

202 FRANKLIN STREET
CATTARAUGUS COUNTY
CITY OF OLEAN, NEW YORK

SITE MANAGEMENT PLAN

NYSDEC Site Number: C905043

Prepared for:

Silence Dogood, LLC
211 Franklin Street
Olean, New York

Prepared by:

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Revisions to Final Approved Site Management Plan:

Revision No.	Date Submitted	Summary of Revision	NYSDEC Approval Date

DECEMBER 2019

CERTIFICATION STATEMENT

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



12/11/2019

DATE

P.E.

DATE



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CITY OF OLEAN, NEW YORK
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: 202 Franklin Street, City of Olean, New York, NYSDEC Site Number C905043

Institutional Controls:	<ol style="list-style-type: none">1. The property may be used for restricted commercial and/or restricted industrial uses;2. All ECs must be maintained as specified in this SMP.3. All ECs must be inspected at a frequency and in a manner defined in the SMP.4. The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Cattaraugus 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 monitoring must be performed as defined in this SMP;6. Data and information pertinent to site management must be reported at the frequency and in a manner 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;9. Operation, maintenance, monitoring, inspection, and reporting of any physical component of the remedy shall be performed as defined in this 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
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	<p>compliance with the restrictions identified by the Environmental Easement.</p> <p>11. The potential for vapor intrusion must be evaluated for any buildings developed in the area within the IC boundaries noted on Figure 11, and any potential impacts that are identified must be monitored or mitigated; and</p> <p>12. Vegetable gardens and farming on the site are prohibited;</p>
Engineering Controls:	1. Cover system
Inspections:	Frequency
1. Cover inspection	Annually
Monitoring:	
2. Groundwater Monitoring Wells MW-A, MW-B, MW-C, MW-D, MW-E, MW-F and MW-G	Annually for the first three years following issuance of the COC
Maintenance:	
1. Cover System	As needed
Reporting:	
1. Groundwater Monitoring Data	Subsequent to Sampling Event
2. Periodic Review Report	Annually, or an alternate longer period of time allowed by the NYSDEC

Notes:

- (1) The sampling duration and frequency, the sampling technique for monitoring events, the number of wells sampled during monitoring events, and the test parameters for samples collected during monitoring events, may be modified with the approval of the NYSDEC. The SMP will be modified to reflect changes in sampling plans approved by the NYSDEC.

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 202 Franklin Street located in City of Olean, Cattaraugus County, New York (hereinafter referred to as the “Site”). See Figure 1. The Site is currently in the New York State (NYS) Brownfield Cleanup Program (BCP) Site No. C905043, which is administered by New York State Department of Environmental Conservation (NYSDEC).

Silence Dogood, LLC entered into a Brownfield Cleanup Agreement (BCA) as a volunteer on May 22, 2014 with the NYSDEC to remediate the Site. A figure showing the Site location and boundaries of this Site is provided in Figure 2. The boundaries of the Site are more fully described in the metes and bounds site description that is part of the Environmental Easement provided in Appendix D.

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 Cattaraugus 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 (Index #C090543-05-14; Site #C905043) 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 A of this SMP.

This SMP was prepared by Day Environmental, Inc. (DAY), on behalf of Silence Dogood, LLC (the Owner), in accordance with the requirements of the NYSDEC's DER-10 ("Technical Guidance for Site Investigation and Remediation"), dated May 2010 (DER-10), 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 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 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 A.

Table 1: Notifications*

Name	Contact Information
Anthony L. Lopes, P.E. [NYSDEC Project Manager]	716-851-7220 / anthony.lopes@dec.ny.gov
Chad Staniszewski [NYSDEC Regional HW Engineer]	716-851-7220 / chad.staniszewski@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 City of Olean, Cattaraugus County, New York and is identified as Section 94.040 Block 1 and Lot 3 on the Cattaraugus County Tax Map (see Figure 2). The Site is an approximately 5.159-acre area and is bounded by the Interstate I-86 right-of-way (ROW) to the north, Franklin Street to the south, an athletic field to the east, and a railroad ROW to the west (see Figure 3– Site Layout Map). The boundaries of the Site are more fully described in Appendix D– Environmental Easement. The owner of the Site parcel at the time of issuance of this SMP is:

Silence Dogood, LLC.

The metes and bounds as recorded in the environmental easement for the Site are included in Appendix D.

2.2 Physical Setting

2.2.1 Land Use

The Site consists of the following: an approximate 5.79-acre parcel of land, of which a 1.83-acre portion is developed as a paved parking lot that services the Industrial Facility located adjacent to the south (i.e. 211 Franklin Street). The Site is zoned industrial and the eastern portion is currently utilized as an employee parking lot by SolEpoxy Inc. (i.e., the tenant at 211 Franklin Street); the remaining portion of the Site (i.e., approximately 4 acres) is vacant land.

The properties adjoining the Site and, in the neighborhood, surrounding the Site primarily include residential, and industrial properties. The properties immediately south of the Site include Franklin Street followed by industrial properties; the properties immediately north of the Site include the Interstate I-86 right-of-way (ROW); the properties immediately east of the Site include a park followed by residential properties; and the properties to the west of the Site include a railroad ROW followed by commercial and industrial properties.

2.2.2 Geology

Figure 3 is a plan view showing the locations of cross-sections prepared for the project. Geologic cross-sections A-A' and B-B' are designated as Figure 4A and Figure 4B, respectively. These cross-sections illustrate the overburden types and corresponding depths identified in test borings, test pits and wells that were advanced as part of the cumulative studies. In addition, the depth of groundwater in the overburden that was measured at respective overburden groundwater monitoring wells on July 10, 2014 and November 5, 2014 are provided on these cross-sections. Site specific boring and test pit logs are provided in Appendix E.

Overburden

The overburden material at the Site generally consists of stratified drift deposits comprised of outwash and kame deposits consisting primarily of sand and gravel with lesser amounts of silt in some locations. With depth, lacustrine silts and clays (i.e., the remnants of glacial lakes and post-glacial lakes that formed as the glaciers retreated northward) are evident near the bottom of the outwash deposits in the valley floor and in proximity to the bedrock surface.

The southern-most portion of the Site is covered with an approximate 79,800 square feet (i.e., approximately 1.83 acres) asphalt-paved parking lot. The asphalt pavement varies in thickness from about 0.2 ft. up to approximately 0.5 ft. with sub-base material or reworked soil extending below the asphalt pavement to an approximate depth of 1 ft. bgs. The ground surface surrounding, and to the northwest of, the asphalt parking is covered by at least 1.0 ft. of an imported cover soil/gravel material deemed to be free of target compounds/analytes at concentrations in excess of Restricted Commercial Use SCOs, and free of detectable concentrations of emerging contaminants. Heterogeneous fill, generally characterized as C&D debris or apparent railroad ballast, underlies the asphalt parking lot and soil cover; except along the northwest boundary of the Site where indigenous soil, consisting of topsoil underlain by sand with little clay above typically sand and gravel deposits, was encountered. The heterogeneous fill varies in thickness from about 1 foot to 11+ ft below the soil cover. The thickest fill deposits are located in the northeastern portion of the property where structures were previously located. The fill in these

areas is predominately C&D debris comprised of numerous bricks, concrete, pipe, scrap metal and wire intermixed within reworked soil (i.e., primarily sand and gravel). In some locations, apparent railroad ballast containing ash and coal fragments intermixed with re-worked soil is present, extending to depths of approximately 1 to 2 ft. below the soil cover. Additionally, layers of fibrous (paper-like) fill material and paper with a tar-like binder are present in isolated areas of the west-central portion of the Site, starting at a depth of about 2 ft. below the soil cover.

The indigenous soil beneath the fill at the Site generally consists of deposits of fine to medium sand and fine to coarse gravel. However, a deposit of sandy clay to clayey sand was encountered beneath the fill in some locations. This approximate 1.5 ft. to 4 ft. thick deposit was not continuous across the Site and it may have been removed in areas during previous construction activities. Where present, the sandy clay to clayey sand deposit was encountered between elevations of about 1420 ft. and 1427 ft.

Bedrock

Based on a review of “*Geology of Cattaraugus County*” by Irving Tesmer, 1975, bedrock is comprised of gray and black shale interbedded with gray siltstone and sandstone of the Conneaut Group, also referred to as the Chadakoin Formation. These sedimentary rocks are relatively flat lying and dip gently to the south at an approximate rate of 40 ft. per mile. Estimated depth to bedrock at the Site is greater than 200 ft. and was not encountered during previous subsurface investigations at the Site. [Note: The deepest test boring advanced at the Site extended to a depth of 48.0 ft. bgs or an elevation of about 1378.5 ft.]

2.2.3 Hydrogeology

The Site is located within an area designated by the United State Department of the Interior Geological Survey (USGS) as a primary water supply aquifer (Olean). A primary water supply aquifer is defined as: “A highly productive aquifer that is being used as a source of water supply in major public-supply systems.” According to USGS Water-Resources report 85-4157 *Hydrogeology of the Olean Area, Cattaraugus County, New York* dated 1987 prepared by Phillip J. Zarriello and Richard J. Reynolds, the total saturated thickness of the outwash aquifer in

proximity of the Site ranges between approximately 20 ft. and 40 ft., and this aquifer is capable of producing water at rates in excess of 1,000 gallons per minute (GPM) depending on the size and construction of the supply well(s).

Regionally, groundwater flow is generally to the southwest, eventually discharging into the Allegheny River; however, in proximity of the Site, groundwater appears to flow generally to the south-southeast with a southwesterly component in the southern portion of the Site that is more pronounced as the groundwater levels decrease seasonally. Groundwater flow at the Site is in the direction of Olean Creek, which is located about 2,000 ft. east of the Site. Olean Creek flows generally to the south and discharges into the Allegheny River approximately 8,300 ft. south-southwest of the Site.

As described in USGS Water-Resources report 85-4082 titled *Effect of Reduced Industrial Pumpage on the Migration of Dissolved Nitrogen in an Outwash Aquifer in Olean, New York* dated 1987 prepared by Marcel P. Bergeron, extensive pumping was undertaken in the 1970s and 1980s to contain a dissolved nitrogen spill and prevent contaminated groundwater from impacting the municipal water supply wells. Some of the wells that were pumped at rates as high as 10 million gallons per day included wells located adjacent to the southwest boundary of the Site. During this pumping, a 20 ft. to 30 ft. deep cone of depression was created. The continuous pumping has stopped and water levels have since returned to pre-pumping levels. It is suspected that the extensive pumping that occurred in proximity of the Site may have contributed to the vertical distribution of the petroleum-impact identified in test borings at the Site.

The depth to groundwater at the Site varies seasonally. The groundwater elevations ranged from about 2.3 ft. (MW-G) to about 2.5 ft. (MW-A) lower during the November 5, 2014 sampling event than they were during the groundwater level measurements collected on July 10, 2014. The groundwater elevations ranged between about 1411.8 ft. (MW-F) and 1412.7 ft. (MW-C) on July 10, 2014 and between about 1409.3 ft. (MW-F) and 1410.3 ft. (MW-C) on November 5, 2014. These groundwater elevations represent depths to groundwater ranging between about 13.9 ft. bgs and 17.2 ft. bgs on July 10, 2014, and ranging between about 16.0 ft. bgs and 19.6 ft. bgs on November 5, 2014. Groundwater contour maps developed for measurements taken on July 10,

2014 and November 5, 2014 are presented as Figure 5a and Figure 5b, respectively. Groundwater elevation data is provided in Table 6.

The average of the "slug in" and "slug out" hydraulic conductivities measured in monitoring wells MW-B, MW-C and MW-K (i.e., located adjacent to the Site on property to the south) ranged between 1.63 ft/day or 5.75×10^{-4} cm/sec and 3.73 ft./day or 1.31×10^{-3} cm/sec. These values are consistent with the generalized soil permeability values ranging between 0.6 inches/hour and 6 inches/hour presented in Zarriello and Reynolds 1987.

Based upon measurements made at various times during this study, the average hydraulic gradient between the monitoring wells installed at the Site ranged between about 0.001 ft/ft and 0.002 ft/ft. Using the range of calculated hydraulic conductivities and average horizontal gradients and an estimated porosity of 0.3 (i.e., as referenced in Groundwater, by R. Allan Freeze & John A., Cherry, 1979), groundwater flow at the Site was calculated to range between about 0.0054 ft./day and 0.025 ft./day.

