191**	**527**	**884**	45.8	**430**	**6,540**	**409**	**36,500**	**1,110**	**95.4**	**6,110**	**154**	**361**	**639**	**1,120**	**808**	**554**	**553**	**1,500**	**197**
Magnesium	--	--	--	--	--	575	727	5,920	876	1,550	633	5,160	892	5,200	1,760	5,330	393	7,250	2,950	5,380	1,040	2,320	2,390	1,900	8,510	13,500	2,520	5,780	24,400	8,210	3,600	18,200	5,530
Manganese	**1600**	**2000**	**10000**	**10000**	--	302	240	633	337	737	134	897	722	332	342	1,060	130	591	1,110	588	258	942	152	321	469	**6,630**	496	415	532	514	634	941	327
Mercury	**0.18**	**0.81**	**2.8**	**5.7**	**5.7**	**0.242**	**1.6**	**0.823**	**1.0**	**2.1**	**0.374**	**0.278**	**0.227**	**0.403**	**0.183**	**0.196**	ND	**0.205**	**6.8**	**0.509**	**6.6**	**0.978**	**0.395**	**0.496**	0.084	**0.214**	**0.629**	**0.286**	**0.419**	**0.184**	**0.503**	**0.900**	0.098
Nickel	**30**	**140**	**310**	**10000**	--	16.5	14.8	23.7	15.0	22.7	15.9	**143**	26.0	**45.2**	18.7	**46.5**	18.5	24.6	29.0	**35.4**	22.7	**72.3**	16.1	12.2	19.3	23.9	29.0	29.8	15.7	**46.5**	**44.5**	**66.7**	18.3
Potassium	--	--	--	--	--	709	757	954	1,160	898	646	893	553	520	756	974	547	1,120	1,110	763	826	792	1,240	728	589	1,460	853	1,430	1,280	979	667	1,200	554
Selenium	**3.9**	**36**	**1500**	**6800**	--	ND	ND	ND	ND	2.8	ND	ND	**4.8**	ND	ND	ND	ND	ND	**52.7**	ND	**3.9**	ND	ND	2.9	3.4	**5.5**	ND	ND	2.6	1.7	ND	4.0	3.3
Silver	**2**	**36**	**1500**	**6800**	--	ND	ND	ND	ND	ND	ND	**2.2**	ND	ND	ND	ND	ND	ND	ND	ND	**2.1**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	--	--	--	--	--	168	263	202	269	290	374	163	288	126	176	185	206	218	759	201	405	308	ND	208	183	597	ND	144	536	ND	ND	289	ND
Thallium	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.2	ND	ND	ND	1.3	ND	ND	ND	ND
Vanadium	--	--	--	--	--	28.5	28.6	27.8	26.9	25.5	16.8	20.0	30.5	14.9	25.5	23.1	19.5	20.3	28.2	13.3	25.6	20.6	23.6	17.1	15.6	45.0	24.0	22.3	24.5	13.2	12.7	26.6	6.7
Zinc	**109**	**2200**	**10000**	**10000**	--	**461**	**367**	**371**	**637**	**1,290**	**168**	**1,800**	**1,920**	**360**	**304**	**844**	80.0	**327**	**2,550**	**623**	**1,030**	**1,860**	**161**	**589**	**518**	**816**	**762**	**489**	**568**	**905**	**1,420**	**1,330**	**315**
Polychlorinated Biphenyls (PCBs), Pesticides, and Herbicides - mg/Kg [3]																																
2,4-D	--	--	--	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND
4,4'-DDD	**0.0033**	**2.6**	**92**	**180**	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	**0.0091 J**	ND	**0.020**
4,4'-DDE	**0.0033**	**1.8**	**62**	**120**	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	**0.0070 J**	ND	ND	**0.016**	ND	**0.037**
4,4'-DDT	**0.0033**	**1.7**	**47**	**94**	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	**0.020**	**0.032**	**0.022**	**0.028**	**0.014**	**0.082**	ND	**0.670**
Aroclor 1260	**0.1**	**1**	**1**	**25**	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	0.039 J	0.029 J	**0.220**	0.095	0.042 J	0.083	**0.150**	**0.170**	**4.900**	**0.150**
Chlordane (Alpha)	**0.094**	**0.91**	**24**	**47**	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	0.022	ND	ND	ND	ND	ND	ND
Chlordane (Gamma)	--	--	--	--	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	0.015	ND	ND	ND	ND	ND	ND
Dieldrin	**0.005**	**0.0039**	**1.4**	**2.8**	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	NA	ND	ND	ND	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-detect.
2. Values per NYSDEC Part 375 Soil Cleanup Objectives (December 2006) or as approved by the NYSDEC (Site-specific values).
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. At the time of this draft report, soil vapor results are not available. The final results will be included in the final report.

Definitions:
-- = No SCO has been established for subject parameter./ Not analyzed for that parameter.
ND = Parameter not detected above laboratory detection limit.
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 Residential SCOs.
BOLD	Exceeds Part 375 Commercial SCOs.
BOLD	Exceeds Part 375 Industrial SCOs.
BOLD	Exceeds Site-specific SCO, as approved by the NYSDEC.

TABLE 2
RI SOIL BORING (SB) AND SURFACE SOIL (SS) ANALYTICAL DATA SUMMARY
SITE MANAGEMENT PLAN
837 BAILEY AVE. SITE
BUFFALO, NEW YORK

						Sample Locations					
						Surface Soil					
PARAMETER[1]	Unrestricted (ppm) [2]	Residential (ppm) [2]	Commercial (ppm) [2]	Industrial (ppm) [2]	Site-Specific (ppm) [2]	SS-10	SS-11	SS-12	Dupe 4 (SS-12)	SS-13	SS-14
Volatile Organic Compounds (VOCs) - mg/Kg[3]											
1,2-Dichlorobenzene	1.1	100	500	1000	--	ND	ND	ND	ND	ND	ND
1,2,4-Trimethybenzene	3.6	47	190	380	--	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	8.4	47	190	380	--	ND	ND	ND	ND	ND	ND
1,4-Diethylbenzene	--	-	--	--	--	ND	ND	ND	ND	ND	ND
1,2,4,5-Tetramethylbenzene	--	-	--	--	--	ND	ND	ND	ND	ND	ND
2-Butanone	--	-	--	--	--	ND	ND	ND	ND	ND	ND
4-Ethyltoluene	--	-	--	--	--	ND	ND	ND	ND	ND	ND
Acetone	0.05	100	500	1000	--	0.0051 J	ND	ND	ND	ND	ND
Benzene	0.06	2.9	44	89	--	ND	ND	ND	ND	0.00045 J	ND
Carbon disulfide	--		--	--	--	ND	ND	ND	ND	ND	ND
Dichloromethane	--	--	--	--	--	0.0010 BJ	ND	0.0035 J	0.0022 J	0.013	ND
Ethylbenzene	1	30	390	780	--	ND	ND	ND	ND	ND	ND
Methylcyclohexane	--	-	--	--	--	ND	ND	ND	ND	ND	ND
Methylene Chloride	0.05	51	500	1000	--	ND	ND	ND	ND	ND	ND
p-Isopropylbenzene	--	-	--	--	--	ND	ND	ND	ND	ND	ND
sec-Butybenzene	11	100	500	1000	--	ND	ND	ND	ND	ND	ND
Toluene	0.7	100	500	1000	--	ND	ND	ND	ND	ND	ND
Trichloroethene (TCE)	0.47	10	200	200	--	0.0036 J	0.0021 J	ND	ND	0.0071	0.0041 J
Trichlorofluoromethane (CFC 11)	--	--	--	--	--	ND	0.00083 J	ND	ND	ND	ND
Xylene, Total	0.26	100	500	1000	--	ND	ND	ND	ND	ND	ND
Semi-Volatile Organic Compounds (SVOCs) - mg/Kg[3]											
Acenaphthene	20	100	500	1000	--	0.210 J	ND	ND	0.150 J	ND	0.410 J
Acenaphthylene	100	100	500	1000	--	0.170 J	ND	ND	0.130 J	ND	0.340 J
Acetophenone	--	--	--	--	--	ND	0.430 J	ND	ND	ND	ND
Anthracene	100	100	500	1000	--	0.650	ND	0.200 J	0.510	ND	1.900
Benzo (a) anthracene	1	1	5.6	11	--	**1.600**	0.380 J	0.490 J	**1.600**	0.700 J	**4.300**
Benzo (b) fluoranthene	1	1	5.6	11	--	**1.900**	0.580 J	0.620 J	**2.100**	0.940 J	**4.000**
Benzo (k) fluoranthene	0.8	1	56	110	--	0.630	ND	0.230 J	0.710	ND	**1.400**
Benzo (a) pyrene	1	1	1	1.1	--	**1.500**	0.380 J	0.450 J	**1.600**	ND	**3.500**
Benzo (g,h,i) perylene	100	100	500	1000	--	0.940	0.390 J	0.300 J	0.990	ND	1.900
Bis(2 - ethylhexyl) phthalate	--	--	--	--	--	1.400	6.700	0.390 BJ	0.880 B	53.000	0.590 J
Butyl Benzyl Phthalate	--	--	--	--	--	0.560	0.520 J	ND	0.510	ND	0.220 J
Carbazole	--	-	--	--	--	0.220 J	ND	ND	0.180 J	ND	0.270 J
Chrysene	1	1	56	110	--	**1.400**	0.400 J	0.480 J	**1.600**	0.640 J	**4.100**
Dibenzo (a,h) anthracene	0.33	0.33	0.56	1.1	--	0.260 J	ND	ND	0.280 J	ND	**0.560 J**
Dibenzofuran	7	14	350	1000	--	0.140 J	ND	ND	0.095 J	ND	0.190 J
Di - n - butyl phthalate	--	--	--	--	--	0.170 J	ND	ND	0.200 BJ	ND	0.330 J
Di - n - octyl phthalate	-	-	-	-	--	ND	ND	ND	ND	ND	ND
Dimethyl Phthalate	--	--	--	--	--	0.190 J	ND	0.250 J	0.120 J	ND	ND
Fluoranthene	100	100	500	1000	--	3.100	0.810 J	0.970	3.200	1.200 J	9.100
Fluorene	30	100	500	1000	--	0.230 J	ND	ND	0.150 J	ND	0.520 J
Indeno (1,2,3 - cd) pyrene	0.5	0.5	5.6	11	--	**0.870**	0.310 J	0.280 J	**0.990**	ND	**1.900**
Isophorone	--	--	--	--	--	0.410 B	ND	ND	ND	1.000 BJ	0.300 BJ
2 - Methylnaphthalene	--	--	--	--	--	0.140 J	0.840 J	ND	0.170 J	ND	ND
3-methylphenol/4-Methylphenol	--	-	--	--	--	ND	ND	ND	ND	ND	ND
Naphthalene	12	100	500	1000	--	0.140 J	0.370 J	ND	0.180 J	ND	0.150 J
Pentachlorophenol	0.8		6.7	55	--	ND	ND	ND	ND	ND	ND
Phenanthrene	100	100	500	1000	--	2.100	0.550 J	0.630 J	1.600	ND	6.300
Phenol	0.33		500	1000	--	ND	ND	ND	ND	ND	ND
Pyrene	100	100	500	1000	--	2.700	0.750 J	0.840 J	2.500	1.100 J	8.400
Total PAHs					500	*18.62*	*5.35*	*5.49*	*18.48*	*4.58*	*49.05*
Total Metals - mg/Kg											
Aluminum	--	--	--	--	--	7,080	5,630	7,430	9,810	4,390	4,770
Antimony	--	--	--	--	--	ND	ND	ND	ND	ND	ND
Arsenic	13	16	16	16	50	9.4	12.6	**13.0**	12.6	**15.9**	**24.9**
Barium	350	350	400	10000	--	222	220	211	222	162	298
Beryllium	7.2	14	590	2700	--	ND	0.363	0.485	0.555	ND	ND
Cadmium	2.5	2.5	9.3	60	--	**4.3**	**8.7**	**12.9**	**9.3**	**5.3**	**9.5**
Calcium	--	--	--	--	--	143,000	54,000	45,200	36,600	57,100	25,300
Chromium	30	36	1500	6800	--	**43.9**	**46.2**	**57.9**	**41.7**	**41.2**	**70.2**
Cobalt	--	--	--	--	--	ND	7.7	8.2	10.2	6.9	12.4 J
Copper	50	270	270	10000	--	**152**	**965**	**236**	**171**	**395**	**268**
Cyanide	27	27	27	10000	--	ND	ND	ND	ND	ND	ND
Iron	--	--	--	--	--	41,300	77,000	69,000	82,800	76,600	142,000
Lead	63	400	1000	3900	5000	**690**	**9,010**	**515**	**423**	**531**	**1,010**
Magnesium	--	--	--	--	--	20,300	7,770	10,400	10,700	6,080	4,060
Manganese	1600	2000	10000	10000	--	863	569	736	685	557	927
Mercury	0.18	0.81	2.8	5.7	5.7	**0.352**	**0.361**	**0.381**	**0.285**	**0.453**	**1.2**
Nickel	30	140	310	10000	--	29.2	**80.9**	**48.4**	**45.4**	**45.1**	**74.6**
Potassium	--	--	--	--	--	1,360	846	1,280	1,450	792	701
Selenium	3.9	36	1500	6800	--	3.6	ND	1.7	ND	ND	ND
Silver	2	36	1500	6800	--	ND	ND	ND	ND	ND	ND
Sodium	--	--	--	--	--	384	182	233	184	138	241
Thallium	--	--	--	--	--	2.6	ND	ND	ND	ND	ND
Vanadium	--	--	--	--	--	21.4	14.1	19.5	21.7	15.5	18.1
Zinc	109	2200	10000	10000	--	**690**	**1,120**	**868**	**613**	**835**	**1,240**
Polychlorinated Biphenyls (PCBs), Pesticides, and Herbicides - mg/Kg[3]											
4,4'-DDD	0.0033	2.6	92	180	--	ND	ND	ND	**0.010**	ND	ND
4,4'-DDE	0.0033	1.8	62	120	--	ND	ND	**0.010 J**	**0.019**	**0.011 P**	**0.015**
4,4'-DDT	0.0033	1.7	47	94	--	**0.040**	**0.010**	**0.110**	**0.170**	**0.073**	**0.077**
Aroclor 1260	0.1	1	1	1	--	**0.610**	**0.140**	**0.330**	**0.320**	**0.590**	**0.420**

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) or as approved by the NYSDEC (Site-specific values).
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. At the time of this draft report, soil vapor results are not available. The final results will be included in the final report.

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BOLD	Exceeds Part 375 Commercial SCOs.
BOLD	Exceeds Part 375 Industrial SCOs.
BOLD	Exceeds Site-specific SCO, as approved by the NYSDEC.

TABLE 3
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS - 837 BAILEY AVE.
SITE MANAGEMENT PLAN
837 Bailey Ave. Site
Buffalo, New York

PARAMETER[1]	GWQS/ GV[2]	TPMW-1[(4)(6)]		TPMW-2[(4)(6)]		TPMW-3[(4)(6)]		TPMW-4[(4)(6)]		TPMW-5[(4)(6)]		MW-1[(5)(6)]		MW-2[(5)(6)]		MW-3[(5)(6)]		Dupe 5 (MW-3)	MW-4[(5)(6)]	
		Total Metals	Dissolved Metals	Total Metals	Dissolved Metals	Total Metals	Dissolved Metals	Total Metals	Dissolved Metals	Total Metals	Dissolved Metals	Total Metals	Dissolved Metals	Total Metals	Dissolved Metals	Total Metals	Dissolved Metals	Total Metals	Total Metals	Dissolved Metals
Volatile Organic Compounds (VOCs) - ug/L																				
Acetone	**50**	ND	NA	ND	NA	1.8 J	NA	1.4 J	NA	ND	NA	24	NA	2.2 J	NA	2.6 J	NA	2.1 J	14	NA
Carbon disulfide	**--**	0.25 J	NA	ND	NA	ND	NA	ND	NA	ND	NA	3.3	NA	0.31 J	NA	0.26 J	NA	0.28 J	3.7 J	NA
2-Butanone (MEK)	**50**	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	7.2	NA	ND	NA	ND	NA	ND	4.2 J	NA
2-Hexanone	**50**	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	2.3 J	NA	ND	NA	ND	NA	ND	ND	NA
Methyl tert-butyl ether (MTBE)	**10**	ND	NA	0.40 J	NA	6.9	NA	0.97 J	NA	ND	NA	0.32 J	NA	1.3	NA	**26**	NA	**26**	ND	NA
Semi-volatile Organic Compounds (SVOCs) - ug/L																				
Anthracene	**50**	ND	NA	ND	NA	1.1 J	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	ND	NA
Benzo[a]anthracene	**0.002**	ND	NA	ND	NA	**3.8 J**	NA	**1.5 J**	NA	**1.3 J**	NA	ND	NA	**1.3 J**	NA	ND	NA	**1.1 J**	ND	NA
Benzo[a]pyrene	**ND**	ND	NA	ND	NA	**3.5 J**	NA	**1.4 J**	NA	**1.2 J**	NA	ND	NA	**1.2 J**	NA	ND	NA	**1.1 J**	ND	NA
Benzo[b]fluoranthene	**0.002**	**1.2 J**	NA	ND	NA	**4.3 J**	NA	**1.7 J**	NA	**1.5 J**	NA	ND	NA	**1.4 J**	NA	ND	NA	**1.4 J**	ND	NA
Benzo[g,h,i]perylene	**--**	ND	NA	ND	NA	2.3 J	NA	1.2 J	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	ND	NA
Benzo[k]fluoranthene	**0.002**	ND	NA	ND	NA	**1.6 J**	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	ND	NA
Bis(2-ethylhexyl) phthalate	**5**	ND	NA	ND	NA	ND	NA	1.3 J	NA	ND	NA	ND	NA	1.4 J	NA	ND	NA	ND	1.2 J	NA
Chrysene	**0.002**	**1.0 J**	NA	ND	NA	**3.8 J**	NA	**1.6 J**	NA	**1.3 J**	NA	ND	NA	**1.1 J**	NA	ND	NA	**1.3 J**	ND	NA
Fluoranthene	**50**	2.0 J	NA	ND	NA	8.0 J	NA	3.8 J	NA	2.4 J	NA	ND	NA	2.6 J	NA	ND	NA	2.1 J	ND	NA
Indeno[1,2,3-cd]pyrene	**0.002**	ND	NA	ND	NA	**2.3 J**	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	ND	NA
Phenanthrene	**50**	1.3 J	NA	ND	NA	3.9 J	NA	1.8 J	NA	1.0 J	NA	ND	NA	1.3 J	NA	ND	NA	1.2J	ND	NA
Pyrene	**50**	1.7 J	NA	ND	NA	5.2 J	NA	2.7 J	NA	2.0 J	NA	ND	NA	1.8 J	NA	ND	NA	1.8 J	ND	NA
Polychlorinated Biphenyls (PCBs) - ug\L																				
Total PCBs	**0.09**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA
Pesticides and Herbicides - ug\L																				
Total Pesticides/Herbicides	**Various**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA
Total Metals - ug/L [3]																				
Aluminum	**--**	85,100	ND	84,200	ND	125,000	ND	136,000	ND	127,000	ND	305,000	ND	245,000	ND	332,000	ND	274,000	5,100	ND
Antimony	**3**	ND	ND	ND	ND	**84.8**	ND	**85.7**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	**25**	**163**	ND	**128**	ND	**239**	ND	**251**	ND	**189**	ND	**48.2**	ND	**333**	ND	**316**	ND	**266**	ND	ND
Barium	**1,000**	**2,330**	360	**2,010**	370	**6,340**	540	**4,860**	250	**5,670**	260	**1,060**	12	**5,290**	350	**6,330**	320	**5,080**	52.2	4.4
Beryllium	**3**	**7.2**	ND	**9.7**	ND	**10.7**	ND	**12.3**	ND	**10.1**	ND	**10.5**	ND	**22.0**	ND	**26.0**	ND	**22.0**	ND	ND
Cadmium	**5**	ND	ND	ND	ND	**44.5**	ND	**34.4**	ND	**59.4**	ND	ND	0.59 J	**25.0**	ND	**27.2**	ND	**17.3**	ND	ND
Calcium	**--**	184,000	117,000 B	237,000	195,000 B	263,000	152,000 B	281,000	154,000 B	237,000	154,000 B	255,000	281,000 B	441,000	147,000 B	442,000	134,000 B	425,000	176,000	165,000 B
Chromium	**50**	**243**	ND	**196**	1.2 J	**1,480**	ND	**408**	ND	**396**	1.2 J	**73.7**	ND	**576**	ND	**799**	ND	**637**	ND	ND
Cobalt	**--**	64.0	0.81 J	65.2	1.5 J	121	ND	96.5	ND	101	1.2 J	78.7	0.67 J	217	1.2 J	277	1.1 J	230	108	ND
Copper	**200**	**829**	ND	**1,100**	ND	**4,480**	ND	**4,900**	ND	**2,520**	ND	73.2	ND	**2,180**	ND	**3,520**	ND	**2,590**	ND	ND
Cyanide	**200**	ND	ND	ND	ND	**208**	ND	54	ND	15	ND	ND	ND	30	ND	20	ND	22	ND	ND
Iron	**300**	**167,000**	120	**126,000**	**590**	**546,000**	**15,400**	**492,000**	81	**560,000**	28 J	**128,000**	**1,400**	**422,000**	29 J	**454,000**	**1,300**	**362,000**	**13,200**	190
Lead	**25**	**6,880**	ND	**2,440**	ND	**36,000**	ND	**15,300**	ND	**14,700**	ND	**157**	ND	**25,900**	ND	**25,100**	ND	**19,700**	ND	ND
Magnesium	**35,000**	30,200	20,700	29,100	21,200	34,600	15,200	**38,200**	20,200	28,700	11,900	**152,000**	**178,000**	**71,000**	15,100	**98,700**	16,800	**91,800**	**70,800**	**69,500**
Manganese	**300**	**1,650**	**530**	**1,010**	**420**	**3,130**	**390**	**2,710**	**510**	**2,150**	190	**2,230**	**590**	**5,370**	**720**	**6,480**	**900**	**5,900**	**1,660**	**620**
Mercury	**0.7**	**13.8**	ND	**1.2**	ND	**15.8**	ND	**9.6**	ND	**28.9**	ND	ND	ND	**79.2**	ND	**7.7**	ND	**7.4**	ND	ND
Nickel	**100**	**170**	2.9 J	**173**	3.8 J	**367**	2.4 J	**431**	1.5 J	**254**	3.8 J	**121**	3.9 J	**523**	3.6 J	**684**	2.5 J	**564**	**149**	2.8 J
Potassium	**--**	16,600	8,400	23,600	15,100	33,800	15,200	28,600	11,300	20,600	7,200	16,400	3,800	62,100	17,000	78,300	17,100	64,700	2,300	2,800
Selenium	**10**	**55.8**	ND	ND	ND	**31.5**	ND	**34.4**	ND	**62.3**	ND	ND	ND	**36.7**	ND	**41.8**	ND	**34.1**	ND	ND
Silver	**50**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	**20,000**	**22,900**	**21,900**	**52,200**	**57,700**	**44,900**	**38,300**	15,200	12,300	13,900	11,100	**148,000**	**53,000**	**179,000**	**142,000**	**40,800**	**38,100**	**39,800**	**49,100**	**49,600**
Thallium	**0.5**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	**--**	223	ND	253	ND	357	ND	419	ND	311	ND	96.2	ND	821	ND	900	ND	772	ND	ND
Zinc	**2,000**	**4,740**	21	**2,110**	54	**11,800**	8.2 J	**13,600**	8.7 J	**17,500**	180	406	7.3 J	**11,300**	9.5 J	**12,500**	4.5 J	**10,800**	176	3.9 J

Notes:

1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compunds were reported as non-detect.
2. Values per NYSDEC Division of Water Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations - GA Class (TOGS 1.1.1)
3. Values reported in mg/L and converted to ug/L for comparison to regulatory limits.
4. Monitoring wells installed by LCS as part of the 2015 Subsurface Investigation.
5. Monitoring wells installed by EnSol as part of the 2016 Remedial Investigation.
6. Total metals analysis samples collected 3/14-3/15/16. Disssolved metals analysis samples collected 6/1/16 and sample filtration was performed by the laboratory.

Definitions:

ND = Parameter not detected above laboratory detection limit.
(-) = Parameter not analyzed at that location.
NA = Sample not analyzed for parameter.
"--" = No GWQS available.
J = Estimated value; result is less than the sample quantitation limit but greater than zero.
P = Used for a pesticide/aroclor target analyte when the concentration difference between 2 GC columns is greater than 25%; the lower value is flagged with "P".
U = Indicates a result < MDL.
B = Compound was found in the blank and sample.
BOLD = Indicates that the sample result exceeds GWQS/GV.

EnSol, Inc.

TABLE 4
SUMMARY OF SOIL VAPOR ANALYTICAL RESULTS - 837 BAILEY AVE. PARCEL
SITE MANAGEMENT PLAN
837 Bailey Ave.
Buffalo, New York

PARAMETER[1]	SV-1		SV-2		SV-3		SV-4	
	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV
1,2,4-Trimethylbenzene	24	4.9	21	4.3	22	4.4	22	4.4
1,3,5-Trimethylbenzene	8.8	1.8	7.9	1.6	10	2.1	8.4	1.7
4-ethyltoluene	3.6	0.74	3.4	0.69	3.4	0.70	4.0	0.81
Acetone	510	220	440	180	2900	1200	4700	2000
Bromofluorobenzene	ND	1.2	ND	1.1	ND	1.2	ND	1.2
Carbon disulfide	2.3	0.75	1.1	0.34	1.7	0.55	ND	ND
Chloroform	1.3	0.27	ND	ND	ND	ND	ND	ND
Chloromethane	0.35	0.17	0.50	0.24	ND	ND	ND	ND
Ethyl acetate	1.8	0.50	1.4	0.39	ND	ND	ND	ND
Ethylbenzene	3.4	0.79	1.6	0.37	2.7	0.62	4.0	0.93
Freon 11	3.7	0.65	4.4	0.79	1.3	0.23	1.4	0.25
Freon 12	6.7	1.4	1.7	0.35	1.7	0.34	ND	ND
m&p-Xylene	18	4.0	9.2	2.1	14	3.2	16	3.8
Methyl Butyl Ketone	96	23	110	27	600	150	600	150
Methyl Ethyl Ketone	200	67	200	68	1100	360	1500	500
Methylene chloride	0.42	0.12	ND	ND	0.49	0.14	0.45	0.13
o-Xylene	8.3	1.9	5.5	1.3	6.6	1.5	8.3	1.9
Tetrachloroethylene	4.9	0.72	1.4	0.21	5.4	0.79	6.7	0.99
Toluene	3.4	0.89	1.4	0.37	3.4	0.91	4.0	1.1
Total Xylenes	26.3	5.9	14.7	3.4	20.6	4.7	24.3	5.7

Notes:

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

Definitions:

ND = Parameter not detected above laboratory detection limit.

TABLE 5
IRM SOIL ANALYTICAL DATA SUMMARY - SB-6
SITE MANAGEMENT PLAN
837 BAILEY AVE. SITE
BUFFALO, NEW YORK

		Original RI Boring[2]		IRM Deliniation Borings[3]					IRM Confirmatory Samples[4]	
PARAMETER	Site-Specific (ppm)[1]	SB-6 (0'-4')	SB-6 (4'-8')	SB-6: 10'N[5][7]	SB-6: 10'E	SB-6: 15'E[6]	SB-6: 10'S	SB-6: 10'W	SB-6 EXC N-2[7]	SB-6 Over-Exc. NSW
Total Metals - mg/Kg										
Arsenic	75	22.9	45.3	38.4	40.8	NA	42.2	25.1	23.4	16.7
Lead	5,000	3,880	2,790	**5,110**	**23,300**	276	3,140	2,490	**6,360**	524
Mercury	5.7	0.8	3.0	NA	NA	NA	NA	NA	NA	NA

BOLD exceeds site-specific soil cleanup objective

Notes:

1. Site-specific values as approved by the NYSDEC.
2. Original RI Boring data collected March 2016.
3. IRM Delineation Boring data collected January 2017.
4. IRM Confirmatory Samples data collected August & October 2017 at NYSDEC request.
5. No further interval samples collected in this direction during IRM Deliniation. Sample located approximately 3' within fenceline.
6. Additional interval analysis was required in this direction as inner samples did not pass site-specific SCOs.
7. Soil that this sample represents was ultimately removed during over-excvation of this location past the fenceline to the property line in November 2017.

TABLE 6
IRM SOIL ANALYTICAL DATA SUMMARY - SB-7
SITE MANAGEMENT PLAN
837 BAILEY AVE. SITE
BUFFALO, NEW YORK

		Original RI Boring[2]	IRM Deliniation Borings[3]					IRM Confirmatory Sample[4]
PARAMETER	**Site-Specific (ppm)[1]**	**SB-7 (4'-8')**	**SB-7: 10'N[5]**	**SB-7: 10'E**	**SB-7: 15'E[6]**	**SB-7: 10'S**	**SB-7: 10'W**	**SB-7 EXC N-1**
Total Metals - mg/Kg								
Arsenic	75	30.4	NA	NA	NA	NA	16.6	15.8
Lead	5,000	**39,800**	581	**7,180**	1,950	2,300	316	1,280
Mercury	5.7	1.1	NA	NA	NA	NA	NA	NA

BOLD exceeds site-specific soil cleanup objective

Notes:

1. Site-specific values as approved by the NYSDEC.
2. Original RI Boring data collected March 2016.
3. IRM Delineation Boring data collected January 2017.
4. IRM Confirmatory Sample data collected August 2017 at NYSDEC request.
5. No further interval samples collected in this direction during IRM Deliniation. Sample located approximately 3' within fenceline.
6. Additional interval analysis was required in this direction as inner samples did not pass site-specific SCOs.

TABLE 7
IRM SOIL ANALYTICAL DATA SUMMARY - SB-9
SITE MANAGEMENT PLAN
837 BAILEY AVE. SITE
BUFFALO, NEW YORK

		Original RI Boring[2]	IRM Deliniation Borings[3]					IRM Confirmatory Sample[4]
PARAMETER	**Site-Specific (ppm)[1]**	**SB-9 (2'-9.5')**	**SB-9: 10'N**	**SB-9: 10'E[5]**	**SB-9: 10'S**	**SB-9: 10'W**	**SB-9: 15'W[6]**	**SB-9 ESW 5-7'**
Total Metals - mg/Kg								
Arsenic	75	13.3	NA	NA	NA	NA	NA	NA
Lead	5,000	**8,250**	1,480	417	351	**9,210**	4,770	566
Mercury	5.7	**25.2**	0.16	0.35	0.66	0.55	NA	0.966

BOLD exceeds site-specific soil cleanup objective

Notes:

1. Site-specific values as approved by the NYSDEC.
2. Original RI Boring data collected March 2016.
3. IRM Delineation Boring data collected January 2017.
4. IRM Confirmatory Sample data collected August 2017 at NYSDEC request.
5. No further interval samples collected in this direction during IRM Deliniation. Sample located approximately 3' within fenceline.
6. Additional interval analysis was required in this direction as inner samples did not pass site-specific SCOs.

TABLE 8
IRM SOIL ANALYTICAL DATA SUMMARY - SB-10
SITE MANAGEMENT PLAN
837 BAILEY AVE. SITE
BUFFALO, NEW YORK

		Original RI Boring[2]	IRM Deliniation Borings[3][4]			
PARAMETER	**Site-Specific (ppm)[1]**	**SB-10 (1'-4')**	**SB-10: 10'N**	**SB-10: 10'E**	**SB-10: 10'S**	**SB-10: 10'W**
Total Metals - mg/Kg						
Arsenic	75	29.2	NA	NA	NA	NA
Lead	5,000	**9,290**	757	524	2,560	293
Mercury	5.7	1.4	NA	NA	NA	NA

BOLD exceeds site-specific soil cleanup objective

Notes:

1. Site-specific values as approved by the NYSDEC.
2. Original RI Boring data collected March 2016.
3. IRM Delineation Boring data collected January 2017.
4. No additional IRM Confirmatory samples were required by the NYSDEC at this location.

TABLE 9
IRM SOIL ANALYTICAL DATA SUMMARY - SB-14
SITE MANAGEMENT PLAN
837 BAILEY AVE. SITE
BUFFALO, NEW YORK

		Original RI Boring[2]	IRM Deliniation Borings[3]				IRM Confirmatory Sample[4]
PARAMETER	**Site-Specific (ppm)[1]**	**SB-14 (4'-8')**	**SB-14: 10'N**	**SB-14: 10'E**	**SB-14: 10'S**	**SB-14: 10'W**	**SB-14 SSW 6-8'**
Total Metals - mg/Kg							
Arsenic	75	8.6	NA	NA	NA	NA	NA
Lead	5,000	2,710	1,450	284	4,440	14.7	811
Mercury	5.7	0.126	NA	NA	NA	NA	ND

BOLD exceeds site-specific soil cleanup objective

Notes:

1. Site-specific values as approved by the NYSDEC.
2. Original RI Boring data collected March 2016.
3. IRM Delineation Boring data collected January 2017.
4. IRM Confirmatory Sample data collected August 2017 at NYSDEC request.

TABLE 10
IRM SOIL ANALYTICAL DATA SUMMARY - SB-19
SITE MANAGEMENT PLAN
837 BAILEY AVE. SITE
BUFFALO, NEW YORK

		Original RI Boring[2]	IRM Deliniation Borings[3]														IRM Confirmatory Samples[4]	
PARAMETER	**Site-Specific (ppm)[1]**	**SB-19 (4'-7.5')**	**SB-19: 10'N**	**SB-19: 15'N**	**SB-19: 20'N[6]**	**SB-19: 10'E**	**SB-19: 15'E**	**SB-19: 20'E**	**SB-19: 25'E**	**SB-19: 30'E[6]**	**SB-19: 10'S[5][7]**	**SB-19: 10'W**	**SB-19: 15'W**	**SB-19: 20'W**	**SB-19: 25'W**	**SB-19: 30'W**	**SB-19: 35'W[6]**	**SB-19 SSW-1 (E) 5-7'**	**SB-19 SSW-2 (W) 5-7'**
Total Metals - mg/Kg																		
Arsenic	75	62.6	46.3	NA	NA	**123**	69.9	**111**	**85.2**	12.7	**113**	**77.3**	**288**	68.9	NA	NA	NA	6.74	6.62
Lead	5,000	**35,300**	**22,700**	**9,270**	727	**7,560**	4,610	NA	NA	NA	**13,400**	**21,800**	**9,540**	**10,400**	**9,940**	**6,660**	4,970	14.6	14.3
Mercury	5.7	2.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

BOLD exceeds site-specific soil cleanup objective

Notes:

1. Site-specific values as approved by the NYSDEC.
2. Original RI Boring data collected March 2016.
3. IRM Delineation Boring data collected January 2017.
4. IRM Confirmatory Samples data collected August & October 2017 at NYSDEC request.
5. No further interval samples collected in this direction during IRM Deliniation. Sample located approximately 3' within fenceline.
6. Additional interval analysis was required in this direction as inner samples did not pass site-specific SCOs.
7. Soil that this sample represents was ultimately removed during over-excvation of this location to the fenceline in November 2017.

TABLE 11
IRM SOIL ANALYTICAL DATA SUMMARY - SB-20
SITE MANAGEMENT PLAN
837 BAILEY AVE. SITE
BUFFALO, NEW YORK

		Original RI Boring[2]	IRM Deliniation Borings[3]				IRM Confirmatory Sample[4]
PARAMETER	**Site-Specific (ppm)[1]**	**SB-20 (1'-4')**	**SB-20: 10'N**	**SB-20: 10'E**	**SB-20: 10'S**	**SB-20: 10'W**	**SB-20 Bottom 4'**
Polycyclic Aromatic Hydrocarbons (PAHs) - mg/Kg [3]							
Acenaphthene	--	4.000 J	0.227	0.233	0.378	0.217	ND
Acenaphthylene	--	5.000 J	0.0609	0.0756	0.102	0.0973	0.902
Anthracene	--	29.000	0.468	0.653	0.883	0.57	0.946
Benzo (a) anthracene	--	**66.000**	1.19	1.88	1.72	1.2	4.000
Benzo (b) fluoranthene	--	**64.000**	1.14	1.95	1.55	1.46	3.880
Benzo (k) fluoranthene	--	**24.000**	0.402	0.648	0.58	0.502	3.320
Benzo (a) pyrene	--	**47.000**	1.04	1.74	1.44	1.09	4.060
Benzo (g,h,i) perylene	--	22.000	0.545	0.951	0.743	0.961	2.770
Chrysene	--	**61.000**	0.923	1.51	1.34	1.04	5.380
Dibenz(a,h)anthracene	--	**7.600 J**	0.156	0.261	0.228	0.24	0.842
Fluoranthene	--	**140.000**	2.26	3.23	3.45	2.42	10.100
Fluorene	--	11.000	0.175	0.218	0.398	0.222	ND
Indeno (1,2,3 - cd) pyrene	--	**26.000**	0.666	1.17	0.879	1.06	2.990
Naphthalene	--	ND	0.0903	0.0945	0.294	0.224	ND
Phenanthrene	--	**110.000**	1.68	2.2	3.26	2.09	4.920
Pyrene	--	**100.000**	1.81	2.73	2.69	1.98	8.820
Total PAHs	500	**726.60**	12.8332	19.5441	19.935	15.3733	52.930

BOLD exceeds site-specific soil cleanup objective

Notes:

1. Site-specific values as approved by the NYSDEC.
2. Original RI Boring data collected March 2016.
3. IRM Delineation Boring data collected January 2017.
4. IRM Confirmatory Samples data collected August 2017 at NYSDEC request.

TABLE 12
IRM SOIL ANALYTICAL DATA SUMMARY - SB-27
SITE MANAGEMENT PLAN
837 BAILEY AVE. SITE
BUFFALO, NEW YORK

		Original RI Boring[2]	IRM Deliniation Borings[3]				
PARAMETER	**Site-Specific (ppm)[1]**	**SB-27 (6'-10')**	**SB-27: 10'N**	**SB-27: 10'E**	**SB-27: 10'S**	**SB-27: 10'W**	**SB-27: 15'W[4]**
Total Metals - mg/Kg							
Arsenic	75	**95.7**	18.6	12.9	20.8	38.7	NA
Lead	5,000	**6,540**	325	1,310	800	**10,700**	723
Mercury	5.7	**6.8**	0.1	1.5	0.2	1.1	NA

BOLD exceeds site-specific soil cleanup objective

Notes:

1. Site-specific values as approved by the NYSDEC.
2. Original RI Boring data collected March 2016.
3. IRM Delineation Boring data collected January 2017.
4. Additional interval analysis was required in this direction as inner samples did not pass site-specific SCOs.

TABLE 13
IRM SOIL ANALYTICAL DATA SUMMARY - SB-28
SITE MANAGEMENT PLAN
837 BAILEY AVE. SITE
BUFFALO, NEW YORK

		Original RI Boring[2]	IRM Deliniation Borings[3]				
PARAMETER	**Site-Specific (ppm)[1]**	**SB-28 (4'-8')**	**SB-28: 10'N**	**SB-28: 10'E**	**SB-28: 15'E[4]**	**SB-28: 10'S**	**SB-28: 10'W**
Total Metals - mg/Kg							
Arsenic	75	16.9	NA	NA	NA	NA	NA
Lead	5,000	**36,500**	2,160	1,140	NA	479	3,820
Mercury	5.7	**6.6**	1.8	**9.7**	0.68	0.043	0.83

BOLD exceeds site-specific soil cleanup objective

Notes:

1. Site-specific values as approved by the NYSDEC.
2. Original RI Boring data collected March 2016.
3. IRM Delineation Boring data collected January 2017.
4. Additional interval analysis was required in this direction as inner samples did not pass site-specific SCOs.

TABLE 14
IRM SOIL ANALYTICAL DATA SUMMARY - SB-30
SITE MANAGEMENT PLAN
837 BAILEY AVE. SITE
BUFFALO, NEW YORK

		Original RI Boring[2]	IRM Deleniation Borings[3]				
PARAMETER	**Site-Specific (ppm)[1]**	**SB-30 (4'-8')**	**SB-30: 10'N**	**SB-30: 10'E**	**SB-30: 10'S**	**SB-30: 15'S[4]**	**SB-30: 10'W**
Total Metals - mg/Kg							
Arsenic	50	20.8	NA	NA	NA	NA	NA
Lead	5000	**6,110**	386	992	**7,190**	1,730	2,680
Mercury	5.7	0.496	NA	NA	NA	NA	NA

BOLD exceeds site-specific soil cleanup objective

Notes:

1. Site-specific values as approved by the NYSDEC.
2. Original RI Boring data collected March 2016.
3. IRM Delineation Boring data collected January 2017.
4. Additional interval analysis was required in this direction as inner samples did not pass site-specific SCOs.