While no structures are present at the site that require water or sewer service, the Site is serviceable by a public water system and public sanitary sewer system that is located in the Franklin Street ROW. The City of Olean obtains drinking water from groundwater supply wells located on Richmond Avenue (Well Site M18, which produced 278 million gallons of water in 2013), East River Road (Well Site M37, M38, which produced 325 million gallons of water in 2013), and from Olean Creek (296 million gallons of water were obtained from this location in 2013). The water intake for Olean Creek is located at the River Street water treatment plant, approximately 2,000 ft east of the Site, and hydraulically upgradient of the Site. Well Site M18 is located about 2.3 miles southeast of the Site (i.e., beyond Olean Creek), and Well Site M37/M38 are located about 2.45 miles southeast of the Site (i.e., beyond the confluence of Olean Creek and the Allegheny River).

Groundwater monitoring well construction logs are provided in Appendix E.

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.

2.3.1 Past Uses and Ownership

Based on information obtained from Sanborn Fire Insurance (Sanborn) maps, historic records, and historic directories from the City of Olean, industrial activities were conducted on the Site between 1909 and the early 1960's, including the following:

- The United Wood Alcohol Company was located on the eastern portion of the Site between at least 1909 until around 1915, and operations included the manufacturing and storage of wood alcohol (methanol). A 1909 Sanborn map depicts four buildings at this facility, and a railroad spur line that connects the western-most buildings of the United Wood Alcohol Company to railroad lines located to the south. A 1915 Sanborn map depicts the four buildings on the Site with a note “not in operation”.
- Seaman Container occupied portions of the buildings at the Site between at least 1925 until around 1932, and operations included the manufacturing of paper pails, containers, coolers, etc. The Olean Bag Company also occupied portions of the buildings at the Site between at least 1925 until around 1932, and it is assumed that sewing operations were performed at this facility. A 1925 Sanborn map depicts a north-south trending railroad spur with industrial buildings on either side of the spur. The buildings to the east of the railroad spur are labeled, “dipping room, gas drying ovens, storage, painting dept., finishing dept., press room, tank room, beating room, and storage”. The buildings to the west of the railroad spur are labeled, “stock room, sewing, cleaning and storage”. An area of the map, approximately 3,200 square feet in size located adjacent to the east of the railroad spur and between the eastern and western buildings, is outlined and labeled “pile of old paper”.
- The Arvey Ware Corporation occupied the buildings at the Site between at least 1932 until around 1941, and operations included manufacturing wastebaskets, vases, etc. from

reprocessed waste paper pulp. On the 1932 Sanborn map, the buildings at the Site are labeled, “stock room, enameling and asphalt coating, dress room, trimming/drying, beater room, tank room, machine shop, boiler room and “ovens – not used”.

- The Fibre Forming Corporation occupied the buildings at the Site between around 1941 until around 1962, when they were demolished. Operations conducted by Fibre Forming Corporation included manufacturing wastebaskets, vases, etc. from reprocessed waste paper pulp. A 1956 Sanborn map depicts the buildings at the Site as being, “Vac.” (Vacant), and also depicts a storage building and two alcohol tanks located on the southwest corner of the Site.
- Hysol, a Division of the Dexter Corporation [i.e., the entity that occupied the adjacent property and manufacturing facility to the south (i.e., 211 Franklin Street)], purchased the Site sometime around 1979. A parking lot was subsequently constructed on the southeastern portion of the Site.
- Since 2010, SolEpoxy, Inc. has used the parking lot on the Site for employee vehicle parking.
- In addition to operations conducted on the Site, industrial activities including an oil refinery, oil production/storage operations and railroad lines are/were located in proximity of the Site.
- The Site is located within a 500-acre area which has been designated as a Brownfields Opportunity Area. This designation recognizes that environmental contamination may be present based on historical industrial uses.

2.3.2 Previous Reports and Documents

The previous environmental assessments and studies completed at the Site are summarized below.

Phase I Environmental Site Assessments (Phase I ESAs)

Environmental Resources Management (ERM) prepared a Phase I ESA report dated May 2007 for the Site and select adjacent properties that included a total of approximately 13.5 acres (i.e., 202 Franklin Street, 119 Franklin Street, and 211 Franklin Street). This Phase I ESA report identified that the Site was historically used for residential occupancy, a wood alcohol manufacturing facility, and multiple waste paper pulp manufacturers. Recognized environmental conditions (RECs), pertaining to the Site, that were identified in the 2007 Phase I ESA report include:

- “Historical uses of the subject property included...wood alcohol production (circa 1910 to 1940)...and other manufacturing activities.”
- “An approximate 500-acre area covering eleven current and former industrial properties, including the subject property, has been named by the City of Olean and the State of New York as a Brownfield Opportunity Area (BOA)...the BOA initiative includes creation of a statewide groundwater database to assist communities in evaluating groundwater issues related to the cleanup of contaminated properties...No soil or groundwater sampling has been performed to characterize site conditions on the subject property.”

DAY completed a Phase I ESA in 2013 that included the Site and select adjacent properties that covered approximately 14.28 acres (i.e., 202 Franklin Street, 119 Franklin Street, 211 Franklin Street, and 120 West Connell Street). This report identified that the Site has been used for residential occupancy, a wood alcohol manufacturing facility and warehouses, a textile sewing operation, multiple waste paper pulp manufacturers, and a parking lot. A railroad spur was also identified crossing the southern portion of the Site. RECs pertaining to the Site, that were identified in the 2013 Phase I ESA include:

- Industrial historical occupants of the 202 Franklin Street parcel (i.e., the parcel located on the north side of Franklin Street) included the Olean Bag Co., Seaman Container Co., United Wood Alcohol Company, Arvey Ware Company, and Fibre Forming Corporation. Some of

the chemicals, hazardous substances and waste products used/generated during these operations included:

- Materials and waste products associated with the manufacture of wood alcohol; chemicals and waste products associated with waste paper pulp product manufacturing including paints, enamels and asphalt; and,
 - Petroleum products, coal, and ash associated with power plants/boilers fueling operations at these facilities.”
- Railroad spurs were present in various areas of the Site, both north and south of Franklin Street and apparent railroad ballast material was observed on the ground surface of the Site.
 - The historical use of the adjoining and nearby properties revealed a long history of industrial use of the area. The most significant historical use of the area was an oil refinery, which extended to the northeast, north, northwest, west and southwest of the Site. Numerous oil storage tanks, processing equipment and pipelines were located on the refinery complex. Other industries, which were located in the vicinity of the Site, and which may have used, stored and disposed of hazardous/petroleum products/wastes included: Acme Glass, Seaman Container Manufacturing, Wheeling Corrugating Co, and Empire Mills.
 - The NYSDEC spills database identified four spills at off-site properties, including: the adjoining property to the west/northwest (“Former Socony Vacuum” site); the adjoining property to the west/southwest (“Offsite Scott Rotary Seal BCP site”); and two properties located approximately 0.25 miles north (“MJ Painting Contractor” site and “Offsite Homer Street BCP site”). These four spills were attributed to the historic presence of an oil refinery operated by a predecessor to ExxonMobil. Off-site contaminant migration, potentially toward the assessed property, was identified at each of these spill sites.
 - An approximate 500-acre area [in the vicinity of the Site] has been designated as a Brownfield Opportunity Area (BOA). This designation suggests recognition that environmental contamination may be present based on historical industrial uses. Additionally, this

designation indicates that certain community organizations and municipalities may be eligible for funding to complete revitalization plans and implementation strategies for areas or communities affected by the presence of Brownfield sites, and site assessments for strategic Brownfield sites.

Preliminary Phase II Environmental Site Assessment (Phase II ESA)

DAY completed a Preliminary Phase II ESA at the Site and select adjacent properties in 2013 (i.e., 202 Franklin Street, 119 Franklin Street, 211 Franklin Street, and 120 West Connell Street). The portion of the Preliminary Phase II ESA performed on the Site consisted of the advancement of two test borings (designated TB-01 and TB-06), the installation of one overburden groundwater monitoring well (designated MW-A) within test boring TB-01, and the collection and analysis of one groundwater sample.

The findings of the Preliminary Phase II ESA relative to the Site include:

- Beginning at a depth of about 20 feet (ft.) below ground surface (bgs), photoionization detector (PID) readings in excess of 100 parts per million (ppm) were measured above soil samples collected from test boring TB-01, and these samples exhibited a petroleum-like odor. A maximum PID reading of 121 ppm was measured above the bottom-most sample collected from test boring TB-01 at a depth of about 26 ft. bgs, and this sample exhibited petroleum-like odors.
- A peak PID reading of 275 ppm was measured above a groundwater sample collected from monitoring well MW-A. This sample exhibited a petroleum-like odor and petroleum-type sheen was observed on its surface.
- The laboratory reported a total petroleum hydrocarbon (TPH) concentration of 139 mg/l or ppm in the groundwater sample collected from monitoring well MW-A. The TPH was classified as ‘unidentified petroleum product’. However, the laboratory indicated that the GC fingerprint of the petroleum product identified in groundwater sample MW-A was similar to #2 Fuel Oil and/or other oil, including lubricating, cutting, and silicon oil.

- The concentration of tert-butylbenzene detected in the groundwater sample from MW-A [i.e., 5.38 ug/L or parts per billion (ppb)] exceeds the corresponding NYSDEC groundwater quality standard of 5 ug/l or ppb.

Limited Supplemental Phase II ESA

In February 2014, DAY completed a Limited Supplemental Phase II ESA at the Site which consisted of the advancement of ten test pits (designated TP-A through TP-J) and the collection and analysis of soil/fill samples.

The findings of the Limited Supplemental Phase II ESA relative to the Site include:

- Test pits excavated during this study detected the presence of fill materials typical of previous manufacturing operations (e.g., building debris, railroad ballast associated with former railroad lines, tar-like materials, etc.).
- Various metals (e.g., arsenic) and/or PAHs were measured in several of the samples tested during this study at concentrations that exceed Unrestricted Use SCOs, Restricted Commercial Use SCOs and/or Protection of Groundwater SCOs.

2.3.3 Summary of Remedial Investigation Findings

A Remedial Investigation (RI) was performed to characterize the nature and extent of contamination at the Site. The results of the RI are described in detail in the following report:

- *Remedial Investigation Alternatives Analysis Report*, 202 Franklin Street, City of Olean, Cattaraugus County, New York, BCP Site Number: C905043, prepared by DAY dated July 14, 2017.

The RI/AA report summarizes studies previously conducted at the Site, and presents the results of Remedial Investigation (RI) activities and presents various remedial alternatives developed to address contaminant impact identified at the Site.

Work completed as part of the RI was done in general accordance with the provisions outlined in a document titled *Remedial Investigation/Remedial Alternatives Analysis Work Plan, 202 Franklin Street, Olean, New York 14760, NYSDEC Site Number C905043-05-14* prepared by DAY dated May 2014 (the RIWP). The scope of work included the following:

- Geophysical Survey: A geophysical survey was completed over exterior areas of the Site to evaluate the potential presence of USTs and/or other buried anomalies. Ten anomalies identified by the geophysical survey were evaluated through test borings or test pits.
- Utilities Evaluation including review of utility maps.
- Surface Soil Samples: Eleven surface soil samples were collected and submitted for laboratory analysis.
- Test Boring and Monitoring Well Installation: 15 test borings were advanced at the Site. A portion of the test borings were completed as groundwater monitoring wells. Soil and groundwater samples collected from these test borings and groundwater monitoring wells and submitted for laboratory analysis.
- Test Pit Excavation: 23 test pits were excavated at the Site. Soil and fill material samples collected from these test pits were submitted for laboratory analysis.
- Hydraulic Conductivity Testing.

Below is a summary of Site conditions when the RI was performed:

Surface Soil

VOCs were not detected at concentrations exceeding Unrestricted Use SCO in the surface soil samples tested, except for an estimated concentration of acetone in surface soil sample SS-05. This concentration of acetone does not exceed the Commercial Use SCO.

The concentrations of the following PAH SVOCs exceed their respective Unrestricted Use SCO in one or more surface soil samples: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene. The concentrations of the following PAH SVOCs also exceed their respective Commercial Use SCO in one or more surface samples: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene.

The concentrations of the following pesticide/herbicide and/or PCB compounds exceed their respective Unrestricted Use SCO in one or more surface soil samples: 4,4'-DDE, 4,4'-DDT, aldrin, and PCBs . However, these pesticide/herbicide and PCB compound concentrations do not exceed the Commercial Use SCO.

The concentrations of the following metals exceed their respective Unrestricted Use SCO in one or more surface soil samples: arsenic, copper, lead, mercury, nickel, selenium, and zinc. The concentrations of arsenic in surface soil samples SS-01, SS-03, SS-05 and SS-08, also exceed the Commercial Use SCO.

Soil/Fill

The concentrations of the VOC acetone exceeded the respective Unrestricted Use SCO in one or more subsurface soil/fill samples. The concentrations of VOCs reported in the subsurface soil/fill samples do not exceed the Commercial Use SCO.

The concentrations of the following SVOCs exceed their respective Unrestricted Use SCO in one or more subsurface soil/fill samples tested: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene,

dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, and phenol. The concentrations of the following PAH SVOCs also exceed their respective Commercial Use SCO in one or more surface samples: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene

The concentrations of the following pesticide/herbicide compounds exceed their respective Unrestricted Use SCO in one or more subsurface soil/fill samples: 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, and PCBs. The concentrations of pesticide/herbicide and PCBs reported in the subsurface soil/fill samples do not exceed the Commercial Use SCO.

The concentrations of the following metals exceed their respective Unrestricted Use SCO in one or more subsurface soil/fill samples: arsenic, barium, cadmium, chromium, copper, lead, manganese, mercury, nickel, selenium, and zinc. The concentrations of the following metals also exceed their respective Commercial Use SCO in one or more subsurface soil/fill samples: arsenic, barium, cadmium, copper, and lead.

Site-Related Groundwater

VOCs and SVOCs were not detected in the groundwater samples tested at concentrations exceeding groundwater standards or guidance values during either of the sample rounds completed during this study. However, VOC TICs were identified in samples from each of the monitoring wells during at least one of the sample events completed during this study, ranging between 6.3 ug/l (or ppb) and 201.9 ppb. Total VOC TIC concentrations in excess of 100 ppb were reported in both samples collected from MW-G. SVOC TICs ranging between 4.6 ppb and 105 ppb were identified in samples from each of the monitoring wells during both sample events completed during this study. Total SVOC TIC concentration in excess of 100 ppb were reported in the sample collected on June 26, 2014 from MW-G.

Note: An apparent plume of petroleum-impacted groundwater was identified in the western portion of the Site. However, this plume is attributable to an off-site source and the concentrations measured and the apparent degree of petroleum impact do not appear to increase as groundwater migrates through the Site.

Pesticide/herbicide and PCB compounds were not detected in the groundwater samples tested during this study.

The concentrations of the following metals measured during at least one of the sample events completed during this study exceed their respective groundwater standards or guidance values antimony, arsenic, barium, iron, manganese, selenium, and sodium. Although the concentrations of iron, manganese and sodium exceeded their respective groundwater standards or guidance values, the concentrations measured are typical of background conditions and, as such, apparently not attributable to contaminants at the Site. The arsenic concentrations detected in samples from monitoring well MW-D (i.e., 31.5 ug/l and 63.4 ug/l) were approximately six and twelve times (respectively) higher than the average of arsenic concentrations detected in the other wells sampled, and about 50% and 150% (respectively) higher than the groundwater standard of 25 ug/l. The barium concentrations detected in samples from monitoring well MW-D (i.e., 1,530 ug/l and 2,490 ug/l) were approximately five and eight times (respectively) higher than the average of barium concentrations detected in the other wells sampled, and about 50% and 150% (respectively) higher than the groundwater standard of 1000 ug/l.

2.3.4 Summary of Remedial Actions

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

1. Metal Waste Fill Removal
2. UST Removal.
3. Cover system

2.3.4.1 Metal Waste Fill Removal

Metal waste fill was removed from the subsurface at the Site between September 20 and 22, 2017. The approximate areas from which the metal waste fill was removed (i.e., located in the northeast portion of the Site) are depicted on Figure 6.

On September 20, 2017, the topsoil was stripped from an approximate 6,540 square-foot area located in the northeast portion of the Site to an approximate depth of 0.3 ft. bgs and stockpiled on the Site. The locations of the eleven anomalies identified by the geophysical survey during the RI, within the area that had been stripped of topsoil, (herein referred to as Area 1 through Area 11) were demarcated for subsequent excavation. The approximate locations of Area 1 through Area 11 are depicted on Figure 6.

Excavation in the vicinity of Area 1 and Area 2 was completed on September 20, 2017, starting at the northern edge of Area 1, followed by excavation of Area 2 before proceeding to the southern portion of Area 1. Waste materials encountered in the subsurface (i.e., starting below the stripped topsoil and extending to depths up to approximately 4 ft. bgs) were removed using an excavator. These materials included discolored (i.e., black) soil/fill, black vitrified fragments of apparent tar or plastic material, brick, iron bar, sheet metal, welded wire mesh, steel machinery components (e.g., gears), a rectangular steel open-top container (i.e., bin), and a 2-inch-thick layer of ash, slag and cinders. The excavated material was placed directly into the bucket of a loader, transported to the northeast portion of the employee parking lot, and stockpiled on two layers of 10-mil thick poly sheeting. The limits of Area 1 and Area 2 were increased or modified in order to remove the metal waste fill encountered, and excavation advanced in depth and/or area until the metal waste fill was no longer observed in the sidewalls or base of the excavation. During excavation activities, portions of the materials excavated, excavation sidewalls, and the excavation base were screened using a PID. PID readings above background levels (i.e., 0.0 ppm to 0.2 ppm) were not measured in the areas screened.

Excavation in the vicinity of Area 3 through Area 8 was completed on September 21, 2017, starting with Area 6 and proceeding toward the southwest, then east. Waste materials encountered in the subsurface (i.e., starting below the stripped topsoil and extending to depths up to approximately 4.5 ft. bgs) were removed using an excavator. These materials included discolored (i.e., black to rust colored) soil/fill, welded wire mesh, partially incinerated materials, black vitrified fragments of apparent tar or plastic material, steel cable, ash, and steel bar. The depths at which the top of the metal waste fill was encountered generally increased toward the north. Therefore, a 1 ft. to 2 ft. thick layer of 'clean' fill soil (i.e., that did not exhibit evidence of

containing metal waste or produce readings above background levels in the ambient air when screened with a PID) was encountered above portions of the metal waste fill, starting at the ground surface and extending to the top of the metal waste fill layer. When practical this material, where encountered, was stripped and used to backfill areas where removal activities had been completed. Excavation, removal, stockpiling, and screening activities completed on September 21, 2017 were conducted in a similar manner to that described above.

Excavation in the vicinity of Area 9 through Area 11 was completed on September 22, 2017, starting with Area 11 and proceeding toward the southwest. Waste materials encountered in the subsurface (i.e., starting below the stripped topsoil and extending to depths up to approximately 4.5 ft. bgs) were removed using an excavator. These materials included discolored (i.e., black or rust colored) soil/fill, sheet metal tabs (i.e., waste from an apparent stamping operation), brick, concrete, glass, a steel rail, a rail tie timber, apparent railroad bed ballast, partially incinerated materials, black vitrified fragments of apparent tar or plastic material, and steel cable. Excavation, removal, stockpiling, screening, and 'clean' soil stripping activities completed on September 22, 2017 were conducted in a similar manner to that described above.

Representative soil/fill samples were collected from the waste stockpile that was generated from the metal waste fill excavations between September 20 and 22, 2017. A portion of each sample was placed in laboratory provided glassware for subsequent testing by a NYSDOH environmental laboratory accreditation program (ELAP)-certified laboratory.

SolEpoxy prepared waste profile #118494NY on behalf of Silence Dogood. This profile, including the results of the testing described above, was submitted to Waste Management, Inc., in Model City, New York (Waste Management) for approval. Waste Management approved waste profile #118494NY on December 21, 2017.

On January 9, 2018, approximately 289 tons of soil/fill were transported to Waste Management's Chafee Landfill and disposed under Waste Management profile #118494NY. The soil/fill was transported from the Site to the Chafee landfill by D&H Excavating, a NYCRR Part 364 permitted waste hauler (permit #9A-834).

2.3.4.2. UST Removal

An 8,000-gallon UST was removed from the Site between September 25 and 26, 2017. The former location of UST (i.e., adjacent to the southwest corner of the employee parking lot at the Site) is depicted on Figure 7. Prior to the removal of the UST, the residual liquid from the tank was removed, to the extent possible, using a vacuum truck. Once the liquid contents were removed, a pressure washer was used to clean the UST interior, and the wash liquids were evacuated using the vacuum truck. The liquid removed from the UST interior (i.e., product and cleaning fluids) was transferred from the vacuum truck into three New York State Department of Transportation (NYSDOT) approved, steel, 55-gallon drums, that were subsequently placed on and covered with 2 layers of 10-mil thick poly sheeting on the northeast portion of the employee parking lot.

The UST was removed from the ground and observed. An apparent product supply pipe was observed to be broken below a 90° elbow fitting that was affixed to the UST (i.e., located at the invert of the south end wall). [Note: during the subsequent soil removal (described below), the apparent product supply pipe was observed to extend approximately five feet to the east, where it turned 90° and entered the south face of the concrete foundation wall, approximately one foot above the elevation of the footer. When the apparent product supply pipe was disconnected from the concrete foundation wall, perched water flowed from the opening in the wall. The water did not exhibit evidence of impact (i.e., sheen, odor, discoloration, etc.).] Although the steel walls were observed to be covered by rust, and pitting was noted, no obvious holes or other areas of potential failure were noted in the UST exterior.

After the tank was removed, a DAY representative observed the excavation floor and sidewalls of the excavation for evidence of impact (i.e., staining, petroleum or chemical type odors, free product, etc.) and screened soil samples collected from the excavation with a PID. During this evaluation, evidence of apparent impact was observed in the south end wall of the excavation, in the vicinity of the former location of the apparent product supply pipe described above. The impacts observed consisted of gray/black staining, chemical-type odors and a peak PID readings in excess of 500 ppm. In addition, a thin layer (i.e., approximately 0-1 ft. thick) of apparent fill

material was observed below the UST, located approximately 10.5 ft. to 11.5 ft. bgs. This material was black in color, but did not emit an odor. PID readings over this material were not measured above background levels. [Note: based on its location and thickness, is suspected that this material was placed below the UST as a bedding layer when the UST was installed, rather than the result of impacts from a release of the former UST contents.]

Between September 27 and 28, 2017, the 0-1 ft. thick layer of apparent tank bedding fill material was excavated and stockpiled on a double layer of 10-mil thick poly sheeting to await disposal at a regulated facility. In addition, apparently impacted soil located in the vicinity of the south end wall of the UST was excavated, and added to the stockpile described above. Specifically, this apparently impacted soil was removed from an area extending approximately 6.5 ft. to the south, southeast, and southwest of the south end wall of the former UST (refer to Figure 6); to a maximum depth of approximately 15.5 ft. bgs. The extent of the removal was determined by the DAY representative and the NYSDEC Project Manager based on observation of the impacted material in the excavation sidewalls and base (i.e., generally in the vicinity of, and extending away from, the apparent product pipe described above), the results of PID readings collected over spoils excavated from the impacted zone, and obstructions that limited the amount of material that could be removed. Specifically, the extent of the removal was limited by the proximity to the western property boundary and utilities located along Franklin Street, the concrete foundation wall, and the reach of the excavator bucket (i.e., to a maximum depth of approximately 15.5 ft. bgs). Excavation and removal of the impacted material continued, extending away from the apparent source (i.e., the apparent product pipe) until PID readings indicated the edge of the impact, or until further excavation was not practical, due to one or more of the limitations described above. Piping encountered during the excavation activities (i.e., extending from the concrete foundation wall) was disconnected and recycled as scrap.

Demarcation layers (i.e., orange plastic net fabric) were placed over the base and sidewalls to demarcate the furthest extent of excavation that was completed during the UST and impacted soil removals. In addition, a demarcation layer was placed in the southern portion of the excavation (i.e., generally to the south of the former position of the UST) at a depth of around 11 ft. bgs, for the purpose of marking the top of the impacted soil layer that was encountered. Confirmatory

samples were collected from the sidewalls and base of the excavation on September 28, 2017 prior to placement of demarcation layers.

A representative sample of liquids removed from the UST interior (i.e., product and cleaning fluids) was collected by SUN on September 26, 2017 and submitted to Paradigm, a NYSDOH ELAP-certified laboratory. The liquid sample was tested for flashpoint using USEPA Method 1010A, and the results of the testing characterized the liquid waste a RCRA hazardous (D001) flammable liquid. Therefore, a temporary hazardous waste generator ID (NYR000233627) was obtained from the USEPA by SolEpoxy representatives. On November 8 2017, SUN transported three 55-gallon drums of liquid waste to Cycle Chem., Inc. in Lewisberry, Pennsylvania for treatment/disposal.