TABLE 15
IMPORT CRITERIA
COMMERCIAL USE SOIL CLEANUP OBJECTIVES
SITE MANAGEMENT PLAN
837 BAILEY AVENUE
BUFFALO, NEW YORK

PARAMETER	COMMERCIAL USE SCOs
Metals (mg/kg)	
Arsenic	16
Barium	400
Beryllium	590
Cadmium	9.3
Chromium, Hexavalent	400
Chromium, Trivalent	1,500
Copper	270
Cyanide	27
Lead	1,000
Manganese	10,000
Mercury	2.8
Nickel	310
Selenium	1,500
Silver	1,500
Zinc	10,000
PCBs/Pesticides (mg/kg)	
2,4,5-TP Acid (Silvex)	500
4,4-DDE	62
4,4-DDT	47
4,4-DDD	92
Aldrin	0.68
alpha-BHC	3.4
beta-BHC	3
cis-Chlordane	24
delta-BHC	500
Dibenzofuran	350
Dieldrin	1.4
Endosulfan I	200
Endosulfan II	200
Endosulfan Sulfate	200
Endrin	89
Heptachlor	15
Lindane	9.2
Polychlorinated biphenyls (PCBs)	1
Semi-Volatile Organic Compounds (mg/kg)	
Acenaphthene	500
Acenapthylene	500
Anthracene	500
Benzo(a)anthracene	5.6
Benzo(a)pyrene	1
Benzo(b)fluoranthene	5.6
Benzo(g,h,i)perylene	500

TABLE 15
IMPORT CRITERIA
COMMERCIAL USE SOIL CLEANUP OBJECTIVES
SITE MANAGEMENT PLAN
837 BAILEY AVENUE
BUFFALO, NEW YORK

Benzo(k)fluoranthene	56
Chrysene	56
Dibenz(a,h)anthracene	0.56
Fluoranthene	500
Fluorene	500
Indeno(1,2,3-cd)pyrene	5.6
m-Cresol	500
Napthalene	500
O-Cresol	500
P-Cresol	500
Pentachlorophenol	6.7
Phenanthrene	500
Phenol	500
Pyrene	500
Volatile Organic Compounds (mg/kg)	
1,1,1-Trichloroethane	500
1,1-Dichloroethane	240
1,1-Dichloroethene	500
1,2-Dichlorobenzene	500
1,2-Dichloroethane	30
cis-1,2-Dichloroethene	500
trans-1,2-Dichloroethene	500
1,3-Dichlorobenzene	280
1,4-Dichlorobenzene	130
1,4-Dioxane	130
Acetone	500
Benzene	44
n-Butylbenzene	500
Carbon Tetrachloride	22
Chlorobenzene	500
Chloroform	350
Ethylbenzene	390
Hexachlorobenzene	6
Methyl ethyl ketone	500
Methyl tert-butyl ether	500
Methylene chloride	500
n-Propylbenzene	500
sec-Butylbenzene	500
tert-Butylbenzene	500
Tetrachloroethene	150
Toluene	500
Trichloroethene	200
1,2,4-Trimethylbenzene	190
1,3,5-Trimethylbenzene	190
Vinyl chloride	13
Xylene (mixed)	500

APPENDIX A

ENVIRONMENTAL EASEMENT

MICHAEL P. KEARNS, ERIE COUNTY CLERK
REF:

DATE:11/20/2019
TIME:9:17:20 AM
RECEIPT: 19196039

PARALEGAL SERVICES OF BUFFALO
ACCOUNT #: 9273

ITEM - 01 785
RECD: 11/20/2019 9:22:23 AM
FILE: 2019255467 BK/PG D 11353/83
Deed Sequence: TT2019008556
NEAR DINGENS LLC
Recording Fees
TP584

Subtotal		95.00
	105.00	10.00

TOTAL DUE	$105.00
PAID TOTAL	$105.00
PAID ESCROW	$105.00

REC BY: Dorina G
COUNTY RECORDER

D13539

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

THIS INDENTURE made this 7th day of Novemb, 2019 between Owner(s) Near Dingens, LLC, having an office at 271 Dingens Street, Buffalo, New York 14206, County of Erie, State of New York (the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

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

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

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

WHEREAS, Grantor, is the owner of real property located at the address of 837 Bailey Avenue in the City of Buffalo, County of Erie and State of New York, known and designated on the tax map of the County Clerk of Erie as tax map parcel number: Section 112.80 Block 1 Lot 12.1, being a portion of the property conveyed to Grantor by deed dated August 17, 2015 and recorded in the Erie County Clerk's Office in Liber and Page 11285/34. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 8.740 +/- acres, and is hereinafter more fully described in the Land Title Survey dated May 17, 2016 and last revised July 18, 2019 prepared by Michael Joseph Pohl, L.L.S. of 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

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: C915298-11-15 as amended March 16, 2017, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement").

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

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

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

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

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

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

(4) The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the 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 or Restricted Residential purposes as defined in 6NYCRR 375-1.8(g)(2)(i) and (ii), and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

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

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

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

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

This property is subject to an Environmental Easement held

by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the Environmental Conservation Law.

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

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

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

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

(i) are in-place;

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

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

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

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

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

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

(7) the information presented is accurate and complete.

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

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

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

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

5. Enforcement

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

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

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

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

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

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

Parties shall address correspondence to:

Site Number: C915298
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

With a copy to:

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

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail

and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

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

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

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

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

11. Consistency with the SMP. To the extent there is any conflict or inconsistency between the terms of this Environmental Easement and the SMP, regarding matters specifically addressed by the SMP, the terms of the SMP will control.

Remainder of Page Intentionally Left Blank

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

Near Dingens, LLC:

By: _____

Print Name: John Sullivan

Title: Member Date: 10/30/19

Grantor's Acknowledgment

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

On the 30th day of October, in the year 2019, before me, the undersigned, personally appeared John J. Sullivan, 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.

Y. Shah
Notary Public - State of New York

NOTARY P. OF NEW YORK
QUALI. TY
LIC. #0 3
COMM. EXP. 10/20/22

YATI K SHAH
NOTARY PUBLIC STATE OF NEW YORK
QUALIFIED IN ERIE COUNTY
LIC. #01SH6313393
COMM. EXP. 10/20/22

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: _____
Michael J. Ryan, Director
Division of Environmental Remediation

Grantee's Acknowledgment

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

On the 7th day of November, in the year 2019 before me, the undersigned, personally appeared Michael J. Ryan, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public - State of New York

David J. Chiusano
Notary Public, State of New York
No. 01CH5032146
Qualified in Schenectady County
Commission Expires August 22, 2022

SCHEDULE "A" PROPERTY DESCRIPTION

DESCRIPTION
ENVIRONMENTAL EASEMENT

ALL THAT TRACT OR PARCEL OF LAND situate in the City of Buffalo, County of Erie and State of New York being part of Lot Nos. 10, 157 and 158, Township 10, Range 7 of the Buffalo Creek Reservation, bounded and described as follows:

BEGINNING at a point in the east line of Bailey Avenue (66' wide), distant 121.31 feet south of its intersection with the south line of Dingens Street;

Thence easterly at an interior angle of 103° 23' 23", along the south line of lands conveyed to Louis Metzdorf and more by deed recorded in the Erie County Clerk's Office in Liber 517 of Deeds at page 38, a distance of 181.08 feet to a point;

Thence easterly at an interior angle of 193° 16' 46", parallel with the said south line of Dingens Street, and continuing along the said south line of lands conveyed to Louis Metzdorf and more, a distance of 115.00 feet to the west line of lands conveyed to Donnelly by deed recorded in the Erie County Clerk's Office in Liber 8241 of Deeds at page 221;

Thence southerly at an interior angle of 90° 00' 00", along the said west line of lands conveyed to Donnelly, a distance of 125.00 feet to the southwest corner of said lands conveyed to Donnelly;

Thence easterly at an interior angle of 270° 00' 00", parallel with the said south line of Dingens Street, and continuing along the south line of said lands conveyed to Donnelly, a distance of 523.33 feet to the east line of Subdivision Lot 9 as shown on a map recorded in the Erie County Clerk's Office in Liber 575 of Deeds at page 377;

Thence southerly at an interior angle of 89° 30' 53", along the said east line of Subdivision Lot 9, a distance of 459.54 feet to the northwest line of the former Erie Lackawanna Railroad and the former Delaware Lackawanna and Western Railroad;

Thence southwesterly at an interior angle of 137° 08' 23", along the said northwest line of the former railroad lands, a distance of 175.24 feet to the northeast line of lands conveyed to McKinley Transport Limited by deed recorded in the Erie County Clerk's Office in Liber 7506 of deeds at page 239;

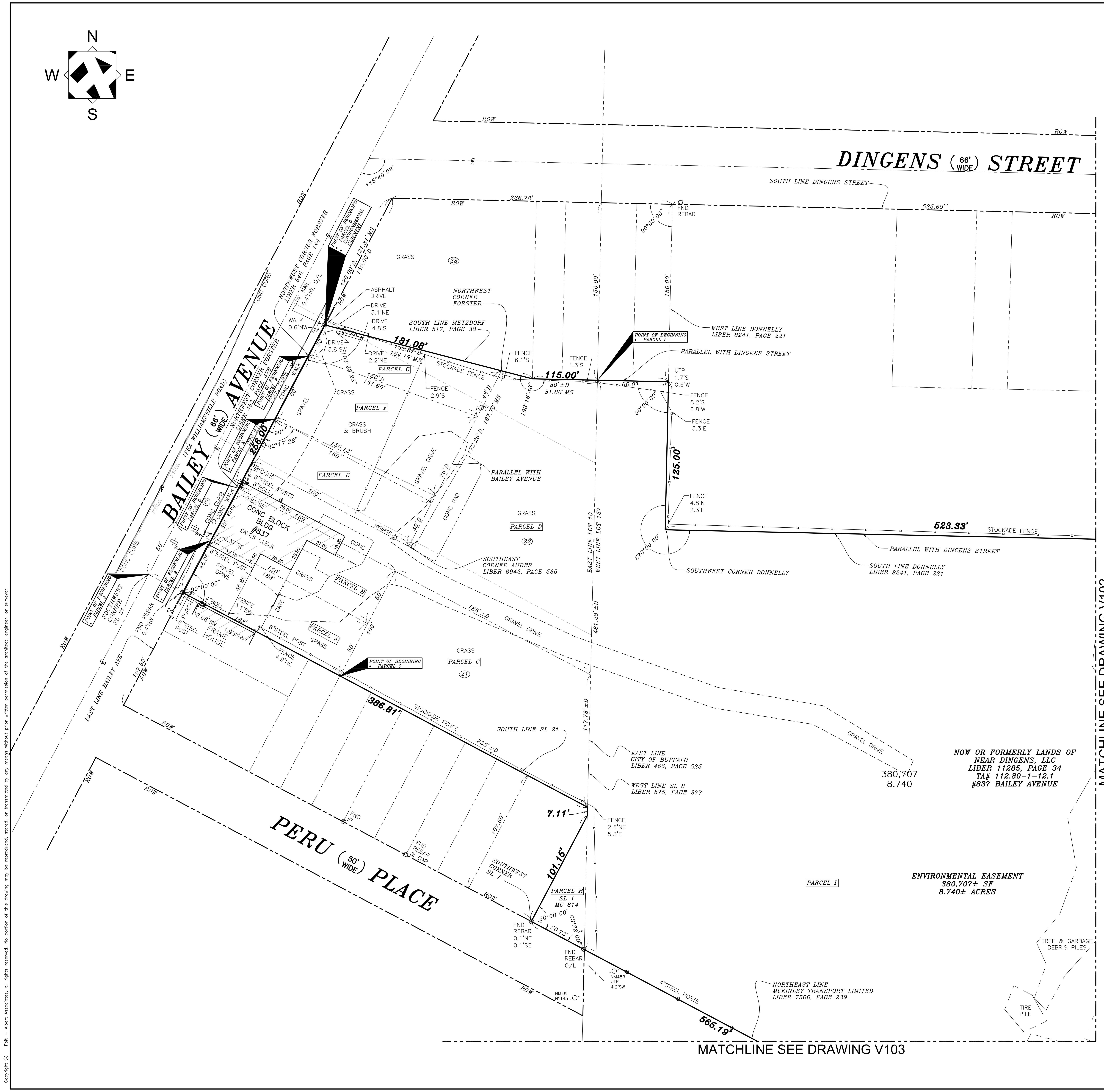
Thence northwesterly at an interior angle of 106° 40' 35", along the said northeast line of lands conveyed to McKinley Transport Limited, a distance of 565.19 feet to the southwest corner of Subdivision Lot 1 as shown on a map filed in the Erie County Clerk's Office under Map Cover No. 814;

Thence northeasterly at an interior angle of 90° 00' 00", along the northwest line of said Subdivision Lot 1, a distance of 101.15 feet to the west line of Lot 157, Township 10, Range 7 of the Buffalo Creek Reservation;

Thence northerly along the said west line of Lot 157, a distance of 7.11 feet to the south line of Subdivision Lot 21 as shown on a map recorded in the Erie County Clerk's Office in Liber 136 of Deeds at page 109;

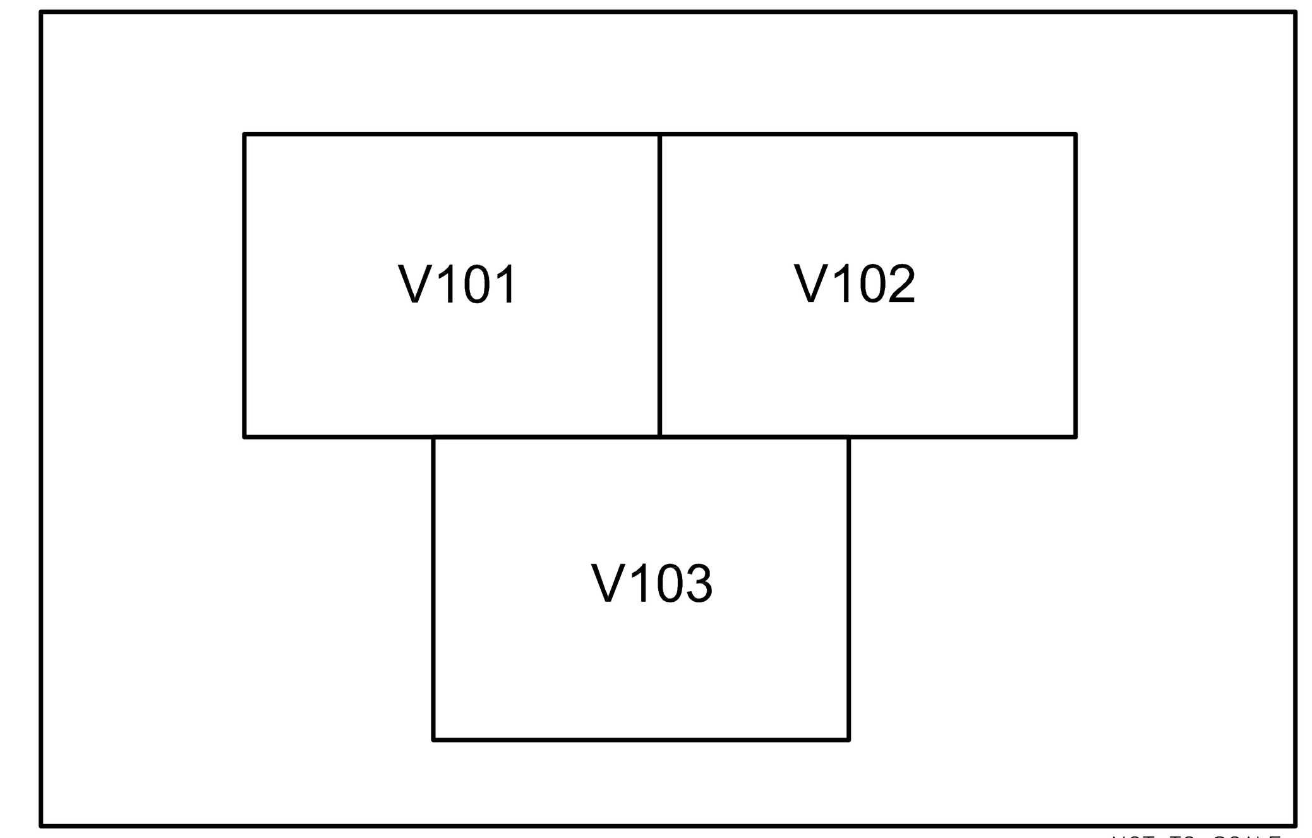
Thence northwesterly along the said south line of Subdivision Lot 21, a distance of 386.81 feet to the said east line of Bailey Avenue;

Thence northerly at an interior angle of 90° 00' 00", along the said east line of Bailey Avenue, a distance of 256.00 feet to the point or place of beginning, containing 380,707 square feet or 8.740 acres of land, more or less.



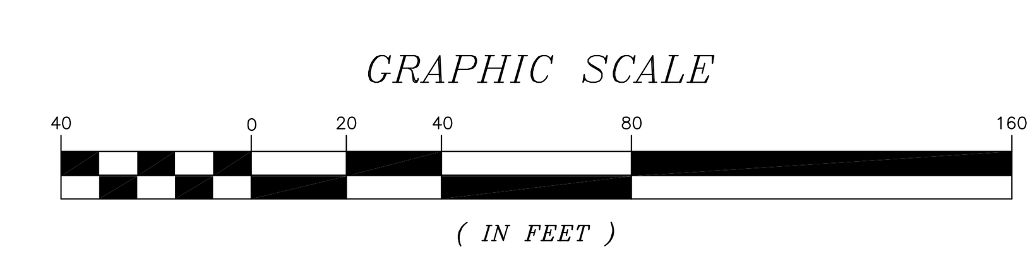
VICINITY MAP

NOT TO SCALE



SHEET KEY

NOT TO SCALE



FoitAlbert
ASSOCIATES
Architecture. Engineering. Surveying.
763 Main Street
Buffalo, New York 14203
T 716.856.3933 F 716.856.3961 W foit-albert.com

ENVIRONMENTAL EASEMENT

NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION
837 BAILEY AVE - SITE NO. C915298
PART OF LOTS 10, 157 & 158, TOWNSHIP 10, RANGE 7
OF THE BUFFALO CREEK RESERVATION
CITY OF BUFFALO, COUNTY OF ERIE, STATE OF NEW YORK

Seal: STATE OF NEW YORK — MICHAEL JOSEPH — 048978 — LICENSED LAND SURVEYOR

Revision Number	Revision Date/Description
1	7/18/2019 DMZ REVISED EASEMENT

Scale: 1"=40'

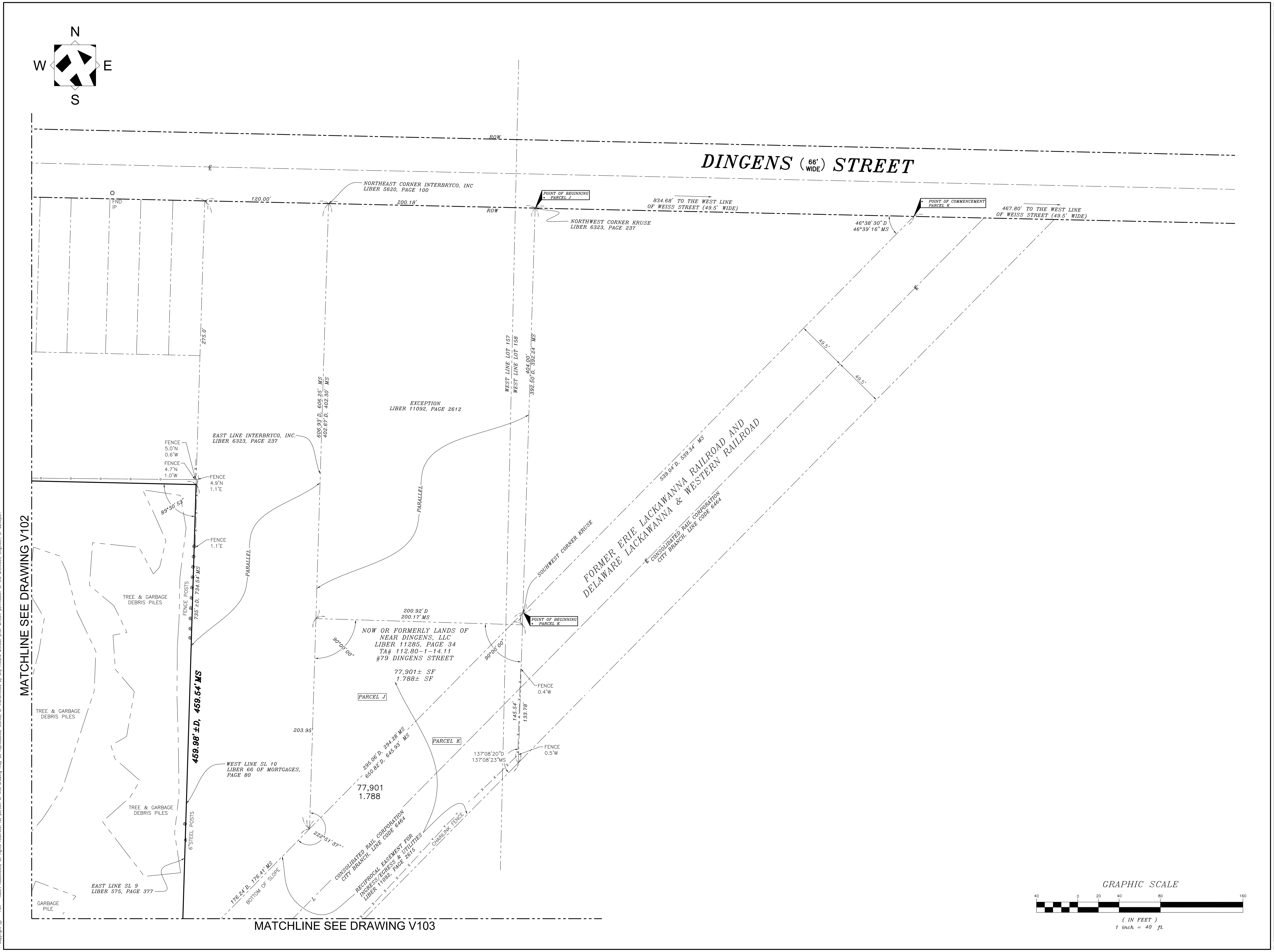
Date: 5/17/2016	Project Manager: M. POHL
Drawn By: D. ZENDANO	Checked By: M. POHL

Project: 16001-09

File Name: 16001-09

Sheet: 1 OF 4

V101


N
S
W
E
DINGENS (66' WIDE) STREET
ROW
FND IP
120.00'
200.18'
NORTHEAST CORNER INTERBRYCO, INC
LIBER 5620, PAGE 100
POINT OF BEGINNING PARCEL J
NORTHWEST CORNER KRUSE
LIBER 6323, PAGE 237
834.68' TO THE WEST LINE OF WEISS STREET (49.5' WIDE)
POINT OF COMMENCEMENT PARCEL K
467.80' TO THE WEST LINE OF WEISS STREET (49.5' WIDE)
46°38'30" D
46°39'16" MS
49.5'
49.5'
275.0'
606.93' D, 606.25' MS
402.67' D, 402.30' MS
WEST LINE LOT 157
WEST LINE LOT 158
404.00'
392.50' D, 392.24' MS
EXCEPTION
LIBER 11092, PAGE 2612
EAST LINE INTERBRYCO, INC.
LIBER 6323, PAGE 237
FENCE 5.0'N 0.6'W
FENCE 4.7'N 1.0'W
FENCE 4.9'N 1.1'E
89°30'53"
FENCE 1.1'E
PARALLEL
PARALLEL
539.04' D, 539.34' MS
FORMER ERIE LACKAWANNA RAILROAD AND DELAWARE LACKAWANNA & WESTERN RAILROAD
CONSOLIDATED RAIL CORPORATION CITY BRANCH, LINE CODE 6464
SOUTHWEST CORNER KRUSE
TREE & GARBAGE DEBRIS PILES
FENCE POSTS
735' ±D, 734.54' MS
200.92' D
200.17' MS
POINT OF BEGINNING PARCEL K
NOW OR FORMERLY LANDS OF NEAR DINGENS, LLC
LIBER 11285, PAGE 34
TA# 112.80-1-14.11
#79 DINGENS STREET
90°00'00"
90°00'00"
77,901± SF
1.788± SF
FENCE 0.4'W
459.98' ±D, 459.54' MS
MATCHLINE SEE DRAWING V102
TREE & GARBAGE DEBRIS PILES
PARCEL J
PARCEL K
145.54'
133.78'
203.95'
295.06' D, 294.28' MS
650.82' D, 645.93' MS
137°08'20"D
137°08'23"MS
FENCE 0.5'W
WEST LINE SL 10
LIBER 66 OF MORTGAGES, PAGE 80
77,901
1.788
TREE & GARBAGE DEBRIS PILES
6" STEEL POSTS
222°51'37"
CONSOLIDATED RAIL CORPORATION CITY BRANCH, LINE CODE 6464
RECIPROCAL EASEMENT FOR INGRESS/EGRESS & UTILITIES LIBER 11092, PAGE 2615
CHAINLINK FENCE
176.24' D, 176.41' MS
BOTTOM OF SLOPE
EAST LINE SL 9
LIBER 575, PAGE 377
GARBAGE PILE
MATCHLINE SEE DRAWING V103
GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

Consultant:

FoitAlbert ASSOCIATES
Architecture. Engineering. Surveying.
763 Main Street
Buffalo, New York 14203
T 716.856.3933 F 716.856.3961 W foit-albert.com

ENVIRONMENTAL EASEMENT

NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION
837 BAILEY AVE - SITE NO. C915298
PART OF LOTS 10, 157 & 158, TOWNSHIP 10, RANGE 7
OF THE BUFFALO CREEK RESERVATION
CITY OF BUFFALO, COUNTY OF ERIE, STATE OF NEW YORK

Seal:
STATE OF NEW YORK
MICHAEL JOSEPH ...
LICENSED LAND SURVEYOR

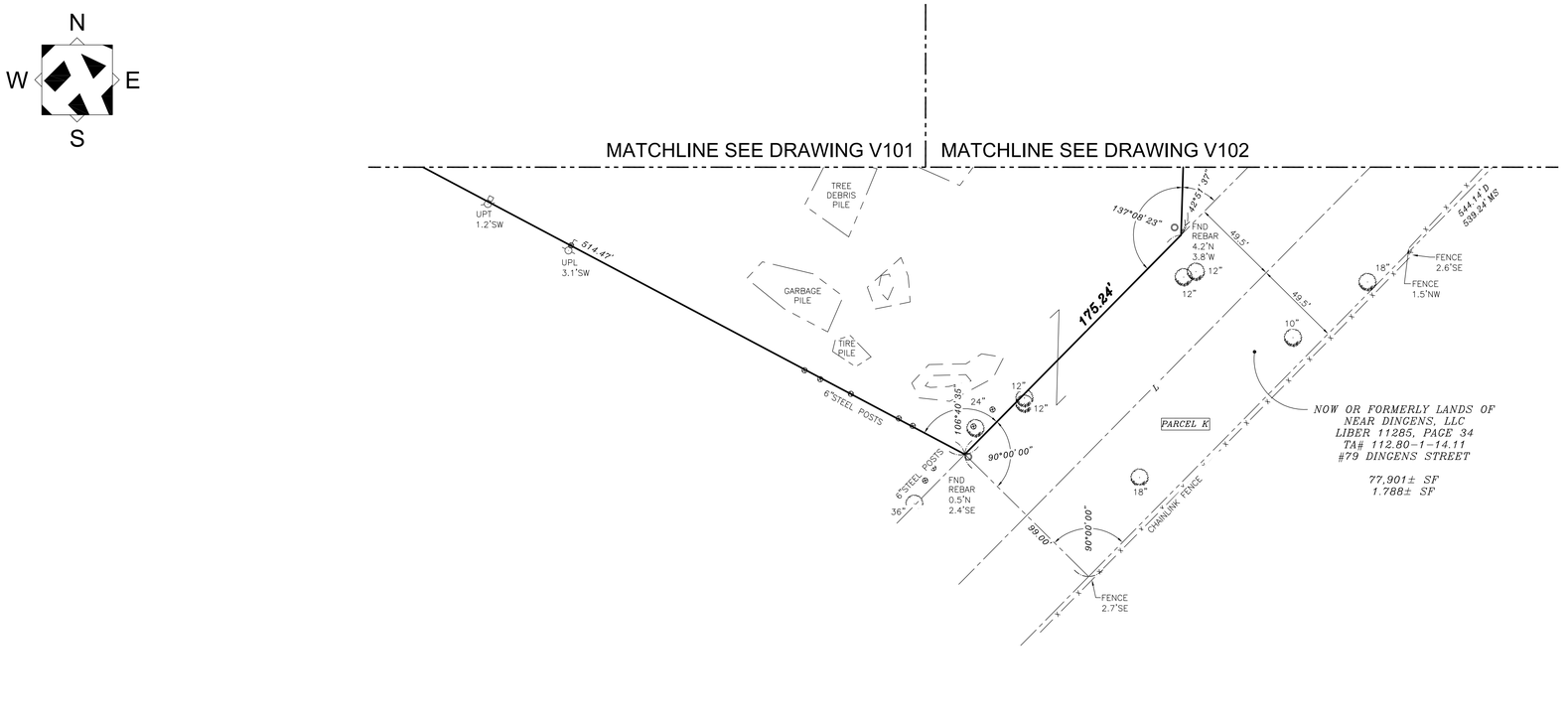
Revision Number	Revision Date/Description
△	7/18/2017 DMZ REVISED EASEMENT
△	
△	
△	

Scale: 1"=40'

Date: 5/17/2016	Project Manager: M. POHL
Drawn By: D. ZENDANO	Checked By: M. POHL

Project: 16001-09
File Name: 16001-09
Sheet: 2 OF 4

V102



LEGEND:

- BOLLARD
- DECIDUOUS TREE
- CATCH BASIN
- ELECTRIC MANHOLE
- FIRE HYDRANT
- GAS METER
- GAS VALVE
- PARCEL A – LIBER 11285, PAGE 34
- POLE w/LIGHT
- POST
- PROPERTY MARKER (FOUND)
- SIGN
- SUBLOT 21 LIBER 136, PAGE 109
- UTILITY POLE
- UTILITY POLE w/LIGHT
- UTILITY POLE w/TRANSFORMER
- WATER VALVE

ABBREVIATIONS:

BLDG	BUILDING
BOLL	BOLLARD
E	EAST
FND	FOUND
IP	IRON PIPE
MS	MEASURED
N	NORTH
NM	NIAGARA MOHAWK
NYT	NEW YORK TELEPHONE
O/L	ON LINE
ROW	RIGHT OF WAY
S	SOUTH
SL	SUBLOT
UPL	UTILITY POLW W/LIGHT
UPT	UTILITY POLE W/TRANSFORMER
UTP	UTILITY POLE
W	WEST
WV	WATER VALVE

SURVEY LINE TYPES:

- CHANGE OF PAVEMENT
- FENCE (CHAINLINK)
- PROPERTY BOUNDARY
- GREAT LOT LINE
- PROPERTY LOT LINE
- ROAD CENTERLINE
- ROW
- SLOPE – TOP/BOTTOM

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

Consultant:
FoitAlbert ASSOCIATES
Architecture. Engineering. Surveying.
760 Main Street Buffalo, New York 14203
T 716.856.3933 F 716.856.3961 W foit-albert.com

ENVIRONMENTAL EASEMENT

NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION
837 BAILEY AVE - SITE NO. C915298
PART OF LOTS 10, 157 & 158, TOWNSHIP 10, RANGE 7
OF THE BUFFALO CREEK RESERVATION
CITY OF BUFFALO, COUNTY OF ERIE, STATE OF NEW YORK

Seal: STATE OF NEW YORK MICHAEL JOSEPH POHL 050978 LICENSED LAND SURVEYOR

Revision Number	Revision Date/Description
1	7/18/2017 DMZ REVISED EASEMENT
2	
3	
4	

Scale: 1"=40'

Date: 5/17/2016	Project Manager: M. POHL
Drawn By: D. ZENDANO	Checked By: M. POHL

Project: 16001-09
File Name: 16001-09
Sheet: 3 OF 4

V103

DESCRIPTION
LIBER 11285, PAGE 34

Parcel A

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Buffalo, County of Erie and State of New York, being part of Lot No. 10, Township 10, Range 7 of the Buffalo Creek Reservation and further distinguished as part of Subdivision Lot No. 21 as shown on map attached to deed recorded in the Erie County Clerk's Office in Liber 136 of Deeds at page 109, bounded and described as follows:

BEGINNING in the southwest corner of said Subdivision Lot No. 21; running thence east along the south line of said Subdivision Lot No. 21, 183 feet; thence north parallel with the west line of said Subdivision Lot No. 21, 50 feet; thence west parallel with the first mentioned line, 183 feet; thence south and along the west line of said Subdivision Lot No. 21, 50 feet to the place of beginning.

Parcel B

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Buffalo, County of Erie and State of New York, being part of Lot No. 10, Township 10, Range 7 of the Buffalo Creek Reservation and further distinguished as part of Subdivision Lot No. 21 as shown on map attached to deed recorded in the Erie County Clerk's Office in Liber 136 of Deeds at page 109, bounded and described as follows:

BEGINNING at a point in the easterly line of Bailey Avenue, 50 feet northerly from the south line of said Subdivision Lot No. 21; thence easterly along the northerly line of John Heiss' land, 150 feet; thence north 50 feet; thence westerly at right angles 150 feet to the easterly line of Bailey Avenue; thence southerly along the easterly line of Bailey Avenue, 50 feet to the place of beginning.

Parcel C

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Buffalo, County of Erie and State of New York, being part of Lot No. 10, Township 10, Range 7 of the Buffalo Creek Reservation and further distinguished as part of Subdivision Lot No. 21 as shown on map recorded in the Erie County Clerk's Office in Liber 136 of Deeds at page 109, bounded and described as follows:

BEGINNING at a point in the south line of said Subdivision Lot No. 21, 150 feet east of the point of intersection of said south line of said Subdivision Lot No. 21, with easterly line of Bailey Avenue (which said point of intersection is about 376 feet south from the point of intersection of said easterly line of Bailey Avenue with the southerly line of Dingens Street); thence running northerly parallel to the east line of Bailey Avenue, 100 feet; thence easterly parallel to the south line of Subdivision Lot No. 21 about 185 feet to the easterly line of lands conveyed to the City of Buffalo by deed recorded in the Erie County Clerk's Office in Liber 466 of Deeds at page 525; thence southerly on the easterly line of lands so conveyed to the City of Buffalo by said deed about 117.78 feet to the south line of Subdivision Lot No. 21; thence westerly along the south line of said Subdivision Lot No. 21, about 225 feet to the point or place of beginning.

Parcel D

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Buffalo, County of Erie and State of New York, being part of Lot No. 10, Township 10, Range 7 of the Buffalo Creek Reservation and further distinguished as part of Subdivision Lots Nos. 21, 22 and 23 as shown on map recorded in the Erie County Clerk's Office in Liber 136 of Deeds at page 109, bounded and described as follows:

BEGINNING at a point in the east line of Bailey Avenue about 276 feet south from the south line of Dingens Street, which point is the northwest corner of land conveyed to Stephen Forster by deed recorded in Liber 452 of Deeds at page 478, and which point is 100 feet north from the south line of Subdivision Lot No. 21 as shown on map recorded in Liber 136 of Deeds at page 109; thence east parallel with the south line of said Subdivision Lot No. 21 to the east line thereof; thence north along the east line thereof to a point therein 150 feet south from the south line of Dingens Street; thence westerly along the south line of lands conveyed to Jos. Bauman, Louis Metzdorf and Nicholas Schmidt about 80 feet to the northeast corner of lands conveyed to John Forster by deed recorded in Liber 546 of Deeds at page 149; thence south parallel with Bailey Avenue, 172.26 feet to the southeast corner of lands conveyed to Amelia Aures by deed recorded in the Erie County Clerk's Office in Liber 6942 of Deeds at page 535; thence west along the south line of said Aures' land 150 feet to the east line of Bailey Avenue; thence south along the east line of Bailey Avenue to the place of beginning.

Parcel E

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Buffalo, County of Erie and State of New York, being part of Lot No. 10, Township 10, Range 7 of the Buffalo Creek Reservation, bounded and described as follows:

BEGINNING at a point in the easterly line of Bailey Avenue at the distance of 210 feet southerly of the point of intersection of said easterly line of Bailey Avenue with the southerly line of Dingens Street; running thence easterly at right angles to Bailey Avenue, 150 feet; thence southerly parallel with Bailey Avenue, 48 feet; thence westerly 150 feet to the easterly line of Bailey Avenue; thence northerly along said easterly line of Bailey Avenue, 42 feet to the place of beginning.

Parcel F

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Buffalo, County of Erie and State of New York, being part of Lot No. 10, Township 10, Range 7 of the Buffalo Creek Reservation, bounded and describes as follows:

BEGINNING at a point in the easterly line of Bailey Avenue at the distant 150 feet south of the intersection of said easterly line with southerly line of Dingens Street; thence southerly along the easterly line of Bailey Avenue, 60 feet to a point; thence easterly at an exterior angle of 92° 17' 28" with the said easterly line of Bailey Avenue, 150.12 feet to a point; thence northerly along a line parallel with easterly line of Bailey Avenue, 76 feet to a point; thence westerly in a straight line 151.60 feet to the point of beginning.

Parcel G

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Buffalo, County of Erie and State of New York, being part of Lot No. 10, Township 10, Range 7 of the Buffalo Creek Reservation, bounded and describes as follows:

BEGINNING at a point in the easterly line of Bailey Avenue, 120 feet south of its intersection with the southerly line of Dingens Street; thence southerly along the easterly line of Bailey Avenue, 30 feet to the northwest corner of lands conveyed to Henry Forster by deed recorded in the Erie County Clerk's Office in Liber 546 of Deeds at page 144; thence easterly along the northerly line of lands conveyed to to Henry Forster, Jr. by said deed, 150 feet; thence northerly parallel with Bailey Avenue, 43 feet to the southerly line of lands conveyed to Louis Metzdorf and One by deed recorded in the Erie County Clerk's Office in Liber 517 of Deeds at page 38; thence westerly along the southerly line of lands so conveyed to Louis Metzdorf and One by deed aforesaid, 153.87 feet to the point of beginning.

Parcel H

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Buffalo, County of Erie and State of New York, being part of Lot No. 10, Township 10, Range 7 of the Buffalo Creek Reservation and further distinguished as Subdivision Lot No. 1 as shown on map filed in the Erie County Clerk's Office under Cover No. 814, being triangular Subdivision Lot having a frontage of 50.72 feet more or less and west line of 101.15 feet and northeast line of 113.16 feet

Parcel I

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Buffalo, County of Erie and State of New York, being part of Lot No. 157, Township 10, Range 7 of the Buffalo Creek Reservation, bounded and described as follows:

BEGINNING at a point in the westerly line of Lot No. 157 at a point therein 150 feet south of the south line of Dingens Street; running thence southerly along the west line of Lot No. 157, said line also being the west line of Subdivision Lot No. 8, as shown on map recorded in the Erie County Clerk's Office in Liber 575 of Deeds at page 377, a distance of 481.21 feet more or less to the northeast line of lands conveyed to McKinley Transport Limited by deed recorded in the Erie County Clerk's Office inn Liber 7506 of Deeds at page 239; running thence southeasterly along the northeast line of said lands, 514.47 feet to the northwest line of lands of Erie-Lackawanna Railroad; running thence northeasterly along the line of said railroad, 175.24 feet to the easterly line of Subdivision Lot No. 9 as shown on said map recorded in the Erie County Clerk's Office in Liber 575 of Deeds at page 337; running thence northerly along the east line of said Subdivision Lot 9, 459.98 feet more or less to a point in said east line distant 275 feet south of the south line of Dingens Street; running thence westerly parallel with the south line of Dingens Street and along the south line of lands conveyed to Alfred J. Donnelly by deed recorded in Liber 8241 of Deeds at page 221, 523.33 feet to the southwest corner of lands of Donnelly; running thence northerly along the west line of lands of Donnelly 125 feet to a point; running thence westerly on a line parallel with the south line of Dingens Street, 60 feet to the point or place of beginning.

DESCRIPTION
LIBER 11285, PAGE 34
CONTINUED

Parcel J

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Buffalo, County of Erie and State of New York, being part of Lot No. 158, Township 10, Range 7 of the Buffalo Creek Reservation, and more particularly bounded and described as follows:

BEGINNING at a point in the southerly line of Dingens Street distant 834.68 feet westerly from the point of intersection of the southerly line of Dingens Street with the westerly line of Weiss Street, said point of beginning further described as being the northwest corner of lands conveyed to Otto H. Kruse by deed recorded August 7, 1958 in the Erie County Clerk's Office in Liber 6323 of Deeds at page 237; thence westerly along the southerly line of Dingens Street, 200.18 feet to the northeast corner of lands conveyed to Interbryco, Inc. by deed recorded October 8, 1954 in the Erie County Clerk's Office in Liber 5620 of Deeds at page 100; thence southerly along the east line of lands conveyed to Interbryco, Inc. as aforesaid, 606.93 feet to the northwesterly line of lands of Delaware Lackawanna & Western Railroad; thence northeasterly along said northwesterly line of said railroad land about 295.06 feet to the southwesterly corner of lands conveyed to Otto H. Kruse as aforesaid; thence northerly along the westerly line of said lands, 392.50 feet to the point of beginning.

EXCEPTING THEREFROM that portion of premises as described in a deed recorded in the Erie County Clerk's Office in Liber 11092 of Deeds at page 2612.

Parcel K

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Buffalo, County of Erie and State of New York, being part of Lots Nos. 157 and 158, Township 10, Range 7 of the Buffalo Creek Reservation, bounded and described as follows:

OMMENCING at a point on the south line of Dingens Street, distant 467.80 feet westerly from the west line of Weiss Street as measured along said south line of Dingens Street, said point of beginning also being the intersection of the south line of Dingens Street with a line drawn parallel with the center line of right of way of railroad of Consolidated Rail Corporation (formerly Erie Lackawanna Railroad Company) known as the City Branch and identified as Line Code 6464 in the records of the United States Railway Association and distant 49.50 feet northwesterly from said center line as measured at right angles thereto; thence southwesterly along said line drawn parallel with the center line of said Consolidated Rail Corporation right of way and forming an angel of 46° 37' 30" with the south line of Dingens Street as measured in the southwest quadrant, 539.04 feet to the principal point of beginning; thence continuing southwesterly along said line drawn parallel with the center line of said Consolidated Rail Corporation right of way, 650.82 feet to a point; thence southeasterly at right angles to the last described course, 99.0 feet to a point on a line drawn parallel with the center line of said Consolidated Rail Corporation right of way and distant 49.50 feet southeasterly from said center line as measured at right angles thereto; thence northeasterly along said last described line drawn parallel with the center line of said Consolidated Rail Corporation right of way, 544.14 feet to a point; thence northerly forming an interior angle of 137° 08' 20" with the last described course, 145.54 feet to the principal point of beginning.