On September 29, 2017, three representative soil/fill samples were collected from the UST excavation waste stockpile that was generated between September 27 and 28, 2017. A portion of each sample was placed in laboratory provided glassware for subsequent testing by Spectrum, a NYSDOH ELAP-certified laboratory. The three soil samples were composited into a single sample by Spectrum and tested for VOCs plus TICs using USEPA Method 8260, SVOCs plus TICs using USEPA Method 8270, RCRA-list metals using various methods, pesticides using USEPA Method 8081, herbicides using USEPA Method 8151, PCBs using USEPA Method 8082, ignitability using USEPA Method 1010, corrosivity using USEPA Method 9045, and reactivity using various methods.

SolEpoxy prepared waste profile #118496NY on behalf of Silence Dogood. This profile, including the results of the testing described above, was submitted to Waste Management, Inc., in Model City, New York for approval. Waste Management approved waste profile #118496NY on December 21, 2017.

On January 9, 2018, approximately 86 tons of soil/fill were transported to Waste Management's Chafee Landfill and disposed of under Waste Management profile #118496NY. The soil/fill was transported from the Site to the Chafee landfill by D&H Excavating.

2.3.4.3 Installation of Cover System

Between October 23 and 27, 2017 and approximate 140,00 sq. ft. area of the Site located to the north of the employee parking lot was prepared for the placement of an interim soil cover by removal of vegetative cover and grading and compaction of the ground surface.

Between November 2 and 28, 2017, an interim soil cover was constructed over an approximate 107,350 sq. ft. area. This interim soil cover consisted of an approximate 0.45 ft. to 1.25 ft. layer of gravel fill meeting the criteria for aggregate material as outlined in Section 5.4(e) of DER-10, underlain by a layer of woven geotextile (i.e., which also acts as a demarcation layer to identify the bottom of the site cover, if disturbed during future intrusive work at the Site). The woven geotextile was placed on the ground surface, overlapping approximately 1-2 ft. when adjacent rolls of woven geotextile were placed as the construction proceeded toward the north and east. The gravel fill was subsequently placed on the woven geotextile, spread, and compacted using a flat-drum vibratory soil compactor.

An approximate 31,700 sq. ft. area, located on the northern portion of the Site and adjacent to the north of the interim soil cover was compacted as described above. However, the interim soil cover was not constructed over this area at that time.

Construction of the soil cover system for the Site resumed in July 2019 following a limited soil/fill removal, completed to provide adequate depth to place a 1-foot thick layer of “clean cover soil” over exterior portions of the Site, to the edge of the Site boundary, and maintain the existing grade over the adjacent employee parking lot. Additional soil/fill was removed for grading purposes prior to placement of a stone in the drainage channel that was constructed to the north of the employee parking lot. The material removed generally consisted of re-worked soil. However, some apparent construction and demolition type materials including brick, concrete, and asphalt were also noted in the fill. The excavated materials were loaded into a dump truck, transported to the northwest portion of the Site, and placed at the ground surface over an approximate 6,000 ft² area to create a berm. This material was subsequently covered with demarcation fabric and a minimum 1-foot thick layer of import soil cover.

Subsequent to the excavation and grading activities, a demarcation fabric was placed over the areas designated for soil cover and temporary grade stakes were installed to guide the placement of the soil cover (refer to Section 2.5.1 for a description of the demarcation fabric).

Generally, the soil cover was constructed by placement of the import soil material onto the Site using a dump truck, and subsequently spreading the soil using a bulldozer and/or skid-steer loader to achieve a grade elevation of approximately 2-3 inches above the top of the grade stake markers. The material was subsequently compacted using a drum-roller until the required 1-foot thickness was achieved. However, the soil cover constructed along the southern perimeter of the Site was placed and compacted using an excavator bucket, in order to keep to import soil from migrating onto the asphalt parking lot. A portion of the soil cover system was constructed using a washed stone material, to facilitate stormwater drainage away from the Employee Parking Lot and this area is depicted on Figure 11. In addition, a mulch cover was constructed below the canopies of mature trees located on the eastern edge of Site, in lieu of a soil cover (i.e., due to the negative effect that the soil cover may have on the long-term health of the mature trees).

Subsequent to completing the construction of the soil cover, portions of the soil cover surface (i.e., along the southern, southwestern and northeastern edges of the Employee Parking Lot) were top-dressed with a one to three inch thick layer of screened soil (refer to Section 3.5) and subsequently seeded with grass seed and covered with straw to promote vegetative growth. The remainder of the soil cover was seeded by placement of grass seed and straw directly onto the compacted surface. The areas of soil cover that are considered part of the cover system are depicted on Figure 11.

2.4 Remedial Action Objectives

The Remedial Action Objectives (RAOs) for the Site as listed in the Decision Document dated August 2017 are as follows:

Groundwater

RAOs for Public Health Protection:

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

RAOs for Environmental Protection:

- Remove the source of ground or surface water contamination.
- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practical.

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

Concentrations of individual constituents detected in specific surface soil samples, soil/fill samples, and confirmatory soil samples are presented on Table 3A and 4A (VOCs), Table 3B and 4B (SVOCs), Table 3C and 4C (PCBs and Pesticides) and Table 3D and 4D (Metals and Cyanide) which summarize the analytical samples results of soil remaining at the Site after completion of the remedial measures and indicates exceedance of Unrestricted Use SCOs and/or Restricted Commercial SCOs. [Note: Confirmatory soil samples were also tested for Alcohol using modified USEPA Method 8015, PCBs using USEPA Method 8082 and organochloride pesticides using USEPA Method 8081. However, these compounds were 'Not Detected' above the detection limits utilized by the analytical laboratory in the confirmatory soil samples tested. As such, summary tables for Alcohols, PCBs or Pesticides were not prepared for the confirmatory soil samples.]

Figure 8 presents the soil/fill samples that represent post-remediation Site conditions and designates samples containing one or more constituents at concentrations exceeding their respective Restricted Commercial Use SCOs. Figure 10 indicates the exterior areas of the site with a cover system consisting of a one-foot thick layer of cover soil underlain with a demarcation layer. Two distinct types of demarcation fabric were used at the Site, as described below:

- A black, woven geotextile fabric (i.e., TerraTex® GS) was placed over the approximate 107,350 sq. ft. area of interim soil cover, over an approximate 14,500 sq. ft. area located at the northeast corner of the Site, and within the drainage channel, to replace the demarcation fabric removed during the limited excavation activities described in Section 2.3.4.3.
- An orange netting-type fabric (i.e., High Visible Orange Demarcation Netting) was placed over the approximate 2,300 ft² area located along the southwest edge of the Employee Parking Lot, the approximate 2,700 ft² area located along the northeast edge of the Employee Parking Lot, the approximate 1,920 ft² area located along the southeast edge of the Employee Parking Lot, and an approximate 13,800 ft² area located to the north and northwest of the area of interim soil cover.

Remaining areas have a cover system consisting of asphalt pavement that is underlain by concrete pavement in some areas. As shown on Figure 8, contamination exceeding the Restricted Commercial Use SCOs remains in place following completion of the remedial measures. Contaminants of concern in soil above the Restricted Commercial Use SCOs that remain in place following remedial measures include benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, chrysene, dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene, arsenic, barium, cadmium, copper, and lead.

2.5.2 Groundwater

Detectable levels of VOC TICs and SVOC TICs are present in groundwater at the Site; however, VOCs and SVOCs were not consistently detected in the groundwater samples at concentrations greater than groundwater standards or guidance values [i.e., the compounds tert-butylbenzene and bis(2-chloroethyl)ether were detected in groundwater samples collected from one or more of the monitoring wells at the Site. However, neither of these compounds was detected

on more than one occasion in any of the locations tested.] Various metals are present in groundwater at concentrations greater than their respective groundwater standards or guidance values, including antimony, arsenic, barium, iron, manganese, selenium, sodium and thallium. The concentrations of iron, manganese and sodium are typical of background conditions and, as such, apparently not attributable to contaminants at the Site. As shown on Figure 9, a discernible plume in relation to metals was not identified at the Site. Rather localized areas of metal impacts appear to be present across the Site. Tables 5A through 5D and Figure 9 summarize the results of groundwater samples that exceed the SCGs after completion of the remedial action.

Note: An apparent plume of petroleum-impacted groundwater was identified in the western portion of the Site. However, this plume is attributable to an off-site source and the concentrations measured and the apparent degree of petroleum impact do not appear to increase as groundwater migrates through the Site.

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 B) 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 Restricted Commercial and Restricted 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 11. These ICs are:

- The property may be used for restricted commercial and restricted industrial uses;
- 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 Cattaraugus 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 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 11, 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 System

Exposure to remaining contamination at the Site is prevented by a cover system placed over the Site. This cover system is comprised of asphalt pavement and/or a minimum of 12 inches of clean fill material, underlain by a demarcation layer. Figure 11 presents the location of the cover system and Figure 10 presents the extent of the demarcation layers. The Excavation Work Plan

(EWP) provided in Appendix B outlines the procedures required to be implemented in the event the cover system is breached, penetrated or temporarily removed, and any underlying 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 H.

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 System

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.

3.3.3 Soil Vapor Intrusion Evaluation and Mitigation

At the time of the writing of this SMP, there are no buildings located on the Site. However, the potential for vapor intrusion must be evaluated for any buildings developed in the area within the IC boundaries noted on Figure 11, and any potential impacts that are identified must be monitored or mitigated. Vapor intrusion mitigation systems, if required, will be designed and monitored as engineering controls, requiring modification of this document. Exposures related to soil vapor intrusion in future buildings at the Site may be addressed through remedial programs with ExxonMobil. [Note: As stated in Section 6.3 of the Decision Document, “This site is situated immediately downgradient of the former ExxonMobil Refinery footprint with documented petroleum contamination. The soil and groundwater impacts from the former refinery are being addressed under multiple Brownfield Cleanup Program sites and by ExxonMobil through the Department’s spills program.”]

4.0 MONITORING AND SAMPLING PLAN

4.1 General

This Monitoring and Sampling Plan describes the measures for evaluating the overall performance and effectiveness of the remedy. This Monitoring and Sampling Plan may only be revised with the approval of the NYSDEC. Details regarding the sampling procedures, data quality usability objectives, analytical methods, etc. for all samples collected as part of site management for the Site are included in the Quality Assurance Project Plan provided in Appendix G.

This Monitoring and Sampling Plan describes the methods to be used for:

- Sampling and analysis of all appropriate media (e.g., groundwater);
- Assessing compliance with applicable NYSDEC standards, criteria and guidance (SCGs), particularly groundwater standards and Part 375 SCOs for soil; and
- Evaluating site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment;

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

- Sampling locations, protocol and frequency;
- Analytical sampling program requirements;
- Inspection and maintenance requirements for monitoring wells;
- Monitoring well decommissioning procedures; and
- Annual inspection and periodic certification.

Reporting requirements are provided in Section 7.0 of this SMP.

4.2 Site – wide Inspection

Site-wide inspections will be performed at a minimum of once per year. 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 I – Site Management Forms. The form will compile sufficient information to assess the following:

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

Inspections of 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.

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.

4.3 Post-Remediation Media Monitoring and Sampling

Groundwater samples shall be collected from the groundwater monitoring wells at the Site on a routine basis. Groundwater sampling locations, required analytical parameters and schedule are provided in Table 6.

Detailed sample collection and analytical procedures and protocols are provided in Appendix F – Field Activities Plan and Appendix G – Quality Assurance Project Plan.

4.3.1 Groundwater Sampling

Groundwater monitoring will be performed annually for an initial period of three years to assess the performance of the remedy at which time the NYSDEC will be contacted to discuss subsequent sampling requirements. Modification to the frequency or sampling requirements will require approval from the NYSDEC.

The network of monitoring wells has been installed to monitor upgradient, on-site and downgradient groundwater conditions at the Site. The network of on-site wells has been designed based on the following criteria:

- Monitoring wells MW-A and MW-C are study area upgradient perimeter wells and provide information on contaminants that may be migrating onto the Site from adjoining properties.
- Monitoring wells MW-B and MW-D are Site area wells and provide information on contaminant concentrations within the Site.

- Monitoring wells MW-E, MW-F and MW-G are study-area downgradient perimeter wells and provide information on contaminants that may be migrating from the Site.

Refer to Figure 3 for a Site plan showing the locations of the monitoring wells installed at the Site. The encountered lithology types, monitoring well screened intervals and monitoring well installation depths are presented on the test boring and monitoring well construction logs included in Appendix E. Although groundwater elevations vary seasonally, the groundwater flow patterns presented on Figures 5A and 5B indicate that groundwater flow is typically towards the southeast.

Table 6 summarizes each wells' identification number, as well as the purpose, location, depth, diameter and screened interval of each well. As part of the groundwater monitoring, seven on-site wells will be sampled to evaluate the effectiveness of the remedial system. Table 6 also provides information on analytical parameters to be analyzed, and historical groundwater elevations from measurements performed in July 2014 and November 2014.

Monitoring well construction logs are included in Appendix E of this document.

If biofouling or silt accumulation occurs in the on-site and/or off-site monitoring wells, the wells will be physically agitated/surged and redeveloped. Additionally, monitoring wells will be properly decommissioned and replaced, if an event renders the wells unusable.

Repairs and/or replacement of wells in the monitoring well network will be performed based on assessments of structural integrity and overall performance.

The NYSDEC will be notified prior to any repair or decommissioning of any monitoring well for the purpose of replacement, and the repair or decommissioning and replacement process will be documented in the subsequent Periodic Review Report. Well decommissioning without replacement will be done only with the prior approval of the NYSDEC. Well abandonment will be performed in accordance with NYSDEC's guidance entitled "CP-43: Groundwater Monitoring Well Decommissioning Procedures." Monitoring wells that are decommissioned because they have been rendered unusable will be replaced in kind in the nearest available location, unless otherwise approved by 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.

Deliverables for the groundwater monitoring program are specified in Section 7.0 – Reporting Requirements.

4.3.2 Monitoring and Sampling Protocol

Sampling activities will be recorded in a field book and associated sampling log as provided in Appendix I - 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 detail regarding monitoring and sampling protocols are provided in the site-specific Field Activities Plan provided as Appendix F of this document.

5.0 OPERATION AND MAINTENANCE PLAN

5.1 General

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

6.0 PERIODIC ASSESSMENTS/EVALUATIONS

6.1 Climate Change Vulnerability Assessment

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

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

- **Flood Plain:** Based on review of a Flood Insurance Rate Map for a portion of the City of Olean, NY (Community Panel 360068 0001 B effective date November 1, 1978) acquired from the online FEMA Flood map services Center, the Site is identified with a Zone B designation. Zone B is defined as “Areas of moderate flood hazard, area between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than 1 foot or where the contributing drainage are is less than one square mile; or areas protected by levees from the base flood”. As such, the Site is considered outside the 100-year floodplain.
- **Site Drainage and Storm Water Management:** The existing Site development has adequate storm water management systems.
- **Erosion:** The grade of the Site is such that significant erosion will not occur during periods of severe rain events.
- **High Wind:** Remedial system components (i.e., asphalt and soil cover system) are not susceptible to damage from the wind itself or falling objects, such as trees or utility structures during periods of high wind.

- Electricity: Remedial system components (i.e., asphalt and soil cover system) are not susceptible to damage from power loss and/or dips/surges in voltage during severe weather events, including lightning strikes
- Spill/Contaminant Release: No areas of the Site and/or remedial system are anticipated to be susceptible to a spill or other contaminant release due to storm-related damage caused by flooding, erosion, high winds, loss of power etc.

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).

- Waste Generation: Waste generation is minimal since engineering controls and institutional controls are used as part of the remedy. In addition, groundwater sampling techniques utilized for this Site generate minimal quantities of waste. As such, it does not appear that additional waste reduction efforts are necessary at this time.
- Energy Usage: The remedy for the Site does not require an energy source.
- Emissions: Emissions from the Site, in relation to the site remedy, are not anticipated.
- Water usage: Potable water use at the Site as part of the remedy is minimal (e.g., decontamination water), and is procured from the City of Olean public water system. In addition, the analytical laboratory may provide minimal amounts of deionized water for certain types of samples associated with monitoring.
- Land and/or ecosystems: No disturbance or restoration of land and/or ecosystems is anticipated in relation to the remedy for the Site.

6.2.1 Timing of Green Remediation Evaluations

For major remedial system components, green remediation evaluations and corresponding modifications will be undertaken as part of a formal Remedial System Optimization (RSO), or at any time that the Project Manager feels appropriate, e.g. during significant maintenance events or in conjunction with storm recovery activities.

Modifications resulting from green remediation evaluations will be routinely implemented and scheduled to occur during planned/routine operation and maintenance activities. Reporting of these modifications will be presented in the PRR, and will incorporate the Green Remediation Metrics Form (Appendix I), as applicable.

6.2.2 Frequency of System Checks, Sampling and Other Periodic Activities

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

6.2.5 Metrics and Reporting

The remedy for the Site involves little to no waste generation, energy usage, water usage, transportation, and disturbance to land/ecosystems. As such, documentation and reporting in relation to green remediation during site management is not warranted.

6.3 **Remedial System Optimization**

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

- The remedial actions have not met or are not expected to meet RAOs in the time frame estimated in the Decision Document;
- The management and operation of the remedial system is exceeding the estimated costs;
- The remedial system is not performing as expected or as designed;
- Previously unidentified source material may be suspected;
- Plume shift has potentially occurred;
- Site conditions change due to development, change of use, change in groundwater use, etc.;
- There is an anticipated transfer of the site management to another remedial party or agency; and
- A new and applicable remedial technology becomes available.

An RSO will provide a critique of a site's conceptual model, give a summary of past performance, document current cleanup practices, summarize progress made toward the Site's cleanup goals, gather additional performance or media specific data and information and provide recommendations for improvements to enhance the ability of the present system to reach RAOs or to provide a basis for changing the remedial strategy.

The RSO study will focus on overall site cleanup strategy, process optimization and management with the intent of identifying impediments to cleanup and improvements to site operations to increase efficiency, cost effectiveness and remedial time frames. Green remediation technology and principals are to be considered when performing the RSO.

7.0. REPORTING REQUIREMENTS

7.1 Site Management Reports

All site management inspection, maintenance and monitoring events will be recorded on the appropriate site management forms provided in Appendix I. 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 2 and summarized in the Periodic Review Report.

Table 2: Schedule of Monitoring/Inspection Reports

Task/Report	Reporting Frequency*
Inspection Report (Site Cover)	Annually
Periodic Review Report	Annually, or as otherwise determined by the Department
Groundwater Monitoring Results Letter	Annually

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

All 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., groundwater);
- Copies of all field forms completed (e.g., well sampling logs, chain-of-custody documentation, etc.);
- 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.

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

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

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

- Date of event;
- Name, company, and position of person(s) conducting non-routine maintenance/repair activities;
- Description of non-routine activities performed;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents (included either on the form or on an attached sheet); and

- Other documentation such as copies of invoices for repair work, receipts for replacement equipment, etc. (attached to the checklist/form).

Data will be reported in digital format as determined by the NYSDEC. Currently, data is to be supplied electronically and submitted to the NYSDEC EQUIS™ database in accordance with the requirements found at this link <http://www.dec.ny.gov/chemical/62440.html>.

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 D -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. Media sampling results will also be incorporated into the Periodic Review Report. 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.
- Data summary tables and graphical representations of contaminants of concern by media (i.e., groundwater), 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™ 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 RAWP, ROD or Decision Document;
 - Any new conclusions or observations regarding Site contamination based on inspections or data generated by the Monitoring and Sampling Plan for the media being monitored;
 - Recommendations regarding any necessary changes to the remedy and/or Monitoring and Sampling Plan; and
 - Trends in contaminant levels in the affected media will be evaluated to determine if the remedy continues to be effective in achieving remedial goals as specified by the 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 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 generally accepted engineering practices;*
- *The information presented in this report is accurate and complete; and*
- *No new information has come to my attention, including groundwater monitoring data from wells located at the site boundary, if any, to indicate that the assumptions made in the qualitative exposure assessment of off-site contamination are no longer valid.*

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 Silence DoGood, LLC.

In addition, 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.

7.4 Remedial Site Optimization Report

In the event that an RSO is to be performed (see Section 6.3), upon completion of an RSO, an RSO report must be submitted to the Department for approval. A general outline for the RSO report is provided in Appendix K. The RSO report will document the research/ investigation and data gathering that was conducted, evaluate the results and facts obtained, present a revised conceptual site model and present recommendations. RSO recommendations are to be implemented upon approval from the NYSDEC. Additional work plans, design documents, HASPs etc., may still be required to implement the recommendations, based upon the actions that need to be taken. A final engineering report and update to the SMP may also be required.

The RSO report will be submitted, in electronic format, to the NYSDEC Central Office, Regional Office in which the Site is located, Site Control and the NYSDOH Bureau of Environmental Exposure Investigation.

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).

Phase I Environmental Site Assessment, Henkel Corporation, 211 Franklin Street, Olean, New York dated May 2007 prepared by Environmental Resources Management.

Phase I Environmental Site Assessment, 119, 202 & 211 Franklin Street and 120 West Connell Street, City of Olean, New York dated November 1, 2013 prepared by DAY.

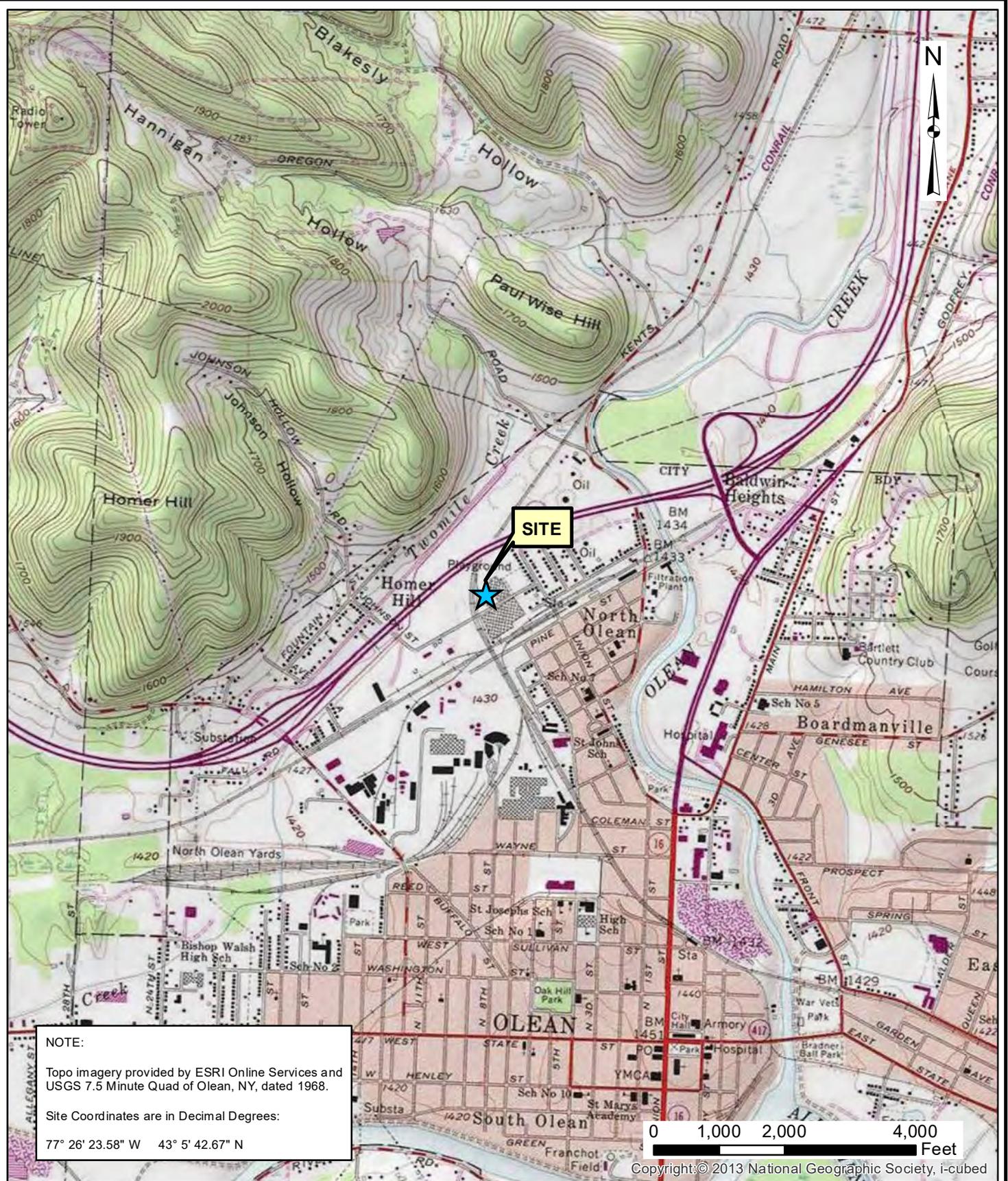
Preliminary Phase II Environmental Site Assessment, 119 Franklin Street, 211 Franklin Street, 202 Franklin Street and 120 West Connell Street, Olean, New York dated October 27, 2013 prepared by DAY.