DESCRIPTION
ENVIRONMENTAL EASEMENT

ALL THAT TRACT OR PARCEL OF LAND situate in the City of Buffalo, County of Erie and State of New York being part of Lot Nos. 10, 157 and 158, Township 10, Range 7 of the Buffalo Creek Reservation, bounded and described as follows:

BEGINNING at a point in the east line of Bailey Avenue (66' wide), distant 121.31 feet south of its intersection with the south line of Dingens Street;

Thence easterly at an interior angle of 103° 23' 23", along the south line of lands conveyed to Louis Metzdorf and more by deed recorded in the Erie County Clerks Office in Liber 517 of Deeds at page 38, a distance of 181.08 feet to a point;

Thence easterly at an interior angle of 193° 16' 46", parallel with the said south line of Dingens Street, and continuing along the said south line of lands conveyed to Louis Metzdorf and more, a distance of 115.00 feet to the west line of lands conveyed to Donnelly by deed recorded in the Erie County Clerks Office in Liber 8241 of Deeds at page 221;

Thence southerly at an interior angle of 90° 00' 00", along the said west line of lands conveyed to Donnelly, a distance of 125.00 feet to the southwest corner of said lands conveyed to Donnelly;

Thence easterly at an interior angle of 270° 00' 00", parallel with the said south line of Dingens Street, and continuing along the south line of said lands conveyed to Donnelly, a distance of 523.33 feet to the east line of Subdivision Lot 9 as shown on a map recorded in the Erie County Clerks Office in Liber 575 of Deeds at page 377;

Thence southerly at an interior angle of 89° 30' 53", along the said east line of Subdivision Lot 9, a distance of 459.54 feet to the northwest line of the former Erie Lackawanna Railroad and the former Delaware Lackawanna and Western Railroad;

Thence southwesterly at an interior angle of 137° 08' 23", along the said northwest line of the former railroad lands, a distance of 175.24 feet to the northeast line of lands conveyed to McKinley Transport Limited by deed recorded in the Erie County Clerk's Office in Liber 7506 of deeds at page 239;

Thence northwesterly at an interior angle of 106° 40' 35", along the said northeast line of lands conveyed to McKinley Transport Limited, a distance of 565.19 feet to the southwest corner of Subdivision Lot 1 as shown on a map filed in the Erie County Clerks Office under Map Cover No. 814;

Thence northeasterly at an interior angle of 90° 00' 00", along the northwest line of said Subdivision Lot 1, a distance of 101.15 feet to the west line of Lot 157, Township 10, Range 7 of the Buffalo Creek Reservation;

Thence northerly along the said west line of Lot 157, a distance of 7.11 feet to the south line of Subdivision Lot 21 as shown on a map recorded in the Erie County Clerks Office in Liber 136 of Deeds at page 109;

Thence northwesterly along the said south line of Subdivision Lot 21, a distance of 386.81 feet to the said east line of Bailey Avenue;

Thence northerly at an interior angle of 90° 00' 00", along the said east line of Bailey Avenue, a distance of 256.00 feet to the point or place of beginning, containing 380,707 square feet or 8.740 acres of land, more or less.

GENERAL NOTES:

The survey for this map was completed on June 19, 2015 and updated on April 19, 2016.

The address posted on the subject property is 837 Bailey Avenue (SBL No. 112.80-1-12.1) and 79 Dingens Street (SBL No. 112.81-1-14.11).

The property hereon described is the same as the pertinent property as described in the Abstract of Title issued by Chicago Title Insurance Company, dated June 15, 2015, as Search No. 1513-02225.

Unauthorized alteration or addition to any survey, drawing, design, specification, plan or report is a violation of Section 7209, Provision 2 of the New York State Education Law

LAND AREA:

Environmental Easement:

380,707 +/- Square Feet
8.740 +/- Acres:

EASEMENTS:

Premises are subject to the following:

Reciprocal Easement for ingress/egress and utilities between Bison products Co., Inc. and Rich-Seapak Corporation.
Liber 11092, Page 2615, modified in Liber 11177, Page 9255

Utility Easement to Niagara Mohawk Power Corporation and New York Telephone Company.
liber 6897, Page 140

Oil and Gas Lease Agreement to Gulf Oil Corporation
Parcels A, B and part of D
liber 4559, Page 228

SITE NUMBER: C915298
SITE NAME: 837 BAILEY AVENUE
SITE ADDRESS: 837 BAILEY AVENUE & 79 DINGENS STREET

This property is subject to an environmental easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the New York State Department of Environmental Conservation Law. The engineering and institutional controls for this Easement are set forth in the Site Management Plan (SMP). A copy of the SMP must be obtained by any party with an interest in the property. The SMP can be obtained from NYS Department of Environmental Conservation, Division of Environmental Remediation, Site Control Section, 625 Broadway, Albany, NY 12233 or at derweb@dec.ny.gov.

Consultant:

FoitAlbert ASSOCIATES
Architecture. Engineering. Surveying.
763 Main Street
Buffalo, New York 14203
T 716.856.3933 F 716.856.3961 W foit-albert.com

ENVIRONMENTAL EASEMENT
NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION
837 BAILEY AVE - SITE NO. C915298
PART OF LOTS 10, 157 & 158, TOWNSHIP 10, RANGE 7
OF THE BUFFALO CREEK RESERVATION
CITY OF BUFFALO, COUNTY OF ERIE, STATE OF NEW YORK

Seal: STATE OF NEW YORK · MICHAEL JOSEPH POHL · 049978 · LICENSED LAND SURVEYOR

Revision Number	Revision Date/Description
1	7/18/2017 DMZ REVISED EASEMENT

Scale: 1"=40'

Date: 5/17/2016	Project Manager: M. POHL
Drawn By: D. ZENDANO	Checked By: M. POHL

Project: 16001-09
File Name: 16001-09
Sheet: 4 OF 4

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APPENDIX B

LIST OF SITE CONTACTS

Name	Phone/Email Address
Site Owner & Remedial Party: John Sullivan, Near Dingens LLC	716-913-1200; sullyair69@icloud.com
Qualified Environmental Professional: John B. Battaglia, P.E., EnSol Inc.	716-285-3920; jbattaglia@ensolinc.com
NYSDEC DER Project Manager; Jaspal Walia	716-851-7220; Jaspal.walia@dec.ny.gov
NYSDEC Regional HW Engineer; Chad Staniszewski	716-851-7220; chad.staniszewski@dec.ny.gov
NYSDEC Site Control; Kelly Lewandowski, P.E.	518-402-9543 kelly.lewandowski@dec.ny.gov
Remedial Party Attorney; Craig A. Slater, Esq.	716-845-6760; CSlater@CSlaterLaw.com

APPENDIX C

SOIL BORING LOGS

EnSol, Inc.					**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 15-0027-5		**Client:** Near Dingens, LLC	**Boring No.** **SB-1**
Address, City, State 837 Bailey Ave., Buffalo, NY				**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Geoprobe
Logged By: JMS		**Date**	**Started:** 3/7/2016	**Drill Size/Type:** Macro-Core	**Total Depth of Boring (ft.):** 8.0
Drill Crew: Steve			**Completed:** 3/7/2016		

Depth (fbgs)	Sample Type	Recovery (% of 4' Tube)	PID Reading (PPM)	Material Classification & Description	Samples Collected
			1.6	Topsoil, Gravel at the Surface, Silt, Gravel, Brick (C&D Fill), Moist	SS-2 (Surface) SB-1 (4"-2')
2	U	100	2.6		
			2.5	Brown-Gray, Silty Clay, Soft, Wet	
4					
6	U	100	0.0		
8					
10					

Notes:

fbgs feet below ground surface

U undisturbed tube (4')

PID photo-ionization detector

Surface soil sample SS-2 collected from this location.

EnSol, Inc.					**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 15-0027-5		**Client:** Near Dingens, LLC	**Boring No.** **SB-2**
Address, City, State 837 Bailey Ave., Buffalo, NY				**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Geoprobe
Logged By: JMS	**Date**	**Started:** 3/7/2016		**Drill Size/Type:** Macro-Core	**Total Depth of Boring (ft.):** 8.0
Drill Crew: Steve		**Completed:** 3/7/2016			

Depth (fbgs)	Sample Type	Recovery (% of 4' Tube)	PID Reading (PPM)	Material Classification & Description	Samples Collected
			2.0	Dark Gray Sand, Silt,Gravel, Brick (C&D Fill), Moist	
2	U	100	2.1	Brown-Gray, Silty Clay, Some Sand, Stiff, Moist	SB-2 (1'-4')
4					
6	U	100	0.0	Brown-Gray, Silty Clay, Some Sand, Stiff, Wet	
8					
10					

Notes:

fbgs feet below ground surface

U undisturbed tube (4')

PID photo-ionization detector

EnSol, Inc.					**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 15-0027-5		**Client:** Near Dingens, LLC	**Boring No.** **SB-3**
Address, City, State 837 Bailey Ave., Buffalo, NY				**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Geoprobe
Logged By: JMS		**Date**	**Started:** 3/7/2016	**Drill Size/Type:** Macro-Core	**Total Depth of Boring (ft.):** 8.0
Drill Crew: Steve			**Completed:** 3/7/2016		

Depth (fbgs)	Sample Type	Recovery (% of 4' Tube)	PID Reading (PPM)	Material Classification & Description	Samples Collected
			0.0	Dark Gray Silt,Some Sand, Organics, Moist	SS-3 (Surface)
			0.0	Brown Silt and Sand, Moist	SB-3 (1'-2')
2	U	100	0.0	Brown-Gray Silty Clay, Soft, Wet	
4					
	U	100	0.0		
6			0.0	Brown-Gray Silty Clay with Gray Mottling, Soft, Wet	
8					
10					

Notes:

fbgs feet below ground surface

U undisturbed tube (4')

PID photo-ionization detector

Surface soil sample SS-3 collected from this location.

EnSol, Inc.					**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 15-0027-5		**Client:** Near Dingens, LLC	**Boring No.** **SB-4**
Address, City, State 837 Bailey Ave., Buffalo, NY				**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Geoprobe
Logged By: JMS		**Date**	**Started:** 3/9/2016	**Drill Size/Type:** Macro-Core	**Total Depth of Boring (ft.):** 11.0
Drill Crew: Steve			**Completed:** 3/9/2016		

Depth (fbgs)	Sample Type	Recovery (% of 4' Tube)	PID Reading (PPM)	Material Classification & Description	Samples Collected
			0.0	Topsoil and Gravel Subbase, Moist	SS-4 (Surface)
2	U	100	0.0	Brown-Gray Silty Clay with Gray Mottling, Stiff, Moist	SB-4 (1'-4')
4					
6	U	100	0.0	Brown-Gray Silty Clay, Stiff, Moist	
8	U	100	0.0	Brown-Gray Silty Clay, Soft, Wet	
10					
12					
14					

Notes:

fbgs feet below ground surface

U undisturbed tube (4')

PID photo-ionization detector

Surface soil sample SS-4 collected from this location.

EnSol, Inc.					**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 15-0027-5		**Client:** Near Dingens, LLC	**Boring No.** **SB-5**
Address, City, State 837 Bailey Ave., Buffalo, NY				**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Geoprobe
Logged By: DJP	**Date**	**Started:** 3/8/2016		**Drill Size/Type:** Macro-Core	**Total Depth of Boring (ft.):** 7.0
Drill Crew: Steve		**Completed:** 3/8/2016			

Depth (fbgs)	Sample Type	Recovery (% of 4' Tube)	PID Reading (PPM)	Material Classification & Description	Samples Collected
2	U	100	1.1 0.0	Organics, Gravel, Loose, Moist grades to Red-Brown Silt, Cinder (Fill), Dense, Moist	SB-5 (0.5'-2')
4			0.0	Red-Brown Silt, Sand, Cinder, Ash (Fill), Loose, Wet	
6	U	100	0.0	Brown-Gray, Silty Clay, Stiff, Moist	
8					
10					

Notes:

fbgs feet below ground surface

U undisturbed tube (4')

PID photo-ionization detector

EnSol, Inc.					**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 15-0027-5		**Client:** Near Dingens, LLC	**Boring No.** **SB-6**
Address, City, State 837 Bailey Ave., Buffalo, NY				**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Geoprobe
Logged By: DJP		**Date**	**Started:** 3/8/2016	**Drill Size/Type:** Macro-Core	**Total Depth of Boring (ft.):** 11.5
Drill Crew: Steve			**Completed:** 3/8/2016		

Depth (fbgs)	Sample Type	Recovery (% of 4' Tube)	PID Reading (PPM)	Material Classification & Description	Samples Collected
					SB-6 (Surface)
2	U	75	0.0	Re-Brown Silt, Black Cinder (Fill), Loose, Moist	
4			0.0	Red-Brown Silt, Cinder (Fill), Loose, Wet	
6	U	50	0.0	Black and Gray Cinder (Fill), Loose, Moist	SB-6 (4'-8')
8					
10	U	100	0.0	Brown-Gray Silty Clay, Soft, Wet	
12					
14					

Notes:

fbgs feet below ground surface

U undisturbed tube (4')

PID photo-ionization detector

EnSol, Inc.					**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 15-0027-5		**Client:** Near Dingens, LLC	**Boring No.** SB-7
Address, City, State 837 Bailey Ave., Buffalo, NY				**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Geoprobe
Logged By: DJP	**Date**	**Started:** 3/8/2016		**Drill Size/Type:** Macro-Core	**Total Depth of Boring (ft.):** 11.5
Drill Crew: Steve		**Completed:** 3/8/2016			

Depth (fbgs)	Sample Type	Recovery (% of 4' Tube)	PID Reading (PPM)	Material Classification & Description	Samples Collected
2	U	75	0.0	Black and Gray Cinder, Some Brick (Fill), Loose, Moist	SB-7 (0'-4')
4					
6	U	25	0.0	Black and Gray Cinder, Some Brick (Fill), Loose, Wet	SB-7 (4'-8')
8					
10	U	100	0.0	Brown-Gray Silty Clay, Stiff to Soft, Wet	
12					
14					

Notes:

fbgs feet below ground surface

U undisturbed tube (4')

PID photo-ionization detector

EnSol, Inc.					**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 15-0027-5		**Client:** Near Dingens, LLC	**Boring No.** **SB-8**
Address, City, State 837 Bailey Ave., Buffalo, NY				**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Geoprobe
Logged By: DJP	**Date**	**Started:** 3/8/2016		**Drill Size/Type:** Macro-Core	**Total Depth of Boring (ft.):** 8.0
Drill Crew: Steve		**Completed:** 3/8/2016			

Depth (fbgs)	Sample Type	Recovery (% of 4' Tube)	PID Reading (PPM)	Material Classification & Description	Samples Collected
2	U	100	0.0	Organics, Brick, Gravel, Loose, Moist Overlaying Red-Brown Silt and Gray Cinder (Fill), Loose, Moist	SB-8 (0.5'-5.0')
4			0.0		
6	U	100	0.0	Gray-Brown Silty Clay, Stiff, Moist	
8					
10					

Notes:

fbgs feet below ground surface

U undisturbed tube (4')

PID photo-ionization detector

EnSol, Inc.					**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 15-0027-5		**Client:** Near Dingens, LLC	**Boring No.** **SB-9**
Address, City, State 837 Bailey Ave., Buffalo, NY				**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Geoprobe
Logged By: DJP		**Date**	**Started:** 3/8/2016	**Drill Size/Type:** Macro-Core	**Total Depth of Boring (ft.):** 11.5
Drill Crew: Steve			**Completed:** 3/8/2016		

Depth (fbgs)	Sample Type	Recovery (% of 4' Tube)	PID Reading (PPM)	Material Classification & Description	Samples Collected
			2.0	Topsoil, Organics, Gravel, Glass, Loose, Moist	SS-5 (Surface)
				Brick (C&D Fill)(0.5'-2.0')	
2	U	100			
4					
	U	100	0.0	Black and Gray Cinder (Fill), Loose, Moist to Wet	SB-9 (2.0'-9.5')
6					
8					
	U	100			
10			0.0	Gray-Brown Silty Clay, Stiff to Soft, Moist to Wet	
12					
14					

Notes:

fbgs feet below ground surface

U undisturbed tube (4')

PID photo-ionization detector

Surface soil sample SS-5 collected from this location.

EnSol, Inc.					**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 15-0027-5		**Client:** Near Dingens, LLC	**Boring No.** **SB-10**
Address, City, State 837 Bailey Ave., Buffalo, NY				**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Geoprobe
Logged By: DJP		**Date**	**Started:** 3/8/2016	**Drill Size/Type:** Macro-Core	**Total Depth of Boring (ft.):** 11.0
Drill Crew: Steve			**Completed:** 3/8/2016		

Depth (fbgs)	Sample Type	Recovery (% of 4' Tube)	PID Reading (PPM)	Material Classification & Description	Samples Collected
			0.0	Topsoil, Brick, Gravel, Cinder (Fill), Loose, Moist	SS-6 (Surface)
2	U	100	0.0	Red-Brown Silt, Glass, Gravel, Organics (Fill), Loose, Moist	SB-10 (1'-4')
4					
6	U	100	16.0	Red-Brown Silty Clay, Some Gray Mottling, Strong Petro. Odor, Stiff, Moist	SB-10 (5'-6') - VOC's
8	U	100	0.0	Gray-Brown Silty Clay, Stiff to Soft, Moist to Wet	
10					
12					
14					

Notes:

fbgs feet below ground surface

U undisturbed tube (4')

PID photo-ionization detector

Surface soil sample SS-6 collected from this location.

EnSol, Inc.					**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 15-0027-5		**Client:** Near Dingens, LLC	**Boring No.** **SB-11**
Address, City, State 837 Bailey Ave., Buffalo, NY				**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Geoprobe
Logged By: JMS	**Date**	**Started:** 3/7/2016		**Drill Size/Type:** Macro-Core	**Total Depth of Boring (ft.):** 8.0
Drill Crew: Steve	**Date**	**Completed:** 3/7/2016			

Depth (fbgs)	Sample Type	Recovery (% of 4' Tube)	PID Reading (PPM)	Material Classification & Description	Samples Collected
			0.9	Brown and Gray Sand and Gravel, some Slag and Brick (Fill)	SS-1 (Surface)
			1.4	Tan and Gray Silt with Mottling, some Gravel (Fill), Loose, Moist	SB-11 (1.5'-2')
2	U	100			
4			0.0	Tan and Gray Mottled Silt, Moist	
6	U	100			
8			0.0	Brown Clay, some Silt, Moist	
10					

Notes:

fbgs feet below ground surface

U undisturbed tube (4')

PID photo-ionization detector

Surface soil sample SS-1 collected from this location.

EnSol, Inc.					**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 15-0027-5		**Client:** Near Dingens, LLC	**Boring No.** **SB-12**
Address, City, State 837 Bailey Ave., Buffalo, NY				**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Geoprobe
Logged By: JMS	**Date**	**Started:** 3/7/2016		**Drill Size/Type:** Macro-Core	**Total Depth of Boring (ft.):** 8.0
Drill Crew: Steve		**Completed:** 3/7/2016			

Depth (fbgs)	Sample Type	Recovery (% of 4' Tube)	PID Reading (PPM)	Material Classification & Description	Samples Collected
	U	100	1.9	Slag at the surface, Gray-Brown Silt and Sand, Some Gravel (Fill), Moist	SB-12 (0.5'-2.0')
2			3.4		
			1.2	Brown and Gray Silt with Mottling, some Sand, Moist	
4					
	U	100	0.0		
6					
			0.0	Brown Clay with Gray Mottling, some Silt, Stiff, Moist	
8					
10					

Notes:

fbgs feet below ground surface

U undisturbed tube (4')

PID photo-ionization detector

EnSol, Inc.					**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 15-0027-5		**Client:** Near Dingens, LLC	**Boring No.** **SB-13**
Address, City, State 837 Bailey Ave., Buffalo, NY				**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Geoprobe
Logged By: JMS	**Date**	**Started:** 3/7/2016		**Drill Size/Type:** Macro-Core	**Total Depth of Boring (ft.):** 8.0
Drill Crew: Steve		**Completed:** 3/7/2016			

Depth (fbgs)	Sample Type	Recovery (% of 4' Tube)	PID Reading (PPM)	Material Classification & Description	Samples Collected
	U	100	0.0	Slag at the surface, Gray-Brown Silt and Sand, Some Gravel (Fill), Moist	SB-13 (0.5'-2.0')
			2.2		
2			1.4	Brown and Gray Silt with Mottling, some Sand, Moist	
4	U	100	0.0		
6			0.0	Brown Silt with Gray Mottling, some Clay, Stiff, Moist	
8					
10					

Notes:

fbgs feet below ground surface

U undisturbed tube (4')

PID photo-ionization detector

EnSol, Inc.					**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 15-0027-5		**Client:** Near Dingens, LLC	**Boring No.** **SB-14**
Address, City, State 837 Bailey Ave., Buffalo, NY				**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Geoprobe
Logged By: JMS	**Date**	**Started:** 3/7/2016		**Drill Size/Type:** Macro-Core	**Total Depth of Boring (ft.):** 12.0
Drill Crew: Steve	**Date**	**Completed:** 3/7/2016			

Depth (fbgs)	Sample Type	Recovery (% of 4' Tube)	PID Reading (PPM)	Material Classification & Description	Samples Collected
2	U	75	2.2 / 0.2	Slag at the surface, Cinders, Brick, and Concrete (C&D Fill), Loose, Moist	
4			0.4	Tan and Brown Silt ans Sand, Wood, some Gravel and Concrete (C&D Fill), Loose, Moist	SB-13 (2.0'-4.0')
6	U	50	0.2	Gray Ash and Cinder, Gravel (Fill), Loose, Wet	SB-13 (4.0'-8.0')
8					
10	U	100	0.0	Brown-Gray Silty Clay, Soft, Wet	
12					

Notes:

fbgs feet below ground surface

U undisturbed tube (4')

PID photo-ionization detector

EnSol, Inc.					**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 15-0027-5		**Client:** Near Dingens, LLC	**Boring No.** **SB-15**
Address, City, State 837 Bailey Ave., Buffalo, NY				**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Geoprobe
Logged By: JMS		**Date**	**Started:** 3/7/2016	**Drill Size/Type:** Macro-Core	**Total Depth of Boring (ft.):** 11.0
Drill Crew: Steve			**Completed:** 3/7/2016		

Depth (fbgs)	Sample Type	Recovery (% of 4' Tube)	PID Reading (PPM)	Material Classification & Description	Samples Collected
	U	50	2.8	Topsoil, Stone, and Brick (C&D Fill), Loose, Moist	
2			2.9	Black Sand, Glass, Ceramic, Concrete (C&D Fill), Loose, Moist	SB-15 (1.0'-4.0')
4					
6	U	30	0.0	Ash and Cinder, Glass (Fill), Loose, Moist	SB-15 (4.0'-7.0')
			0.0	Brown Clay, Stiff, Wet	
8					
10	U	No Data	0.0	Brown-Gray Silty Clay, Soft, Wet	
12					

Notes:

fbgs feet below ground surface

U undisturbed tube (4')

PID photo-ionization detector

EnSol, Inc.					**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 15-0027-5		**Client:** Near Dingens, LLC	**Boring No.** **SB-16**
Address, City, State 837 Bailey Ave., Buffalo, NY				**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Geoprobe
Logged By: JMS	**Date**	**Started:** 3/7/2016		**Drill Size/Type:** Macro-Core	**Total Depth of Boring (ft.):** 12.0
Drill Crew: Steve	**Date**	**Completed:** 3/7/2016			

Depth (fbgs)	Sample Type	Recovery (% of 4' Tube)	PID Reading (PPM)	Material Classification & Description	Samples Collected
2	U	50	0.0	Brick, Sand, and Gravel (C&D Fill), Loose, Moist	SS-7 (Surface) SB-16 (0.0'-3.0')
4			0.0		
6	U	30	1.8	Black and Gray Ash and Cinder (Fill), Loose, Moist	SB-16 (3.0'-7.0')
8			0.5	Brown-Gray Silty Clay, Stiff, Wet	
10	U	100	0.0	Brown-Gray Silty Clay, Soft, Wet	
12					

Notes:

fbgs feet below ground surface

U undisturbed tube (4')

PID photo-ionization detector

Surface soil sample SS-7 collected from this location.

EnSol, Inc.					**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 15-0027-5		**Client:** Near Dingens, LLC	**Boring No.** **SB-17**
Address, City, State 837 Bailey Ave., Buffalo, NY				**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Geoprobe
Logged By: JMS	**Date**	**Started:** 3/7/2016		**Drill Size/Type:** Macro-Core	**Total Depth of Boring (ft.):** 12.0
Drill Crew: Steve		**Completed:** 3/7/2016			

Depth (fbgs)	Sample Type	Recovery (% of 4' Tube)	PID Reading (PPM)	Material Classification & Description	Samples Collected
			0.0	Brick, Sand, and Gravel (C&D Fill), Loose, Moist	
2	U	75	3.1	Tan Silt and Sand, some Gravel (C&D Fill), Loose, Moist	SB-17 (1.0'-3.0')
4			1.4	Black and Gray Ash and Cinder, Glass (Fill), Loose, Moist to Wet	SB-17 (3.0'-8.0')
6	U	20	1.2		
8					
10	U	100	0.0	Brown-Gray Silty Clay, Soft, Wet	
12					

Notes:

fbgs feet below ground surface

U undisturbed tube (4')

PID photo-ionization detector

EnSol, Inc.					**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 15-0027-5		**Client:** Near Dingens, LLC	**Boring No.** **SB-18**
Address, City, State 837 Bailey Ave., Buffalo, NY				**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Geoprobe
Logged By: JMS	**Date**	**Started:** 3/7/2016		**Drill Size/Type:** Macro-Core	**Total Depth of Boring (ft.):** 12.0
Drill Crew: Steve		**Completed:** 3/7/2016			

Depth (fbgs)	Sample Type	Recovery (% of 4' Tube)	PID Reading (PPM)	Material Classification & Description	Samples Collected
2	U	100	1.7	Silt and Sand, Concrete, Brick, Gravel (C&D Fill), Loose, Moist	SB-18 (1.0'-3.5')
4			3.9	Gray Ash and Cinder (Fill), Loose, Moist	SB-18 (3.5'-8.0')
6	U	20	1.4	Brown and Gray Ash and Cinder, Glass (Fill), Loose, Wet	
8					
10	U	100	0.0	Brown-Gray Silty Clay, Soft, Wet	
12					

Notes:

fbgs feet below ground surface

U undisturbed tube (4')

PID photo-ionization detector

EnSol, Inc.				**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site	**Project Number:** 15-0027-5	**Client:** Near Dingens, LLC	**Boring No.**	**SB-19**
Address, City, State 837 Bailey Ave., Buffalo, NY		**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Geoprobe	
Logged By: JMS	**Date** **Started:** 3/7/2016	**Drill Size/Type:** Macro-Core	**Total Depth of Boring (ft.):** 12.0	
Drill Crew: Steve	**Completed:** 3/7/2016			

Depth (fbgs)	Sample Type	Recovery (% of 4' Tube)	PID Reading (PPM)	Material Classification & Description	Samples Collected
2	U	100	No Data	Gravel, Sand, some Brick (C&D Fill), Loose, Moist Tan Sand and Gravel (C&D Fill), Loose, Moist	SB-19 (0.0'-2.0')
4				Tan and Gray Mottled Silt, some Sand, Organics (Fill), Moist	
6	U	20		Red and Gray Ash and Cinder, Glass (Fill), Loose, Wet	SB-19 (4.0'-7.5')
8					
10	U	100		Brown-Gray Silty Clay, Soft, Wet	
12					

Notes:

fbgs feet below ground surface

U undisturbed tube (4')

PID photo-ionization detector

EnSol, Inc.					**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 15-0027-5		**Client:** Near Dingens, LLC	**Boring No.** **SB-20**
Address, City, State 837 Bailey Ave., Buffalo, NY				**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Geoprobe
Logged By: DJP	**Date**	**Started:** 3/8/2016		**Drill Size/Type:** Macro-Core	**Total Depth of Boring (ft.):** 15.5
Drill Crew: Steve		**Completed:** 3/8/2016			

Depth (fbgs)	Sample Type	Recovery (% of 4' Tube)	PID Reading (PPM)	Material Classification & Description	Samples Collected
2	U	100	0.0	Brick, Cinder, Gravel, (C&D Fill), Loose, Moist	SS-8 (Surface) SB-20 (0.0'-3.5')
4					
6	U	75			
8			0.0	Gray and Brown Cinder (Fill), Loose, Moist to Wet	SB-20 (3.5'-12.5')
10	U	10			
12					
14	U	50	0.0	Brown-Gray Silty Clay, Soft, Wet	
16					

Notes:

fbgs feet below ground surface

U undisturbed tube (4')

PID photo-ionization detector

Surface soil sample SS-8 collected from this location.

EnSol, Inc.				**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 15-0027-5	**Client:** Near Dingens, LLC	**Boring No.** SB-21
Address, City, State 837 Bailey Ave., Buffalo, NY			**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Geoprobe
Logged By: DJP	**Date**	**Started:** 3/8/2016	**Drill Size/Type:** Macro-Core	**Total Depth of Boring (ft.):** 15.5
Drill Crew: Steve		**Completed:** 3/8/2016		

Depth (fbgs)	Sample Type	Recovery (% of 4' Tube)	PID Reading (PPM)	Material Classification & Description	Samples Collected
2	U	75	0.0	Silt, Brick, Sand, Gravel, (C&D Fill), Loose, Moist	SS-9 (Surface) SB-21 (0.0'-4.0')
4					
6	U	50	0.0	Gray and Brown Cinder, some Brick (Fill), Loose, Moist to Wet	SB-21 (4.0'-12.0')
8					
10	U	25			
12					
14	U	100	0.0	Brown-Gray Silty Clay, Soft, Wet	
16					

Notes:

fbgs feet below ground surface

U undisturbed tube (4')

PID photo-ionization detector

Surface soil sample SS-9 collected from this location.

EnSol, Inc.					**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 15-0027-5		**Client:** Near Dingens, LLC	**Boring No.** **SB-22**
Address, City, State 837 Bailey Ave., Buffalo, NY				**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Geoprobe
Logged By: DJP		**Date**	**Started:** 3/8/2016	**Drill Size/Type:** Macro-Core	**Total Depth of Boring (ft.):** 20.0
Drill Crew: Steve			**Completed:** 3/8/2016		

Depth (fbgs)	Sample Type	Recovery (% of 4' Tube)	PID Reading (PPM)	Material Classification & Description	Samples Collected
2	U	75	3.2	Silt, Brick, Gravel, some Plastic (C&D Fill), Loose, Moist	SS-10 (Surface) SB-22 (0.0'-3.5')
4					
6	U	75			
8					
10	U	25	0.0	Gray and Brown Ash and Cinder (Fill), Loose, Moist to Wet	SB-22 (3.5'-16.0')
12					
14	U	25			
16					
18	U	75	0.0	Brown-Gray Silty Clay, Soft, Wet	
20					

Notes:

fbgs feet below ground surface

U undisturbed tube (4')

PID photo-ionization detector

Surface soil sample SS-10 collected from this location.

EnSol, Inc.					**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 15-0027-5		**Client:** Near Dingens, LLC	**Boring No. SB-23 (MW-2)**
Address, City, State 837 Bailey Ave., Buffalo, NY				**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Truck-Mounted Rig
Logged By: DJP	**Date**	**Started:** 3/9/2016		**Drill Size/Type:** HSA/Split-Spoon	**Total Depth of Boring (ft.):** 14.0
Drill Crew: Steve	**Date**	**Completed:** 3/9/2016			

Depth (fbgs)	Sample Type	Recovery (% of 2' Spoon)	PID Reading (PPM)	Material Classification & Description	Samples Collected
2	SS	15	0.0	Silt, Organics, Brick, Glass, Cinder (C&D Fill), Loose, Moist	SB-23 (0.0'-4.0')
	SS	15			
4	SS	10			
6	SS	10	0.0	Black and Gray Cinder and Ash (Fill), Loose, Wet	SB-23 (6.0'-10.0')
8	SS	10			
10	SS	10			
12	SS	50	0.0	Brown-Gray Silty Clay, Soft, Wet	
14					
16					

Notes:

fbgs feet below ground surface

SS Split-Spoon (2')

PID photo-ionization detector

EnSol, Inc.					**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 15-0027-5		**Client:** Near Dingens, LLC	**Boring No.** **SB-24**
Address, City, State 837 Bailey Ave., Buffalo, NY				**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Geoprobe
Logged By: JMS	**Date**	**Started:** 3/9/2016		**Drill Size/Type:** Macro-Core	**Total Depth of Boring (ft.):** 12.0
Drill Crew: Steve	**Date**	**Completed:** 3/9/2016			

Depth (fbgs)	Sample Type	Recovery (% of 4' Tube)	PID Reading (PPM)	Material Classification & Description	Samples Collected
2	U	80	0.0	Silt, Sand, Brick, Gravel, Concrete (C&D Fill), Loose, Moist	SS-11 (Surface) SB-24 (0.0'-3.0')
4					
6	U	40	0.0	Ash and Cinder (Fill), Loose, Moist to Wet	SB-24 (4.0'-8.0')
8					
10	U	60			
12			0.0	Brown-Gray Silty Clay, Soft, Wet	

Notes:

fbgs feet below ground surface

U undisturbed tube (4')

PID photo-ionization detector

Surface soil sample SS-11 collected from this location.

EnSol, Inc.					**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 15-0027-5		**Client:** Near Dingens, LLC	**Boring No.** **SB-25**
Address, City, State 837 Bailey Ave., Buffalo, NY				**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Geoprobe
Logged By: JMS		**Date**	**Started:** 3/9/2016	**Drill Size/Type:** Macro-Core	**Total Depth of Boring (ft.):** 16.0
Drill Crew: Steve			**Completed:** 3/9/2016		

Depth (fbgs)	Sample Type	Recovery (% of 4' Tube)	PID Reading (PPM)	Material Classification & Description	Samples Collected
2	U	75	0.0	Silt, Sand, Brick, Gravel, Concrete (C&D Fill), Loose, Moist	SB-25 (0.0'-3.5')
4			0.0		
6	U	20	0.0		SB-25 (4.0'-8.0')
8				Ash and Cinder (Fill), Loose, Moist to Wet	
10	U	10	0.0		
12					
14	U	75	0.0	Brown-Gray Silty Clay, Soft, Wet	
16					

Notes:

fbgs feet below ground surface

U undisturbed tube (4')

PID photo-ionization detector

EnSol, Inc.					**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 15-0027-5		**Client:** Near Dingens, LLC	**Boring No.** **SB-26**
Address, City, State 837 Bailey Ave., Buffalo, NY				**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Geoprobe
Logged By: JMS	**Date**	**Started:** 3/9/2016		**Drill Size/Type:** Macro-Core	**Total Depth of Boring (ft.):** 12.0
Drill Crew: Steve	**Date**	**Completed:** 3/9/2016			

Depth (fbgs)	Sample Type	Recovery (% of 4' Tube)	PID Reading (PPM)	Material Classification & Description	Samples Collected
2	U	80	0.0	Silt, Sand, Brick, Gravel, Concrete (C&D Fill), Loose, Moist	SB-26 (0.0'-2.0')
4			0.0	Ash and Cinder (Fill), Loose, Moist to Wet	
6	U	60	0.0		SB-26 (4.0'-8.0')
8					
10	U	50	0.0		
12			0.0	Brown-Gray Silty Clay, Soft, Wet	

Notes:

fbgs feet below ground surface

U undisturbed tube (4')

PID photo-ionization detector

EnSol, Inc.					**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 15-0027-5		**Client:** Near Dingens, LLC	**Boring No.** **SB-27**
Address, City, State 837 Bailey Ave., Buffalo, NY				**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Truck-Mounted Rig
Logged By: JMS		**Date**	**Started:** 3/10/2016	**Drill Size/Type:** HAS/Split-Spoon	**Total Depth of Boring (ft.):** 16.0
Drill Crew: Steve			**Completed:** 3/10/2016		

Depth (fbgs)	Sample Type	Recovery (% of 2' Spoon)	PID Reading (PPM)	Material Classification & Description	Samples Collected
2	SS	20	No Data	Silt, Gravel, Brick (C&D Fill), Loose, Moist	SB-27 (0.0'-4.0')
	SS	20			
4	SS	20			
6	SS	40		Ash and Cinder (Fill), Loose, Wet	SB-27 (6.0'-10.0')
8	SS	40			
10	SS	60		Brown-Gray Silty Clay, Stiff to Soft, Wet	
12	SS	75			
14	SS	75			
16					

Notes:

fbgs feet below ground surface

SS Split-Spoon (2')

PID photo-ionization detector

Geotechnical data and samples also collected (GTSB-1)

EnSol, Inc.					**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 15-0027-5		**Client:** Near Dingens, LLC	**Boring No.** **SB-28**
Address, City, State 837 Bailey Ave., Buffalo, NY				**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Geoprobe
Logged By: JMS	**Date**	**Started:** 3/9/2016		**Drill Size/Type:** Macro-Core	**Total Depth of Boring (ft.):** 12.0
Drill Crew: Steve	**Date**	**Completed:** 3/9/2016			

Depth (fbgs)	Sample Type	Recovery (% of 4' Tube)	PID Reading (PPM)	Material Classification & Description	Samples Collected
2	U	75	0.0	Silt, Sand, Brick, Gravel, Concrete (C&D Fill), Loose, Moist	SS-13 (Surface) SB-28 (0.0'-3.0')
4			0.0		
6	U	50	0.0	Ash and Cinder (Fill), Loose, Moist to Wet	SB-28 (4.0'-8.0')
8					
10	U	20	0.0		
12			0.0	Brown-Gray Silty Clay, Soft, Wet	

Notes:

fbgs feet below ground surface

U undisturbed tube (4')

PID photo-ionization detector

Surface soil sample SS-13 collected from this location.

EnSol, Inc.					**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 15-0027-5		**Client:** Near Dingens, LLC	**Boring No. SB-29 (MW-3)**
Address, City, State 837 Bailey Ave., Buffalo, NY				**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Truck-Mounted Rig
Logged By: DJP		**Date**	**Started:** 3/9/2016	**Drill Size/Type:** HSA/Split-Spoon	**Total Depth of Boring (ft.):** 14.0
Drill Crew: Steve			**Completed:** 3/9/2016		

Depth (fbgs)	Sample Type	Recovery (% of 2' Spoon)	PID Reading (PPM)	Material Classification & Description	Samples Collected
	SS	10	0.0	Silt, Organics, Brick, Glass, Cinder (C&D Fill), Loose, Moist	SB-29 (0.0'-6.0')
2	SS	0		No Recovery	
4	SS	10	0.0	Black and Gray Cinder and Ash (Fill), Loose, Wet	
6	SS	10			
8	SS	20			
10	SS	75	0.0	Brown-Gray Silty Clay, Soft, Wet	
12	SS	75			
14					
16					

Notes:

fbgs feet below ground surface

SS Split-Spoon (2')

PID photo-ionization detector

Surface soil sample SS-14 collected from this location.

EnSol, Inc.					**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 15-0027-5		**Client:** Near Dingens, LLC	**Boring No.** **SB-30**
Address, City, State 837 Bailey Ave., Buffalo, NY				**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Geoprobe
Logged By: JMS	**Date**	**Started:** 3/9/2016		**Drill Size/Type:** Macro-Core	**Total Depth of Boring (ft.):** 12.0
Drill Crew: Steve	**Date**	**Completed:** 3/9/2016			

Depth (fbgs)	Sample Type	Recovery (% of 4' Tube)	PID Reading (PPM)	Material Classification & Description	Samples Collected
2	U	75	0.0	Silt, Sand, Brick, Gravel, Concrete (C&D Fill), Loose, Moist	SS-15 (Surface) SB-30 (0.0'-4.0')
4					
6	U	10	0.0	Ash and Cinder (Fill), Loose, Moist to Wet	SB-30 (4.0'-8.0')
8					
10	U	20			
12				Brown-Gray Silty Clay, Soft, Wet	

Notes:

fbgs feet below ground surface

U undisturbed tube (4')

PID photo-ionization detector

Surface soil sample SS-15 collected from this location.

EnSol, Inc.					**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 15-0027-5		**Client:** Near Dingens, LLC	**Boring No.** **SB-31**
Address, City, State 837 Bailey Ave., Buffalo, NY				**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Geoprobe
Logged By: JMS	**Date**	**Started:** 3/9/2016		**Drill Size/Type:** Macro-Core	**Total Depth of Boring (ft.):** 16.0
Drill Crew: Steve		**Completed:** 3/9/2016			

Depth (fbgs)	Sample Type	Recovery (% of 4' Tube)	PID Reading (PPM)	Material Classification & Description	Samples Collected
2	U	30	1.4	Silt, Sand, Brick, Gravel, Concrete (C&D Fill), Loose, Moist	SS-16 (Surface) SB-31 (0.0'-4.0')
4					
6	U	80	0.0		SB-31 (4.5'-8.0')
8					
10	U	80	0.0	Black Ash, Cinder, Foundary Sand, Gravel (Fill), Loose, Moist to Wet	
12					
14	U	60			
16			0.0	Brown-Gray Silty Clay, Soft, Wet	

Notes:

fbgs feet below ground surface

U undisturbed tube (4')

PID photo-ionization detector

Surface soil sample SS-16 collected from this location.

EnSol, Inc.					**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 15-0027-5		**Client:** Near Dingens, LLC	**Boring No.** **SB-32**
Address, City, State 837 Bailey Ave., Buffalo, NY				**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Geoprobe
Logged By: JMS		**Date**	**Started:** 3/9/2016	**Drill Size/Type:** Macro-Core	**Total Depth of Boring (ft.):** 20.0
Drill Crew: Steve			**Completed:** 3/9/2016		

Depth (fbgs)	Sample Type	Recovery (% of 4' Tube)	PID Reading (PPM)	Material Classification & Description	Samples Collected
2	U	75	0.0	Silt, Brick, Concrete, Gravel (C&D Fill), Loose, Moist	SS-17 (Surface) SB-32 (0.0'-4.0')
4					
6	U	80	0.0		
8			0.0	Black Foundary Sand, Gravel (Fill), Loose, Wet	SB-32 (6.0'-12.0')
10	U	60	0.0		
12					
14	U	5			
16					
18	U	100	0.0	Brown-Gray Silty Clay, Soft, Wet	
20					

Notes:

fbgs feet below ground surface

U undisturbed tube (4')

PID photo-ionization detector

Surface soil sample SS-17 collected from this location.