Remedial Investigation Alternatives Analysis Report, 202 Franklin Street, City of Olean, Cattaraugus County, New York, BCP Site Number C905043, dated July 14, 2017 prepared by DAY.

Remedial Investigation/Remedial Alternatives Analysis Work Plan, 202 Franklin Street, Olean, New York 14760, NYSDEC Site Number C905043-05-14 dated May 2014 prepared by DAY.

Groundwater, by R. Allan Freeze and John A. Cherry, 1979

FIGURES



NOTE:

Topo imagery provided by ESRI Online Services and USGS 7.5 Minute Quad of Olean, NY, dated 1968.

Site Coordinates are in Decimal Degrees:

77° 26' 23.58" W 43° 5' 42.67" N

0 1,000 2,000 4,000
Feet

Copyright:© 2013 National Geographic Society, i-cubed

Date	07/15/2019
Drawn By	CAH
Scale	AS NOTED

day
DAY ENVIRONMENTAL, INC.
 Environmental Consultants
 Rochester, New York 14606
 New York, New York 10170

Project Title	202 FRANKLIN STREET OLEAN, NEW YORK
	BCP SITE NO. C905043 SITE MANAGEMENT PLAN
Drawing Title	Site Location Map

Project No.	4884S-13
	FIGURE 1

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C1	1432.69'	338.04'	337.26'	N 05°34'22" W
C2	1240.79'	266.80'	266.29'	N 13°20'34" E
C3	5544.58'	174.67'	174.66'	N 60°12'59" E

LINE	BEARING	DISTANCE
L1	N 59°28'08" E	68.03'
L2	N 30°28'00" W	51.78'



This parcel is subject to any easements, encumbrances, or facts that an up to date Abstract of Title would show.

202 Franklin Street
5.159 Acres
Brownfield Cleanup Area

References

- 1) Title Search/
Dated: December 20, 2010
File #5005973
Policy #7430732-8296035
Frontier Abstract & Research Services, Inc.
- 2) Deed/
Henkel Corporation to Goodban Belt LLC
Instrument # 145975-001
Dated: August 31, 2010
Recorded: September 1, 2010
- 3) Survey/
for Dexter Corporation
Dated: August 2, 1979
by M.C. Ackerman, LS 23028

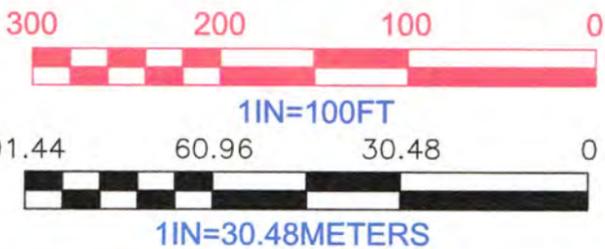
**Environmental Easement description
202 Franklin Street**

Beginning at the intersection of the north bounds of Franklin Street with the east bounds of lands of Southern Tier Rail Authority LLC, thence along the east bounds of lands of Southern Tier Rail Authority:
 1) along a curve to the right, with a radius of 1432.69', a arc length of 338.04' which is subtended by a chord of N 5-34-22 W, a distance of 337.26' to a point
 2) N 59-28-08 E, a distance of 68.03' to a point
 3) N 30-28-00 W, a distance of 51.78' to a point
 4) along a curve to the right, with a radius of 1240.79', a arc length of 266.80' which is subtended by a chord of N 13-20-34 E, a distance of 266.29' to a point, thence along the south bounds of Interstate Route 86: along a curve to the right, with a radius of 5544.58', a arc length of 174.67' which is subtended by a chord of N 60-12-59 E, a distance of 174.66' to a point thence S 30-06-22 E, through the lands of Goodban Belt LLC, a distance of 547.88' to a point, thence S 59-32-00 W along the north bounds of Franklin Street, a distance of 565.54' to the point of beginning

Contains 5.159 acres+/-

Typical Symbols

- hydrant
- utility pole
- light pole
- monitor well
- d. -deed distance
- m. -measured distance



This survey is certified to the following/

- 1) New York State Department of Environmental Conservation

Map and Survey for:
Goodban Belt LLC
of lands at
202 Franklin Street

Copies Invalid Unless Embossed
Alteration of This Document is Illegal Under Sec. 7209
Subdivision 2 of The New York State Education Law.

Part of Lots 4 & 6, Section 5, Twp.# 2, Range # 4 of the Holland Land Co.'s Survey
Blocks 64 and 74 and part of Blocks 63, 65, 73, 75, 80, 81, and 82
Part of Franklin, Washington, Vine, and Spruce streets, and other lands
according to the "Mann Map of Olean Depot"

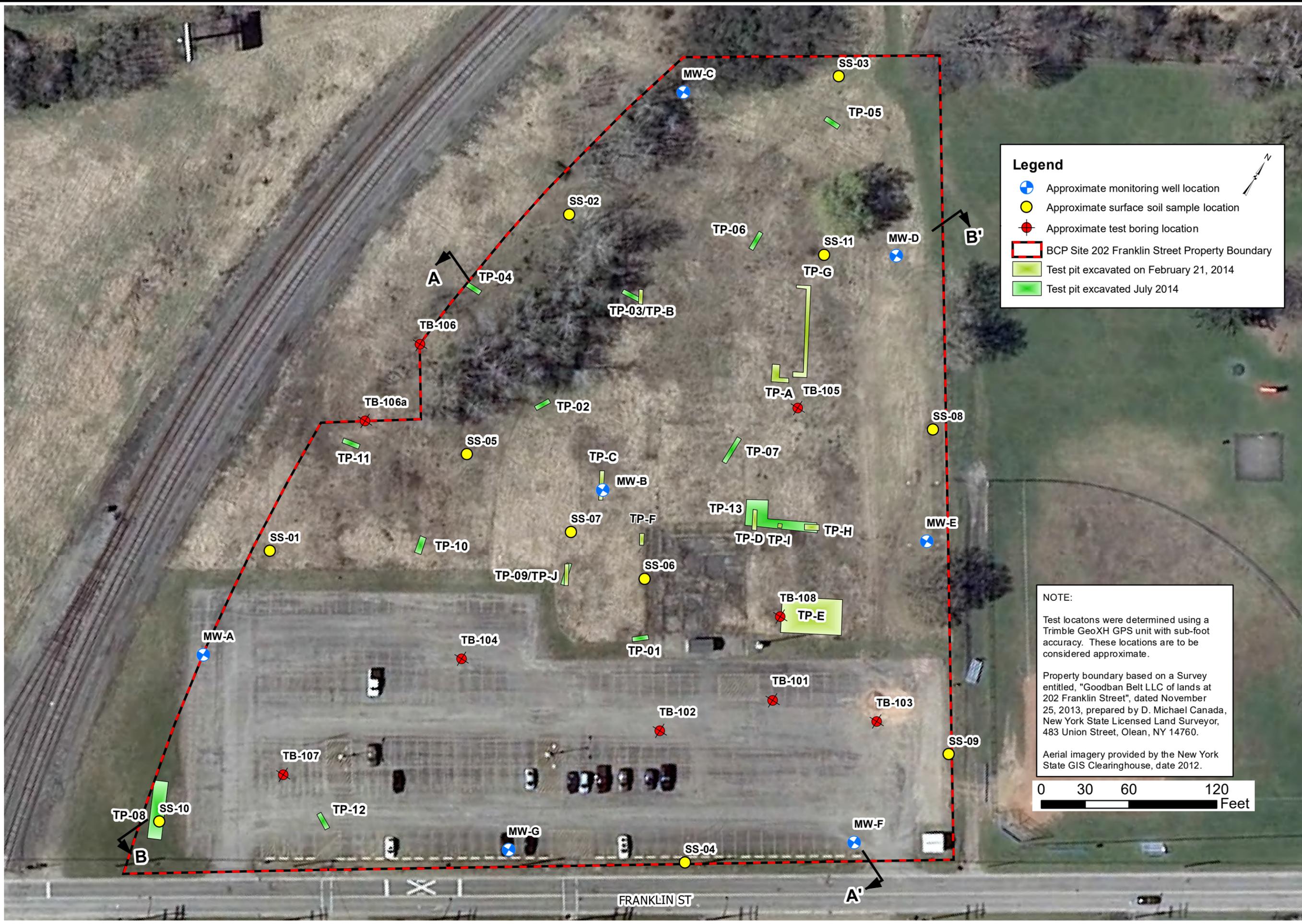
City of Olean
Cattaraugus County, New York
Date: November 25, 2013
Scale: 1IN = 100FT

Prepared By:
D. Michael Canada
New York State
Licensed Land Surveyor
483 North Union Street
Olean, NY 14760
N.Y.S. Lic. No.49215
716-379-7918

Job Number: 7526

**SITE LAYOUT
MAP
FIGURE 2**

Last Date Saved: 15 Jul 2019 Document Path: E:\GIS Mapping\4884S-13\Solepo202Franklin\SM\PI\4884S - 03_Test Loc Plan_SMP.mxd



Legend

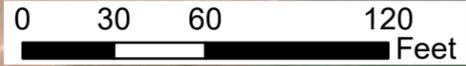
- ⊕ Approximate monitoring well location
- Approximate surface soil sample location
- ⊗ Approximate test boring location
- BCP Site 202 Franklin Street Property Boundary
- Test pit excavated on February 21, 2014
- Test pit excavated July 2014

NOTE:

Test locations were determined using a Trimble GeoXH GPS unit with sub-foot accuracy. These locations are to be considered approximate.

Property boundary based on a Survey entitled, "Goodban Belt LLC of lands at 202 Franklin Street", dated November 25, 2013, prepared by D. Michael Canada, New York State Licensed Land Surveyor, 483 Union Street, Olean, NY 14760.

Aerial imagery provided by the New York State GIS Clearinghouse, date 2012.



DESIGNED BY	RLK	DATE	01-2015
DRAWN BY	CAH	DATE DRAWN	01-2015
SCALE	AS NOTED	DATE ISSUED	07-15-2019

day
DAY ENVIRONMENTAL, INC.
 Environmental Consultants
 Rochester, New York 14606
 New York, New York 10170

Project Title
 202 FRANKLIN STREET
 OLEAN, NEW YORK
 BCP SITE NO. C905043

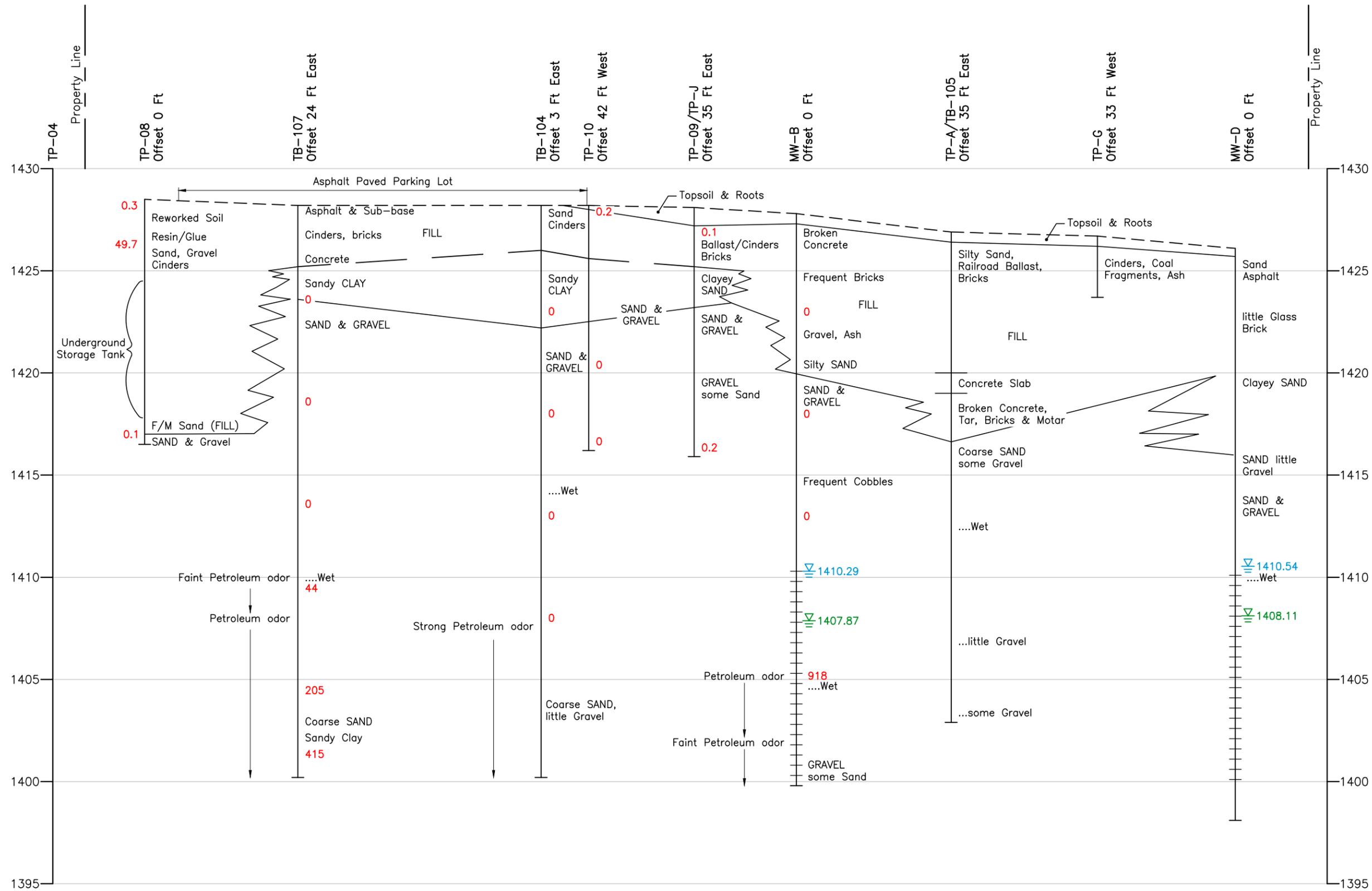
SITE MANAGEMENT PLAN
 Drawing Title

Site Layout Map with Sample Locations and Geologic Cross-Section Locations

Project No.
 4884S-13

FIGURE 3

Ref1: 202 Cross Section B-B.dwg
 Ref2:
 Ref3:
 Xerox432AnsiB-2; 11 x 17
 Layout Name: B-B SMP
 Pen Setting File: 800psFullcolor.ctb
 Time Plotted: Tuesday, July 16, 2019 12:51:14 PM
 File Name: P:\Drawings\Sol Epoxy\4884S-13\202 Cross Sections Scaled.dwg



LEGEND

0	PID Reading Recorded In Parts Per Million (ppm)
≡ 1410.54	Groundwater Elevation Obtained On July 10, 2014
≡ 1408.11	Groundwater Elevation Obtained On November 5, 2014

GEOLOGIC CROSS SECTION B-B'

Horizontal 1" = 60'
 Vertical 1" = 5'

FIELD VERIFIED	DATE
RLK	1-2015
DRAWN BY	DATE DRAWN
RJM	2-6-2015
SCALE	DATE ISSUED
As Noted	7-16-2019

day
 DAY ENVIRONMENTAL, INC.
 ENVIRONMENTAL CONSULTANTS
 ROCHESTER, NEW YORK 14606
 NEW YORK, NEW YORK 10170

PROJECT TITLE
**202 FRANKLIN STREET
 OLEAN, NEW YORK**

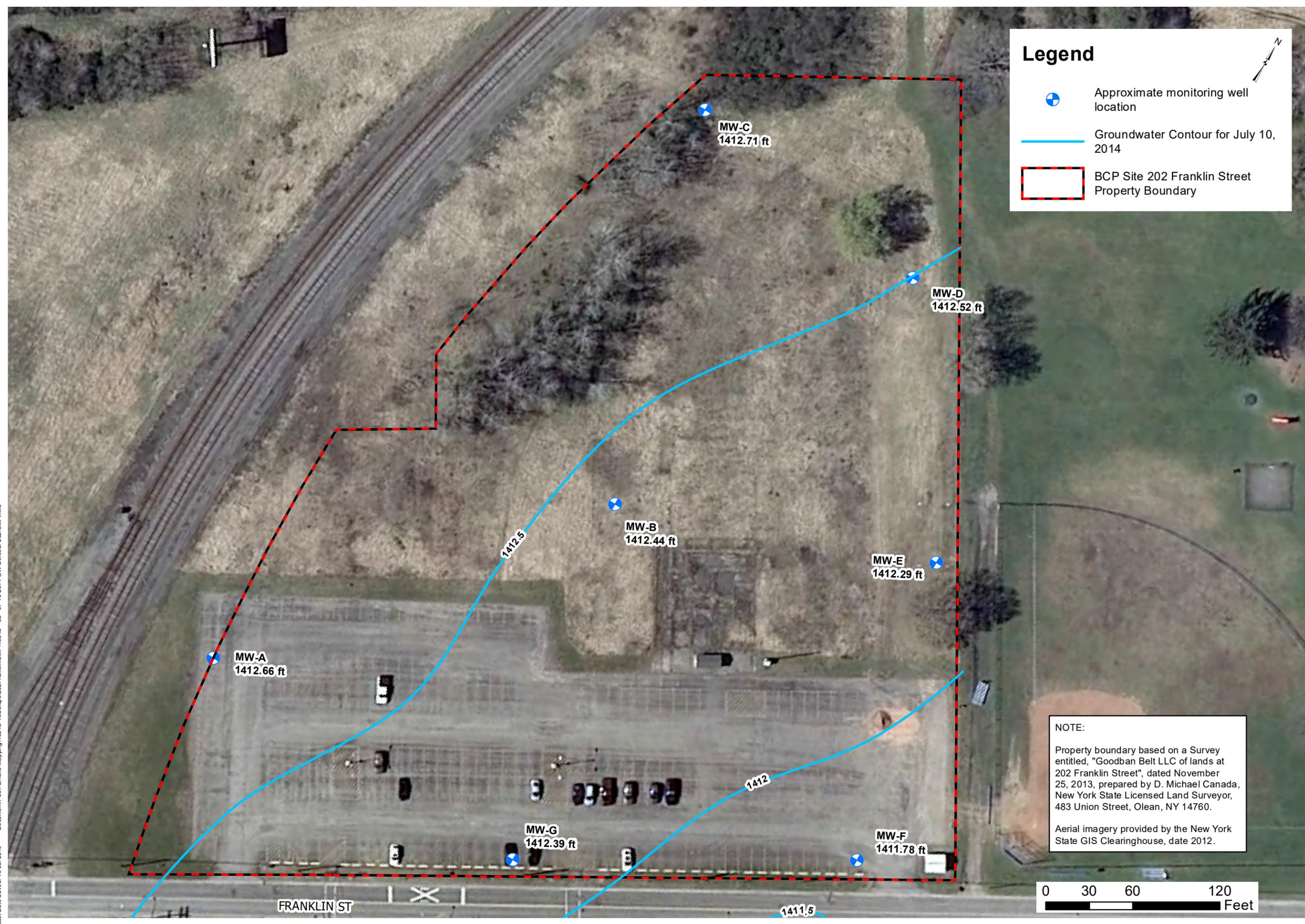
PROJECT NO.
4884S-13

DRAWING TITLE
BCP SITE NO. C90543 SITE MANAGEMENT PLAN

DRAWING TITLE
Geologic Cross Section B-B'

FIGURE 4B

Last Date Saved: 16 Jul 2019 Document Path: E:\GIS Mapping\4884S-13\Site\202FranklinSMP\4884S_5a - 07-10-2014 GW Contour 202 SMP.mxd



Legend

- Approximate monitoring well location
- Groundwater Contour for July 10, 2014
- BCP Site 202 Franklin Street Property Boundary



NOTE:
 Property boundary based on a Survey entitled, "Goodban Belt LLC of lands at 202 Franklin Street", dated November 25, 2013, prepared by D. Michael Canada, New York State Licensed Land Surveyor, 483 Union Street, Olean, NY 14760.

 Aerial imagery provided by the New York State GIS Clearinghouse, date 2012.

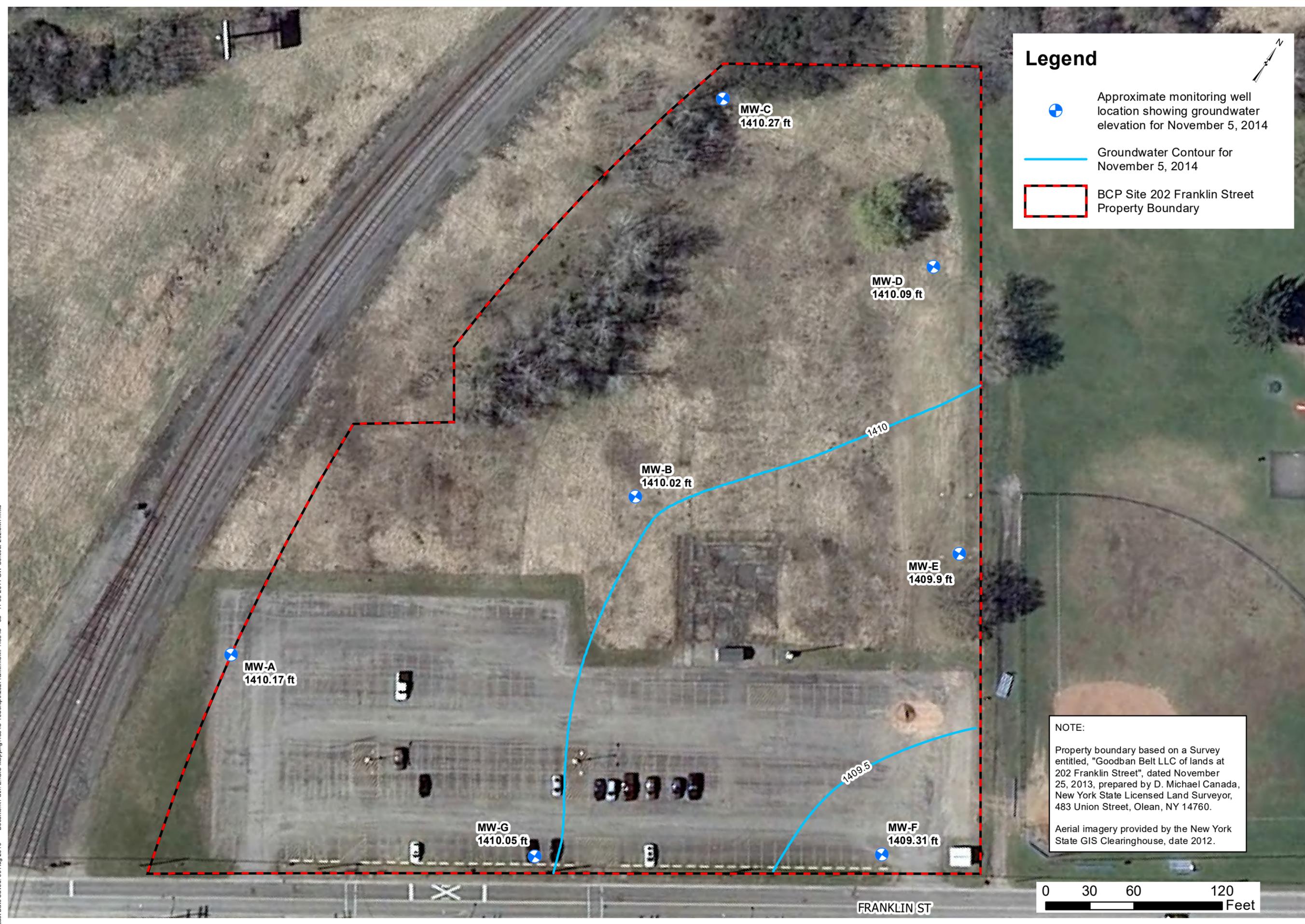
DESIGNED BY	RLK	DATE	02-2015
DRAWN BY	CAH/CPS	DATE DRAWN	02-2015
SCALE	AS NOTED	DATE ISSUED	07-16-2019

day ENVIRONMENTAL, INC.
 Environmental Consultants
 Rochester, New York 14606
 New York, New York 10170

Project No.	4884S-13
Project Name	202 FRANKLIN STREET OLEAN, NEW YORK BCP SITE NO. C905043
Drawing Title	SITE MANAGEMENT PLAN
Groundwater Contour Map	July 10, 2014

FIGURE 5A

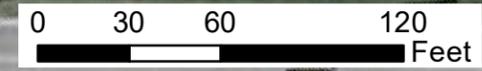
Last Date Saved: 09 Aug 2019 Document Path: E:\GIS Mapping\4884S-13\Solop\202FranklinSMP\4884S-5b-11-05-2014 GW Contour 202 SMP.mxd



Legend

-  Approximate monitoring well location showing groundwater elevation for November 5, 2014
-  Groundwater Contour for November 5, 2014
-  BCP Site 202 Franklin Street Property Boundary

NOTE:
 Property boundary based on a Survey entitled, "Goodban Belt LLC of lands at 202 Franklin Street", dated November 25, 2013, prepared by D. Michael Canada, New York State Licensed Land Surveyor, 483 Union Street, Olean, NY 14760.
 Aerial imagery provided by the New York State GIS Clearinghouse, date 2012.