EnSol, Inc.					**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 15-0027-5		**Client:** Near Dingens, LLC	**Boring No.** **SB-33**
Address, City, State 837 Bailey Ave., Buffalo, NY				**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Geoprobe
Logged By: JMS	**Date**	**Started:** 3/9/2016		**Drill Size/Type:** Macro-Core	**Total Depth of Boring (ft.):** 16.0
Drill Crew: Steve		**Completed:** 3/9/2016			

Depth (fbgs)	Sample Type	Recovery (% of 4' Tube)	PID Reading (PPM)	Material Classification & Description	Samples Collected
2	U	75	3.4	Brown-Gray Silt, Sand, Brick, Gravel, Concrete (C&D Fill), Loose, Moist	SB-33 (0.0'-4.0')
			1.3		
4					
6	U	80	1.0		
8					
10	U	40	3.3	Black and Brown Foundary Sand, Gravel (Fill), Loose, Moist to Wet	SB-33 (8.0'-12.0')
12					
14	U	100	1.0		
			0.0	Brown-Gray Silty Clay, Soft, Wet	
16					

Notes:

fbgs feet below ground surface

U undisturbed tube (4')

PID photo-ionization detector

EnSol, Inc.					**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site		**Project Number:** 15-0027-5		**Client:** Near Dingens, LLC	**Boring No. SB-34 (MW-4)**
Address, City, State 837 Bailey Ave., Buffalo, NY				**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Truck-Mounted Rig
Logged By: DJP		**Date**	**Started:** 3/9/2016	**Drill Size/Type:** HSA/Split-Spoon	**Total Depth of Boring (ft.):** 16.0
Drill Crew: Steve			**Completed:** 3/9/2016		

Depth (fbgs)	Sample Type	Recovery (% of 2' Spoon)	PID Reading (PPM)	Material Classification & Description	Samples Collected
	SS	0		No Recovery	SS-18 (Surface)
2	SS	25	0.0	Brown Silt, Gravel, Brick (C&D Fill), Loose, Moist	SB-34 (2.0'-5.0')
4	SS	75			
6	SS	75	0.0	Reddish-Brown Silty Clay with Gray Mottling, Stiff, Moist	
8	SS	100			
10	SS	100			
12	SS	100	0.0	Brown-Gray Silty Clay, some Sand, Soft, Wet	
14	SS	100			
16					
18					

Notes:

fbgs feet below ground surface

SS Split-Spoon (2')

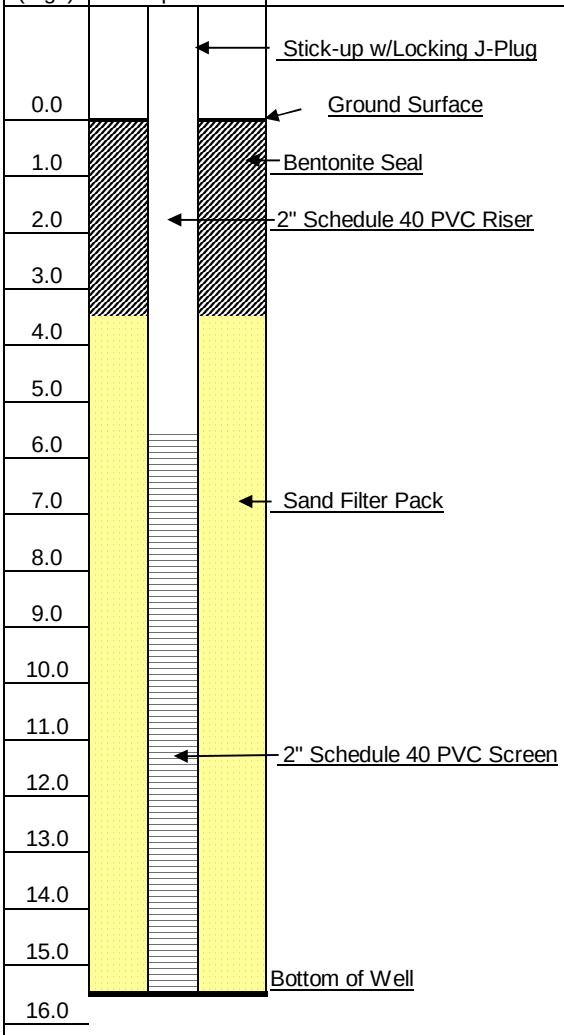
PID photo-ionization detector

Surface soil sample SS-18 collected from this location.

APPENDIX D

MONITORING WELL CONSTRUCTION LOGS

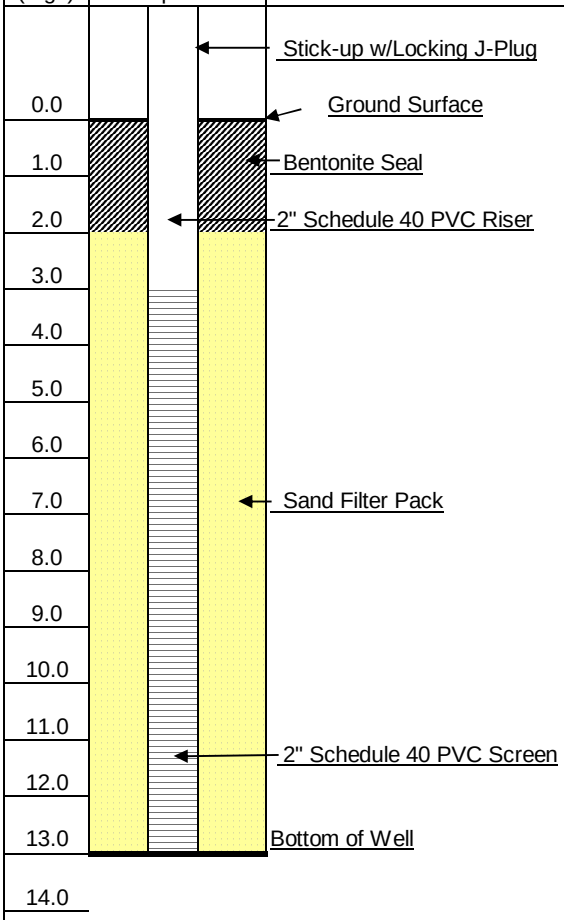
EnSol, Inc.			**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site	**Project Number:** 15-0027-5	**Client:** Near Dingens, LLC	**Well No.** **MW-1**
Address, City, State 837 Bailey Ave., Buffalo, NY		**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Truck-Mounted Rig
Logged By: DJP	**Date** **Started:** 3/10/2016	**Drill Size/Type:** Hollow-Stem Auger	**Total Well Depth (ft.):** 15.5
Drill Crew: Steve	**Completed:** 3/10/2016		



Notes:

fbgs feet below ground surface

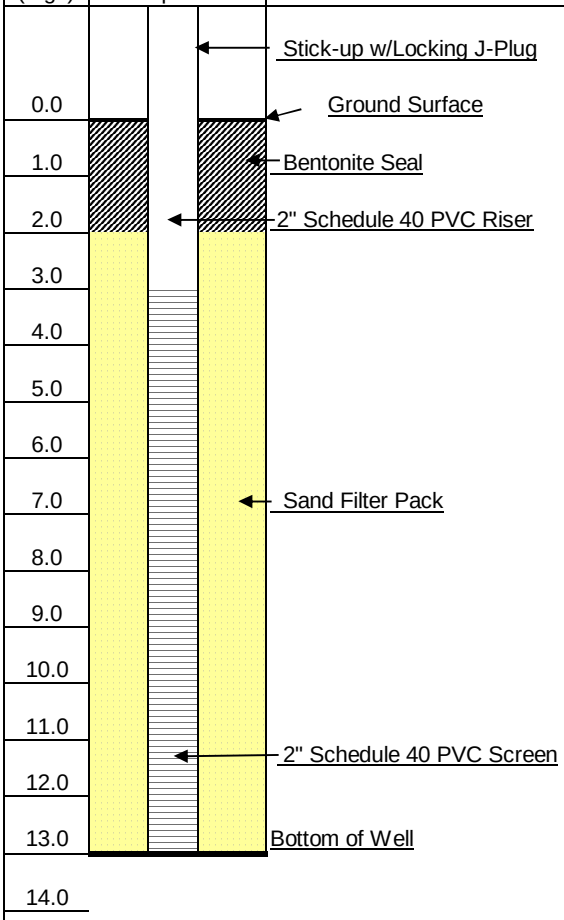
EnSol, Inc.			**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site	**Project Number:** 15-0027-5	**Client:** Near Dingens, LLC	**Well No.** **MW-2**
Address, City, State 837 Bailey Ave., Buffalo, NY		**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Truck-Mounted Rig
Logged By: DJP	**Date** **Started:** 3/9/2016	**Drill Size/Type:** Hollow-Stem Auger	**Total Well Depth (ft.):** 13.0
Drill Crew: Steve	**Completed:** 3/9/2016		



Notes:

fbgs feet below ground surface

EnSol, Inc.			**661 Main St., Niagara Falls, NY 14301**
Project: 837 Bailey Ave. Site	**Project Number:** 15-0027-5	**Client:** Near Dingens, LLC	**Well No.** **MW-3**
Address, City, State 837 Bailey Ave., Buffalo, NY		**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Truck-Mounted Rig
Logged By: DJP	**Date** **Started:** 3/9/2016	**Drill Size/Type:** Hollow-Stem Auger	**Total Well Depth (ft.):** 13.0
Drill Crew: Steve	**Completed:** 3/9/2016		



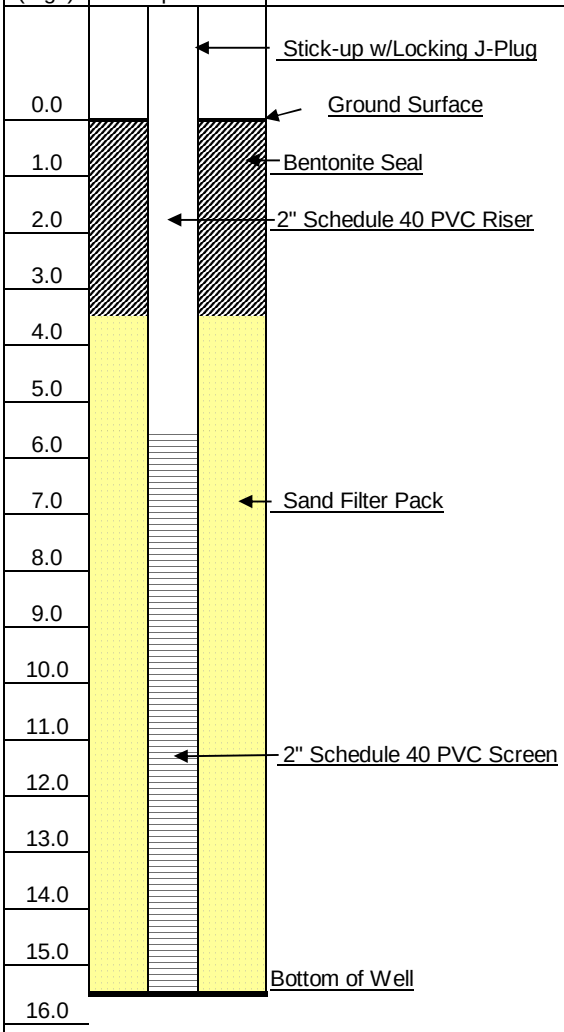
Notes:

fbgs feet below ground surface

EnSol, Inc.

661 Main St., Niagara Falls, NY 14301

Project: 837 Bailey Ave. Site	**Project Number:** 15-0027-5	**Client:** Near Dingens, LLC	**Well No.** MW-4
Address, City, State 837 Bailey Ave., Buffalo, NY		**Drilling Contractor:** Nature's Way	**Drill Rig Type:** Truck-Mounted Rig
Logged By: DJP	**Date** **Started:** 3/9/2016	**Drill Size/Type:** Hollow-Stem Auger	**Total Well Depth (ft.):** 15.5
Drill Crew: Steve	**Completed:** 3/9/2016		



Notes:

fbgs feet below ground surface

APPENDIX E
EXCAVATION WORK PLAN (EWP)

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 NYSDEC. Table E-1 includes contact information for the above notification. The information on this table will be updated as necessary to provide accurate contact information. A full listing of site-related contact information is provided in Appendix B.

Table E-1: Notifications*

NYSDEC Regional HW Engineer Chad Staniszewski, P.E.	716-851-7220 chad.staniszewski@dec.ny.gov
NYSDEC Project Manager Jaspal Walia, P.E.	716-851-7220 jaspal.walia@dec.ny.gov
NYSDEC Site Control Kelly A. Lewandowski, P.E.	518-402-9543 kelly.lewandowski@dec.ny.gov

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

This notification will include:

- A detailed description of the work to be performed, including the location and areal extent of excavation, plans/drawings for site re-grading, intrusive elements or utilities to be installed below the soil cover, estimated volumes of contaminated soil to be excavated and any work that may impact an engineering control;

- A summary of environmental conditions anticipated to be encountered in the work areas, including the nature and concentration levels of contaminants of concern, potential presence of grossly contaminated media, and plans for any pre-construction sampling;
- A schedule for the work, detailing the start and completion of all intrusive work;
- A summary of the applicable components of this EWP;
- A statement that the work will be performed in compliance with this EWP and 29 CFR 1910.120;
- A copy of the contractor's health and safety plan (HASP), in electronic format, if it differs from the HASP provided in Appendix F of this SMP;
- Identification of disposal facilities for potential waste streams; and
- Identification of sources of any anticipated backfill, along with all required chemical testing results.

E-2 SOIL SCREENING METHODS

Visual, olfactory and instrument-based (e.g. photoionization detector) soil screening will be performed by a qualified environmental professional during all excavations into known or potentially contaminated material (remaining contamination). Soil screening will be performed when invasive work is done and will include all excavation and invasive work performed during development, such as excavations for foundations and utility work, after issuance of the COC.

Soils will be segregated based on previous environmental data and screening results into material that requires off-site disposal and material that requires testing to determine if the material can be reused on-site as soil beneath a cover or if the material can be used as cover soil. Further discussion of off-site disposal of materials and on-site reuse is provided in Sections E-6 and E-7 of this Appendix.

E-3 SOIL STAGING METHODS

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

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

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

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 remedial party (if applicable) and its contractors are responsible for safe execution of all invasive and other work performed under this Plan.

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

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

A truck wash will be operated on-site, as appropriate. The qualified environmental professional will be responsible for ensuring that all outbound trucks will be washed at the truck wash before leaving the site until the activities performed under this section are

complete Truck wash waters will be collected and disposed of off-site in an appropriate manner.

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

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

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.

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

Truck transport routes will be selected to provide the shortest possible route but will generally involve; exiting the Site onto Bailey Ave and heading south along Bailey Ave. to Clinton Street, from Clinton trucks will merge onto either Route 190 North or South depending on the destination. All trucks loaded with site materials will exit the vicinity of the site using only these approved truck routes. This is the most appropriate route and takes into account: (a) limiting transport through residential areas and past sensitive sites; (b) use of city mapped truck routes; (c) prohibiting off-site queuing of trucks

entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport.

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

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

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

E-6 MATERIALS DISPOSAL OFF-SITE

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

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

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

E-7 MATERIALS REUSE ON-SITE

The qualified environmental professional will ensure that procedures defined for materials reuse in this SMP are followed and that unacceptable material does not remain on-site. Contaminated on-site material, including historic fill and contaminated soil, that is acceptable for reuse on-site will be placed below the demarcation layer or impervious surface, and will not be reused within a cover soil layer, within landscaping berms, or as backfill for subsurface utility lines.

Any demolition material proposed for reuse on-site will be sampled for asbestos and the results will be reported to the NYSDEC for acceptance. Concrete crushing or processing on-site will not be performed without prior NYSDEC approval. Organic matter (wood, roots, stumps, etc.) or other solid waste derived from clearing and grubbing of the site will not be reused on-site.

E-8 FLUIDS MANAGEMENT

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

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

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 the Decision Document. The existing cover system is comprised of a minimum of 12 inches of clean soil. The demarcation layer, consisting of geotextile 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 SMP. If the type of cover system changes from that which exists prior to the excavation (i.e., a soil cover is replaced by asphalt), this will constitute a modification of the cover element of the remedy and the upper surface of the remaining contamination. A figure showing the modified surface will be included in the subsequent Periodic Review Report and in an updated SMP.

E-10 BACKFILL FROM OFF-SITE SOURCES

All materials proposed for import onto the site will be approved by the qualified environmental professional and will be in compliance with provisions in this SMP prior to receipt at the site. A Request to Import/Reuse Fill or Soil form, which can be found at http://www.dec.ny.gov/regulations/67386.html, will be prepared and submitted to the NYSDEC project manager allowing a minimum of 5 business days for review.

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

All imported soils will meet the backfill and cover soil quality standards established in 6NYCRR 375-6.7(d). Based on an evaluation of the land use, protection of groundwater and protection of ecological resources criteria, the resulting soil quality standards are listed in Table 15. 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.

The contractor will be required to collect the specified number of samples and submit the samples to an independent, NYSDOH ELAP-certified laboratory for analysis. The NYSDEC will be notified of the sampling and provided an opportunity to observe the sample collection work.

All analyses will be in accordance with USEPA SW-846 methodology. The laboratory data package will be a Category A deliverable; however, the NYSDEC may request, at any time, to upgrade the deliverable to Category B. Each import soil source shall be analyzed for the following parameters as more specifically listed in 6NYCRR Part 375-6:

- VOCs – Method 8260
- SVOCs – Method 8270
- Organochlorine Pesticides and PCBs – Method 8081/8082
- Metals, excluding mercury – Method 6010
- Mercury – Method 7471
- Cyanide – Method 9013

Each import soil source shall be subject to testing in accordance with the following schedule per NYSDEC DER-10 Table 5.4(e)10:

Table 5.4(e)10
Recommended Number of Soil Samples for Soil Imported To or Exported From a Site

Contaminant	VOCs	SVOCs, Inorganics & PCBs/Pesticides	
Soil Quantity (cubic yards)	Discrete Samples	Composite	Discrete Samples/Composite
0-50	1	1	3-5 discrete samples from different locations in the fill being provided will comprise a composite sample for analysis
50-100	2	1	
100-200	3	1	
200-300	4	1	
300-400	4	2	
400-500	5	2	
500-800	6	2	
800-1000	7	2	
> 1000	Add an additional 2 VOC and 1 composite for each additional 1000 Cubic yards or consult with DER		

Grab samples will be required for VOC analysis. For all other required analyses, a minimum of three grab samples will be collected to form a single composite sample. Approximately equal aliquots of the grab samples will be composited in the field using a

stainless steel trowel and bowl. The trowel and bowl shall be decontaminated with a non-phosphate detergent (e.g., Alconox®) and potable water wash solution followed by a distilled water rinse between sampling locations.

Import criteria are Commercial SCOs or lesser as published in 6NYCRR Part 375-6.8(b).

Soil imported to a site for use in a soil cap, soil cover, or as backfill must also be tested for 1,4-dioxane and PFAS contamination in general conformance with DER-10, Section 5.4(e). Soil samples will be analyzed for 1,4-dioxane using UPA Method 8270, as well as the full list of PFAS compounds using modified EPA Method 537.1. If PFOA or PFOS is detected in any sample at or above 1 ppb, then a soil sample must be tested by the Synthetic Precipitation Leaching Procedure (SPLP) and the leachate analyzed. If the SPLP results exceed 70 ppt combined PFOA/S, then the source of backfill is not acceptable. Category B deliverables are required.

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

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

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

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

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

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

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

E-12 EXCAVATION CONTINGENCY PLAN

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

Sampling will be performed on product, sediment and surrounding soils, etc. as necessary to determine the nature of the material and proper disposal method. Chemical analysis will be performed for a full list of analytes (TAL metals; TCL volatiles and semi-volatiles, TCL pesticides and PCBs), unless the site history and previous sampling results provide a sufficient justification to limit the list of analytes. In this case, a reduced list of analytes will be proposed to the NYSDEC for approval prior to sampling.

Identification of unknown or unexpected contaminated media identified by screening during invasive site work will be promptly communicated by phone to NYSDEC’s Project Manager. Reportable quantities of petroleum product will also be reported to the NYSDEC spills hotline. These findings will be also included in the Periodic Review Report.

E-13 COMMUNITY AIR MONITORING PLAN

A figure showing the location of air sampling stations is shown in Figure 2. These locations are selected due to the presence of residential receptors located both to the north and south of Site and may be adjusted on a daily or more frequent basis based on actual wind directions to provide an upwind and at least two 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 off-site. Based upon the nature of the contaminants present at the site, nuisance odors are not anticipate to be an issue, however, specific odor control methods to be used on a routine basis will include foam suppressants, if necessary. 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 remedial party'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 though the use of a dedicated on-site water truck for road wetting. The truck will be equipped with a water cannon capable of spraying water directly onto off-road areas including excavations and stockpiles.
- Clearing and grubbing of larger sites will be done in stages to limit the area of exposed, unvegetated soils vulnerable to dust production.
- Gravel will be used on roadways to provide a clean and dust-free road surface.
- On-site roads will be limited in total area to minimize the area required for water truck sprinkling.

E-16 OTHER NUISANCES

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

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

APPENDIX F

HEALTH AND SAFETY PLAN

Site-Specific Health and Safety Plan
for
837 Bailey Ave. Site
Buffalo, NY
NYSDEC BCP Site No. C915298

Prepared for:

Near Dingens, LLC
271 Dingens St.
Buffalo, New York 14206

Prepared by:

EnSol, Inc.
661 Main Street
Niagara Falls, New York 14301

October 2015 (Draft)
PN 15-0027-3LS

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1. Introduction

1.1 Purpose and Objective

The purpose of the project is to implement specified site activities, including the following components:

- Mobilization;
- Clearing and Grubbing;
- Field Engineering and Surveying;
- Soil/Fill Sampling using Direct Push Method (Geoprobe);
- Monitoring Well Installation and Groundwater Sampling;
- Soil/Fill Excavation; and
- Backfilling and Regrading.

The objective of this site-specific Health and Safety Plan (HASP or Plan) is to provide a mechanism for establishing safe working conditions at the site. The safety organization, procedures, and protective equipment have been established based on an analysis of potential physical, chemical, and biological hazards. Specific hazard control methodologies have been evaluated and selected to minimize the potential of accident or injury.

This HASP discusses general safety hazards associated with specific field investigation and remedial activities outlined in the Remedial Investigation Work Plan (Work Plan) (EnSol, August 2015 (Draft). This Plan also specifies minimum safety precautions for various field activities. Each contracted and subcontracted company must review these activities and safety procedures with respect to their own standard safe operating procedures. Each contracted and subcontracted company will utilize their own standard safe operating procedures provided the minimum requirements set forth in this HASP, 29 CFR 1910, and 29 CFR 1926 are met. Each contracted and subcontracted company is responsible for operating in a safe and healthful manner in order to protect their personnel and all site personnel.

All activities and equipment used in association with the referenced site remedial activities will, at a minimum, comply with:

- 29 CFR 1910, General Industry, Occupational Safety and Health (OSHA) Safety and Health Standards;
- 29 CFR 1926, Construction Industry, OSHA Safety and Health Standards;
- 40 CFR 262, Standards Applicable to Generators of Hazardous Waste, Current Edition;
- 40 CFR 178, Shipping Container Specification, Current Edition;
- NIOSH 85-115, NIOSH/OSHA/USCG/USEPA, Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, October 1985;
- EPA 9285.1-03, Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (NIOSH, OSHA, USCF, and EPA), 1992;
- "Threshold Limit Values for Chemical and Physical Agents and Biological Exposure Indices," American Conference of Government Industrial Hygienists, Cincinnati, Ohio, Current Edition;
- "Guide to Occupational Exposure Values," American Conference of Governmental Industrial Hygienists, Cincinnati, Ohio, Current Edition;
- "Community Air Monitoring Plan," 93118PR00149, NYSDEC;
- NYSDOL 28.876, Article 28, Section 876 of NYS Labor Law (Right-to-Know Law), 1980; and
- Other applicable Federal, State, and Local regulations.

1.2 General Location and Site History

The 10.53-acre site is a vacant commercial property located at 837 Bailey Avenue, City of Buffalo, Erie County, New York (Figure 1). Near Dingens, LLC (Near Dingens) is the current property owner. There are no business operations ongoing at the site and a majority of the exterior portion of the site consists of cleared/filled land with mounded materials (including bricks, concrete, tires, vegetation, auto parts, wood, plastic, etc.). Residential properties are adjacent to the site to the north and south. A trucking company, glass block and tile company, and meat distributor are also located north of the site along Dingens St. A machine shop is located to the west of the site and a transport company to the east of the site.

Since commercial development in 1940, the site has been used as an auto salvage/wrecking facility, auto service station, filling station, tire recapping facility, and most recently, an auto salvage/wrecking facility. Based on previous investigations at the site, the contaminants of concern (COC) that currently exist include the following:

Soil/Fill Materials (0'-12')

- Semi-volatile organic compounds (SVOCs) detected in samples at concentrations above the Commercial and/or Industrial Use soil cleanup objectives (SCOs).
- Numerous metals detected at concentrations above the Commercial and/or Industrial Use SCOs.

Groundwater

- Volatile organic compounds (VOCs) detected at concentrations above the Class GA Standard.
- SVOCs detected at concentrations above Class GA Standards.
- Total PCBs detected at concentrations above Class GA Standards.

1.3 Definitions

The following definitions, at a minimum, are applicable to this HASP:

- ***Project Personnel -*** Project personnel include the Project Owner/Project Manager (PM), the Owner's on-site Representatives, Contractor, Subcontractors, and Federal and State Representatives, working or having official business at the project site.

- ***Project -*** All on-site work performed under the scope of work for remedial activities.

- ***Project Site -*** The areas where the site activities are to be performed including Contractor work areas and staging areas.

- ***Authorized Visitor -*** Authorized visitors who work for the State of New York shall receive approval to enter the site from the Owner or Owner's Representative. The Safety Officer (SO) has primary responsibility on determining who is qualified and who may enter the site. The SO will only allow authorized visitors with written proof that they have been medically certified and trained in accordance with 29 CFR 1910.120 to enter the contamination reduction zone (CRZ) and/or exclusion zone (EZ).

- ***Buddy system -*** a system of organizing project personnel into work groups in such a manner that each person of the work group is designated to be observed by at least one other person in the work group at all times. The purpose of the buddy system is to provide rapid assistance to personnel in the event of an emergency.

- ***Decontamination -*** means the removal of hazardous substances from project personnel and their equipment to the extent necessary to preclude the occurrence of foreseeable adverse health effects.

- ***Health hazard -*** a chemical, mixture of chemicals or a pathogen for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principles that acute or chronic health effects may occur in exposed personnel. The term "health hazard" includes chemicals which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins, agents which act on the hematopoietic system, and agents which damage the lungs, skin, eyes, or mucous membranes. It also includes stress due to temperature extremes. Further definition of the terms used above can be found in 29 CFR 1910.1200.

- ***Immediately dangerous to life or health (IDLH) -*** an atmospheric concentration of any toxic, corrosive or asphyxiant substance that poses an immediate threat to life or would interfere with a person's ability to escape from a dangerous atmosphere.

- ***Oxygen deficiency -*** that concentration of oxygen by volume below which atmosphere supplying respiratory protection must be provided. It exists in atmospheres where the percentage of oxygen by volume is less than 19.5 percent oxygen.

- ***Permissible exposure limit (PEL) -*** the exposure, inhalation or dermal permissible exposure limit specified in 29 CFR 1910, Subparts G and Z. "Published exposure level" means the exposure limits published in "NIOSH recommendations for Occupational Health Standards" dated 1986 incorporated by reference, or if none is specified, the exposure limits published in the standards specified by the American Conference of Governmental Industrial Hygienists in their publication "Threshold Limit Values and Biological Exposure Indices for 1987 - 88" dated 1987 incorporated by reference.

- ***Qualified/Competent person -*** a person with specific training, knowledge and experience in the area for which the person has the responsibility and the authority to control.

- ***Contractor Work Area*** - An area of the project site including the Support Zone, access road, staging area, and Exclusion Zone.

- ***Staging Areas*** – Areas within the Exclusion Zone for the temporary staging of contaminated soil and debris.

- ***Exclusion Zone (EZ) -*** any portion of the project site where hazardous substances are, or are reasonably suspected to be, present in the air, water, or soil.

- ***Contamination Reduction Zone (CRZ) -*** area between the Exclusion Zone and Support Zone that provides a transition between contaminated and clean areas. Decontamination stations are located in

this zone.

- ***Support Zone (SZ) -*** all areas of the project site excluding the EZ and CRZ. The SZ surrounds the immediate area where project activities are underway. Support equipment is located in this zone.

- ***Work -*** Work includes all labor, materials, and other items that are shown, described, or implied in the Contract and includes all extra and additional work and material that may be ordered by the PM.

- ***Monitoring -*** The use of direct-reading field instrumentation to provide information regarding the levels of gases and/or vapor, that are present during remedial action. Monitoring shall be conducted to evaluate employee exposures to toxic materials and hazardous conditions.

2. Roles and Responsibilities

2.1 All Personnel

All on-site personnel must adhere to these procedures during the performance of their work. Each person is responsible for completing tasks safely and reporting any unsafe acts or conditions to his or her immediate supervisor or SO. No person may work in a manner that conflict with these procedures. After due warnings, the SO will dismiss from the site any person who violates safety procedures.

All on-site personnel, when applicable, will receive training in accordance with 29 CFR 1910.120, and be familiar with the requirements and procedures contained in this document prior to the beginning of project operations.

The roles of key project personnel are outlined in the following sections. Key personnel and contacts are summarized in Table 2-1, located at the end of this section.

2.2 Contractor

The Contractor will perform all work required by the approved Remedial Investigation (RI) Work Plan (Work Plan) in a safe and environmentally acceptable manner. The Contractor will provide for the safety of all project personnel and the community for the duration of the project.

The Contractor shall have the following responsibilities:

- Employing a SO who shall be assigned full-time responsibility for all tasks herein described under this HASP. In the event the SO cannot meet his responsibilities, the Contractor shall be responsible for obtaining the services of an "alternate" SO meeting the minimum requirements and qualifications contained herein. No work will proceed on this project in the absence of an approved SO.

- Pre-job indoctrination of all project personnel with regard to the HASP and other safety requirements to be observed during work, including but not limited to (a) potential hazards, (b) personal hygiene principles, (c) personal protection equipment, (d) respiratory protective equipment usage and fit testing, and (e) emergency procedures dealing with fire and medical situations;

- Implementation of the HASP and the Emergency Contingency and Response Plan;

- Provide and ensure that all project personnel are properly clothed and equipped, and that all equipment is kept clean and properly maintained in accordance with the manufacturers recommendations or replaced as necessary;

- Alert appropriate emergency services before starting any hazardous work and provide a copy of the Emergency Contingency Plan to the perspective emergency services;

- All safety conditions for the project, including safety of all persons (including employees);

- Protection of project personnel and general public from hazards due to the exposure handling, and transport of contaminated materials. Barricades, lanterns, roped-off areas, and proper signs shall be furnished in sufficient amounts and locations to safeguard the project personnel and public at all times;

- Ensure all OSHA health and safety requirements are met;

- Maintain a chronological log of all persons entering the project site. It will include organization, date, and time of entry and exit. Each person must sign in and out.

2.3 Safety Officer (SO)

The SO shall be the Contractor's on-site person responsible for the day-to-day implementation and enforcement of the HASP. The SO will also act as the Response Coordinator. The designated SO must have, at a minimum, two years of experience in hazardous remediation or related field experience. The SO shall have formal training in health and safety and be conversant with federal and state regulations governing occupational health and safety. The SO shall be certified in CPR and first aid and have or be given experience and training in the implementation of personal protection and air monitoring programs. The SO, or his designated representative, shall have "hands on" experience with the operation and maintenance of real-time air monitoring equipment. The SO, or his designated representative, shall be thoroughly knowledgeable of the operation and maintenance of air-purifying respirators (APR) and supplied air respirators (SAR) including self-contained breathing apparatus (SCBA) and airline respirators.

The SO, and/or his designated representative, shall be responsible for the following minimum requirements:

- Implementing, enforcing, and monitoring the health and safety plan;

- Pre-work indoctrination and periodic training of all on-site personnel with regard to this safety plan and other safety requirements to be observed during the project, including potential hazards, personal hygiene principles, personal protective equipment (PPE), respiratory protection equipment usage and fit testing, emergency procedures dealing with fire and medical situations, and conducting daily update meetings in regard to health and safety;

- Alerting the PM's on-site representative prior to the contractor starting any hazardous work;

- Informing project personnel of the New York State Labor Law Section 876 (Right-to-Know-Law);

- Maintaining separation of Exclusion Zone (Dirty) from the Support Zone (Clean) area as described in Section 6.0.

2.4 Health and Safety Technicians (HST)

The HST shall be under direct supervision of the SO during on-site work. The HST shall have one year of

hazardous remediation or related field experience and be knowledgeable of applicable occupational health and safety regulations. The HST must be certified in CPR and first aid, and be familiar with the operations, maintenance, and calibration of monitoring equipment used in this remediation. A HST shall be assigned to each work crew or task in potentially hazardous areas.

2.5 On-Site Personnel and Visitors

All personnel must read and acknowledge their understanding of this HASP, abide by the requirements of the plan, and cooperate with site supervision in ensuring a safe work site. Site personnel will immediately report any of the following to the SO:

- Accidents and injuries, no matter how minor;
- Unexpected or uncontrolled release of chemical substances;
- Symptoms of chemical exposure;
- Unsafe or malfunctioning equipment;
- Changes in site conditions that may affect the health and safety of project personnel;
- Damage to equipment or property; and
- Situations or activities for which they are not properly trained.

TABLE 2-1
KEY PERSONNEL

Role	**Name/Company**	**Address/Telephone No.**
Project Owner/Manager (PM)	Mr. Thomas Krug Near Dingens, LLC	271 Dingens St., Buffalo, NY (716) 821-9921
Safety Officer (SO)/Response Coordinator	Mr. Jeremiah Smith EnSol, Inc.	661 Main St., Niagara Falls, NY (716) 285-3920 x 219; (716) 998-4347 (cell)
Health and Safety Technicians (HST)	TBD as needed EnSol, Inc.	661 Main St., Niagara Falls, NY (716) 285-3920
Medical Consultant	Mercy Hospital of Buffalo	565 Abbott Rd, Buffalo, NY
Contractor	TBD	
Key Agency Personnel		
Agency/Firm	**Name/Title**	**Address/Telephone**
NYSDEC, DER	Mr. Jaspal Walia Project Manager	270 Michigan Ave., Buffalo, NY (716) 851-7220

3. Project Hazards and Control Measures

3.1 Scope of Work

The scope of work includes the following field activities:

- Mobilization;
- Clearing and Grubbing;
- Field Engineering and Surveying;
- Soil/Fill Sampling using Direct Push Method (Geoprobe);
- Monitoring Well Installation and Groundwater Sampling;
- Soil/Fill Excavation; and
- Backfilling and Regrading.

3.1.1 Job Hazard Assessment

The following job hazard assessment identifies potential safety, health, and environmental hazards associated with each type of field activity. Because of the complex and changing nature of field projects, supervisors must continually inspect the work site to identify hazards that may affect site personnel, the community, or the environment. The SO must be aware of these changing conditions and discuss them with the PM whenever these changes impact employee health, safety, the environment, or performance of the project. The SO will keep the PM and contractors informed of the changing conditions, and the PM and/or SO will write or approve addenda or revisions to this HASP as necessary.

3.2 Field Activities, Hazards, Control Procedures

The following sections present the hazards and safety procedures for activities outlined in the scope of work for the site. Specific activities may be grouped into sections with other activities based on similar hazards and safety precautions.

3.2.1 Mobilization

Mobilization will include establishing work areas, set-up of storage and site facilities, contamination control, project site control, and support zones. A break area will be set up outside regulated work areas in a location that is free from contamination. Mobilization may involve clearing areas for the support and contamination reduction zones. During this initial phase, project personnel from all contracted companies and Agencies will walk the project site to confirm the existence of anticipated hazards and identify safety and health issues that may have arisen since the writing of this plan.

The hazards of this phase of activity are associated with heavy equipment movement, manual materials handling, installation of temporary on-site facilities, and manual project site preparation.

Manual materials handling and manual project site preparation may cause blisters, sore muscles, and joint and

skeletal injuries; and may present eye, overhead, contusion, and laceration hazards. The work area presents slip, trip and fall hazards from scattered debris and irregular walking surfaces.

In accordance with Section 5, decisions on personal protective equipment (PPE) for the chemical hazards will be based on observations and measurements made before and during work activities.

Installation of temporary field office or support facilities may expose personnel to electrical hazards, underground and overhead utilities, and physical injury due to manual lifting and moving of materials. Control procedures for general safety hazards are discussed in Section 4.0.

3.2.2 Clearing and Grubbing

Clearing, grubbing, and debris/brush removal, if necessary, will be one of the first tasks performed at the site. The clearing of all trees, brush, and existing debris piles will take place above the ground surface. Clearing, grubbing, and debris removal may result in the disturbance of some soil. Whenever the ground surface is disturbed, proper air monitoring will be required. This work will, at minimum, require all personnel to wear Level D health and safety protection, using the guidance outlined in this HASP for respiratory/personal protective upgrades. It may be necessary to upgrade to Level C Particulate or Vapor personal protective levels should airborne contaminants be detected. Since these tasks will require the use of motorized equipment, the hearing protection equipment as contained in 29 CFR 1926.52 shall be required, as appropriate.

3.2.3 Field Engineering and Surveying

Field engineering and surveying will be performed in all areas of the site. These activities will include setting of control points, topographical surveys, construction layout, volume surveys, grade control and various survey related activities. The level of protection for each activity will depend on the likelihood of exposure to contaminants. In general, surveying work will take place at the surface, without appreciable risk of coming in contact with contaminated soil or waste. This work will, at a minimum, require all personnel to wear Level D health and safety protection, using the guidance outlined in this HASP for respiratory/personal protective upgrades. Most field engineering will also take place above ground but may require Modified Level D or higher protection in some cases, where warranted.

3.2.4 Soil/Fill Sampling Using Direct Push Method (Geoprobe)

Soil/fill sampling will be conducted using the direct push method (Geoprobe) and will be performed in Level D unless monitoring results indicate an upgrade is required. The SO will continuously monitor the work activities with real-time instrumentation for organic vapors. The hazards of this phase of activity are associated with heavy equipment movement, falls, cuts, injury from falling objects, and potential exposure to chemicals and particulates.

3.2.5 Monitoring Well Installation and Groundwater Sampling

Monitoring well installation work will be performed in Level D unless monitoring results indicate an upgrade is required. The SO will continuously monitor the work activities with real-time instrumentation for organic vapors, LEL, and oxygen. The hazards of this phase of activity are associated with falls, cuts, and potential exposure to chemicals and particulates.

3.2.6 Excavation Activities

Excavation activities may involve a potential for exposure to physical and health hazards. Hazards may be associated with the site and the environmental conditions. For this project, all invasive (i.e., excavation) activities that penetrate into or are intended to remove the existing soil/fill are considered to be contaminated and will, unless determined otherwise, be done within a designated Exclusion Zone (EZ), as further defined in Section 6.7.

Physical Hazards: The physical hazards involved in the excavation of soils are related to the excavation itself and the operation of heavy equipment. The presence of overhead utilities such as power lines requires careful positioning of the excavating equipment in order to maintain a safe distance between the lines and the closest part of the equipment. The presence of underground utilities such as gas lines, power lines, water lines and sewer pipes must be determined prior to beginning the excavation.

Working Surfaces: Slippery work surfaces can increase the likelihood of back injuries, overexertion injuries, slips, and falls. All personnel should frequently inspect working surfaces and keep working surface clear of debris.

Materials Handling: The most common type of accident that occurs in material handling operations is when a load is being handled and a finger or toe gets caught between two objects. Extreme care must be taken when loading and unloading material. Proper lifting technique must be employed.

Control: Prior to initiating activity, the site conditions will be discussed with all employees. Hazards will be identified and protective measures will be explained. Equipment will be inspected and in proper working condition. Mechanical assistance should be provided for large lifting tasks. Avoidance of biological hazards as discussed in Section 4 will be implemented. Near Dingens and its contractor personnel will be working near or in excavation areas. The following sections discuss excavation safety procedures for Near Dingens and its contractor personnel.

3.2.6.1 Excavation Safety

During soil/fill removal activities, site personnel will be working in areas of active excavation. Excavation involves removing earthen materials from a designated area, thereby creating a man-made cut, trench, or depression in the earth's surface.

Excavations pose significant hazards to employees if they are not carefully controlled. There exists a chance for the excavation to collapse if it is not dug properly, sloped, benched or shored as required by 29 CFR 1926

Subpart P. Protective systems, as required by 29 CFR 1926 Subpart P, must be utilized if the potential for hazardous cave-ins exists. The excavation also is a fall hazard, and employees must pay careful attention to what they are doing or they risk a fall into the excavation. Fall protection, as required by 29 CFR 1926 Subpart M, may be required.

Some activities may require personnel to enter an excavation. Whenever feasible, equipment placement and other activities shall be done remotely, without entering the excavation. If entry is absolutely unavoidable, the safety procedures for excavation entry and employee protective systems consistent with 29 CFR 1926 Subpart P shall be followed for each such activity. Air monitoring in accordance with Section 8 is required for all excavation entry activities.

Noise also may present a hazard. Heavy equipment operation frequently results in noise levels exceeding 85 dBA, requiring the use of hearing protection.

Chemical Hazards: Airborne concentrations of soil contaminants and the dust from the procedure pose the potential for exposure at this stage.

Control: Before any digging can be done, all underground utilities must be located and identified. PPE for the excavation will initially consist of Level D. The level of protection may be adjusted as necessary depending on visual observations and air monitoring results.

All excavation activities and personnel entry into an excavation shall be conducted in accordance with 29 CFR 1926 Subpart P. If excavation operations are located near underground installations, the exact location of the installations must be determined by safe and acceptable means. While the excavation is open, underground installations must be protected, supported or removed as necessary to safeguard employees.

3.2.6.2 Excavation Access, Egress, and General Requirements

Structural ramps that are used solely by employees as a means of access or egress from excavations must be designed by a competent person. Structural ramps used for access or egress of equipment must be designed by a competent person qualified in structural design, and must be constructed in accordance with the design. Ramps and runways constructed of two or more structural members must have the structural members connected together to prevent displacement. Structural members used for ramps and runways must be of uniform thickness. Cleats or other appropriate means used to connect runway structural members must be attached to the bottom of the runway or must be attached in a manner to prevent tripping. Structural ramps used in lieu of steps must be provided with cleats or other surface treatments to the top surface to prevent slipping.

A stairway, ladder, ramp or other safe means of egress must be located in trench excavations that are 4 feet (1.22 m) or more in depth, so as to require no more than 25 feet (7.62 m) of lateral travel for employees.

No person shall be permitted underneath loads handled by lifting or digging equipment. Site personnel must be required to stand away from any vehicle being loaded or unloaded to avoid being struck by any spillage or falling materials. Operators may remain in the cabs of vehicles being loaded or unloaded when the vehicles are

equipped, in accordance with 29 CFR 1926.601(b)(6), to provide adequate protection for the operator during loading and unloading operations.

When mobile equipment is operated adjacent to an excavation, or when such equipment is required to approach the edge of an excavation, and the operator does not have a clear and direct view of the edge of the excavation, a warning system must be utilized such as barricades, hand or mechanical signals, or stop logs. If possible, the grade should be away from the excavation.

In addition to the requirements set forth in 29 CFR 1926.50 - 1926.107 to prevent exposure to harmful levels of atmospheric contaminants and to assure acceptable atmospheric conditions, the following requirements must apply: Where oxygen deficiency (atmospheres containing less than 19.5 percent oxygen) or a hazardous atmosphere exists or could reasonably be expected to exist, such as in excavations in landfill areas or excavations in areas where hazardous substances are stored nearby, the atmospheres in the excavation must be tested before employees enter the excavation.

Adequate precautions must be taken to prevent employee exposure to atmospheres containing less than 19.5 percent oxygen and other hazardous atmospheres. These precautions include providing proper respiratory protection or ventilation in accordance with 29 CFR 1926.50 - 1926.107.

Adequate precaution must be taken such as providing ventilation, to prevent employee exposure to an atmosphere containing a concentration of a flammable gas in excess of 10 percent of the lower flammable limit of the gas.

When controls are used that are intended to reduce the level of atmospheric contaminants to acceptable levels, testing must be conducted as often as necessary to ensure that the atmosphere remains safe.

Emergency rescue equipment, such as breathing apparatus, a safety harness and line, or a basket stretcher, must be readily available where hazardous atmospheric conditions exist or may reasonably be expected to develop during work in an excavation. This equipment must be attended by support personnel when in use.

Employees must not work in excavations in which there is accumulated water, or in excavations in which water is accumulating, unless adequate precautions have been taken to protect employees against the hazards posed by water accumulation. The precautions necessary to protect employees adequately vary with each situation, but could include special support or shield systems to protect from cave-ins, water removal to control the level of accumulating water, or use of a safety harness and lifeline. If water is controlled or prevented from accumulating by the use of water removal equipment, the water removal equipment and operations must be monitored by a competent person to ensure proper operation.

If excavation work interrupts the natural drainage of surface water (such as streams), diversion ditches, dikes, or other suitable means must be used to prevent surface water from entering the excavation and to provide adequate drainage of the area adjacent to the excavation. Excavations subject to runoff from heavy rains will require an inspection by a competent person.

Where the stability of adjoining buildings, walls, or other structures is endangered by excavation operations,

support systems such as shoring, bracing, or underpinning must be provided to ensure the stability of such structures for the protection of employees. Excavation below the level of the base or footing of any foundation or retaining wall that could be reasonably expected to pose a hazard to employees is not permitted except when:

- A support system designed by a competent person, such as underpinning, is provided to ensure the safety of employees and the stability of the structure; or
- The excavation is in stable rock; or
- A registered Professional Engineer has approved the determination that the structure is sufficiently removed from the excavation so as to be unaffected by the excavation activity; or
- A registered Professional Engineer has approved the determination that such excavation work will not pose a hazard to employees.

Sidewalks, pavements and appurtenant structures must not be undermined unless a support system or another method of protection is provided to protect employees from the possible collapse of such structures. Adequate protection must be provided to protect employees from loose rock or soil that could pose a hazard by falling or rolling from an excavation face. Such protection must consist of scaling to remove loose material; installation of protective barricades at intervals as necessary on the face to stop and contain falling material; or other means that provide equivalent protection.

Employees must be protected from excavated or other materials or equipment that could pose a hazard by falling or rolling into excavations. Protection must be provided by placing and keeping such materials or equipment at least 2 feet (.61 m) from the edge of excavations, or by the use of retaining devices that are sufficient to prevent materials or equipment from falling or rolling into excavations, or by a combination of both if necessary.

Dust Control - Airborne particulate generation will be controlled during site excavations. Dry, dusty soil will be wetted with a water spray from a potable water or other approved source to control the generation of dust. Soil will not be wetted to a degree which will cause runoff or soil erosion.

Walkways must be provided where employees or equipment are required or permitted to cross over excavations. Guardrails that comply with 1926.502(b) must be provided where walkways are 6 feet (1.8 m) or more above lower levels. Adequate barrier protection must be provided at all remotely located excavations. All wells, pits, shafts, etc., must be barricaded or covered. Upon completion of exploration and other similar operations, temporary wells, pits, shafts, etc., must be backfilled.

3.2.6.3 Inspections by Competent Person

Daily inspections of excavations, the adjacent areas, and protective systems must be made by a competent person for evidence of a situation that could result in possible cave-ins, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions. An inspection must be conducted by the

competent person prior to the start of work and as needed throughout the shift. Inspections also must be made after every rainstorm or other hazard-increasing occurrence. These inspections are only required when employee exposure can be reasonably anticipated. Where the competent person finds evidence of a situation that could result in a possible cave-in, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions, exposed employees must be removed from the hazardous area until the necessary precautions have been taken to ensure their safety.

3.2.6.4 Soil Classification

29 CFR 1926 Subpart P, Appendix A describes methods of classifying soil and rock deposits based on site and environmental conditions, and on the structure and composition of the earth deposits. The appendix contains definitions, sets forth requirements, and describes acceptable visual and manual tests for use in classifying soils. This Appendix applies when a sloping or benching system is designed in accordance with the requirements set forth in 1926.652(b)(2) as a method of protection for employees from cave-ins. This appendix also applies when timber shoring for excavations is designed as a method of protection from cave-ins in accordance with Appendix C to Subpart P of part 1926, and when aluminum hydraulic shoring is designed in accordance with 29 CFR Subpart P Appendix D. Appendix D also applies if other protective systems are designed and selected for use from data prepared in accordance with the requirements set forth in 1926.652(c), and the use of the data are predicated on the use of the soil classification system set forth in Appendix A.

Maximum allowable slope means the steepest incline of an excavation face that is acceptable for the most favorable site conditions as protection against cave-ins, and is expressed as the ratio of horizontal distance to vertical rise (H:V). Short term exposure means a period of time less than or equal to 24 hours that an excavation is open. Soil and rock deposits must be classified in accordance with Appendix A to Subpart P of Part 1926. The maximum allowable slope for a soil or rock deposit must be determined from Table 3-1. The actual slope must not be steeper than the maximum allowable slope. The actual slope must be less steep than the maximum allowable slope, when there are signs of distress. If that situation occurs, the slope must be cut back to an actual slope which is at least 1/2 horizontal to one vertical (1/2 H:1V) less steep than the maximum allowable slope. When surcharge loads from stored material or equipment, operating equipment, or traffic are present, a competent person must determine the degree to which the actual slope must be reduced below the maximum allowable slope, and must assure that such reduction is achieved. Surcharge loads from adjacent structures must be evaluated in accordance with 1926.651(I). Configurations of sloping and benching systems must be in accordance with 29 CFR 1926 Subpart P Appendix B.

TABLE 3-1
29 CFR 1926 Subpart P Appendix B
MAXIMUM ALLOWABLE SLOPES

SOIL OR ROCK TYPE	MAXIMUM ALLOWABLE SLOPES (H:V)(1) FOR EXCAVATIONS LESS THAN 20 FEET DEEP(3)
STABLE ROCK	VERTICAL (90 Deg.)
TYPE A (2)	3/4:1 (53 Deg.)
TYPE B	1:1 (45 Deg.)

TYPE C	1 1/2:1 (34 Deg.)

Footnote(1) Numbers shown in parentheses next to maximum allowable slopes are angles expressed in degrees from the horizontal. Angles have been rounded off.

Footnote(2) A short-term maximum allowable slope of 1/2H:1V (63 degrees) is allowed in excavations in Type A soil that are 12 feet (3.67 m) or less in depth. Short-term maximum allowable slopes for excavations greater than 12 feet (3.67 m) in depth must be 3/4H:1V (53 degrees).

Footnote(3) Sloping or benching for excavations greater than 20 feet deep must be designed by a registered professional engineer.

3.2.6.5 Overhead Electrical Clearances

If excavation is conducted in the vicinity of overhead power lines, the power to the lines must be shut off **or** the equipment must be positioned such that no part, including excavation boom, can come within the minimum clearances as follows:

Nominal System Voltage	Minimum Required Clearance
0-50kV	10 feet
51-100kV	12 feet
101-200kV	15 feet
201-300kV	20 feet
301-500kV	25 feet
501-750kV	35 feet
751-1,000kV	45 feet

When the equipment is in transit, with the boom lowered and no load, the equipment clearance must be at least 4 feet for voltages less than 50kV, 10 feet for voltages of 50 kV to 345 kV, and 16 feet for voltages above 345 kV.

3.2.7 Backfilling and Regrading

To protect all on-site personnel against hazards associated with materials handling, and to prevent injury due to unsafe heavy equipment operation, only properly trained and authorized operators will be allowed to operate heavy equipment. All materials handling equipment will be maintained in safe operating condition and inspected daily prior to use.

3.2.7.1 Haulage Roadways/Traffic Safety

Single-lane private roads with two-way traffic shall be provided with turnouts. Where turnouts are not

practical, a control system shall be provided to prevent vehicles from meeting on such single-lane roads. On private roads used for two-way traffic, arrangements shall be such that vehicles travel on the right side as much as possible. Signs shall be posted to clearly indicate variations from this system. Where practicable, separate haulage roads shall be provided between loaded and empty units. Haulage roads shall be wide enough to allow for safe passage. Safe distances between moving units shall be maintained. Private roads shall be maintained free from holes and ruts that affect the safe control of the vehicle. Every emergency access ramp and berm used by an employer shall be constructed to restrain and control runaway vehicles. Where a hazard exists because of traffic or haulage conditions, a system of traffic controls shall be required so as to abate the hazard.

Project personnel, such as grade-checkers, surveyors and others exposed to vehicular traffic, shall wear flagging garments (i.e., safety vest), or equivalent, as required for flaggers.

Equipment shall be under control at all times and shall be kept in gear when descending grades. No vehicle shall be driven at a speed greater than is reasonable and proper, with due regard for weather, traffic, intersections, width and character of the roadway, type of motor vehicle, and any other existing conditions.

3.2.7.2 Equipment Construction/Safety Features

Arrangements shall be made to direct exhaust gases away from the operator's breathing zone. When push-tractors are working in tandem, heat shields, or equivalent protection, shall be provided for operators.

Windshields complying with the applicable provisions of the Vehicle Code shall be provided and maintained on haulage vehicles and scrapers. Equipment and accessories installed on haulage vehicles shall be arranged so as to avoid impairing the driver's operational vision to the front or sides.

Service brake systems for self-propelled, rubber-tired, off-highway equipment manufactured before January 1, 1972 (for scrapers January 1, 1971) shall meet minimum performance criteria for service brake systems as set forth in the Society of Automotive Engineers Recommended Practices listed below. Service, emergency and parking brake systems for self-propelled, rubber-tired, off-highway equipment manufactured after January 1, 1972 (for scrapers January 1, 1971) shall meet the applicable minimum performance criteria for each system as set forth in the same Society of Automotive Engineers Recommended Practices:

Self-Propelled Graders	SAE J236-1971
Trucks and Wagons	SAE J166-1971
Front-End Loaders & Dozers	SAE J237-1971
Self-Propelled Scrapers	SAE J319b-1971

Haulage vehicles, whose pay load is loaded by means of cranes, power shovels, loaders, or similar equipment, shall have a cab shield and/or canopy adequate to protect the operator from shifting or falling materials. Whenever visibility conditions warrant additional light, all vehicles, or combinations of vehicles, in use shall be equipped with at least two headlights and two taillights in operable condition.

Crawler tractors, bulldozers, carryalls and similar equipment manufactured and used prior to April 1, 1971, except for scrapers, front-end loaders and new equipment, shall have canopy protection and seat belts for the

operator when used where there is exposure to falling or rolling objects.

Operating levers controlling hoisting or dumping devices on haulage bodies shall be equipped with a latch or other device which will prevent accidental starting or tripping of the mechanism. Trip handles for tailgates of dump trucks shall be so arranged that in dumping, the operator will not be exposed either to the hazard of being struck by falling material or any part of the truck. Haulage vehicles equipped with dump bodies that tilt to release their load by gravity through an opening at the rear or side shall be provided with a device that gives the operator a clearly audible or visible warning when sufficient force is applied by the elevating mechanism to cause or sustain dump body elevation.

Tractor-scrapers (self-propelled) pushed by other equipment during loading operations shall be provided with a clearly audible or visible warning device that can be activated by the operator of the tractor-scraper to communicate an "ALL STOP" warning to the pushing equipment in event of an emergency. Roll over protective structures (ROPS) and seat belts shall be installed and used on all equipment in accordance with 29 CFR 1926 Subpart W.

Vehicles with cabs shall have windshields and powered windshield wipers. Cracked or broken windshields shall be replaced promptly. Where fogging or frosting of windshields is prevalent, defogging or defrosting equipment shall be required. Tools and material shall be secured to prevent movement when transported in the same compartment with employees.

Vehicles used to transport employees shall have seats firmly secured and adequate for the number of employees to be carried.

Where vehicles are operated, temporary covers for conduits, trenches and manholes and their supports, when located in roadways and vehicular aisles, shall be designed to carry at least 2 times the maximum intended vehicular live load and they shall be designed and installed so as to prevent accidental displacement.

3.2.7.3 Audible Alarms

Every vehicle used to haul dirt, rock, concrete, or other construction material shall be equipped with a warning device that operates automatically while the vehicle is backing. The warning sound shall be of such magnitude that it will normally be audible from a distance of 200 feet and will sound immediately on backing. In congested areas or areas with high ambient noise which obscures the audible alarm, a signaler, in clear view of the operator, shall direct the backing operation. Other vehicles, if operating in areas where their backward movement would constitute a hazard to employees working in the area on foot, and where the operator's vision is obstructed to the rear of the vehicle, shall be equipped with an effective device or method to safeguard employees such as:

(1) An automatic back-up audible alarm that would sound immediately on backing, or

(2) An automatic braking device at the rear of the vehicle that will apply the service brake immediately on contact with any obstruction to the rear, or

(3) In lieu of 1 or 2 above, administrative controls shall be established such as:

a. A spotter or flagger in clear view of the operator who shall direct the backing operation,

b. Other procedures that will require the operator to dismount and circle the vehicle immediately prior to starting a back-up operation, or

c. Prohibiting all foot traffic in the work area.

(4) Other means shall be provided that will furnish safety equivalent to the foregoing for personnel working in the area.

All vehicles shall be equipped with a manually-operated warning device that can be clearly heard from a distance of 200 feet. The operator of any vehicle shall not leave the controls of the vehicle while it is moving under its own engine power. Hauling or earth moving operations shall be controlled in such a manner as to ensure that equipment or vehicle operators know of the presence of rootpickers, spotters, lab technicians, surveyors, or other workers on foot in the areas of their operations.

3.2.7.4 Wire Rope Use

When wire rope is being wound on a power-driven drum, a mechanical threading device shall be used, where practicable, to guide the cable. When this operation must be done manually, the feet shall not be used and the hands shall be kept at least 3 feet from the drum.

3.2.7.5 Equipment Inspection and Maintenance

All vehicles in use shall be checked at the beginning of each shift to assure that the following parts, equipment, and accessories are in safe operating condition and free of apparent damage that could cause failure while in use: service brakes, including trailer brake connections; parking system (hand brake); emergency stopping system (brake); tires; horn; steering mechanism; coupling devices; seat belts; operating controls; and safety devices. All defects affecting safe operation shall be corrected before the vehicle is placed in service. These requirements also apply to equipment such as lights, reflectors, windshield wipers, defrosters, fire extinguishers, etc., where such equipment is necessary.

Vehicle engines shall not be allowed to run in closed garages or other enclosed places, unless vents are provided that effectively remove the exhaust gases from the building.

Except for emergency field repairs, a safety tire rack, cage, or equivalent protection shall be used when inflating truck or equipment tires after mounting on a rim, if such tires depend upon a locking ring or similar device to hold them on the rim.

No repairs shall be attempted on power equipment until arrangements are made to eliminate possibility of

injury caused by sudden movements or operation of the equipment or its parts. When the equipment being repaired is a bulldozer, carryall, ripper, or other machine having sharp or heavy moving parts such as blades, beds, or gates, such parts shall be lowered to the ground or securely and positively blocked in an inoperative position.

All controls shall be in a neutral position, with the engine(s) stopped and brakes set, unless work being performed requires otherwise. Trucks with dump bodies shall be equipped with positive means of support, permanently attached, and capable of being locked in position to prevent accidental lowering of the body while maintenance or inspection work is being done. In all cases where the body is raised for any work, the locking device shall be used.

3.2.7.6 Equipment Parking and Loading

Whenever the equipment is parked, the parking brake shall be set. Equipment parked on inclines shall have the wheels chocked and the parking brake set or be otherwise prevented from moving by effective mechanical means.

Scissor points on all front-end loaders that constitute a hazard to the operator shall be adequately guarded. A loader shall not travel without adequate visibility for the driver and stability of the equipment. No loading device shall be left unattended until the load or bucket is lowered to the ground, unless proper precautions such as blocking are taken to prevent accidental lowering.

3.2.7.7 Equipment Fueling

No internal combustion engine fuel tank shall be refilled with a flammable liquid while the engine is running. Fueling shall be done in such a manner that the likelihood of spillage is minimal. If a spill occurs it shall be contained and cleaned, or equivalent action taken to control vapors before restarting the engine. Fuel tank caps shall be replaced before starting the engine.

A good metal-to-metal contact shall be kept between fuel supply tank or nozzle of supply hose and the fuel tank. No open lights, welding, or sparking equipment shall be used near internal combustion equipment being fueled or near storage tanks. No smoking shall be permitted at or near the gasoline storage area or on equipment being fueled. Post a conspicuous sign in each fuel storage and fueling area stating: "NO SMOKING WITHIN 50 FEET." Class I liquids shall not be dispensed by pressure from drums, barrels, and similar containers. Approved pumps taking suction through the top of the container or approved self-closing faucets shall be used. No repairs shall be made to equipment while it is being fueled.

Each fuel storage tank or drum shall have the word "Flammable" conspicuously marked thereon and should also have a similarly sized word indicating the contents of the container. A fire extinguisher rated 20:BC or larger shall be in a location accessible to the fueling area.

3.2.7.8 Flaggers

Flaggers shall be utilized at locations on a construction site where barricades and warning signs cannot control

the moving traffic. When flaggers are required, they shall be placed in relation to the equipment or operation so as to give effective warning. Placement of warning signs shall be according to the State Department of Transportation (DOT). Flaggers shall wear orange warning garments such as vests, jackets, or shirts. Rainwear, when worn, shall be orange, or other color provided an orange outer warning garment is worn. During the hours of darkness, flaggers' stations shall be illuminated such that the flagger will be clearly visible to approaching traffic and flaggers shall be outfitted with reflectorized garments. The retro reflective material shall be orange, white (including silver-coated reflecting coatings or elements that reflect white light), yellow, fluorescent red-orange, or fluorescent yellow-orange.

Flaggers shall be trained in the proper fundamentals of flagging moving traffic before being assigned as flaggers. Signaling directions used by flaggers shall conform to the DOT standards.

3.2.7.9 Additional Safety Requirements

Additional general heavy equipment safety requirements include, but are not limited to:

- Prior to operating any heavy equipment, the authorized operator must conduct a pre-operation inspection to determine if the heavy equipment is in safe operating condition prior to each work shift;
- All mobile equipment will be equipped with an audible back-up alarm;
- Personnel will not be allowed to stand or pass under the elevated portion of any heavy equipment, whether loaded or empty;
- Personnel will not place arms or legs between pinch or scissors points of the equipment or outside the operator enclosure;
- A safe distance will be maintained from the edge of excavations, ditches, ramps, or platforms;
- Operators will maintain sufficient headroom under overhead utilities, installations, lights, pipes, sprinkler systems, etc.;
- Heavy equipment must never be used for lifting or transporting personnel unless specifically designed for that purpose;
- The operator is required to look in the direction of, and maintain a clear view of the path of travel;
- Heavy equipment will not be operated without an overhead guard and roll-over protection to protect the operator against falling objects and roll-over;
- Heavy equipment must not be driven up to anyone standing in front of any object;
- Stunt driving and horseplay are strictly prohibited;

- Operators will yield the right-of-way to other site vehicles;

- Other heavy equipment traveling in the same direction, at intersections, blind spots, or other dangerous locations must not be passed;

- A safe distance will be maintained from other heavy equipment, and the equipment must be kept under control at all times;

- Heavy equipment operators must slow down for wet and slippery conditions. Under all travel conditions the equipment will be operated at a speed that will permit it to be brought to a stop in a safe manner;

- Operators will avoid running over loose objects on operating surfaces;

- Grades or ramps must be ascended or descended slowly;

- On all grades the load will be tilted back, and raised only as far as necessary to clear the operating surface;

- The operator will slow down and sound the horn at intersections, entering buildings, and other locations where vision may be obstructed;

- If the load being carried obstructs forward view, the operator will travel with the load trailing;

- While negotiating turns, speed will be reduced to a safe level, and turning will be in a smooth, sweeping motion to avoid abrupt turns and potential upset; and

- Authorized operators will only handle stable or safely-arranged loads and loads within the rated capacity of the heavy equipment and will not affect the stability of the heavy equipment.

When a piece of heavy equipment is left unattended, hydraulics will be fully lowered, controls will be neutralized, power will be shut off, and brakes set. Wheels will be blocked or chocked if the heavy equipment is parked on an incline. When internal combustion engine-powered heavy equipment is utilized indoors, near confined spaces, or near excavations, carbon monoxide levels shall be monitored to prevent personnel exposure.

4. General Safety Practices

4.1 General Practices

General safety procedures for site activities include, but are not limited to the following:

- At least one copy of this Plan must be at the project site, in a location readily available to all personnel, and reviewed by all project personnel prior to starting work.
- Food, beverages, or tobacco products must not be present or consumed in the exclusion and contamination reduction zones. Cosmetics must not be applied within these zones.
- Contaminated waste, debris, and used protective clothing must be properly contained and labeled.
- Removing contamination from protective clothing or equipment with compressed air, shaking, or any other means that disperses constituents into the air is prohibited.
- Visitors to the site must abide by the following:
    - All visitors must be instructed to remain within the support zone during the extent of their stay.
    - Visitors must be cautioned to avoid skin contact with surfaces that are contaminated or suspected to be contaminated.

4.1.1 Buddy System

All on-site personnel must use the buddy system. Visual contact must be maintained between crew members at all times, and crew members must observe each other for signs of chemical exposure, heat or cold stress. Indications of adverse effects include, but are not limited to:

- Changes in complexion and skin coloration;
- Changes in coordination;
- Changes in demeanor;
- Excessive salivation and pupillary response; and
- Changes in speech pattern.

Team members must also be aware of potential exposure to possible safety hazards, unsafe acts, or non-compliance with safety procedures.

Employees must inform their fellow team members of non-visible effects of exposure to toxic materials. The symptoms of such exposure may include:

- headaches;
- dizziness;
- nausea;
- blurred vision;
- cramps; and/or
- irritation of eyes, skin, or respiratory tract.

If protective equipment or noise levels impair communications, prearranged hand signals must be used for communication. Personnel must stay within line of sight of another team member.

4.1.2 Emergency Equipment

Adequate emergency equipment will be maintained on site for the activities conducted on site and as required by applicable sections of 29 CFR 1910 and 29 CFR 1926. Personnel will be provided with access to emergency equipment including, but not limited to, the following:

- Emergency eyewash and shower, meeting ANSI Z358.1-1990 requirements;
- Fire extinguishers of adequate size, class, number, and location as required by applicable sections of 29 CFR 1910 and 29 CFR 1926;
- Industrial First Aid Kit of adequate size for number of personnel on site;

In addition to those items listed above, the SO will also maintain the following inventory of equipment and protective clothing for use at the site in the event of emergencies:

- Washable coveralls;
- Gloves (outer);
- Gloves (inner);
- Safety glasses;
- Respirators and appropriate cartridges;
- Disposable coveralls;
- Chemical-resistant boots and latex covers;
- Hard hats;
- Rain suits.

4.2 Heat Stress

Heat stress is caused by a number of interacting factors, including environmental conditions, clothing, workload, etc., as well as the physical and conditioning characteristics of the individual. Since heat stress is one of the most common illnesses associated with heavy outdoor work conducted with direct solar load and, in particular, because wearing PPE can increase the risk of developing heat stress, workers must be capable of recognizing the signs and symptoms of heat-related illnesses. Personnel must be aware of the types and causes of heat-related illnesses and be able to recognize the signs and symptoms of these illnesses in both themselves and their co-workers.

Heat rashes are one of the most common problems in hot work environments. Commonly known as prickly heat, a heat rash is manifested as red papules and usually appears in areas where the clothing is restrictive. As sweating increases, these papules give rise to a prickling sensation. Prickly heat occurs in skin that is persistently wetted by unevaporated sweat, and heat rash papules may become infected if they are not treated. In most cases, heat rashes will disappear when the affected individual returns to a cool environment.

Heat cramps are usually caused by performing hard physical labor in a hot environment. These cramps have been attributed to an electrolyte imbalance caused by sweating. It is important to understand that cramps can be caused both by too much and too little salt.

Cramps appear to be caused by the lack of water replenishment. Because sweat is a hypotonic solution (plus or minus 0.3% NaCl), excess salt can build up in the body if the water lost through sweating is not replaced. Thirst cannot be relied on as a guide to the need for water; instead, water must be taken every 15 to 20 minutes in hot environments.

Under extreme conditions, such as working for 6 to 8 hours in heavy protective gear, a loss of sodium may occur. Drinking commercially available carbohydrate-electrolyte replacement liquids is effective in minimizing physiological disturbances during recovery.

Heat exhaustion occurs from increased stress on various body organs due to inadequate blood circulation, cardiovascular insufficiency, or dehydration. Signs and symptoms include pale, cool, moist skin; heavy sweating; dizziness; nausea; headache, vertigo, weakness, thirst, and giddiness. Fortunately, this condition responds readily to prompt treatment.

Heat exhaustion should not be dismissed lightly, however, for several reasons. One is that the fainting associated with heat exhaustion can be dangerous because the victim may be operating machinery or controlling an operation that should not be left unattended; moreover, the victim may be injured when he or she faints. Also, the signs and symptoms seen in heat exhaustion are similar to those of heat stroke, which is a medical emergency.

Workers suffering from heat exhaustion should be removed from the hot environment, be given fluid replacement, and be encouraged to get adequate rest.

Heat stroke is the most serious form of heat stress. Heat stroke occurs when the body's system of temperature regulation fails and the body's temperature rises to critical levels. This condition is caused by a combination of highly variable factors, and its occurrence is difficult to predict.

Heat stroke is a medical emergency. The primary signs and symptoms of heat stroke are confusion; irrational behavior; loss of consciousness; convulsions; a lack of sweating (usually); hot, dry skin; and an abnormally high body temperature, e.g., a rectal temperature of 41°C (105.8°F). If body temperature is too high, it causes death. The elevated metabolic temperatures caused by a combination of work load and environmental heat load, both of which contribute to heat stroke, are also highly variable and difficult to predict.
If a worker shows signs of possible heat stroke, professional medical treatment should be obtained

immediately. The worker should be placed in a shady area and the outer clothing should be removed. The worker's skin should be wetted and air movement around the worker should be increased to improve evaporative cooling until professional methods of cooling are initiated and the seriousness of the condition can be assessed. Fluids should be replaced as soon as possible. The medical outcome of an episode of heat stroke depends on the victim's physical fitness and the timing and effectiveness of first aid treatment.

Regardless of the worker's protestations, any employee suspected of being ill from heat stroke should not be sent home or left unattended unless a physician has specifically approved such an order.

Proper training and preventive measures will help avert serious illness and loss of work productivity. Preventing heat stress is particularly important because once someone suffers from heat stroke or exhaustion, that person may be predisposed to additional heat injuries.

Heat Stress Safety Precautions

Heat stress monitoring and work rest cycle implementation should commence when the ambient adjusted temperature exceeds 72°F. A minimum work rest regimen and procedures for calculating ambient adjusted temperature are described in the Table 4-1.

TABLE 4-1
WORK/REST SCHEDULE

Adjusted Temperature[b]	*Work/Rest Regimen Normal Work Ensemble[c]*	*Work/Rest Regimen Impermeable Ensemble*
90°F (32.2°C) or above	After each 45 minutes of work	After each 15 minutes of work
87.5°-90°F (30.8°-32.2°C)	After each 60 minutes of work	After each 30 minutes of work
82.5°-87.5°F (28.1°-30.8°C)	After each 90 minutes of work	After each 60 minutes of work
77.5°-82.5°F (25.3°-28.1°C)	After each 120 minutes of work	After each 90 minutes of work
72.5°-77.5°F (30.8°-32.2°C)	After each 150 minutes of work	After each 120 minutes of work

[a] For work levels of 250 kilocalories/hour (Light-Moderate Type of Work)
[b] Calculate the adjusted air temperature (ta adj) by using this equation: ta adj 1F = ta 1F + (13 x % sunshine). Measure air temperature (ta) with a standard mercury-in-glass thermometer, with the bulb shielded from radiant heat. Estimate percent sunshine by judging what percent time the sun is not covered by clouds that are thick enough to produce a shadow. (100 percent sunshine = no cloud cover and a sharp, distinct shadow; 0 percent sunshine = no shadows.)
[c] A normal work ensemble consists of cotton coveralls or other cotton clothing with long sleeves and pants.
[d] The information presented above was generated using the information provided in the American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLV) Handbook.

In order to determine if the work/rest cycles are adequate for the personnel and specific site conditions additional monitoring of individuals' heart rates will be conducted during the rest cycle. To check the heart rate, count the radial pulse for 30 seconds at the beginning of the rest period. If the heart rate exceeds 110 beats per minute, shorten the next work period by one-third and maintain the same rest period.
Additionally, one or more of the following control measures can be used to help control heat stress and are mandatory if any site worker has a heart rate (measure immediately prior to rest period) exceeding 115 beats

per minute:

- Site workers will be encouraged to drink plenty of water and electrolyte replacement fluids throughout the day;
- On-site drinking water will be kept cool (50 to 60oF);
- A work regimen that will provide adequate rest periods for cooling down will be established, as required;
- All personnel will be advised of the dangers and symptoms of heat stroke, heat exhaustion, and heat cramps;
- Cooling devices, such as vortex tubes or cooling vests, should be used when personnel must wear impermeable clothing in conditions of extreme heat;
- Employees should be instructed to monitor themselves and co-workers for signs of heat stress and to take additional breaks as necessary;
- A shaded rest area must be provided. All breaks should take place in the shaded rest area;
- Employees must not be assigned to other tasks during breaks;
- Employees must remove impermeable garments during rest periods. This includes white Tyvek-type garments; and
- All employees must be informed of the importance of adequate rest, acclimation, and proper diet in the prevention of heat stress disorders.

4.3 Cold Stress Hazards

Cold stress normally occurs in temperatures at or below freezing, or under certain circumstances, in temperatures up to 40°F. Extreme cold for a short time may cause severe injury to exposed body surfaces or result in profound generalized cooling, causing death. Areas of the body that have high surface area-to-volume ratio, such as fingers, toes, and ears, are the most susceptible. Two factors influence the development of a cold weather injury: ambient temperature and wind velocity. For instance, 10°F with a wind of 15 miles per hour (mph) is equivalent in chilling effect to still air at -18°F. An equivalent chill temperature chart relating the actual dry bulb temperature and wind velocity is presented in Table 4-2.

TABLE 4-2
CHILL TEMPERATURE CHART

Estimated Wind Speed (in mph)	Actual Temperature Reading (°F)											
	50	40	30	20	10	0	-10	-20	-30	-40	-50	-60
	Equivalent Chill Temperature (°F)											
calm	50	40	30	20	10	0	-10	-20	-30	-40	-50	-60
5	48	37	27	16	6	-5	-15	-26	-36	-47	-57	-68
10	40	28	16	4	-9	-24	-33	-46	-58	-70	-83	-95
15	36	22	9	-5	-18	-32	-45	-58	-72	-85	-99	-112
20	32	18	4	-10	-25	-39	-53	-67	-82	-96	-110	-121
25	30	16	0	-15	-29	-44	-59	-74	-88	-104	-118	-133
30	28	13	-2	-18	-33	-48	-63	-79	-94	-109	-125	-140
35	27	11	-4	-20	-35	-51	-67	-82	-98	-113	-129	-145
40	26	10	-6	-21	-37	-53	-69	-85	-100	-116	-132	-148
(Wind speeds greater than 40 mph have little additional effect.)	LITTLE DANGER Maximum danger of false sense of security.				INCREASING DANGER Danger from freezing of exposed flesh within one minute.			GREAT DANGER Flesh may freeze within 30 seconds.				
	Trench foot and immersion foot may occur at any point on this chart.											

[This chart was developed by the U.S. Army Research Institute of Environmental Medicine, Natick, MA (Source: ACGIH Threshold Limit Values for Chemical Substances and Physical Agents).]

Local injury resulting from cold is included in the generic term frostbite. There are several degrees of tissue damage associated with frostbite. Frostbite of the extremities can be categorized into:

- *Frost Nip or Incipient Frostbite* - characterized by suddenly blanching or whitening of skin.
- *Superficial Frostbite* - skin has a waxy or white appearance and is firm to the touch, but tissue beneath is resilient.
- *Deep Frostbite* - tissues are cold, pale, and solid; extremely serious injury.

Systemic hypothermia is caused by exposure to freezing or rapidly dropping temperature. It can be fatal. Its symptoms are usually exhibited in five stages: 1) shivering; 2) apathy, listlessness, sleepiness, and (sometimes) rapid cooling of the body to less than 95°F; 3) unconsciousness, glassy stare, slow pulse, and slow respiratory rate; 4) freezing of the extremities; and 5) death. Trauma sustained in freezing or sub-zero conditions requires special attention because an injured worker is predisposed to secondary cold injury. Special provisions must be made to prevent hypothermia and secondary freezing of damaged tissues in addition to providing for first aid treatment. To avoid cold stress, site personnel must wear protective clothing appropriate for the level of

cold and physical activity. In addition to protective clothing, preventive safe work practices, additional training, and warming regimens may be utilized to prevent cold stress.

Safety Precautions for Cold Stress Prevention

- For air temperature of 0°F or less, the hands should be protected by mittens. For exposed skin, continuous exposure should not be permitted when air speed and temperature results in a wind chill temperature of -25°F.

- At air temperatures of 36°F or less, field personnel who become immersed in water or whose clothing becomes wet must be immediately provided with a change of clothing and be treated for hypothermia.

- If work is done at normal temperature or in a hot environment before entering the cold, the field personnel must ensure that their clothing is not wet as a consequence of sweating. If wet, field personnel must change into dry clothes prior to entering the cold area.

- If the available clothing does not give adequate protection to prevent hypothermia or frostbite, work must be modified or suspended until adequate clothing is made available or until weather conditions improve.

- Field personnel handling evaporative liquid (e.g., gasoline, alcohol, or cleaning fluids) at air temperatures below 40°F must take special precaution to avoid soaking of clothing or gloves with the liquids because of the added danger of cold injury due to evaporative cooling.

Safe Work Practices

- Direct contact between bare skin and cold surfaces (< 20°F) should be avoided. Metal tool handles and/or equipment controls should be covered by thermal insulating material.

- For work performed in a wind chill temperature at or below 10°F, workers should be under constant protective observation (buddy system). The work rate should be established to prevent heavy sweating that will result in wet clothing. For heavy work, rest periods must be taken in heated shelters and workers should be provided with an opportunity to change into dry clothing if needed.

- Field personnel should be provided the opportunity to become accustomed to cold-weather working conditions and required protective clothing.

- Work should be arranged in such a way that sitting or standing still for long periods is minimized.

During the warming regimen (rest period), field personnel should be encouraged to remove outer clothing to permit sweat evaporation or to change into dry work clothing. Dehydration, or loss of body fluids, occurs insidiously in the cold environment and may increase susceptibility to cold injury due to a significant change in blood flow to the extremities. Fluid replacement with warm, sweet drinks and soups is recommended. The intake of coffee should be limited because of diuretic and circulatory effects.

4.4 Biological Hazards

Biological hazards may include poison ivy, snakes, thorny bushes and trees, ticks, mosquitoes, and other pests.

4.4.1 Tick-Borne Diseases

Lyme disease, erlichiosis, and Rocky Mountain Spotted Fever (RMSF) are diseases transmitted by ticks and occur throughout the United States during spring, summer, and fall.

Lyme Disease **-** The disease commonly occurs in summer and is transmitted by the bite of infected ticks. "Hot spots" in the United States include New York, New Jersey, Pennsylvania, Massachusetts, Connecticut, Rhode Island, Minnesota and Wisconsin. Few cases have been identified in other states.

Erlichiosis **-** The disease also commonly occurs in summer and is transmitted by the bite of infected ticks. "Hot spots" in the United States include New York, Massachusetts, Connecticut, Rhode Island, Minnesota and Wisconsin. Few cases have been identified in other states.

These diseases are transmitted primarily by the deer tick, which is smaller and redder than the common wood tick. The disease may be transmitted by immature ticks, which are small and hard to see. The tick may be as small as a period on this page.

Symptoms of Lyme disease include a rash or a peculiar red spot, like a bull's eye, which expands outward in a circular manner. The victim may have headache, weakness, fever, a stiff neck, swelling and pain in the joints, and eventually, arthritis. Symptoms of erlichiosis include muscle and joint aches, flu-like symptoms, but there is typically no skin rash.

Rocky Mountain Spotted Fever **-** This disease is transmitted via the bite of an infected tick. The tick must be attached 4 to 6 hours before the disease-causing organism (*Rickettsia rickettsii*) becomes reactivated and can infect humans. The primary symptom of RMSF is the sudden appearance of a moderate-to-high fever. The fever may persist for two to three weeks. The victim may also have a headache, deep muscle pain, and chills. A rash appears on the hands and feet on about the third day and eventually spreads to all parts of the body. For this reason, RMSF may be confused with measles or meningitis. The disease may cause death, if untreated, but if identified and treated promptly, death is uncommon.

Control **-** Tick repellant containing diethyltoluamide (DEET) should be used when working in tick-infested areas, and pants legs should be tucked into boots. In addition, workers should search the entire body every three or four hours for attached ticks. Ticks should be removed promptly and carefully without crushing, since crushing can squeeze the disease-causing organism into the skin. A gentle and steady pulling action should be used to avoid leaving the head or mouth parts in the skin. Hands should be protected with surgical gloves when removing ticks.

4.4.2 Poisonous Plants

Poison ivy may be present in the work area. Personnel should be alerted to its presence, and instructed on methods to prevent exposure.

Control **-** The main control is to avoid contact with the plant, cover arms and hands, and frequently wash potentially exposed skin. Particular attention must be given to avoiding skin contact with objects or protective clothing that have touched the plants. Treat every surface that may have touched the plant as contaminated, and practice contamination avoidance. If skin contact is made, the area should be washed immediately with soap and water, and observed for signs of reddening.

4.4.3 Snakes

The possibility of encountering snakes exists, specifically for personnel working in wooded/vegetated areas. Snake venoms are complex and include proteins, some of which have enzymatic activity. The effects produced by venoms include neurotoxic effects with sensory, motor, cardiac, and respiratory difficulties; cytotoxic effects on red blood cells, blood vessels, heart muscle, kidneys, and lungs; defects in coagulation; and effects from local release of substances by enzymatic actions. Other noticeable effects of venomous snake bites include swelling, edema, and pain around the bite, and the development of ecchymosis (the escape of blood into tissues from ruptured blood vessels).

Control - To minimize the threat of snake bites and insect hazards, all personnel walking through vegetated areas must aware of the potential for encountering snakes, and the need to avoid actions potentiating encounters, such as turning over logs, etc. If a snake bite occurs, an attempt should be made to kill the snake for identification. The victim must be transported to the nearest hospital within 30 minutes; first aid consists of applying a constriction band, and washing the area around the wound to remove any unabsorbed venom.

4.5 Noise

Exposure to noise over the OSHA action level can cause temporary impairment of hearing; prolonged and repeated exposure can cause permanent damage to hearing. The risk and severity of hearing loss increases with the intensity and duration of exposure to noise. In addition to damaging hearing, noise can impair voice communication, thereby increasing the risk of accidents on site.

Control - All personnel must wear hearing protection - with a Noise Reduction Rating (NRR) of at least 20 - when noise levels exceed 85 dBA. When it is difficult to hear a co-worker at normal conversation distance, the noise level is approaching or exceeding 85 dBA, and hearing protection is necessary. All site personnel who may be exposed to noise must also receive baseline and annual audiograms and training as to the causes and prevention of hearing loss.

Whenever possible, equipment that does not generate excessive noise levels will be selected for this project. If the use of noisy equipment is unavoidable, barriers or increased distance will be used to minimize worker exposure to noise, if feasible.

4.6 Sanitation

Site sanitation will be maintained according to OSHA and Department of Health requirements.

4.6.1 Break Area

Breaks must be taken in the Support Zone (SZ), away from the active work area and after site personnel go through decontamination procedures, where applicable. There will be no smoking, eating, drinking, or chewing gum or tobacco in any area other than the SZ.

4.7 Electrical Hazards

Electricity may pose a particular hazard to site workers due to the use of portable electrical equipment. If wiring or other electrical work is needed, it must be performed by a qualified electrician.

General electrical safety requirements include:

- All electrical wiring and equipment must be a type listed by UL, Factory Mutual Engineering Corporation (FM), or other recognized testing or listing agency;
- All installations must comply with the National Electrical Safety Code (NESC), the National Electrical Code (NEC), or United States Coast Guard regulations;
- Portable and semi-portable tools and equipment must be grounded by a multiconductor cord having an identified grounding conductor and a multi-contact polarized plug-in receptacle;
- Tools protected by an approved system of double insulation, or its equivalent, need not be grounded. Double-insulated tools must be distinctly marked and listed by UL or FM;
- Live parts of wiring or equipment must be guarded to prevent persons or objects from touching them;
- Electric wire or flexible cord passing through work areas must be covered or elevated to protect it from damage by foot traffic, vehicles, sharp corners, projections, or pinching;
- All circuits must be protected from overload;
- Temporary power lines, switch boxes, receptacle boxes, metal cabinets, and enclosures around equipment must be marked to indicate the maximum operating voltage;
- Plugs and receptacles must be kept out of water unless of an approved submersible construction;
- All extension outlets must be equipped with ground fault circuit interrupters (GFCI);
- Attachment plugs or other connectors must be equipped with a cord grip and be constructed to endure rough treatment;

- Extension cords or cables must be inspected prior to each use and replaced if worn or damaged. Cords and cables must not be fastened with staples, hung from nails, or suspended by bare wire; and

- Flexible cords must be used only in continuous lengths without splice, with the exception of molded or vulcanized splices made by a qualified electrician.

4.8 Lifting Hazards

Back strain or injury may be prevented by using proper lifting techniques. The fundamentals of proper lifting include:

- Consider the size, shape, and weight of the object to be lifted. A mechanical lifting device or additional persons must be used to lift an object if it cannot be lifted safely alone;

- The hands and the object should be free of dirt or grease that could prevent a firm grip;

- Gloves must be used, and the object inspected for metal slivers, jagged edges, burrs, or rough or slippery surfaces;

- Fingers must be kept away from points which could crush or pinch them, especially when putting an object down;

- Feet must be placed far enough apart for balance. The footing should be solid and the intended pathway should be clear;

- The load should be kept as low as possible, close to the body with the knees bent;

- To lift the load, grip firmly and lift with the legs, keeping the back as straight as possible;

- A worker should not carry a load that he or she cannot see around or over; and

- When putting an object down, the stance and position are identical to that for lifting - the legs are bent at the knees and the back is straight as the object is lowered.

5. Personal Protective Equipment (PPE)

5.1 General

Personal protective equipment is required to safeguard site personnel from various hazards. Varying levels of protection may be required depending on the level of contaminants and the degree of physical hazard. This section presents the various levels of protection and defines the conditions of use for each level. Based on evaluation of the potential hazards for the site, the initial and minimum levels of PPE have been designated as Level D for the entire site.

5.2 Levels of Protection

Protection levels are determined based upon contaminants present in the work area. A summary of the levels is presented in this section.

5.2.1 Level D Protection

The minimum level of protection that will be required of project personnel at the site will be Level D, which will be worn when site conditions or air monitoring indicates no inhalation hazard exists. In general, Level D applies to all activities in the SZ. The following equipment will be used:

- Work clothing as prescribed by weather;
- Safety-toe work boots, meeting ANSI Z41;
- Safety glasses with side shields or goggles, meeting ANSI Z87;
- ANSI Z89 approved hard hat when falling objects and/or hazards are present; and
- Hearing protection (if noise levels exceed 85 dBA, then hearing protection with a US EPA NRR of at least 20 dBA must be used).

5.2.2 Modified Level D Protection

Modified Level D will be used when airborne constituents are not present at levels of concern, but site activities present an increased potential for skin contact with contaminated materials. In general, Modified Level D applies to all activities in the EZ and CRZ. Modified Level D consists of Level D as described above with the following additions:

- Chemical-resistant gloves, as appropriate, and boots during excavation and sampling activities.

5.2.3 Level C Protection

Level C protection will be required when the airborne concentration of site constituents reaches the action level specified for the project (refer to Section 8.5) and in general, Level C only applies to activities in the EZ and CRZ. The following equipment will be used for Level C protection:

- MSA UltraTwin full-face, air purifying respirator (MSHA/NIOSH approved), or equivalent, with acid mists/organic vapor cartridges with HEPA filter (i.e., P-100). Half-face respirators may be substituted during certain tasks as approved by the SO;
- Chemical resistant coverall suit (Tyvek, Poly-Tyvek, or Saranex suit), as applicable, with ankles and cuffs taped to boots and gloves. Poly-Tyvek and Saranex suit to be used for splash protection;
- Nitrile or neoprene outer gloves over nitrile or latex inner gloves;
- ANSI-approved safety toe work boots;
- Chemical-resistant neoprene or butyl rubber outer boots or latex/PVC booties over safety-toe shoes;
- ANSI-approved hard hat; and
- Hearing protection (if necessary).

5.2.4 Selection of PPE

Equipment for personal protection will be selected based on the potential for contact, site conditions, ambient air quality, and the judgment of supervising site personnel (PM/SO). The PPE used will be chosen to be effective against the compound(s) present on the site.

5.3 Site Respiratory Protection Procedures

Respiratory protection is an integral part of employee health and safety at the site due to the potential for airborne constituents.

Site respiratory protection procedures will consist of the following:

- All site personnel who may use respiratory protection will have an assigned respirator.
- All site personnel who may use respiratory protection will have been fit tested and trained in the use of a full-face air purifying respirator within the past 12 months.
- All site personnel who may use respiratory protection must within the past year have been medically certified as being capable of wearing a respirator. Documentation of the medical certification must be

provided to the HSC, prior to commencement of site work.

- Only cleaned, maintained, NIOSH/MSHA-approved respirators are to be used on this site.
- If respirators are used, the respirator cartridge is to be properly disposed of at the end of each work shift, or when load-up or breakthrough occurs.
- Contact lenses are not to be worn on-site.
- All site personnel who may use respiratory protection must be clean-shaven. Mustaches and sideburns are permitted, but they must not touch the sealing surface of the respirator.
- Respirators will be inspected, and a negative pressure test performed prior to each use.
- After each use, the respirator will be wiped with a disinfectant, cleansing wipe. When used, the respirator will be thoroughly cleaned at the end of the work shift. The respirator will be stored in a clean plastic bag, away from direct sunlight in a clean, dry location, in a manner that will not distort the face piece.

5.4 Using PPE

Depending upon the level of protection selected, specific donning and doffing procedures may be required. The procedures presented in this section are mandatory when Modified Level D or higher PPE is used.

All people entering the EZ must put on the required PPE in accordance with the requirements of this plan. When leaving the EZ, PPE will be removed in accordance with the procedures listed, to minimize the spread of contamination.

5.4.1 Donning Procedures

These procedures are mandatory when Modified Level D or higher PPE is used on the project:

- Remove bulky outerwear. Remove street clothes and store in clean location;
- Put on work clothes or coveralls;
- Put on the required chemical-protective coveralls or rain gear;
- Put on the required chemical-protective boots or boot covers;
- Tape the legs of the coveralls to the boots with duct tape;
- Put on the required chemical-protective gloves;

- Tape the wrists of the protective coveralls to the gloves;
- Don the required respirator (Level C or higher) and perform appropriate fit check;
- Put hood or head covering overhead and respirator straps (Level C or higher) and tape hood to face piece; and
- Don remaining PPE, such as safety glasses or goggles and hard hat.

When these procedures are instituted, one person must remain outside the work area to ensure that each person entering has the proper protective equipment.

5.4.2 Doffing Procedures

The following procedures are mandatory when Modified Level D or higher PPE is required for this project. Whenever a person leaves a Modified Level D or higher work site, the following decontamination sequence will be followed:

- Upon entering the CRZ, rinse contaminated materials from the boots or remove contaminated boot covers;
- Clean reusable protective equipment;
- Remove protective garments, equipment, and respirator (Level C or higher). All disposable clothing should be placed in plastic bags, which are labeled with contaminated waste labels;
- Wash hands, face and neck or shower (if necessary);
- Proceed to clean area and dress in clean clothing; and
- Clean and disinfect respirator (Level C or higher) for next use.

All disposable equipment, garments, and PPE must be bagged in plastic bags, labeled for disposal. See Section 7 for detailed information on decontamination stations.

5.5 Selection Matrix

The level of personal protection selected will be based upon the specified work area and real-time air monitoring of the work environment and an assessment by the SO of the potential for skin contact with impacted materials.

6. Site Control

6.1. Authorization to Enter

All personnel who are potentially exposed to hazardous substances (i.e., within the EZ and CRZ) must have completed hazardous waste operations initial training as defined under OSHA Regulation 29 CFR 1910.120, have completed their training or refresher training within the past 12 months, and have been certified by a physician as fit for hazardous waste operations in order to enter a site area designated as an EZ or CRZ. Personnel without such training or medical certification may enter the designated SZ only. The Contractor will maintain a list of authorized persons; only personnel on the authorized persons list will be allowed within the EZ or CRZ.

6.2. Site Orientation and Hazard Briefing

No person will be allowed in the general work area during site operations without first being given a site orientation and the appropriate hazard briefing. This orientation will be presented by the SO, and will consist of a review of this HASP. This review must cover the chemical, physical, and biological hazards, protective equipment, safe work procedures, and emergency procedures for the project, as applicable for the task involved. In addition to this meeting, daily update meetings in regard to health and safety will be held.

All personnel on the site, including visitors who perform site work or traverse the site during site work, must document their attendance to this briefing. A sample Daily Safety Meeting Log is included with this Plan as Appendix B.

6.3. Certification Documents

A training and medical file will be established for the project and kept on site during all site operations. All applicable training certificates will be maintained within that file. All site personnel must provide their training documentation to the SO prior to the start of field work.

6.4. Entry Log

A log-in/log-out sheet will be maintained at the site by the Contractor. Personnel must sign in and out on a log sheet as they enter and leave the CRZ, and the Contractor will document entry and exit in the field notebook.

6.5. Entry Requirements

In addition to the authorization, hazard briefing and certification requirements listed above, no person will be allowed on site unless he or she is wearing the minimum SZ PPE as described in Section 5. Personnel entering the EZ or CRZ must wear the required PPE for those locations.

6.6. Emergency Entry and Exit

People who must enter the site on an emergency basis will be briefed of the hazards by the Contractor. All hazardous activities will cease in the event of an emergency and any sources of emissions will be controlled, if

possible.

People exiting the site because of an emergency will gather in a safe area for a head count. The Contractor is responsible for ensuring that all people who entered the work area have exited in the event of an emergency.

6.7. Contamination Control Zones

Contamination control zones are maintained to prevent the spread of contamination and to prevent unauthorized people from entering hazardous areas.

6.7.1 Exclusion Zone

The EZ consists of the specific hazardous work area, or may be the entire area of suspected contamination. These areas include the designated waste areas where waste/soil is to be excavated and removed from the site or relandfilled based on characterization analysis and any other areas where intrusive activities (i.e., excavation into below grade soil/fill or groundwater) will occur. All employees entering the EZ must use the required PPE, and must have the appropriate training for hazardous waste work. The EZ is the defined area where there is a possible respiratory and/or contact health hazard plus an additional 50-foot radius around such area. Safety fencing, cones, caution tape, and/or other appropriate means will identify the location of each exclusion zone.

6.7.2 Contamination Reduction Zone

The CRZ or transition area will be established, if necessary, to perform decontamination of personnel and equipment. All personnel entering or leaving the EZ will pass through this area to prevent any cross-contamination. Tools, equipment, and machinery will be decontaminated in a specific location. Personal protective outer garments and respiratory protection will be removed in the CRZ and prepared for cleaning or disposal. This zone is the only appropriate corridor between the EZ and the SZ.

6.7.3 Support Zone

The SZ is a clean area outside the CRZ located to prevent employee exposure to hazardous substances. Eating and drinking will be permitted in the support area only after proper decontamination. Smoking may be permitted in the SZ, subject to site requirements.

6.7.4 Posting

The EZ, CRZ, and SZ will be prominently marked and delineated using safety fencing, cones, caution tape, signs, and/or other suitable means.

6.8 Site Inspections

The SO will conduct a daily inspection of site activities, equipment, and zone set up to verify that the required elements are in place. A record of the inspections will be kept in the daily field report and, as necessary, forwarded to the PM for review.

6.9 Record Keeping

The documentation of field activities will entail the recording of project information, observations, and measurements in a field log book; the completion of applicable field log forms; and the compilation of a photographic record of project site conditions and the remedial activities.

Pertinent remedial activities and sampling information shall be recorded in a logbook during each day of the field activity. A logbook will be assigned to each field task and will have a unique document control number. No general rules can specify the extent of information that must be entered in a logbook. However, logbooks shall contain sufficient information so that anyone can reconstruct the field activity without relying on the memory of the field crew.

A Daily Field Report Form shall be completed for each day of the field activities. The form shall be filled out with relevant information in the appropriate space on the form. A sample Daily Field Report Form is included with this report as Appendix C.
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7. Decontamination

7.1 Personnel Decontamination

Decontamination will not be necessary when only Level D protection is used. However, disposable gloves used during sampling activities should be removed and bagged. Personnel will be encouraged to remove clothing and shower as soon as is practicable at the end of the day. All non-disposable clothing should be machine-washed. All personnel should wash their hands and face prior to eating and before and after using the restroom.

Decontamination will be necessary if Modified Level D, Level C or Level B protection is used. The following OSHA-specified procedures include steps necessary for complete decontamination prior to entry into the SZ, and steps necessary if a worker only needs to change a respirator or respirator canister. All spent PPE will be placed in a drum specified for PPE and sampling equipment only.

Modification can be made to the twelve-station decontamination process by the SO depending upon the extent of contamination.

Station 1: Segregated Equipment Drop

Deposit equipment used on the site (tools, sampling devices and containers, monitoring instruments, clipboards, etc.) on plastic drop cloths or in different containers with plastic liners. Each will be contaminated to a different degree. Segregation at the drop reduces the probability of cross-contamination. All documentation including field books and field forms will be transferred to support personnel until the decontamination procedure is completed.

Station 2: Suit/Safety Boot and Outer-Glove Wash

Thoroughly wash chemical-resistant suit, safety boots and outer gloves. Scrub with long-handle, soft-bristle scrub brush and copious amounts of Alconox/water solution.

Necessary equipment includes:

1. Wash tub (30-gallon or large enough for person to stand in)
2. Alconox water solution
3. Long-handle soft-bristle scrub brushes

Station 3: Suit/Safety Boot and Outer-Glove Rinse

Rinse off Alconox/water solution using copious amounts of water. Repeat as many times as necessary.

Necessary equipment includes:

1. Wash tub (30-gallon or large enough for person to stand in)
2. Spray unit

3. Water
4. Long-handle, soft-bristle scrub brushes

Station 4: Outer Gloves Removal

Remove the outer gloves and deposit in individually marked plastic bags.

Necessary equipment includes:

1. Plastic bag

Station 5: Canister or Mask Change

1. Plastic bag

If a worker leaves the EZ to change a canister (or mask), this is the last step in the decontamination procedures. The worker's canister is exchanged, new outer glove donned, and joints taped. Worker returns to duty. Otherwise the worker proceeds to Station 6.

Station 6: Removal of Chemical-Resistant Suit and Outer Boots

With assistance of helper, remove suit and boots. Deposit in container with plastic liner (if disposable).

Necessary equipment includes:

1. PPE drum
2. Non-disposable boot storage rack

Station 7: Inner-Glove Wash

Wash inner gloves with Alconox/water solution. Repeat as many times as necessary.

Necessary equipment includes:

1. Alconox/water solution
2. Wash tub
3. Long-handle, soft-bristle brushes

Station 8: Inner-Glove Rinse

Rinse inner gloves with water. Repeat as many times as necessary.

Necessary equipment includes:

1. Water
2. Wash tub

Station 9: Respirator Removal

Remove face piece. Avoid touching face. Wash respirator in clean, sanitized solution.

Store in clean area.
Necessary equipment includes:

1. Plastic bags for respirator storage
2. Sanitizing solution
3. Cotton

Station 10: Inner-Glove Removal

Remove inner gloves and deposit in container with plastic liner.

Necessary equipment includes:

1. PPE drum

Station 11: Field Wash

Wash hands and face.

Necessary equipment includes:

1. Water
2. Soap
3. Tables
4. Wash basins or buckets
5. Clean towels

Station 12: Redress

If re-entering EZ put on clean field clothes (e.g., Tyvek, gloves, etc.).

Necessary equipment includes:

1. Table
2. Clothing

7.2 Equipment Decontamination

All vehicles, or portions thereof, that may have been contaminated during the course of remedial operations will be decontaminated at the decontamination pad prior to leaving the area. If the level of vehicle contamination is low, decontamination may be limited to rinsing of tires and wheel wells with water. If the vehicle is significantly contaminated, steam cleaning or pressure washing of vehicles and equipment may be required. An appropriate detergent such as trisodium phosphate shall be used. Washing and rinsing solutions will be disposed of at the dewatering facility.

The decontamination pad will be equipped with a drain system and holding tank on a properly graded area that has no deleterious material. The Contractor shall obtain and analyze one soil sample at the area where the decontamination pad is to be built and one soil sample after the pad has been dismantled, as directed by the PM. The decontamination pad shall meet the following requirements:

- Adequate dimensions to contain wash water and debris from the largest-sized vehicles to be utilized in this project. All vehicles and construction equipment leaving a contaminated zone shall be decontaminated.

- Perimeter to be curbed and provided with splash guards.

- 40-mil impervious HDPE membrane or equivalent is required to prevent seepage into the ground.

- Sumps, pumping facilities, and temporary storage facilities to be adequate for anticipated use.

- Temporary storage facility may be mobile tankers or suitable fixed tanks. Fixed tanks shall be located within secondary containment areas capable of containing 100% of the tank capacity, or 110% of the largest tank where the secondary containment area holds more than one tank. The secondary containment area shall have a permeability of not more than 1.0 x 10-7 cm/sec. Additional capacity is required to allow for storage of precipitation.

- The decontamination pad is to be located at the exit of each contaminated zone such that previously non-contaminated areas are not contaminated during remedial activities. This may require the construction and use of multiple decontamination pads.

- There shall be a minimum of six (6) inches of sand under the decontamination pad.

- There shall be side wall panels, six (6) feet high minimum on two sides to prevent over spray.

7.3 Personal Protective Equipment Decontamination

Where and whenever possible, single use, external protective clothing must be used for work within the EZ or CRZ. This protective clothing must be disposed of in properly labeled containers.

Reusable protective clothing will be rinsed at the site with detergent and water. The rinsate will be collected for disposal.

Prior to being removed from the CRZ, the respirator will be thoroughly cleaned with soap and water. The respirator face piece, straps, valves and covers must be thoroughly cleaned at the end of each work shift, and ready for use prior to the next shift. Respirator parts may be disinfected with a solution of bleach and water, or by using a spray disinfectant or other specified respirator cleaning agent.

8. Air Monitoring

8.1 Introduction

Airborne contaminants can present a significant threat to worker health and safety, thus screening, and sometimes quantification of these contaminants through air monitoring, is an essential component of the health and safety program. Reliable measurements of airborne contaminants are useful for:

- Selecting personal protective equipment.
- Delineating areas where protection is needed.
- Assessing the potential health effects of exposure.
- Determining the need for specific medical monitoring.

This section delineates the factors to consider when conducting air monitoring. It presents strategies for assessing airborne contamination and describes instruments and methods for measuring their levels. Exposures may or may not be related to air contaminants due to factors such as PPE, the length of time spent in the work zone, and the location of the work zone.

The air monitoring plan will include both real-time and documentation air monitoring, including real-time air monitoring for particulate levels at the perimeter of the work area. Air monitoring equipment will be operated by personnel trained in the use of the equipment provided and will be under the control of the on-site SO. A field log of the location, time, type and value of each reading and/or sampling event will be maintained. Copies of log sheets will be kept on-site.

8.1.1 Real-Time Air Monitoring

Monitoring equipment shall be maintained and calibrated in accordance with the manufacturer's recommendations. The real-time air monitoring program is implemented to monitor volatile organic vapors and the presence of respirable dust. Real-time air monitoring will be conducted using the following equipment:

- Air monitoring for volatile organic vapors in the breathing zone will be conducted with the Photovac TIP, total organic vapor analyzer or equivalent. The instrument will be calibrated once daily following procedures outlined in the user's manual.

- Total particulates will be measured using a MiniRam Model MIEPDM-3 dust particulate monitor or equivalent. The instrument will be calibrated daily according to the procedure in the user's manual.

The real-time particulate monitor shall be used continuously in the vicinity of the work areas, during the construction activities to monitor for particulate matter less than ten microns (PM-10). The particulate monitor will be able to continuously monitor particulate concentrations. Readings and calibration data shall be recorded in daily logs by the SO. A sample Daily Air Monitoring Log is included in Appendix D.

Real-time air monitoring will determine if an upgrade (or downgrade) of PPE is required while performing onsite work and to implement engineering controls, protocols or emergency procedures if action levels are

encountered.

During the progress of remedial work, air quality will be monitored around each active operation with real-time instrumentation prior to personnel entering these areas. Monitoring will be conducted on a continuous basis. Any departures from background will be noted. Prior to personnel entering a confined area, the SO will determine when and if operations will be shut down.

Monitoring instruments will be kept clean during use to allow for easy decontamination. When not in use, the monitoring instruments will be stored in a clean and dry area. Additional monitoring instruments may be required if the situation or conditions change.

8.1.2 Community Air Monitoring

Community air monitoring will be implemented to monitor for VOC and particulate levels at the perimeter of the work area. Total volatile organic compounds will be monitored continuously at the downwind perimeter of the work area daily using the recommended instrumentation. If total organic vapor levels exceed 5 ppm above background at the work area perimeter, work activities must be halted and the source evaluated. All readings will be recorded and be available for NYSDEC and NYSDOH personnel to review. Total particulate/dust will be monitored upwind and downwind at temporary particulate monitoring stations. If the downwind perimeter particulate level exceeds 150 ug/m^3 over the upwind particulate level, then the dust suppression techniques must be employed. Upwind/downwind locations will be determined by observing the on-site windsock or weather station.

8.2 Action Levels

Should action levels be encountered, work operations shall cease until further evaluation is performed and safe levels are present. If through engineering controls and monitoring, safe levels (below action levels) cannot be achieved, an upgrade in personal protection equipment shall be mandated by the SO, or operations shall cease in that portion of the site. The action levels for this project are as follows:

- Volatile organic compounds (organic vapor monitor); consistent reading of > 5ppm above background levels.
- Odors; noticeable odors outside the EZ.
- Total particulates; consistent downwind readings that are 2.5 times > than background (i.e., upwind) and/or > 150 ug/m^3.
- Visible dust.

8.3 Variables of Site Exposure

Complex, multi-substance environments pose significant challenges to accurately and safely assessing airborne contaminants. Several independent and uncontrollable variables, most notably temperature and weather conditions, can affect airborne concentrations. These factors must be considered when developing an air monitoring program and when analyzing data. Some demonstrated variables include:

- Temperature. An increase in temperature increases the vapor pressure of most chemicals.

- Wind speed. An increase in wind speed can affect vapor concentrations near a free-standing liquid surface. Dusts and particulate-bound contaminants are also affected.

- Rainfall. Water from rainfall can essentially cap or plug vapor emission routes from open or closed containers, saturated soil, or lagoons thereby reducing airborne emissions of certain substances.

- Moisture. Dusts, including finely divided hazardous solids, are highly sensitive to moisture content. Moisture content can vary significantly with respect to location and time and can also affect the accuracy of many sampling results.

- Vapor Emissions. The physical displacement of saturated vapors can produce short-term, relatively high vapor concentrations. Continuing evaporation and/or diffusion may produce long-term low vapor concentrations.

9. Employee Training

9.1 General

All on-site project personnel who work in areas where they may be exposed to site constituents (i.e., potentially hazardous substances during invasive soil/fill excavation) must be trained as required by OSHA Regulation 29 CFR 1910.120. The following are the general training requirements outlined in 29 CFR 1910.120:

General site workers (such as equipment operators, general laborers and supervisory personnel) engaged in hazardous substance removal or other activities that expose or potentially expose workers to hazardous substances and health hazards shall receive a minimum of 40 hours of instruction off the site, and a minimum of three days actual field experience under the direct supervision of a trained experienced supervisor.

Workers on site only occasionally for a specific limited task (such as, but not limited to, ground water monitoring, land surveying, or geophysical surveying) and who are unlikely to be exposed over permissible exposure limits and published exposure limits shall receive a minimum of 24 hours of instruction off the site, and the minimum of one day actual field experience under the direct supervision of a trained, experienced supervisor.

On-site management and supervisors directly responsible for, or who supervise employees engaged in, hazardous waste operations shall receive 40 hours initial training, three days of supervised field experience (the training may be reduced to 24 hours and one day if the only area of their responsibility is employees who are unlikely to be exposed over permissible exposure limits) and at least eight additional hours of specialized supervisor training at the time of job assignment on such topics as, but not limited to, the employer's health and safety program and the associated employee training program, personal protective equipment program, spill containment program, and health hazard monitoring procedure and techniques.

9.2 Basic 40-Hour Course

The following is a list of the topics typically covered in a 40-hour training course:

- General safety procedures;
- Physical hazards (fall protection, noise, heat stress, cold stress);
- Names and job descriptions of key personnel responsible for site health and safety;
- Safety, health, and other hazards typically present at hazardous waste sites;
- Use, application and limitations of PPE;
- Work practices by which employees can minimize risks from hazards;
- Safe use of engineering controls and equipment on site;
- Medical surveillance requirements;
- Recognition of symptoms and signs that might indicate overexposure to hazards;
- Worker right-to-know (Hazard Communication OSHA 1910.1200);
- Routes of exposure to constituents;
- Engineering controls and safe work practices;
- Components of a site health and safety program and HASP;
- Decontamination practices for personnel and equipment;

- Confined-space entry procedures; and
- General emergency response procedures.

9.3 Supervisor Course

Management and supervisors receive an additional eight hours of training, which typically includes:

- General site safety and health procedures;
- PPE programs; and
- Air monitoring techniques.

9.4 Site-Specific Training

Site-specific training will be accomplished by each site worker reading this HASP or through a site briefing by the PM, SO, or HSC on the contents of this HASP before work begins. The review must include a discussion of the chemical, physical, and biological hazards, the protective equipment and safety procedures, and emergency procedures.

9.5 Daily Safety Meetings

Daily Safety Meetings will be held to cover the work to be accomplished, the hazards anticipated, the protective clothing and procedures required to minimize site hazards, and emergency procedures. These meetings should be presented by the SO. No work will be performed in an EZ before the Daily Safety Meeting has been held. Additional safety meetings will be held on an as-required basis. A sample Daily Safety Meeting Log is included as Appendix B.

9.6 First Aid and CPR

At least one employee current in first aid/CPR training should be assigned to the work crew and will be on the site during operations. Refresher training in first aid (triennially) and CPR (annually) is required to keep the certificate current. These individuals must also receive training regarding the precautions and protective equipment necessary to protect against exposure to blood-borne pathogens.

10. Medical Surveillance

10.1 General

All personnel who are potentially exposed to site constituents (i.e., potentially hazardous substances during invasive work) must participate in a medical surveillance program as defined by OSHA in 29 CFR 1910.120 (f).

10.1.1 Preplacement Medical Examination

All potentially exposed personnel must have completed a comprehensive medical examination prior to assignment, and periodically thereafter as defined by applicable OSHA Regulations. The preplacement and periodic medical examinations typically include the following elements:

- Medical and occupational history questionnaire;
- Physical examination;
- Complete blood profile and chemistry;
- Liver enzyme profile;
- Chest X-ray, at a frequency determined by the physician;
- Pulmonary function test;
- Audiogram;
- Electrocardiogram for persons older than 45 years of age, or if indicated during the physical examination;
- Drug and alcohol screening, as required by job assignment;
- Visual acuity; and
- Follow-up examinations, at the discretion of the examining physician.

The examining physician provides the employee with a letter summarizing his findings and recommendations, confirming the worker's fitness for work and ability to wear a respirator. Documentation of employee's medical clearance will be available during all project site work.

Contractors and subcontractors will certify that all their employees have successfully completed a physical examination by a qualified physician. The physical examinations must meet the requirements of 29 CFR 1910.120 and 29 CFR 1910.134. Contractors and subcontractors will supply copies of the medical examination certificate for each on-site employee to the SO.

10.1.2 Other Medical Examination

In addition to pre-employment, annual, and exit physicals, personnel may be examined:

- At employee request after known or suspected exposure to toxic or hazardous materials;

- At the discretion of the client, HS professional, or occupational physician in anticipation of, or after known or suspected exposure to toxic or hazardous materials; and

- At the discretion of the occupational physician.

10.1.3 Periodic Examination

Following the pre-placement examination, all employees must undergo a periodic examination, similar in scope to the pre-placement examination. For employees potentially exposed over 30 days per year, the frequency of periodic examinations will be annual. For employees potentially exposed fewer than 30 days per year, the frequency for periodic examinations will be 18 months.

10.2 Medical Restriction

When the examining physician identifies a need to restrict work activity, the employee's supervisor must communicate the restriction to the employee and the SO. The terms of the restriction will be discussed with the employee and the supervisor.

11. Contingency Plan

11.1 Introduction

The objective of this Contingency Plan is to establish procedures for handling events that occur outside the scope of routine maintenance and minimize hazards to human health and the environment. The Contingency Plan, which outlines response actions, should be implemented following the identification of a hazardous site condition.

The following guidelines are offered to determine when the Contingency Plan should be implemented and to evaluate possible corrective actions when responding to an emergency. All corrective actions, where appropriate, will be executed in a timely fashion; and must include notification of the appropriate regulatory agencies.

11.2 Personnel Training

All field personnel will receive health and safety training prior to the initiation of any site activities and will be briefed on daily sign-in procedures. A chronological daily sign-in log, for all persons entering the project site, will be maintained by the Contractor. The daily sign-in log will contain at a minimum: organization, date, and time of entry and exit. On a day-to-day basis, individual personnel should be constantly alert for indicators of potentially hazardous situations and for signs and symptoms in themselves and others that warn of hazardous conditions and exposures. Rapid recognition of dangerous situations can avert an emergency. Before daily work assignments, safety meetings will be held. Discussion should include:

- Tasks to be performed;
- Time constraints (e.g., rest breaks, cartridge changes);
- Hazards that may be encountered, including their effects, how to recognize symptoms or monitor them, concentration limits, or other danger signals;
- Evacuation routes and safe zones, which may change from day to day depending upon location of work to be performed;
- Communication protocols including use of two-way radios and standard hand signals; and
- Emergency procedures.

All field personnel shall adhere to the standard safe work practices as the primary means for accident prevention.

11.3 Vehicles and Heavy Equipment

Working with large motor vehicles and heavy equipment could be a major hazard at this site. Injuries can result from equipment hitting or running over personnel, impacts from flying objects, or overturning of vehicles. Vehicle and heavy equipment design and operation will be in accordance with 29 CFR, Subpart 0, 1926.600 through 1926.602. In particular, the following precautions will be utilized to help prevent injuries/accidents.

- Brakes, hydraulic lines, light signals, fire extinguishers, fluid levels, steering, tires, horn, and other safety devices will be checked at the beginning of each shift.

- Large construction motor vehicles will not be backed up unless:

    - The vehicle has a reverse signal alarm audible above the surrounding noise level; or

    - The vehicle is backed up only when an observer signals that it is safe to do so.

- Heavy equipment or motor vehicle cable will be kept free of all nonessential items, and all loose items will be secured.

- Large construction motor vehicles and heavy equipment will be provided with necessary safety equipment (seat belts, roll-over protection, emergency shut-off in case of roll-over, backup warning lights and audible alarms.)

- Blades and buckets will be lowered to the ground and parking brakes will be set before shutting off any heavy equipment or vehicles.

11.4 Contingency Plan Implementation

11.4.1 Responsible Personnel

The PM for this site has primary responsibility for ensuring that this plan is implemented as described. At all times, there will be at least one employee (the "Response Coordinator") either at the site or on call, responsible for coordinating all emergency response measures. The Response Coordinator must be familiar with all aspects of the operations onsite, location and characteristics of all materials handled, and emergency resources available. The Response Coordinator must be thoroughly familiar with all facets of this Contingency Plan. For this project, the SO will act as the Response Coordinator.

All personnel and outside contractors who work at the site must be familiar with the provisions of this plan. Their training must be documented by the Response Coordinator as part of the site's operating record. Refer to Table 2.1 for a listing of the facility's PM and Response Coordinator.

11.4.2 Procedures

The Project Manager will designate a Response Coordinator, who will be responsible for ensuring proper execution of the Emergency Response Plan. The Response Coordinator may be any onsite employee who has received adequate training in implementation of the contingency plan.

Responsibilities of the Response Coordinator BEFORE an emergency include the following:

1. Ensure there is an Alternate Response Coordinator ready to take over in his absence who is fully trained and capable of assuming control in emergency situations;

2. Become familiar with the physical layout of the site, and the operations carried out;

3. Develop an understanding of the emergency response organization;

4. Establish close cooperation with local response agencies, including briefing them on potential hazards and facility emergency procedures; and

5. Alert appropriate emergency services before starting any hazardous work and provide a copy of the Contingency Plan (Section 11) to the respective emergency services.

Responsibilities of the Response Coordinator DURING an emergency include the following:

1. Direct and coordinate all response activities;

2. Request assistance of local response agencies, if needed;

3. Coordinate the efforts of onsite personnel with offsite emergency response agencies;

4. Supervise the evacuation of non-essential personnel from the area of the emergency;

5. Assess possible hazards to human health and the environment that may result from a chemical release, fire, or explosion; including the effects of the release, fire, or explosion. The assessment will include considerations on the effects of toxic, irritating or asphyxiating gases, and hazardous surface runoff due to water or chemical agents used to control fires, etc. If it is determined through these assessments that off-site areas may need to be evacuated, the Response Coordinator will consult and assist with the appropriate local authorities to accomplish this; and

6. Supervise emergency surveillance of the area for leaks, pressure build-ups, gas generation or ruptures in valves, pipes, and other equipment if the facility stops operations.

Responsibilities of the Response Coordinator AFTER an emergency include the following:

1. Ensure that all aspects of the situation have been addressed including an immediate and thorough examination of the entire emergency area, and all equipment that may have been involved in the incident;

2. Supervise post-emergency surveillance of the area to ensure that an emergency situation does not redevelop;

3. Establish normal facility operation; if this is not possible, ensure that alternate options are developed;

4. Supervise post-emergency clean-up and provide for testing, storing, and disposing of recovered waste, plus contaminated materials used to mitigate the emergency situation;

5. Supervise the redevelopment of emergency equipment and material back into a state of readiness;

6. Determine the cause of the emergency;

7. Develop or modify operating procedures and equipment to prevent future emergencies from similar causes;

8. Modify existing emergency response procedures, if required;

9. Notify the appropriate regulatory agencies as required (coordinate this activity with the PM); and

10. Prepare a report for the operating record which includes: date and time, who responded, type of incident, details of areas/materials involved, procedures used, post- emergency response, personnel injuries, etc.

11.4.3 Arrangements with Emergency Authorities and Contractors

The appropriate local authorities and contractors who may be called upon for assistance during an emergency must be apprised of that possibility and provided a copy of this plan. Transmittal of the Contingency Plan to local response agencies and hospitals must be documented by the Response Coordinator. Refer to Table 12.1 for a listing of local authorities.

11.5 Response Plan Actions

11.5.1 General

The response actions outlined in the following sections contain general guidelines in the event of an emergency situation at the facility. These guidelines provide the information necessary to inform appropriate company personnel and outside agencies of the potential hazards and response actions that may be required in an emergency.

Emergency conditions are considered to exist if:

- Any member of the field crew is involved in an accident or experiences any adverse effects or symptoms of exposure while on site.

- A condition is discovered that suggests the existence of a situation more hazardous than anticipated.

In the event that an emergency develops on site, the procedures delineated herein are to be immediately followed:

- Notify the paramedics and/or fire department, as necessary;
- Signal the evacuation procedure outlined in Section 11.5.7 and implement the entire procedure;
- Isolate the area;
- Stay upwind of any fire;
- Keep the area surrounding the problem source clear after the incident occurs; and
- Complete accident investigation report form and distribute to appropriate personnel.

11.5.2 Fire and Explosions

Fires and gas explosions at the facility must be immediately reported to the local fire department (listed in Table 12-1) for assistance. Any trained emergency response personnel may extinguish the fire if conditions permit this to be accomplished safely. Appropriate response measures, including personnel safety, will be the responsibility of the fire department. Fires will be extinguished according to approved fire department protocol. The Response Coordinator will coordinate evacuation of the impacted area and account for all personnel onsite. At the earliest possible time, the PM must be notified of the situation.

11.5.3 Release of Hazardous Material

Anyone discovering a release of hazardous (or unknown) material at the facility must immediately contact the Response Coordinator. The Response Coordinator must identify the material involved and direct all

containment, cleanup, and remedial efforts. At the earliest possible time, the PM must be notified of the situation. If necessary, actions will be implemented to assess potential groundwater or surface water contamination and/or emissions. If required, the appropriate regulatory agencies must be notified of the release (refer to Table 12-1).

11.5.4 Release of Non-Hazardous Material

Anyone discovering a release of an identified non-hazardous material at the facility must immediately contact the Response Coordinator. The Response Coordinator will direct all containment, cleanup, and remedial efforts to be performed. If necessary, any follow-up assessments or notifications will be made by the Response Coordinator. At the earliest possible time, the PM must be notified of the situation.

11.5.5 Medical Emergency

In the event of a medical emergency, personnel must immediately contact appropriate local response agencies (as listed in Table 12-1). At the earliest possible time, the Response Coordinator must be notified. The Response Coordinator will be responsible for ensuring that follow-up procedures are completed. Refer to Figure 2 for a map to nearest medical facility (Mercy Hospital of Buffalo).

11.5.6 Chemical Exposure

If a member of the field crew demonstrates symptoms of chemical exposure the procedures outlined below should be followed:

- Another team member (buddy) should remove the individual from the immediate area of contamination. The buddy should communicate to the Response Coordinator (via voice and hand signals) the chemical exposure. The Response Coordinator should contact the appropriate emergency response agency.

- Precautions should be taken to avoid exposure of other individuals to the chemical.

- If the chemical is on the individual's clothing, the chemical should be neutralized or removed if it is safe to do so.

- If the chemical has contacted the skin, the skin should be washed with copious amounts of water.

- In case of eye contact, an emergency eye wash should be used. Eyes should be washed for at least 15 minutes.

- All chemical exposure incidents must be reported in writing to the PM. The Response Coordinator is responsible for completing the accident investigation report (See Appendix E*).*

- Provide a post-exposure medical exam and document any findings.

Organic vapor action levels that require emergency response or corrective action are defined in Section 8.3 of the HASP. When concentrations in the 20-foot zone exceeding the organic vapor action levels (5 ppm) are indicated, the following activities will be undertaken:

1. The local police authorities will immediately be contacted by the Response Coordinator and advised of

the situation.

2. Frequent air monitoring will be conducted at 30-minute intervals within the 20-foot zone. If two successive readings below action levels are measured, air monitoring may be halted or modified by the SO.

3. All emergency contacts will go into effect as appropriate.

11.5.7 Evacuation Procedures

- The Response Coordinator will initiate the evacuation procedure by signaling to leave the site with a series of air horn blasts.

- All personnel in the work area should evacuate the area and meet in the common designated area, as determined by Response Coordinator before the project begins. All workers will be instructed on the location of the designated area before they begin work. Instruction will be documented.

- All personnel suspected to be in or near the contract work area should be accounted for and the whereabouts of missing persons determined immediately.

- Further instruction will then be given by the Response Coordinator, Contractor, or PM.

11.5.8 Vehicle Accident

If an off-site vehicle accident involving a company vehicle occurs, the local police must immediately be contacted to file a report. If an accident occurs onsite involving a non-site owned vehicle or an injury (regardless of the vehicle involved), personnel must immediately contact the local police department (as listed in Table 12-1) to file a report. If an onsite accident involves only a site-owned vehicle, an internal investigation report must be prepared. In any of these situations, the Response Coordinator must be notified as soon as possible. The Response Coordinator will be responsible for ensuring that follow-up procedures and documentation are completed and that the PM is notified.

11.5.9 Personal Injury

- In the case of personal injury at the site, the following procedures should be followed:

- Another team member (buddy) should signal the Response Coordinator that an injury has occurred.

- A field team member trained in first aid can administer treatment for minor injuries to the injured worker.

- If off-site treatment is required, the victim should then be transported to the nearest hospital or medical center. If necessary, an ambulance should be called to transport the victim.

- The Response Coordinator is responsible for making certain that an accident report form is completed within 24 hours. This form is to be submitted to the PM within 24 hours. Follow-up action should be taken and documented to correct the situation that caused the accident.

11.5.10 Property Damage and/or Theft

Any property damage and/or theft, discovered at the facility will immediately be reported to the local police department (as listed in Table 12-1) to file a report. At the earliest possible time, the Response Coordinator must be notified. The Response Coordinator will be responsible for ensuring that follow-up procedures and documentation are completed.

11.5.11 Site Security

Signage will be posted directing visitors to report to the field office prior to entering the site. Temporary fences and barricades will be installed to protect intruders from open excavation and construction areas during non-working hours. Equipment will be staged in visible areas at the end of each work day.

11.6 Maintenance of and/or Revisions to Plan

11.6.1 Maintenance

The PM must review the Contingency Plan on an annual basis, at a minimum, and document the review in the site's operating record. The Contingency Plan must also be reviewed after implementation in an emergency to determine if any changes are needed to improve its effectiveness. Should any aspect of the site's operations (including personnel changes), equipment, or arrangements with local authorities or contractors change, the plan must be revised accordingly.

11.6.2 Revisions

The PM and Response Coordinator must ensure that any revisions made to the plan are distributed for insertion into all copies of the Contingency Plan. Documentation that all affected personnel have been made familiar with the revisions must be maintained by the Response Coordinator.

12. Emergency Procedures

12.1 General

Prior to the start of operations, the work area will be evaluated for the potential for fire, constituent release, or other catastrophic event. Unusual conditions or events, activities, chemicals, and conditions will be reported to the SO immediately.

The SO will establish evacuation routes and assembly areas for the site. All personnel entering the site will be informed of this route and the assembly area.

12.2 Emergency Response

If an incident occurs, the following steps will be taken:

- The SO will evaluate the incident and assess the need for assistance and/or evacuation;
- The SO will call for outside assistance as needed;
- The SO will ensure the PM is notified promptly of the incident; and
- The SO will take appropriate measures to stabilize the incident scene.

12.2.1 Fire

In the case of a fire on the site, the SO will assess the situation and direct fire-fighting activities. The SO will ensure that the client site representative (as appropriate) is immediately notified of any fires. Site personnel will attempt to extinguish the fire with available extinguishers, if safe to do so. In the event of a fire that site personnel are unable to safely extinguish, the local fire department will be summoned.

12.3 Spill Prevention/Response

This section details requirements for activities to be performed by the Contractor to prevent, or if occurred, minimize the impacts from the accidental spill or other release of fuels, oils, or other hazardous materials brought on-site during remedial measure activities. The purpose of this section is to:

- Identify site specific re-fueling procedures which minimize the potential for release of hazardous materials to the environment;
- Identify the responsibilities of the Contractor's SO;
- Provide emergency spill response procedures in the event of a spill or other release; and
- Identify spill reporting requirements.

The Contractor's SO will have the responsibility of implementing this Plan.

12.3.1 Site Specific Re-Fueling Procedures

All Contractor-owned and rented equipment will be supplied with appropriate spill kits. Absorbent pads shall be placed beneath the fuel filler nozzle during re-fueling procedures. All fuel brought onto the site shall be

contained in a DOT-approved truck mounted tank, outfitted with an electric fueling nozzle equipped with an automatic shut-off. All equipment requiring re-fueling will be conducted in an area outside the excavation area.

For earth moving equipment equipped with hydraulic lines, the fluid lines shall be visually inspected daily by the Contractor. In case of a line break, the spill-kits on the equipment shall be utilized to contain the spill, after which it shall be cleaned up and placed in approved DOT containers for proper disposal. Any such spill shall follow the spill response and reporting requirements identified below.

12.3.2 Duties and Responsibilities of the Contractor's Designated Emergency Coordinator

The Contractor's SO shall be responsible for coordinating and directing emergency response measures and should be thoroughly familiar with remediation activities, the location and characteristics of all materials handled, the location of records within the project site office, the general layout of the area, and all aspects of this contingency plan.

Whenever there is an imminent emergency situation, the Contractor's SO shall immediately:

1. Notify site personnel of the incident.
2. Notify appropriate contacts listed.
3. If deemed necessary, notify applicable local authorities.

In the event of an accidental release of a toxic or hazardous material, the employee observing the incident shall immediately notify the Contractor's SO, and if possible, proceed to control the emergency situation.

The Contractor's SO shall then immediately assess the hazard and identify the character and specific source of the spill. Most releases will be minor and require only cleanup and disposal of small quantities of materials. However, if there is an immediate threat to human health and the environment, evacuation and notification of the appropriate authorities may be necessary. Appropriate authorities may include local police and fire departments, hospitals, and state and local emergency response teams.

Good judgment shall be used in evacuation procedures to avoid placing people in greater danger. If no immediate threat exists, the Contractor's SO shall continue to direct emergency response cleanup activities and notify the Group's On-Site Representative of the incident and provide the minimum information, to be followed by a written report which includes, but is not limited to, the following:

1. Name of the person reporting the incident.
2. Location of the incident.
3. Phone number where the person reporting the spill can be reached.
4. Date, time and location of the incident.
5. A brief description of the incident.

6. The estimated quantities of materials or wastes spilled.
7. The extent of contamination of land, water, or air, if known.
8. Action taken, or to be taken.

When determining the possible hazards to human health and/or the environment that may result from the incident, the Contractor's SO must consider both the direct and indirect effects of the release, assess the possible effects of any toxic, irritating, or asphyxiating gases that are generated, and determine the effects of any hazardous run-off from water or chemical agents used to control fire and heat-induced explosions.

Material Safety Data Sheets (MSDS) shall be maintained in the project site office and provide information on the chemical hazards.

The Contractor's SO shall take all reasonable measures to ensure that the fire, explosion, or discharge does not occur, reoccur, or spread to other materials or waste at the site. These measures include stopping operations, collecting and containing released materials or wastes, and removing or isolating containers. The Contractor's SO must ensure that all waste materials which are handled are compatible. In addition, the Contractor's SO shall ensure that any emergency equipment used during the event is decontaminated.

12.3.3 Emergency Spill Response Procedures

All spills will be reported immediately to the Contractor's SO. The Contractor's SO will then be responsible for determining whether the project site has had a release of material which could present a threat to human health and/or the environment. If the assessment indicates that evacuation of local areas may be advisable, the Contractor's SO will notify on-site personnel and local emergency response personnel of an evacuation.

12.3.4 Spill Reporting Requirements

If a release is reportable to the National Response Center (NRC) [i.e., meets federal Reportable Quantities (RQ)] as determined by the Contractor's SO or HSC, then the PM will be notified. The PM will then immediately contact the NRC. Additionally, if a release is reportable to the NYSDEC (i.e., meets state RQ) the PM will immediately notify the spill hotline, as well as the NYSDEC Project Manager. At a minimum, the PM shall provide the following information, for reporting purposes:

- location of the release or threatened release;
- the material released or threatened to be released;
- the approximate quantity and concentration of the release or threatened; and
- any other information as required for compliance with NRC or NYSDEC reporting requirements.

12.3.5 Emergency Information

The means to summon local public response agencies such as police, fire, and ambulance will be reviewed in the daily safety meeting. Emergency contacts are listed in Table 12-1.

12.4 Medical Emergency

All employee injuries must be promptly reported to the SO, who will:

- Ensure that the injured employee receives prompt first aid and medical attention;

- In emergency situations, the worker is to be transported by appropriate means to the nearest urgent care facility (normally a hospital emergency room).

12.5 Emergency Planning

12.5.1 Driving Route to Nearest Hospital

Post in conspicuous places in the SZ a map with written directions to the nearest hospital or emergency treatment facility. **A map showing the location of the nearest hospital is included as Figure 2**.

The nearest hospital to the site is Mercy Hospital. The hospital is approximately 2.4 miles from the site and it takes approximately 7 minutes by motor vehicle.

Starting from: 837 Bailey Ave. (Site)
Arriving at: Mercy Hospital of Buffalo, 565 Abbott Road, Buffalo, New York
Distance: Approximately 2.4 miles
Travel Time: Approximately 7 minutes

Directions:
Head southwest on Bailey Ave. - 1.3mi.
Turn left onto McKinley Pkwy - 0.3mi.
Slight right onto Southside Pkwy - 69ft.
Turn left onto Abbott Rd - 0.8mi.

12.6 First Aid - General

All persons must report any near-miss incident, accident, injury, or illness to their immediate supervisor or the SO. First aid will be provided by trained personnel. Injuries and illnesses requiring medical treatment must be documented. The SS must conduct an accident investigation as soon as emergency conditions no longer exist and first-aid and/or medical treatment has been ensured. These two reports must be completed and submitted to the PM within 24 hours after the incident.

If first-aid treatment is required, first aid kits are kept at the CRZ. If treatment beyond first aid is required, the injured should be transported to the medical facility. If the injured is not ambulatory, or shows any sign of not being in a comfortable and stable condition for transport, then an ambulance/paramedics should be summoned. If there is any doubt as to the injured worker's condition, it is best to let the local paramedic or ambulance service examine and transport the worker.

- ***Survey the scene.*** Determine if it is safe to proceed. Try to determine if the conditions which caused the incident are still a threat. Protect yourself from exposure before attempting to rescue the victim.

- ***Do a primary survey of the victim.*** Check for **airway** obstruction, **breathing**, and **pulse**. Assess likely routes of chemical exposure by examining the eyes, mouth, nose, and skin of the victim for symptoms.

- ***Phone Emergency Medical Services (EMS).*** Give the location, telephone number used, caller's name, what happened, number of victims, victims' condition, and help being given.

- ***Maintain airway and perform rescue breathing*** as necessary.

- ***Perform cardiopulmonary resuscitation (CPR) as necessary.***

- ***Do a secondary survey of the victim.*** Check ***vital signs*** and do a ***head-to-toe exam.***

- ***Treat other conditions as necessary.*** If the victim can be moved, take him to a location away from the work area where EMS can gain access.

12.6.1 First Aid - Inhalation

Any employee complaining of symptoms of chemical overexposure will be removed from the work area and transported to the designated medical facility for examination and treatment.

12.6.2 First Aid - Ingestion

Call EMS and consult a poison control center for advice. If available, refer to the MSDS for treatment information, if recommended. If unconscious, keep the victim on his side and clear the airway if vomiting occurs.

12.6.3 First Aid - Skin Contact

Project personnel, who have had skin contact with constituents will, unless the contact is severe, proceed through the decontamination zone, to the wash-up area. Personnel will remove any contaminated clothing, and then flush the affected area with water for at least 15 minutes. The worker should be transported to the medical facility if he shows any sign of skin reddening, irritation, or if he requests a medical examination.

12.6.4 First Aid - Eye Contact

Project personnel who have had constituents splashed in their eyes or who have experienced eye irritation while in the contaminated zone, must immediately proceed to the eyewash station, set up in the decontamination zone. Do not decontaminate prior to using the eyewash. Remove whatever protective clothing is necessary to use the eyewash. Flush the eye with clean running water for at least 15 minutes. Arrange prompt transport to the designated medical facility.

12.7 Reporting Injuries and Illnesses

All injuries and illnesses, however minor, will be reported to the SO immediately. The SO will complete an injury report and submit it to the PM within 24 hours.

12.8 Emergency Information

The means to summon local public response agencies such as police, fire, and ambulance will be reviewed in the Daily Safety Meeting. These agencies are identified in the following table.

TABLE 12-1
EMERGENCY CONTACTS

	Phone Number	Location
1. Local Emergency Contacts		
Emergency City of Buffalo		
- Police Department	911 or 716-851-4444	74 Franklin St., Buffalo, NY
- Fire Department	911 or 716-851-5333	195 Court St., Buffalo, NY
Emergency Erie County		
- Sheriff's Department	716-858-7618	Buffalo, NY
- Health Department	716-858-7691	Buffalo, NY
Emergency New York State		
- State Police	716-773-9651	Grand Island, New York
- NYSDEC Region 9 Office Division of Environmental Remediation	716-851-7220	Buffalo, New York
2. Medical Emergency Contacts		
Mercy Hospital	716-826-7000	565 Abbott Rd, Buffalo, NY

Ambulance Services (24 hour)	911 or	Buffalo Ambulance

Note: See Table 2-1 of this HASP for telephone numbers of key client and site personnel associated with this project.

Figure 1

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Site Location Map

Project No.	15-0027-3	**EnSol, Inc.**	**SITE LOCATION MAP**
Date	October 2015	**Environmental Solutions** **661 Main St.** **Niagara Falls, NY 14301** **Phone:(716) 285-3920** **Fax: (716) 285-3928**	837 Bailey Ave. Site
Scale	NTS		Near Dingens, LLC — **Fig. 1**

Figure 2

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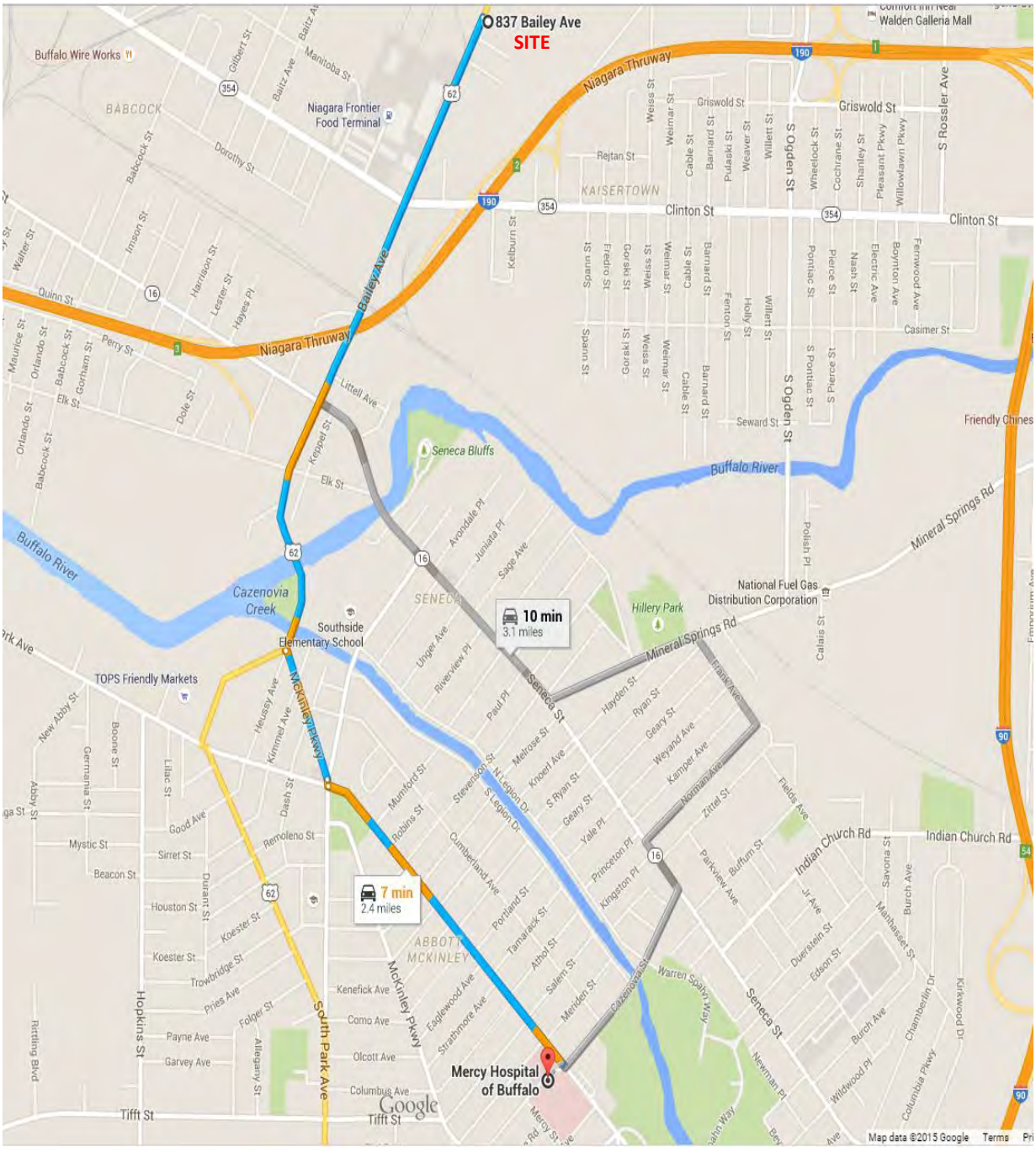
Route to Nearest Hospital



Project No.	15-0027-3	**EnSol, Inc.**	**ROUTE TO NEAREST HOSPITAL**
Date	October 2015	**Environmental Solutions** **661 Main St.** **Niagara Falls, NY 14301** **Phone:(716) 285-3920** **Fax: (716) 285-3928**	837 Bailey Ave. Site
Scale	NTS		Near Dingens, LLC — **Figure 2**

Appendix A

Health and Safety Plan Acknowledgments

Approvals and Acknowledgments

Approvals

I have read and approved this HASP with respect to project hazards, regulatory requirements, and property owner procedures.

Project Name: **837 Bailey Ave. Site – RI/Remedial Activities (BCP Site No. C915298)**

_____

Project Manager/Date

_____

Project Safety Officer/Date

Acknowledgments

The final approved version of this HASP has been provided to the Safety Officer (SO). I acknowledge my responsibility to provide the SO with the equipment, materials and qualified personnel to implement fully all safety requirements in this HASP. I will formally review this plan with the health and safety every six months until project completion.

_____ _____.

Project Manager Date

I acknowledge receipt of this HASP from the Project Manager, and that it is my responsibility to explain its contents to all site personnel and cause these requirements to be fully implemented. Any change in conditions, scope of work, or other change that might affect worker safety requires me to notify the Project Manager.

_____ _____.

Safety Officer Date

Health and Safety Plan Acknowledgment

I have read this Site-Specific Health and Safety Plan (HASP), or its contents have been presented to me, and I understand the contents, and I agree to abide by its requirements.

Project Name: **837 Bailey Ave. Site – RI/Remedial Activities (BCP Site No. C915298)**

Name (Print)	**Signature**	**Representing**	**Date**

Appendix B

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Daily Air Monitoring Log

DAILY AIR MONITORING LOG

Project: **Date:**

Monitoring Instruments:

Air Monitor: **Activity:**

Level of Protection:

Time	Location	Instrument Reading	Comments

Appendix C

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Daily Field Report

DAILY FIELD REPORT NO.:

DAILY FIELD REPORT

PROJECT: **CLIENT:**		**DATE:** **SHEET NO. ___ OF** **PROJECT NO.:**
CONTRACTOR:	**CONTRACT NO.:**	**DAY OF WEEK:** S M T W T F S
REPORT BY:	**SIGNATURE:**	
WEATHER: Wind From: N NE E SE S SW W NW at ___ mph Sunny Partly Cloudy Cloudy Overcast Sprinkles Showers Thunderstorms		**TEMPERATURE: LOW HIGH**

Daily Objective

Field Notes

Testing/Samples

Site Visitors

LABOR										
Classification	Prime		A		B		C		D	
	No. Men	Hrs.	No. Men	Hrs.	No. Men	Hrs.	No. Men	Hrs.	No. Men	Hrs.
Superintendent										
Foreman										
Laborer										
Operator										
Teamster										
Site Safety Officer										
CQA Inspector										
EQUIPMENT										
Description	Prime		A		B		C		D	
Make/Size/Model No.	No.	Hrs.	No.	Hrs.	No.	Hrs.	No.	Hrs.	No.	Hrs.
A is:					**C is:**					
B is:					**D is:**					

MATERIALS					
Item No.	Description	Quantity	Item No.	Description	Quantity

Appendix D

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Daily Safety Meeting Log

SAFETY MEETING LOG

PROJECT: _____ **LOCATION:** _____

DATE/TIME: _____ **ACTIVITY:** _____

1. Work Summary
2. Physical/Chemical Hazards
3. Protective Equipment/Procedures
4. Emergency Procedures

5. Signatures of Attendees	

Appendix E

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Accident Investigation Report

ACCIDENT INVESTIGATION REPORT

Date of Report _____ Date of Accident _____ Time of Accident _____

Project Name/Location _____

Employee's Name _____ Title _____

Address _____ Employee # _____

City _____ State _____ Zip Code _____

Age _____ Sex _____ Marital Status _____

Date of Hire _____ Social Security # _____ # of Dependents _____

Description of Accident: _____

Description of Injuries: _____

_____

_____

Witnesses: _____

Injuries Required:

☐ First Aid (At Scene) ☐ Emergency Room Treatment ☐ Hospitalization

Location of Accident _____

First Aid Provided By _____

Medical Facility/Address _____

Attending Physician _____

Did Employee Return to Work?

Yes No If Yes, Give Date _____

Did Employee Lose Time at Work?

Yes No If Yes, Give Amount _____

Actions or Conditions Causing Accident: _____

Corrective Actions: _____

_____

Further Comments: _____

_____

Employee Signature _____ Date _____

H&S Review _____ Date _____

Appendix F

Underground/Overhead Utility Checklist

UNDERGROUND/OVERHEAD UTILITY CHECKLIST

Project Name/Number_____ **Date**_____
Location_____
Prepared By_____ **Project Manager**_____

This checklist must be completed for any intrusive subsurface work such as excavation or drilling. It documents that overhead and underground utilities in the work are identified and located. The Project Manager shall request utility markouts before the start of field operations to allow the client and utility companies sufficient time to provide them. If complete information is not available, a magnetometer or other survey shall be performed to locate obstacles prior to intrusive subsurface activities.

Procedure

A diagram of the work area depicting the proposed location of intrusive subsurface work sites (i.e., boring locations, excavation locations) must be attached to this form. The diagram must clearly indicate the areas checked for underground structures/utilities, and overhead power lines. This form and the diagram must be signed by the Project Manager (if present), the Ste Supervisor, and the client representative.

Checklist

Type of Structure	Present	Not Present	Method of Markout
Electric Power Line			
Natural Gas Line			
Telephone Line			
Water Line			
Product Line			
Sewer Line			
Steam Line			
Drain Line			
Underground Tank			
Underground Cable			
Overhead Power Line			
Overhead Product Line			
Other (Specify)			

Client Representative_____ Date_____

Project Manager_____ Date_____

Site Supervisor_____ Date_____

Appendix G

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Material Safety Data Sheets

APPENDIX G

SITE MANAGEMENT FORMS

Enclosure 1

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No.

Site Name

Site Address: Zip Code:
City/Town:
County:
Allowable Use(s) (if applicable, does not address local zoning):
Site Acreage:
Owner:
, , NY

Reporting Period: to

Verification of Site Details **Box 2**

	YES	NO
1. Is the information in Box 1 correct?	☐	☐
If NO, are changes handwritten above or included on a separate sheet?	☐	
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	☐
If YES, is documentation or evidence that documentation has been previously submitted included with this certification?	☐	
3. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	☐
If YES, is documentation (or evidence that documentation has been previously submitted) included with this certification?	☐	
4. If use of the site is restricted, is the current use of the site consistent with those restrictions?	☐	☐
If NO, is an explanation included with this certification?	☐	
5. For non-significant-threat Brownfield Cleanup Program Sites subject to ECL 27-1415.7(c), has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid?	☐	☐
If YES, is the new information or evidence that new information has been previously submitted included with this Certification?	☐	
6. For non-significant-threat Brownfield Cleanup Program Sites subject to ECL 27-1415.7(c), are the assumptions in the Qualitative Exposure Assessment still valid (must be certified every five years)?	☐	☐
If NO, are changes in the assessment included with this certification?	☐	

SITE NO.

Box 3

Description of Institutional Controls

Box 4

Description of Engineering Controls

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

   b) 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; and the information presented is accurate and compete.

YES	NO
☐	☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

   (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) 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;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
☐	☐

3. If this site has an Operation and Maintenance (O&M) Plan (or equivalent as required in the Decision Document);

   I certify by checking "YES" below that the O&M Plan Requirements (or equivalent as required in the Decision Document) are being met.

YES	NO
☐	☐

4. If this site has a Monitoring Plan (or equivalent as required in the remedy selection document);

   I certify by checking "YES" below that the requirements of the Monitoring Plan (or equivalent as required in the Decision Document) is being met.

YES	NO
☐	☐

IC CERTIFICATIONS
SITE NO.

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 2 and/or 3 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 _____ at _____,
print name print business address

am certifying as _____(Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

_____ _____
Signature of Owner or Remedial Party Rendering Certification Date

IC/EC CERTIFICATIONS

Box 7

QUALIFIED ENVIRONMENTAL PROFESSIONAL (QEP) SIGNATURE

I certify that all information in Boxes 4 and 5 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 _____ at _____,
print name print business address

am certifying as a Qualified Environmental Professional for the _____

(Owner or Remedial Party) for the Site named in the Site Details Section of this form.

_____ _____ _____
Signature of Qualified Environmental Professional, for the Owner or Remedial Party, Rendering Certification Stamp (if Required) Date

Enclosure 2

Certification Instructions

I. Verification of Site Details (Box 1 and Box 2):

Answer the six questions in the Verification of Site Details Section. Questions 5 and 6 only refer to sites in the Brownfield Cleanup Program. The Owner and/or Qualified Environmental Professional (QEP) may include handwritten changes and/or other supporting documentation, as necessary.

II. Certification of Institutional / Engineering Controls (Boxes 3, 4, and 5)

1. Review the listed IC/ECs, confirming that all existing controls are listed, and that all existing controls are still applicable. If there is a control that is no longer applicable the Owner / Remedial Party is to petition the Department requesting approval to remove the control.

2. In Box 5, complete certifications for all Plan components, as applicable, by checking the corresponding checkbox.

3. If you cannot certify "YES" for each Control and/or certify the other SM Plan components that are applicable, continue to complete the remainder of this **Certification** form. Attach supporting documentation that explains why the **Certification** cannot be rendered, as well as a statement of proposed corrective measures, and an associated schedule for completing the corrective measures. Note that this **Certification** form must be submitted even if an IC or EC cannot be certified; however, the certification process will not be considered complete until corrective action is completed.

   If the Department concurs with the explanation, the proposed corrective measures, and the proposed schedule, a letter authorizing the implementation of those corrective measures will be issued by the Department's Project Manager. Once the corrective measures are complete, a new Periodic Review Report (with IC/EC Certification) is to be submitted within 45 days to the Department. If the Department has any questions or concerns regarding the PRR and/or completion of the IC/EC Certification, the Project Manager will contact you.

III. IC/EC Certification by Signature (Box 6 and Box 7):

If you certified "YES" for each Control, please complete and sign the IC/EC Certifications page. Where the only control is an Institutional Control on the use of the property the certification statement in Box 6 shall be completed and may be made by the property owner. Where the site has Institutional and Engineering Controls, the certification statement in Box 7 must be completed by a Professional Engineer or Qualified Environmental Professional (see table below).

Table 1. Signature Requirements for Control Certification Page

Type of Control	Example of IC/EC	Required Signatures
EC which does not include a treatment system or engineered caps.	Fence, Clean Soil Cover, Individual House Water Treatment System, Vapor Mitigation System	A site or property owner or remedial party, and a QEP. (P.E. license not required)
EC that includes treatment system or an engineered cap.	Pump & Treat System providing hydraulic control of a plume, Part 360 Cap.	A site or property owner or remedial party, and a QEP with a P.E. license.

EnSol, Inc.
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Professional Engineering • Business Consulting

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Niagara Falls, NY 14301
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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:
COVER SYSTEM INTEGRITY INSPECTION:
COMPLIANCE WITH PERMITS AND O&M PLAN:
RECORDS COMPLIANCE:
GENERAL COMMENTS:
INSPECTION COMPLETED BY: (signature and date)

EnSol
ENGINEERING + ENVIRONMENTAL

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Niagara Falls, NY 14301
716.285.3920

ensolinc.com

Soil Vapor Sampling Form

PROJECT:	DATE:
CLIENT:	SHEET NO. OF PROJECT NO.:
SITE ADDRESS:	DAY OF WEEK: S M T W T F S
REPORT BY:	SAMPLE 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: _____

SAMPLE SOURCE: Indoor Air Sub-Slab Near Slab Soil Gas Exterior Soil Gas

SAMPLE DATE

SAMPLE TIME: START TIME: _____ STOP TIME: _____

SHIPPING DATE: _____

SAMPE IDENTIFICATION NUMBER: _____

SAMPLE CANISTER LOCATION: _____

CANISTER TYPE: 400mL - 1.0 L Summa Canister 6 L Summa Canister Other (Specify) _____

CANISTER SERIALNO.: _____ FLOW CONTROLLER SERIAL NO.: _____

SAMPLING INFORMATION:

	START		**STOP**	
	Ambient	Interior	Ambient	Interior
TEMPERATURE:				
	START		**STOP**	
PRESSURE GAUAGE READING				
TIME:				

Was there significant precipitation within 12 hours prior to (or during) the sampling event? YES NO

Comments: _____

APPENDIX H

FIELD SAMPLING PLAN

837 BAILEY AVE. SITE

ERIE COUNTY

BUFFALO, NEW YORK

FIELD SAMPLING PLAN

NYSDEC Site Number: C915298

Prepared for:

Near Dingens, LLC

271 Dingens St., Buffalo, New York 14206

Prepared by:

EnSol, Inc.

661 Main St., Niagara Falls, New York 14301

716-285-3920

Revisions to Final Approved Field Sampling Plan:

Revision No.	Date Submitted	Summary of Revision	NYSDEC Approval Date

DECEMBER 2019

Table of Contents

1. Introduction and Purpose

This document provides general guidance for any environmental sampling to be completed at the 837 Bailey Ave. Site (Site), located at 837 Bailey Ave., Buffalo, New York following the completion of Brownfield Cleanup Program (BCP) remedial activities.

2. Summary of Environmental Conditions

2.1 Soil

Table 2 and Figures 9A-9C of the Site Management Plan (SMP) summarize the results of all soil samples collected that exceed the Unrestricted Use SCOs and the Commercial Use SCOs at the site after completion of remedial action.

The following further describes remaining soil conditions following the completion of all remedial activities at the site:

- There are no identified impacts to native soils underlying the fill materials at the site.
- Surface soils and both the shallow C&D backfill layer and deeper ash and cinder backfill layer contain various SVOCs and Metals at concentrations exceeding Unrestricted and Commercial Use SCOs.
- There are no identified VOC, PCB, Pesticides or Herbicide impacts to any site soils.
- The elevations of the top of remaining soil contamination and the thickness of the remaining contamination are indicated on the cross sections included as Figures 3A through 3C.
- Assuming all remaining fill materials at the site exhibit some contamination above SCOs, there is approximately 186,000 cubic yards of contaminated material remaining below the cover system.
- A geotextile demarcation layer has been placed across the entire site between the underlying contaminated fill materials and the overlying one-foot thick soil cover system.
- There are no point sources of contamination as the contaminants are generally present within all fill materials. Therefore, there are no known areas of the site where contamination is significantly higher than other areas.
- There are no active utility lines or other subsurface infrastructure present at the site.
- There is no remaining contamination that was not remediated due to the presence of buildings or critical infrastructure.

2.2 Groundwater

Table 3 of the SMP summarizes the results of all samples of groundwater that exceed the SCGs after completion of the remedial action. As indicated on Table 3, groundwater at the site contains concentrations of various SVOCs and Metals above GWQS standards.

2.3 Soil Vapor

Table 4 of the SMP summarizes the results of all samples of soil vapor collected during the RI. Soil vapor sampling locations are indicated on Figure 5 of the SMP. Soil vapor sampling was performed as per NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York (October 2006, 2007 Update Memo). As indicated on Table 4 the levels for methyl ethyl ketone were elevated with the highest value being 1500 ug/m^3.

3. Soil Sampling Procedures

3.1 Sample Collection

Soil sampling of site fill materials may be required any time site soils below the demarcation layer are to be handled or disposed. This may occur during future development of the site and would be associated with excavation of site fill materials to accommodate site development plans. Refer to the Excavation Work Plan for further details regarding procedures to be followed during the excavation of site fill materials. Soil sampling may also be required of any soil materials proposed to be imported to the site for use as backfill on the site.

There are numerous methods by which soil samples can be collected including, but not limited to; direct collection (for exposed soils), test pitting, hand auger, geoprobe, hollow-stem auger drilling, etc. The appropriate sampling method must be determined on a case by case basis based upon the activity requiring sampling. Refer to the Soil Sampling Standard Operating Procedure (SOP) developed by the USEPA for further guidance on proper soil sampling techniques. The SOP is included as Attachment 1 to this Plan.

3.2 Sample Analysis

As stated in the Decision Document, the major contaminants of concern identified at the site are: arsenic, copper, cadmium, mercury, lead, barium, and polycyclic aromatic hydrocarbons (PAHs). At minimum all site backfill soil samples should be tested for NYSDEC Part 375 Metals and NYSDEC Part 375 semi-volatile organic compounds (SVOCs). Any soil materials proposed to be imported to the site for use as backfill shall be tested for; volatile organic compounds (VOCs), SVOCs, Inorganics, PCBs, and Pesticides in accordance with Table 5.4(e)10 of NYSDEC Program Policy DER-10 "Technical Guidance for Site Investigation and Remediation" as well as Emerging Contaminant analysis of PFAS and 1,4-dioxane. A copy of Table 5.4(e)10 is included as Attachment 2 to this Plan.

The NYSDEC should be consulted to determined final sampling parameters prior to completing any soil sampling event.

4. Groundwater Sampling Procedures

4.1 Sample Collection

There are currently no groundwater monitoring wells present at the site. However, if groundwater sampling is required in the future, the following details methods to be employed for the collection of groundwater samples.

Temporary Monitoring Well Installation

Monitoring wells are typically installed in conjunction with the installation of soil borings. After completion of the soil/fill boring advancement, boring locations are then converted into temporary groundwater monitoring wells. A direct-push drill rig capable of advancing hollow-stem augers can be employed to install 2-inch inside diameter (ID) monitoring wells. Each boring location should be advanced to native clay (approximately 10-12 fbgs), with a target minimum of 5 feet below the first encountered groundwater for well installation. All non-dedicated drilling tools and equipment will be decontaminated between boring locations using potable tap water and a phosphate-free detergent (e.g., Alconox).

Subsequent to boring completion, a 2-inch ID flush-joint Schedule 40 PVC monitoring well will be installed. Each well will be constructed with a minimum 5-foot flush-joint Schedule 40 PVC, 0.010-inch machine slotted well screen. Each well screen and attached riser will be placed at the bottom of each borehole and a silica sand filter pack (size #0) will be installed from the base of the well to a maximum of 2 feet above the top of the screen. A bentonite chip seal will then be installed and allowed to hydrate sufficiently to mitigate the potential for downhole grout contamination. The newly installed monitoring wells will be completed with keyed-alike locks and a lockable J-plug.

Well Development

After installation, but not within 24 hours, newly installed monitoring wells will be developed in accordance with NYSDEC protocols. Development of the monitoring wells will be accomplished with dedicated disposable polyethylene bailers via surge and purge methodology. Field parameters including pH, temperature, turbidity, dissolved oxygen and specific conductance will be measured periodically (i.e., every well volume or as necessary) during development. Field measurements will continue until they became relatively stable. Stability will be defined as variation between measurements of approximately 10 percent or less with no overall upward or downward trend in the measurements. A minimum of three well volumes will be evacuated from each monitoring well. Development water from the monitoring wells will be containerized and sampled for constituents of concern (based on RI groundwater analytical results). Upon analytical approval, development water will either be discharged to the ground or disposed of at a local treatment facility.

Groundwater Sample Collection

Prior to sample collection, static water levels from all on-Site monitoring wells will be measured and recorded. Following water level measurement, monitoring wells will be purged and sampled using either a bladder pump with dedicated pump tubing following low-flow/minimal drawdown purge and sample collection procedures, or a dedicated polyethylene bailer. Prior to sample

collection, groundwater will be evacuated from each well at a low-flow rate (typically less than 0.1 L/min). Field measurements for pH, temperature, turbidity, dissolved oxygen, specific conductance and water level, as well as visual and olfactory field observations, will be periodically recorded and monitored for stabilization. Purging will be considered complete when pH, specific conductivity, dissolved oxygen and temperature stabilize and when turbidity measurements fall below 50 Nephelometric Turbidity Units (NTU), or become stable above 50 NTU. Stability is defined as variation between field measurements of 10 percent or less and no overall upward or downward trend in the measurements. Upon stabilization of field parameters, groundwater samples will be collected and analyzed as discussed below. All non-dedicated sampling components (e.g., bladder housing) will be decontaminated between sample collection locations using potable tap water and a phosphate-free detergent (e.g., Alconox).

Groundwater sample collection methods that may be implemented include:

Polyethylene Disposable Bailer

Wells of any depth (up to 100 fbgs) may be purged and sampled using a polyethylene disposable bailer via direct grab. In general, a bottom-filling dedicated polyethylene bailer is attached to a length of dedicated hollow-braid polypropylene rope and lowered into the well smoothly and slowly as not to agitate the groundwater or damage the well. Purging continues until a predetermined volume of water has been removed (typically three well volumes) or to dryness. Measurements for pH, temperature, specific conductance, dissolved oxygen and turbidity will be recorded following removal of each well volume. The well is purged until the readings for indicator parameters stabilize or the well is purged to dryness.

Bladder Pump with Dedicated Pump Tubing

Monitoring wells will be purged and sampled using a bladder pump and dedicated pump tubing following low-flow (minimal drawdown) purge and sample collection procedure, as described above. Prior to, and immediately following collection of groundwater samples, field measurements for pH, specific conductance, temperature, dissolved oxygen, turbidity and water level, as well as visual and olfactory field observations will be recorded. All collected groundwater samples will be placed in pre-cleaned, pre-preserved laboratory provided sample bottles, cooled to 4°C in the field, and transported under chain-of-custody command to the designated laboratory for analysis.

4.2 Sample Analysis

As stated in the Decision Document, the major contaminants of concern identified at the site are: arsenic, copper, cadmium, mercury, lead, barium, and polycyclic aromatic hydrocarbons (PAHs). At minimum all groundwater samples should be tested for NYSDEC Part 375 Metals and NYSDEC Part 375 semi-volatile organic compounds (SVOCs).

The NYSDEC should be consulted to determined final sampling parameters prior to completing any groundwater sampling event.

5. Soil Vapor Sampling Procedures

5.1 Sample Collection

In the event that buildings are proposed for development on the site it will first be necessary to collect soil vapor samples from the proposed building(s) area(s). The NYSDEC should be notified once building development plans are formulated so an appropriate sampling plan can be developed. In general, a soil vapor sampling event consists of the installation of a subsurface soil vapor sampling point and the sampling of the point using a laboratory-certified vacuum sampling canister which is commonly known as a Summa Canister. Soil vapor samples should be collected via EPA Method TO-15 as well as the NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York. The NYSDEC and/or the NYSDOH should be consulted prior to development of a soil vapor sampling plan in order to assure the most recent versions of these guidance documents are used.

5.2 Sample Analysis

All soil vapor samples shall be submitted for laboratory analysis of VOCs via EPA Method TO-15.

6. Records, Recordkeeping, and Reporting

Regardless of the media being sampled, all sampling records shall be maintained on file and submitted to the NYSDEC and/or NYSDOH. At minimum, sampling records include: sampling point installation logs (soil borings, monitoring wells, soil vapor monitoring points), field sampling logs, sample chain of custody documentation, and final laboratory analytical reports.

Attachment 1

EnSol, Inc. *Environmental Solutions*

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USEPA Soil Sampling Standard Operating Procedure

U. S. EPA ENVIRONMENTAL RESPONSE TEAM

STANDARD OPERATING PROCEDURES

SOIL SAMPLING

CONTENTS

SUPERCEDES: SOP #2012; Revision 0.0; 11/16/94; U.S. EPA Contract 68-C4-0022.

1.0 SCOPE AND APPLICATION

The purpose of this standard operating procedure (SOP) is to describe the procedures for the collection of representative soil samples. Sampling depths are assumed to be those that can be reached without the use of a drill rig, direct-push, or other mechanized equipment (except for a back-hoe). Analysis of soil samples may determine whether concentrations of specific pollutants exceed established action levels, or if the concentrations of pollutants present a risk to public health, welfare, or the environment.

These are standard (i.e., typically applicable) operating procedures which may be varied or changed as required, dependent upon site conditions, equipment limitations or limitations imposed by the procedure. In all instances, the actual procedures used should be documented and described in an appropriate site report.

Mention of trade names or commercial products does not constitute U.S. Environmental Protection Agency (EPA) endorsement or recommendation for use.

2.0 METHOD SUMMARY

Soil samples may be collected using a variety of methods and equipment depending on the depth of the desired sample, the type of sample required (disturbed vs. undisturbed), and the soil type. Near-surface soils may be easily sampled using a spade, trowel, and scoop. Sampling at greater depths may be performed using a hand auger, continuous flight auger, a trier, a split-spoon, or, if required, a backhoe.

3.0 SAMPLE PRESERVATION, CONTAINERS, HANDLING, AND STORAGE

Chemical preservation of solids is not generally recommended. Samples should, however, be cooled and protected from sunlight to minimize any potential reaction. The amount of sample to be collected and proper sample container type are discussed in ERT/REAC SOP #2003 Rev. 0.0 08/11/94, *Sample Storage, Preservation and Handling*.

4.0 INTERFERENCES AND POTENTIAL PROBLEMS

There are two primary potential problems associated with soil sampling - cross contamination of samples and improper sample collection. Cross contamination problems can be eliminated or minimized through the use of dedicated sampling equipment. If this is not possible or practical, then decontamination of sampling equipment is necessary. Improper sample collection can involve using contaminated equipment, disturbance of the matrix resulting in compaction of the sample, or inadequate homogenization of the samples where required, resulting in variable, non-representative results.

5.0 EQUIPMENT

Soil sampling equipment includes the following:

- Maps/plot plan
- Safety equipment, as specified in the site-specific Health and Safety Plan
- Survey equipment or global positioning system (GPS) to locate sampling points
- Tape measure
- Survey stakes or flags
- Camera and film
- Stainless steel, plastic, or other appropriate homogenization bucket, bowl or pan
- Appropriate size sample containers
- Ziplock plastic bags
- Logbook
- Labels
- Chain of Custody records and custody seals
- Field data sheets and sample labels
- Cooler(s)
- Ice
- Vermiculite
- Decontamination supplies/equipment
- Canvas or plastic sheet
- Spade or shovel
- Spatula
- Scoop
- Plastic or stainless steel spoons
- Trowel(s)
- Continuous flight (screw) auger
- Bucket auger
- Post hole auger
- Extension rods
- T-handle
- Sampling trier
- Thin wall tube sampler
- Split spoons
- Vehimeyer soil sampler outfit
  - Tubes
  - Points
  - Drive head
  - Drop hammer
  - Puller jack and grip
- Backhoe

6.0 REAGENTS

Reagents are not used for the preservation of soil samples. Decontamination solutions are specified in ERT/REAC SOP #2006 Rev. 0.0 08/11/94, *Sampling Equipment Decontamination*, and the site specific work plan.

7.0 PROCEDURES

7.1 Preparation

1. Determine the extent of the sampling effort, the sampling methods to be employed, and the types and amounts of equipment and supplies required.

2. Obtain necessary sampling and monitoring equipment.

3. Decontaminate or pre-clean equipment, and ensure that it is in working order.

4. Prepare schedules and coordinate with staff, client, and regulatory agencies, if appropriate.

5. Perform a general site survey prior to site entry in accordance with the site specific Health and Safety Plan.

6. Use stakes, flagging, or buoys to identify and mark all sampling locations. Specific site factors, including extent and nature of contaminant, should be considered when selecting sample location. If required, the proposed locations may be adjusted based on site access, property boundaries, and surface obstructions. All staked locations should be utility-cleared by the property owner or the On-Scene-Coordinator (OSC) prior to soil sampling; and utility clearance should always be confirmed before beginning work.

7.2 Sample Collection

7.2.1 Surface Soil Samples

Collection of samples from near-surface soil can be accomplished with tools such as spades, shovels, trowels, and scoops. Surface material is removed to the required depth and a stainless steel or plastic scoop is then used to collect the sample.

This method can be used in most soil types but is limited to sampling at or near the ground surface. Accurate, representative samples can be collected with this procedure depending on the care and precision demonstrated by the sample team member. A flat, pointed mason trowel to cut a block of the desired soil is helpful when undisturbed profiles are required. Tools plated with chrome or other materials should not be used. Plating is particularly common with garden implements such as potting trowels.

The following procedure is used to collect surface soil samples:

1. Carefully remove the top layer of soil or debris to the desired sample depth with a pre-cleaned spade.

2. Using a pre-cleaned, stainless steel scoop, plastic spoon, or trowel, remove and discard a thin layer of soil from the area which came in contact with the spade.

3. If volatile organic analysis is to be performed, transfer the sample directly into an appropriate, labeled sample container with a stainless steel lab spoon, or equivalent and secure the cap tightly. Place the remainder of the sample into a stainless steel, plastic, or other appropriate homogenization container, and mix thoroughly to obtain a homogenous sample representative of the entire sampling interval. Then, either place the sample into appropriate, labeled containers and secure the caps tightly; or, if composite samples are to be collected, place a sample from another sampling interval or location into the homogenization container and mix thoroughly. When compositing is complete, place the sample into appropriate, labeled containers and secure the caps tightly.

7.2.2 Sampling at Depth with Augers and Thin Wall Tube Samplers

This system consists of an auger, or a thin-wall tube sampler, a series of extensions, and a "T" handle (Figure 1, Appendix A). The auger is used to bore a hole to a desired sampling depth, and is then withdrawn. The sample may be collected directly from the auger. If a core sample is to be collected, the auger tip is then replaced with a thin wall tube sampler. The system is then lowered down the borehole, and driven into the soil to the completion depth. The system is withdrawn and the core is collected from the thin wall tube sampler.

Several types of augers are available; these include: bucket type, continuous flight (screw), and post-hole augers. Bucket type augers are better for direct sample recovery because they provide a large volume of sample in a short time. When continuous flight augers are used, the sample can be collected directly from the flights. The continuous flight augers are satisfactory when a composite of the complete soil column is desired. Post-hole augers have limited utility for sample collection as they are designed to cut through fibrous, rooted, swampy soil and cannot be used below a depth of approximately three feet.

The following procedure is used for collecting soil samples with the auger:

1. Attach the auger bit to a drill rod extension, and attach the "T" handle to the drill rod.

2. Clear the area to be sampled of any surface debris (e.g., twigs, rocks, litter). It may be advisable to remove the first three to six inches of surface soil for an area approximately six inches in radius around the drilling location.

3. Begin augering, periodically removing and depositing accumulated soils onto a plastic sheet spread near the hole. This prevents accidental brushing of loose material back down the borehole when removing the auger or adding drill rods. It also facilitates refilling the hole, and avoids possible contamination of the surrounding area.

4. After reaching the desired depth, slowly and carefully remove the auger from the hole. When sampling directly from the auger, collect the sample after the auger is removed from the hole and proceed to Step 10.

5. Remove auger tip from the extension rods and replace with a pre-cleaned thin wall tube sampler. Install the proper cutting tip.

6. Carefully lower the tube sampler down the borehole. Gradually force the tube sampler into the soil. Do not scrape the borehole sides. Avoid hammering the rods as the vibrations may cause the boring walls to collapse.

7. Remove the tube sampler, and unscrew the drill rods.

8. Remove the cutting tip and the core from the device.

9. Discard the top of the core (approximately 1 inch), as this possibly represents material collected before penetration of the layer of concern. Place the remaining core into the appropriate labeled sample container. Sample homogenization is not required.

10. If volatile organic analysis is to be performed, transfer the sample into an appropriate, labeled sample container with a stainless steel lab spoon, or equivalent and secure the cap tightly. Place the remainder of the sample into a stainless steel, plastic, or other appropriate homogenization container, and mix thoroughly to obtain a homogenous sample representative of the entire sampling interval. Then, either place the sample into appropriate, labeled containers and secure the caps tightly; or, if composite samples are to be collected, place a sample from another sampling interval into the homogenization container and mix thoroughly.

    When compositing is complete, place the sample into appropriate, labeled containers and secure the caps tightly.

11. If another sample is to be collected in the same hole, but at a greater depth, reattach the auger bit to the drill and assembly, and follow steps 3 through 11, making sure to decontaminate the auger and tube sampler between samples.

12. Abandon the hole according to applicable state regulations. Generally, shallow holes can simply be backfilled with the removed soil material.

7.2.3 Sampling with a Trier

The system consists of a trier, and a "T" handle. The auger is driven into the soil to be sampled and used to extract a core sample from the appropriate depth.

The following procedure is used to collect soil samples with a sampling trier:

1. Insert the trier (Figure 2, Appendix A) into the material to be sampled at a 0^{o} to 45^{o} angle from horizontal. This orientation minimizes the spillage of sample.

2. Rotate the trier once or twice to cut a core of material.

3. Slowly withdraw the trier, making sure that the slot is facing upward.

4. If volatile organic analyses are required, transfer the sample into an appropriate, labeled sample container with a stainless steel lab spoon, or equivalent and secure the cap tightly. Place the remainder of the sample into a stainless steel, plastic, or other appropriate homogenization container, and mix thoroughly to obtain a homogenous sample representative of the entire sampling interval. Then, either place the sample into appropriate, labeled containers and secure the caps tightly; or, if composite samples are to be collected, place a sample from another sampling interval into the homogenization container and mix thoroughly. When compositing is complete, place the sample into appropriate, labeled containers and secure the caps tightly.

7.2.4 Sampling at Depth with a Split Spoon (Barrel) Sampler

Split spoon sampling is generally used to collect undisturbed soil cores of 18 or 24 inches in length. A series of consecutive cores may be extracted with a split spoon sampler to give a complete soil column profile, or an auger may be used to drill down to the desired depth for sampling. The split spoon is then driven to its sampling depth through the bottom of the augured hole and the core extracted.

When split spoon sampling is performed to gain geologic information, all work should

be performed in accordance with ASTM D1586-98, "Standard Test Method for Penetration Test and Split-Barrel Sampling of Soils".

The following procedures are used for collecting soil samples with a split spoon:

1. Assemble the sampler by aligning both sides of barrel and then screwing the drive shoe on the bottom and the head piece on top.

2. Place the sampler in a perpendicular position on the sample material.

3. Using a well ring, drive the tube. Do not drive past the bottom of the head piece or compression of the sample will result.

4. Record in the site logbook or on field data sheets the length of the tube used to penetrate the material being sampled, and the number of blows required to obtain this depth.

5. Withdraw the sampler, and open by unscrewing the bit and head and splitting the barrel. The amount of recovery and soil type should be recorded on the boring log. If a split sample is desired, a cleaned, stainless steel knife should be used to divide the tube contents in half, longitudinally. This sampler is typically available in 2 and 3 1/2 inch diameters. A larger barrel may be necessary to obtain the required sample volume.

6. Without disturbing the core, transfer it to appropriate labeled sample container(s) and seal tightly.

7.2.5 Test Pit/Trench Excavation

A backhoe can be used to remove sections of soil, when detailed examination of soil characteristics are required. This is probably the most expensive sampling method because of the relatively high cost of backhoe operation.

The following procedures are used for collecting soil samples from test pits or trenches:

1. Prior to any excavation with a backhoe, it is important to ensure that all sampling locations are clear of overhead and buried utilities.

2. Review the site specific Health & Safety plan and ensure that all safety precautions including appropriate monitoring equipment are installed as required.

3. Using the backhoe, excavate a trench approximately three feet wide and approximately one foot deep below the cleared sampling location. Place excavated soils on plastic sheets. Trenches greater than five feet deep must be sloped or protected by a shoring system, as required by OSHA regulations.

4. A shovel is used to remove a one to two inch layer of soil from the vertical face of the pit where sampling is to be done.

5. Samples are taken using a trowel, scoop, or coring device at the desired intervals. Be sure to scrape the vertical face at the point of sampling to remove any soil that may have fallen from above, and to expose fresh soil for sampling. In many instances, samples can be collected directly from the backhoe bucket.

6. If volatile organic analyses are required, transfer the sample into an appropriate, labeled sample container with a stainless steel lab spoon, or equivalent and secure the cap tightly. Place the remainder of the sample into a stainless steel, plastic, or other appropriate homogenization container, and mix thoroughly to obtain a homogenous sample representative of the entire sampling interval. Then, either place the sample into appropriate, labeled containers and secure the caps tightly; or, if composite samples are to be collected, place a sample from another sampling interval into the homogenization container and mix thoroughly. When compositing is complete, place the sample into appropriate, labeled containers and secure the caps tightly.

7. Abandon the pit or excavation according to applicable state regulations. Generally, shallow excavations can simply be backfilled with the removed soil material.

8.0 CALCULATIONS

This section is not applicable to this SOP.

9.0 QUALITY ASSURANCE/QUALITY CONTROL

There are no specific quality assurance (QA) activities which apply to the implementation of these procedures. However, the following QA procedures apply:

1. All data must be documented on field data sheets or within site logbooks.

2. All instrumentation must be operated in accordance with operating instructions as supplied by the manufacturer, unless otherwise specified in the work plan. Equipment checkout and calibration

activities must occur prior to sampling/operation, and they must be documented.

10.0 DATA VALIDATION

This section is not applicable to this SOP.

11.0 HEALTH AND SAFETY

When working with potentially hazardous materials, follow U.S. EPA, OHSA and corporate health and safety procedures, in addition to the procedures specified in the site specific Health & Safety Plan..

12.0 REFERENCES

Mason, B.J. 1983. Preparation of Soil Sampling Protocol: Technique and Strategies. EPA-600/4-83-020.

Barth, D.S. and B.J. Mason. 1984. Soil Sampling Quality Assurance User's Guide. EPA-600/4-84-043.

U.S. Environmental Protection Agency. 1984 Characterization of Hazardous Waste Sites - A Methods Manual: Volume II. Available Sampling Methods, Second Edition. EPA-600/4-84-076.

de Vera, E.R., B.P. Simmons, R.D. Stephen, and D.L. Storm. 1980. Samplers and Sampling Procedures for Hazardous Waste Streams. EPA-600/2-80-018.

ASTM D 1586-98, ASTM Committee on Standards, Philadelphia, PA.

APPENDIX A
Figures
SOP #2012
February 2000

FIGURE 1. Sampling Augers

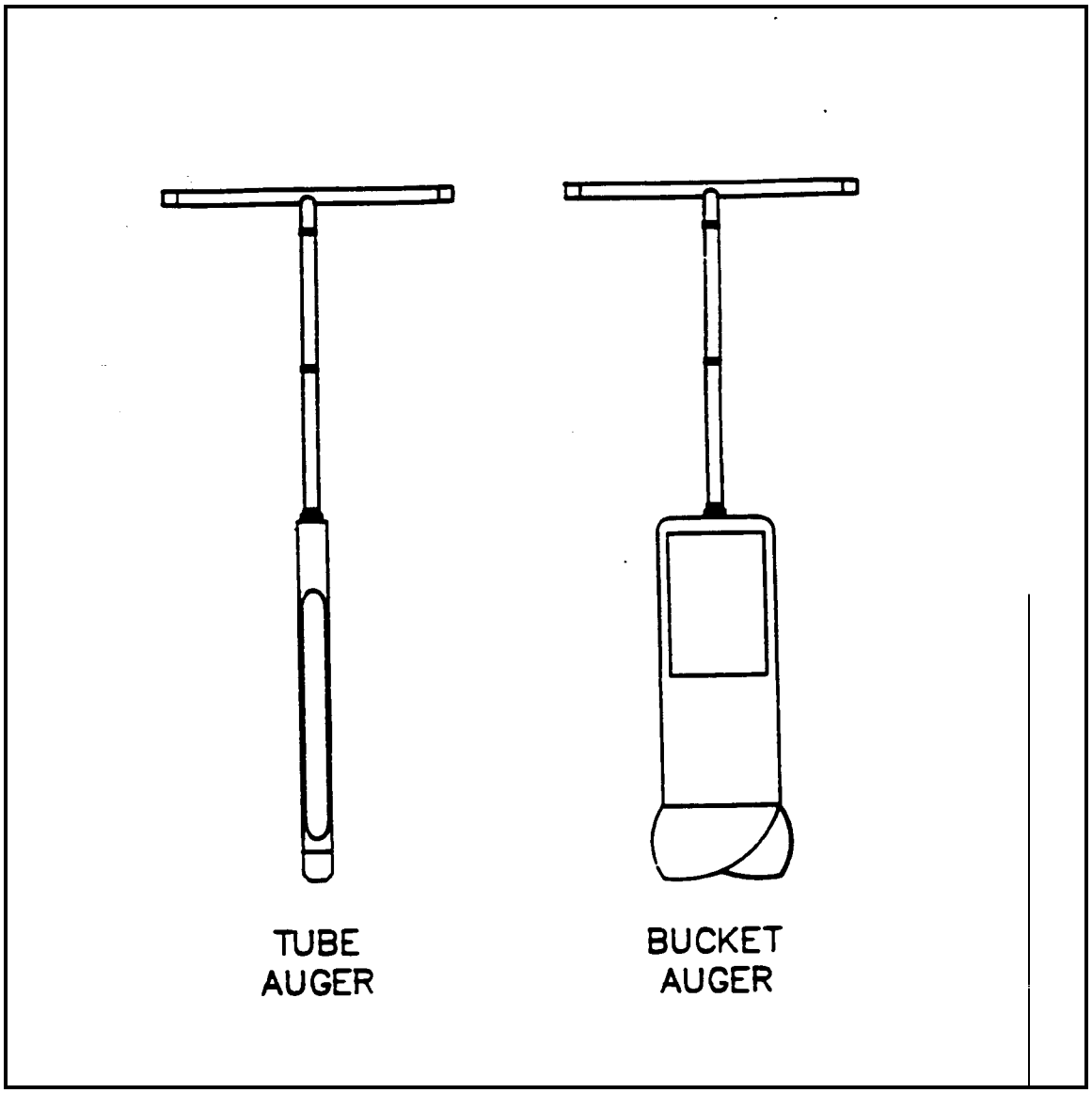
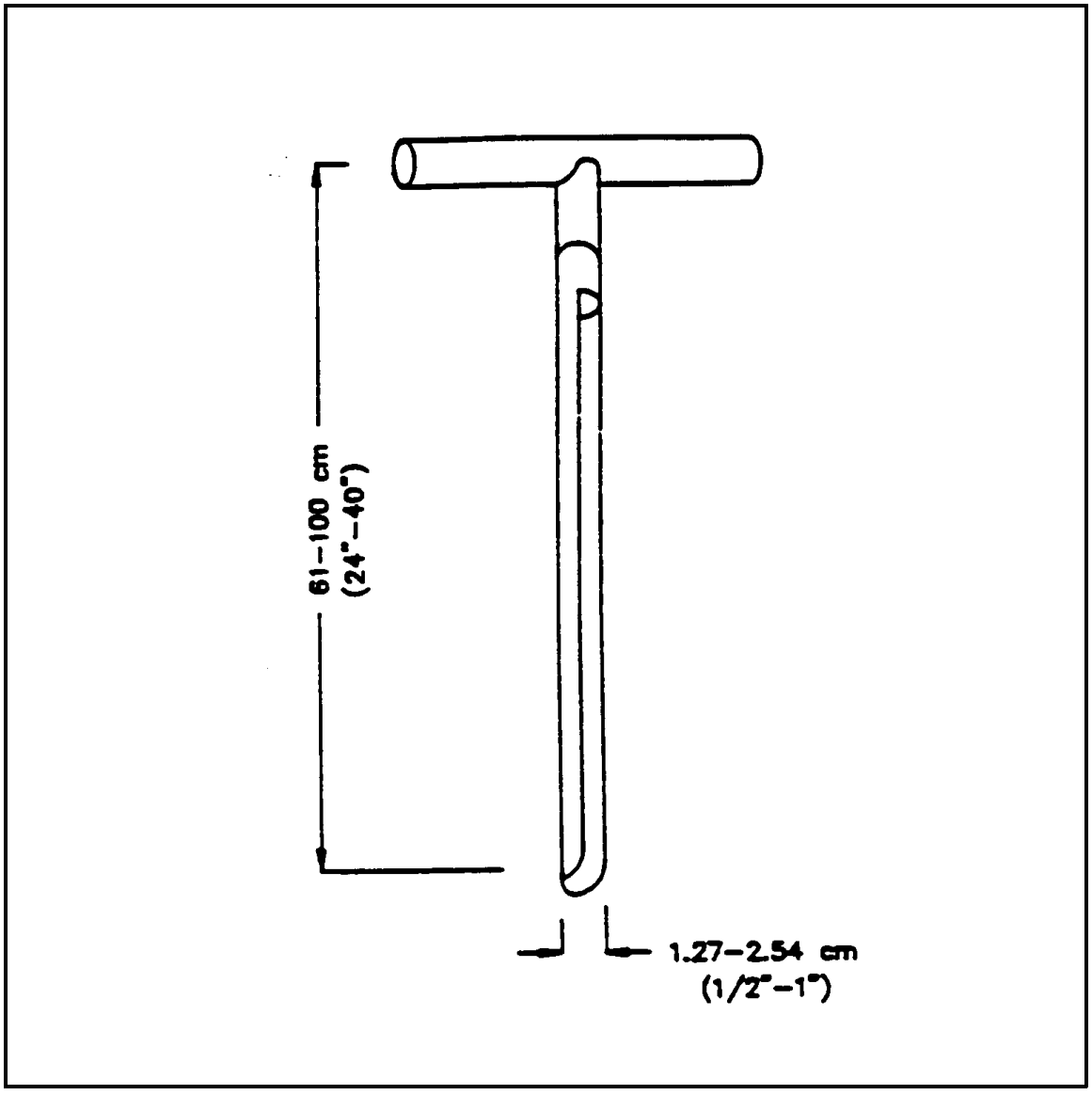


FIGURE 2. Sampling Trier



Attachment 2

EnSol, Inc. *Environmental Solutions*

professional engineering – business consulting

Table 5.4(e)10 of NYSDEC DER-10

Table 5.4(e)10 Recommended Number of Soil Samples for Soil Imported To or Exported From a Site			
Contaminant	**VOCs**	**SVOCs, Inorganics & PCBs/Pesticides**	
Soil Quantity (cubic yards)	**Discrete Samples**	**Composite**	**Discrete Samples/Composite**
0-50	1	1	3-5 discrete samples from different locations in the fill being provided will comprise a composite sample for analysis
50-100	2	1	
100-200	3	1	
200-300	4	1	
300-400	4	2	
400-500	5	2	
500-800	6	2	
800-1000	7	2	
➢ 1000	Add an additional 2 VOC and 1 composite for each additional 1000 Cubic yards or consult with DER		

APPENDIX I

QUALITY ASSURANCE PROJECT PLAN

837 BAILEY AVE. SITE

ERIE COUNTY

BUFFALO, NEW YORK

Quality Assurance Project Plan

NYSDEC Site Number: C915298

Prepared for:

Near Dingens, LLC

271 Dingens St., Buffalo, New York 14206

Prepared by:

EnSol, Inc.

661 Main St., Niagara Falls, New York 14301

716-285-3920

Revisions to Final Quality Assurance Project Plan:

Revision No.	Date Submitted	Summary of Revision	NYSDEC Approval Date

SEPTEMBER 2019

Table of Contents

1. Introduction

This Quality Assurance Project Plan (QAPP) is an appendix to the Site Management Plan (SMP), which is required as an element of the remedial program at the 837 Bailey Ave. Site (Site) under the New York State 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 #C915298-11-15, Site #C915298 executed in February 2016 and amended in March 2017.

1.1 Site Location and Description

The site is located at 837 Bailey Avenue in Buffalo, Erie County, New York and is identified as Section 112.80 Block 1 and Lot 12.1 on the Erie County Tax Map (see Figure 2 of the SMP). The site is an approximately 8.74-acre area and is bounded by multiple residential and commercial properties to the north, multiple residential and commercial properties to the south, commercial properties to the east, and Bailey Avenue to the west. The boundaries of the site are more fully described in the Environmental Easement (Appendix A of the SMP). The property is currently vacant with no buildings or structures and was formerly the location of auto-salvage yard.

1.2 Scope of the QAPP

This QAPP was prepared to provide quality assurance (QA) guidelines to be implemented post-remedial activities. The QAPP will assure the accuracy and precision of data collection during post-remedial Site redevelopment and data interpretation. The QAPP identifies procedures for sample collection to mitigate the potential for cross-contamination, as well as analytical requirements necessary to allow for independent data validation. The QAPP has been prepared in accordance with USEPA's Requirements for Quality Assurance Project Plans for Environmental Data Operations, the EPA Region II CERCLA Quality Assurance Manual, and NYSDEC's DER-10 Technical Guidance for Site Investigation and Remediation. This document may be modified for subsequent phases of investigative work if necessary.

This QAPP provides:

- A means to communicate to the persons executing the various activities exactly what is to be done, by whom, and when;
- A culmination to the planning process that ensures that the program includes provisions for obtaining quality data (e.g., suitable methods of field operations);
- A document that can be used by the Project Managers and QA Officer to assess if the activities planned are being implemented and their importance for accomplishing the goal of quality data;
- A plan to document and track project data and result; and,
- Detailed descriptions of the data documentation materials and procedures, project files, and tabular and graphical reports.

The QAPP is primarily concerned with the quality assurance and quality control aspects of the procedures involved in the collection, preservation, packaging, and transportation of samples; field testing, record keeping; data management; chain of custody procedures; laboratory

analyses; and other necessary matters to assure that the investigation activities, once completed, will yield data whose integrity can be defended.

QA refers to the conduct of all planned and systematic actions necessary to perform satisfactorily all task-specific activities and to provide information and data confidence as a result of such activities. The QA for task-specific activities includes the development of procedures, auditing, monitoring and surveillance of the performance.

QC refers to the activity performed to determine if the work activities conform to the requirements. This includes activities such as inspections of the work activities in the field (e.g., verification that the items and materials installed conform to applicable codes and design specifications). QA is an overview monitoring of the performance of QA activities through audits rather than first time inspections.

2. Project Organization and Responsibility

The following sections provide a generic organization for sampling activities, including roles, responsibilities, and required qualifications of these organizations.

2.1 NYSEC and NYSDOH

It is the responsibility of the New York State Department of Environmental Conservation (NYSDEC), in conjunction with the New York State Department of Health (NYSDOH), to review the project documents for completeness and conformance with the site-specific cleanup objectives and to make a decision to accept or reject these documents based on this review. The NYSDEC also has the responsibility and authority to review and approve all QA documentation collected during brownfield cleanup construction and to confirm that the QA Plan was followed.

2.2 Property Owner

The property owner or holder of the Certificate of Completion (COC) will be responsible for complying with the QA requirements as specified herein and for monitoring and controlling the quality of the Brownfield cleanup activities either directly or through their designated environmental consultant and/or legal counsel. The Owner will also have the authority to select Contractor(s) to assist them in fulfilling these responsibilities. The Owner is responsible for implementing the project, and has the authority to commit the resources necessary to meet project objectives and requirements.

2.3 Project Manager

The Project Manager has the responsibility for ensuring that the project meets the overall project objectives, reports directly to the Owner, coordinates with the NYSDEC/NYSDOH Project Coordinators, and is responsible for technical and project oversight. The PM will:

- Define project objectives and develop a detailed work plan schedule
- Establish project policy and procedures to address the specific needs of the project as a whole, as well as the objectives of each task
- Acquire and apply technical and corporate resources as needed to assure performance within budget and schedule constraints.
- Develop and meet ongoing project and/or task staffing requirements, including mechanisms to review and evaluate each task product
- Review the work performed on each task to assure its quality, responsiveness, and timeliness
- Review and analyze overall task performance with respect to planned requirements and authorizations
- Review and approve all deliverables before their submission to the NYSDEC
- Develop and meet ongoing project and/or task staffing requirements, including mechanisms to review and evaluate each task product
- Ultimately be responsible for the preparation and quality of interim and final reports
- Represent the project team at meetings

2.4 Field Team Leader

The Field Team Leader (FTL) has the responsibility for implementation of specific project tasks identified at the Site, and is responsible for the supervision of project field personnel, subconsultants, and subcontractors. The FTL reports directly to the Project Manager. The FTL will:

- Define daily work activities
- Orient field staff concerning the project's special considerations
- Monitor and direct subcontractor personnel
- Review the work performed on each task to ensure its quality, responsiveness, and timeliness
- Assure that field activities, including sample collection and handling, are carried out in accordance with this QAPP

2.5 Quality Assurance Officer

The QA Officer will have direct access to corporate executive staff as necessary, to resolve any QA dispute, and is responsible for auditing the implementation of the QA program in conformance with the demands of specific investigations and policies, and NYSDEC requirements. Specific functions and duties include:

- Performing QA audits on various phases of the field operations
- Reviewing and approving QA plans and procedures
- Providing QA technical assistance to project staff
- Reporting on the adequacy, status, and effectiveness of the QA program on a regular basis to the Project Manager for technical operations
- Responsible for assuring third part data review of all sample results from the analytical laboratory

2.6 Laboratory Responsibilities

Any environmental laboratory utilized for sample analysis for this Site must be an independent, NYSDOH Environmental Laboratory Approval Program (ELAP)-certified facility approved to perform the analyses prescribed herein.

- **Laboratory Director**: The Laboratory Director is a technical advisor and is responsible for summarizing and reporting overall unit performance. Responsibilities of the Laboratory Director include:
    - Provide technical, operational, and administrative leadership.
    - Allocation and management of personnel and equipment resources
    - Quality performance of the facility
    - Certification and accreditation activities
    - Blind and reference sample analysis
- **Quality Assurance Manager:** The QA Manager has the overall responsibility for data after it leaves the laboratory. The QA Manager will be independent of the laboratory but will communicate data issues through the Laboratory Director. In addition, the QA Manager will:
    - Oversee laboratory QA
    - Oversee QA/QC documentation
    - Conduct detailed data review

- Determine whether to implement laboratory corrective actions, if required
- Define appropriate laboratory QA procedures
- Prepare laboratory SOPs

3. Quality Assurance Objectives for Measurement Data

The overall objectives and criteria for assuring quality for this effort are discussed below. This QAPP addresses how the acquisition and handling of samples and the review and reporting of data will be documented. The objectives of this QAPP are to address the following:

- The procedure to be used to collect, preserve, package, and transport soil, groundwater, and air samples
- Field data collection
- Record keeping
- Data management
- Chain-of-custody procedures
- Precision, accuracy, completeness, representativeness, for sample analysis and data management under EPA analytical methods

3.1 Level of QC Effort for Sample Parameters

Field blank, method blank, trip blank, field duplicate, laboratory duplicate, laboratory control, standard reference materials (SRM) and matrix spike samples will be analyzed to assess the quality of the data resulting from the field sampling and analytical programs. QC samples are discussed below.

- Field and trip blanks consisting of distilled water will be submitted to the analytical laboratories to provide the means to assess the quality of the data resulting from the field-sampling program. Field (equipment) blank samples are analyzed to check for procedural chemical constituents at the facility that may cause sample contamination. Trip blanks are used to assess the potential for contamination of samples due to contaminant migration during sample shipment and storage.
- Method blank samples are generated within the laboratory and used to assess contamination resulting from laboratory procedures.
- Duplicate samples are analyzed to check for sampling and analytical reproducibility.
- MS/MSD and MS/Duplicate samples provide information about the effect of the sample matrix on the digestion and measurement methodology. Depending on site-specific circumstances, one MS/MSD or MS/Duplicate should be collected for every 20 or fewer investigative samples to be analyzed for organic and inorganic chemicals of a given matrix.

The general level of QC effort will be one field (blind) duplicate and one field blank (when non-dedicated equipment is used) for every 20 or fewer investigative samples of a given matrix. Additional sample volume will also be provided to the laboratory to allow one site-specific MS/MSD or MS/Duplicate for every 20 or fewer investigative samples of a given matrix. One trip blank consisting of distilled, deionized water will be included along with each sample delivery group of aqueous VOC samples.

4. Sample Custody Procedures

Sample custody is controlled and maintained through the chain-of-custody procedures. Chain of custody is the means by which the possession and handling of samples will be tracked from the source (field) to their final disposition, the laboratory. A sample is considered to be in a person's custody if it is in the person's possession or it is in the person's view after being in his or her possession or it was in that person's possession and that person has locked it in a vehicle or room. Sample containers will be cleaned and preserved at the laboratory before shipment to the Site.

4.1 Sample Storage

Samples are stored in secure limited-access areas. Walk-in coolers or refrigerators are maintained at 4°C, +/-2°C, or as required by the applicable regulatory program. The temperatures of all refrigerated storage areas are monitored and recorded a minimum of once per day. Deviations of temperature from the applicable range require corrective action, including moving samples to another storage location if necessary.

4.2 Sample Custody

Sample custody is defined by this document as when any of the following occur:

- It is in someone's actual possession
- It is in someone's view after being in his or her physical possession
- It was in someone's' possession and then locked, sealed, or secured in a manner that prevents unsuspected tampering
- It is placed in a designated and secured area

Samples are removed from storage areas by the sample custodian or analysts and transported to secure laboratory areas for analysis. Access to the laboratory and sample storage areas is restricted to laboratory personnel and escorted visitors only; all areas of the laboratory are therefore considered secure. If required by the applicable regulatory program, internal chain-of-custody is documented in a log by the person moving the samples between laboratory and storage areas.

Laboratory documentation used to establish COC and sample identification may include the following:

- Field COC forms or other paperwork that arrives with the sample
- The laboratory COC
- Sample labels or tags are attached to each sample container
- Sample custody seals
- Sample preparation logs (i.e. extraction and digestion information) recorded in hardbound laboratory books that are filled out in legible handwriting, and signed and dated by the chemist
- Sample analysis logs (e.g. metals, GC/MS, etc.) information recorded in hardbound laboratory books that are filled out in legible handwriting, and signed and dated by the chemist
- Sample storage log (same as the laboratory COC)
- Sample disposition log, which documents sample disposal by a contracted waste disposal company

4.2 Sample Tracking

All samples are maintained in the appropriate coolers prior to and after analysis. The analysts remove and return their samples as needed. Samples that require internal COC are relinquished to the analysts by the sample custodians. The analyst and sample custodian must sign the original COC relinquishing custody of the samples from the sample custodian to the analyst. When the samples are returned, the analyst will sign the original COC returning sample custody to the sample custodian. Sample extracts are relinquished to the instrumentation analysts by the preparatory analysts. Each preparation department tracks internal COC through their logbooks/spreadsheets.

Any change in the sample during the time of custody will be noted on the COC (e.g., sample breakage or depletion).

5. Calibration Procedures and Frequency

This section describes the calibration procedures and the frequency at which these procedures will be performed for both field and laboratory instruments.

5.1 Field Instrument Calibration

Quantitative field data to be obtained during groundwater sampling include pH, turbidity, specific conductance, temperature, dissolved oxygen and depth to groundwater. Quantitative water level measurements will be obtained with an electronic sounder or steel tape, which require no calibration. Quantitative field data to be obtained during soil sampling include screening for the presence of volatile organic constituents using a photoionization detector (PID).

5.2 Preventative Maintenance

Each piece of field equipment is checked according to its routine maintenance schedule and before field activities begin. Field equipment that may be used at the Site include:

- Photoionization detector (PID)
- Water quality meters (includes pH, turbidity, temperature, Eh, and specific conductance)
- Electric water level indicator

Field personnel will report all equipment maintenance and/or replacement needs to the Project QA Officer and will record the information on the daily field record.

6. Data Validation and Reporting

All data generated through field activities, or by the laboratory operation shall be reduced and validated (as required in the SMP) before reported.

6.1 Data Usability Evaluation

If requested by the NYSDEC, data evaluation will be performed by a third party data validator using the most current methods and quality control criteria from the USEPA's Contract Laboratory Program (CLP) *National Functional Guidelines for Organic Data Review*, and Contract Laboratory Program, *National Functional Guidelines for Inorganic Data Review*.

6.1.1 Procedures Used to Evaluate Field Data Usability

The performance of all field activities, calibration checks on all field instruments at the beginning of each day of use, manual checks of field calculations, checking for transcription errors and review of field log books is the responsibility of the Field Team Leader.

6.1.2 Procedures Used to Evaluate Laboratory Data Usability

Data evaluation will be performed by the third party data validator using the most current methods and quality control criteria from the USEPA's Contract Laboratory Program (CLP) *National Functional Guidelines for Organic Data Review*, and Contract Laboratory Program, *National Functional Guidelines for Inorganic Data Review*. The data review guidance will be used only to the extent that it is applicable to the SW-846 methods; SW-846 methodologies will be followed primarily and given preference over CLP when differences occur. Also, results of blanks, surrogate spikes, MS/MSDs, and laboratory control samples will be reviewed/evaluated by the data validator. All sample analytical data for each sample matrix shall be evaluated. The third party data validation expert will also evaluate the overall completeness of the data package. Completeness checks will be administered on all data to determine whether deliverables specified in this QAPP are present. The reviewer will determine whether all required items are present and request copies of missing deliverables.

6.2 Data Reporting

6.2.1 Field Data Reporting

All field documents will be accounted for when they are completed. Accountable documents include items such as field notebooks, sample logs, field data records, photographs, data packages, computer disks, and reports.

6.2.2 Laboratory Data Reporting

Analytical data will be summarized in tabular format with such information as sample identification, sample matrix description, parameters analyzed and their corresponding detected concentrations, and the detection limit. Analytical results will be incorporated into reports as data tables, maps showing sampling locations and analytical results, and supporting text.

7. Corrective Action

Corrective action is the process of identifying, recommending, approving, and implementing measures to counter unacceptable procedures or out of quality control performance that can affect data quality. Corrective action can occur during field activities, laboratory analyses, data validation, and data assessment. All corrective action proposed and implemented should be documented in the regular quality assurance reports to management. Corrective action should be implemented only after approval by the Project Manager, or his/her designee. If immediate corrective action is required, approvals secured by telephone from the Project Manager should be documented in an additional memorandum.

7.1 Field Corrective Action

If errors in field procedures are discovered during the observation or review of field activities by the Project QA Officer or his/her designee, corrective action will be initiated. Nonconformance to the QA/QC requirements of the field operating procedures will be identified by field audits or immediately by project staff who know or suspect that a procedure is not being performed in accordance with the requirements. The Project QA Officer or his designee will be informed immediately upon discovery of all deficiencies. Timely action will be taken if corrective action is necessary.

Corrective action in the field may be needed when the sample network is changed (i.e., more/less samples, sampling locations other than those specified in the Work Plan, etc.) or when sampling procedures and/or field analytical procedures require modification due to unexpected conditions. In general, the Project Manager and QA Officer may identify the need for corrective action. The Project Manager will approve the corrective measure that will be implemented by the field team. It will be the responsibility of the Project Manager to ensure that corrective action has been implemented.

If the corrective action will supplement the existing sampling using existing and approved procedures in the QAPP, corrective action approved by the Project Manager will be documented. If the corrective actions result in less samples (or analytical fractions), alternate locations, etc., which may result in non-achievement of project QA objectives, it will be necessary that all levels of project management, including the NYSDEC Project Coordinator, concur with the proposed action.

Corrective actions will be implemented and documented in the project field record book. No staff member will initiate corrective action without prior communication of findings through the proper channels. If corrective actions are insufficient, work may be stopped by the NYSDEC Project Coordinator.

If at any time a corrective action issue is identified which directly impacts project data quality objectives, the NYSDEC Project Coordinator will be notified immediately.

7.2 Laboratory Corrective Action

Corrective actions may be initiated if the quality assurance goals are not achieved. The initial step in a corrective action is to instruct the analytical laboratory to examine its procedures to

assess whether analytical or computational errors caused the anomalous result. If no error in laboratory procedures or sample collection and handling procedures can be identified, then the Project Manager will assess whether reanalysis or resampling is required or whether any protocol should be modified for future sampling events.

7.3 Data Validation & Assessment Corrective Action

The need for corrective action may be identified during the data validation or assessment processes. Potential types of corrective action may include resampling by the field team, or reinjection/reanalysis of samples by the laboratory.

These actions are dependent upon the ability to mobilize the field team, whether the data to be collected is necessary to meet the QA objectives (e.g., the holding time for samples is not exceeded, etc.). If the data validator identifies a corrective action situation, the Project Manager will be responsible for approving the corrective action implementation. All required corrective actions will be documented by the laboratory Quality Assurance Coordinator.

APPENDIX J

RESPONSIBILITIES of OWNER and REMEDIAL PARTY

J-1 Responsibilities

The responsibilities for implementing the Site Management Plan ("SMP") for the 837 Bailey Ave. Site (the "site"), number **C915298**, are divided between the site owner(s) and a Remedial Party, as defined below. The owner(s) is/are currently listed as:

- Near Dingens, LLC, John Sullivan (the "owner")
  25 Dingens Street, Buffalo NY 14206
  (716) 913-1200

Solely for the purposes of this document and based upon the facts related to a particular site and the remedial program being carried out, the term Remedial Party ("RP") refers to any of the following: certificate of completion holder, volunteer, applicant, responsible party, and, in the event the New York State Department of Environmental Conservation ("NYSDEC") is carrying out remediation or site management, the NYSDEC and/or an agent acting on its behalf. The RP is:

- Near Dingens, LLC, John Sullivan (the "owner")
  25 Dingens Street, Buffalo NY 14206
  (716) 913-1200

Nothing on this page shall supersede the provisions of an Environmental Easement, Consent Order, Consent Decree, agreement, or other legally binding document that affects rights and obligations relating to the site.

J-2 Site Owner's Responsibilities

1. The owner shall follow the provisions of the SMP as they relate to future construction and excavation at the site.

2. In accordance with a periodic time frame determined by the NYSDEC, the owner shall periodically certify, in writing, that all Institutional Controls set forth in an

Environmental Easement remain in place and continue to be complied with. The owner shall provide a written certification to the RP, upon the RP's request, in order to allow the RP to include the certification in the site's Periodic Review Report (PRR) certification to the NYSDEC.

3. In the event the site is delisted, the owner remains bound by the Environmental Easement and shall submit, upon request by the NYSDEC, a written certification that the Environmental Easement is still in place and has been complied with.

4. The owner shall grant access to the site to the RP and the NYSDEC and its agents for the purposes of performing activities required under the SMP and assuring compliance with the SMP.

5. The owner is responsible for assuring the security of the remedial components located on its property to the best of its ability. In the event that damage to the remedial components or vandalism is evident, the owner shall notify the site's RP and the NYSDEC in accordance with the timeframes indicated in Section 1.3- Notifications.

6. In the event some action or inaction by the owner adversely impacts the site, the owner must notify the site's RP and the NYSDEC in accordance with the time frame indicated in 1.3- Notifications and (ii) coordinate the performance of necessary corrective actions with the RP.

7. The owner must notify the RP and the NYSDEC of any change in ownership of the site property (identifying the tax map numbers in any correspondence) and provide contact information for the new owner of the site property/ies. 6 NYCRR Part contains notification requirements applicable to any construction or activity changes and changes in ownership. Among the notification requirements is the following: Sixty days prior written notification must be made to the NYSDEC.

Notification is to be submitted to the NYSDEC Division of Environmental Remediation's Site Control Section. Notification requirements for a change in use are detailed in Section 2.4 of the SMP. A 60-Day Advance Notification Form and Instructions are found at http://www.dec.ny.gov/chemical/76250.html.

8. In accordance with the tenant notification law, within 15 days of receipt, the owner must supply a copy of any vapor intrusion data, that is produced with respect to structures and that exceeds NYSDOH or OSHA guidelines on the site, whether produced by the NYSDEC, RP, or owner, to the tenants on the property. The owner must otherwise comply with the tenant and occupant notification provisions of Environmental Conservation Law Article 27, Title 24.

J-3 Remedial Party Responsibilities

1. The RP must follow the SMP provisions regarding any construction and/or excavation it undertakes at the site.

2. The RP shall report to the NYSDEC all activities required for remediation, operation, maintenance, monitoring, and reporting. Such reporting includes, but is not limited to, periodic review reports and certifications, electronic data deliverables, corrective action work plans and reports, and updated SMPs.

3. Before accessing the site property to undertake a specific activity, the RP shall provide the owner advance notification that shall include an explanation of the work expected to be completed. The RP shall provide to (i) the owner, upon the owner's request, (ii) the NYSDEC, and (iii) other entities, if required by the SMP, a copy of any data generated during the site visit and/or any final report produced.

4. If the NYSDEC determines that an update of the SMP is necessary, the RP shall update the SMP and obtain final approval from the NYSDEC. Within 5 business

days after NYSDEC approval, the RP shall submit a copy of the approved SMP to the owner(s).

5. The RP shall notify the NYSDEC and the owner of any changes in RP ownership and/or control and of any changes in the party/entity responsible for the operation, maintenance, and monitoring of and reporting with respect to any remedial system (Engineering Controls). The RP shall provide contact information for the new party/entity. Such activity constitutes a Change of Use pursuant to 375-1.11(d) and requires 60-days prior notice to the NYSDEC. A 60-Day Advance Notification Form and Instructions are found at http://www.dec.ny.gov/chemical/76250.html .

6. The RP shall notify the NYSDEC of any damage to or modification of the systems as required under Section 1.3 - Notifications of the SMP.

7. Prior to a change in use that impacts the remedial system or requirements and/or responsibilities for implementing the SMP, the RP shall submit to the NYSDEC for approval an amended SMP.

8. Any change in use, change in ownership, change in site classification (e.g., delisting), reduction or expansion of remediation, and other significant changes related to the site may result in a change in responsibilities and, therefore, necessitate an update to the SMP and/or updated legal documents. The RP shall contact the Department to discuss the need to update such documents.

Change in RP ownership and/or control and/or site ownership does not affect the RP's obligations with respect to the site unless a legally binding document executed by the NYSDEC releases the RP of its obligations.

Future site owners and RPs and their successors and assigns are required to carry out the activities set forth above.