DESIGNED BY	RLK	DATE	02-2015
DRAWN BY	CAH/CPS	DATE DRAWN	02-2015
SCALE	AS NOTED	DATE ISSUED	07-16-2019

day ENVIRONMENTAL, INC.
 Environmental Consultants
 Rochester, New York 14606
 New York, New York 10170

Project: 202 FRANKLIN STREET
 OLEAN, NEW YORK
 BCP SITE NO. C905043
 SITE MANAGEMENT PLAN
 Drawing Title
 Groundwater Contour Map: November 5, 2014

Project No.
 4884S-13
FIGURE 5B

Last Date Saved: 15 Jul 2019 Document Path: \\DAY\GIS\GIS_Data\GIS Mapping\4884S-13\Solep02\Franklin\SNP\4884S - 06-Metal Waste SMP.mxd



NOTES:

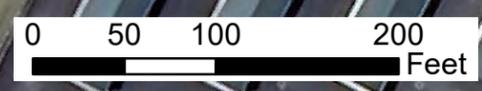
Excavation limits were determined using a Trimble GeoXH GPS unit with sub-foot accuracy. Excavation depth contours based are on measurements made in the field, and in reference to the ground surfaces adjacent to the excavations. These locations and depths are to be considered approximate.

Property boundary based on a Survey entitled, "Goodban Belt LLC of lands at 202 Franklin Street", dated November 25, 2013, prepared by D. Michael Canada, New York State Licensed Land Surveyor, 483 Union Street, Olean, NY 14760.

Aerial imagery provided by the New York State GIS Clearinghouse, date 2012.

Legend

- Location of metal waste fill stockpile, September 20, 2017 to January 9, 2018
- Extent of excavations completed September 20-22, 2017
- Excavation Depth, 1 ft. Contour Interval
- Excavation Depth, 1/2 ft. Contour Interval
- Extent of eleven "distinct" magnetic anomalies, identified during RI
- Extent of magnetic anomaly area, identified during RI
- BCP Site 202 Franklin Street Property Boundary



DESIGNED BY	RLK	DATE	02-2018
DRAWN BY	CAH	DATE DRAWN	02-2018
SCALE	AS NOTED	DATE ISSUED	07-15-2019

day
DAY ENVIRONMENTAL, INC.
 Environmental Consultants
 Rochester, New York 14606
 New York, New York 10170

Project Title
 202 FRANKLIN STREET
 OLEAN, NEW YORK
 BCP SITE NO. C905043

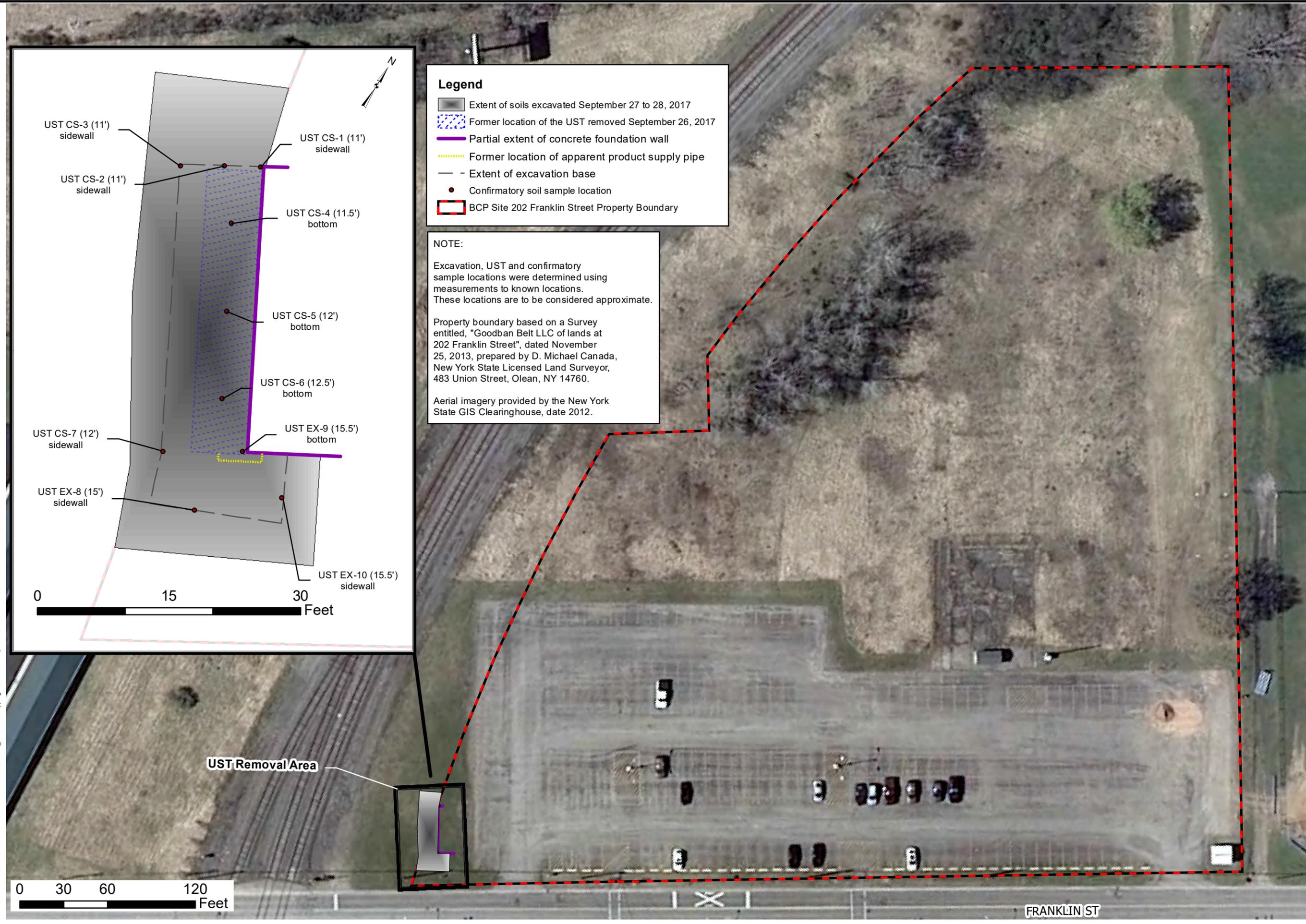
SITE MANAGEMENT PLAN
 Drawing Title

Site Plan Depicting Removal Extents of Metal Waste Fill Area

Project No.
 4884S-13

FIGURE 6

Last Date Saved: 15 Jul 2019 Document Path: \\DAY\GIS\GIS_Data\GIS_Mapping\4884S-13\Solep\202Franklin\SMP\4884S - 07 UST Excavation Plan.SMP.mxd



Legend

- Extent of soils excavated September 27 to 28, 2017
- Former location of the UST removed September 26, 2017
- Partial extent of concrete foundation wall
- Former location of apparent product supply pipe
- Extent of excavation base
- Confirmatory soil sample location
- BCP Site 202 Franklin Street Property Boundary

NOTE:

Excavation, UST and confirmatory sample locations were determined using measurements to known locations. These locations are to be considered approximate.

Property boundary based on a Survey entitled, "Goodban Belt LLC of lands at 202 Franklin Street", dated November 25, 2013, prepared by D. Michael Canada, New York State Licensed Land Surveyor, 483 Union Street, Olean, NY 14760.

Aerial imagery provided by the New York State GIS Clearinghouse, date 2012.

DESIGNED BY	RLK	DATE	02-2018
DRAWN BY	CAH	DATE DRAWN	02-2018
SCALE	AS NOTED	DATE ISSUED	07-15-2019

day
DAY ENVIRONMENTAL, INC.
 Environmental Consultants
 Rochester, New York 14606
 New York, New York 10170

Project Title
 202 FRANKLIN STREET
 OLEAN, NEW YORK
 BCP SITE NO. C905043

SITE MANAGEMENT PLAN
 Drawing Title

Site Plan Depicting UST Removal Area

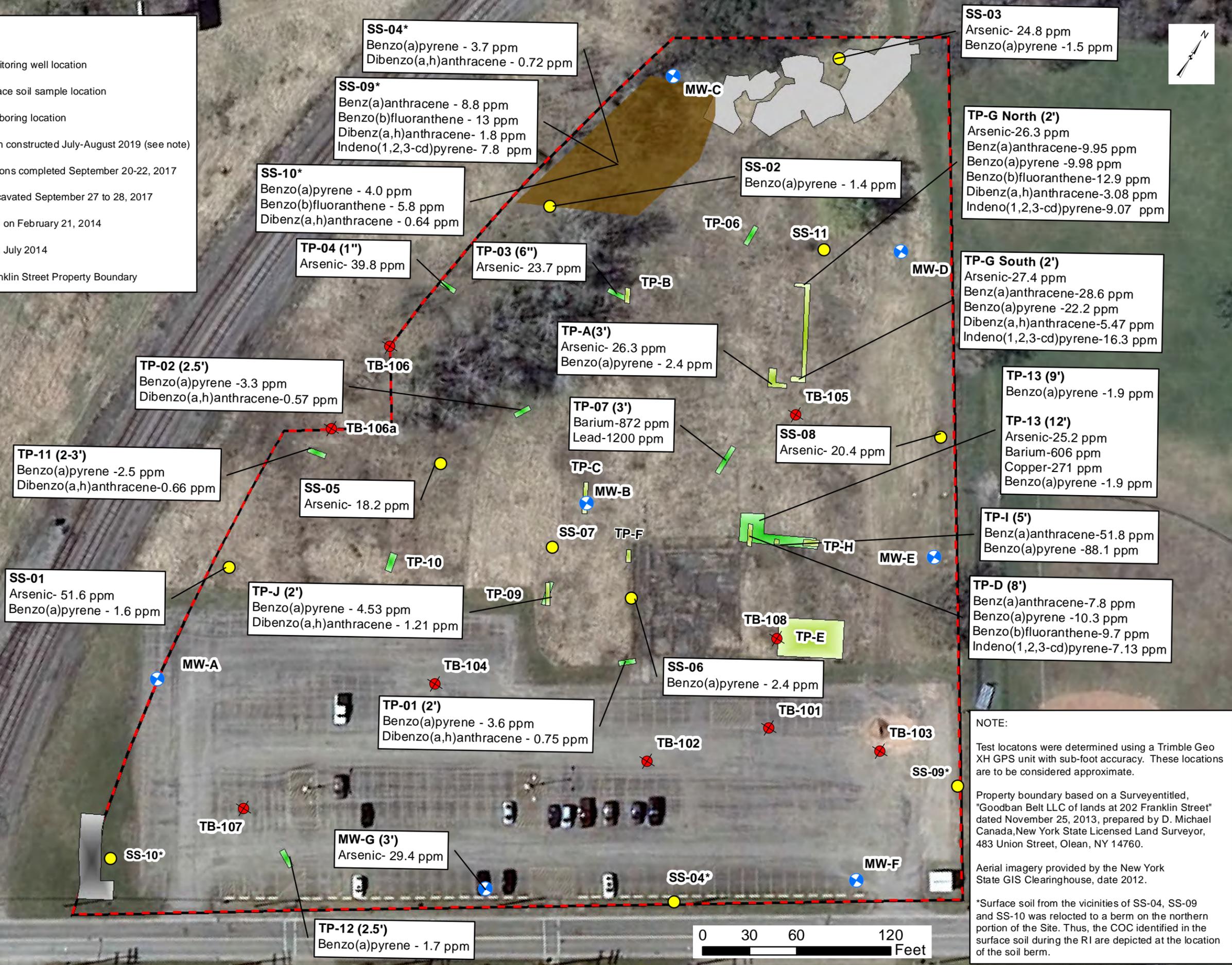
Project No.
 4884S-13

FIGURE 7

Legend

- Approximate monitoring well location
- Approximate surface soil sample location
- Approximate test boring location
- Extent of soil berm constructed July-August 2019 (see note)
- Extent of excavations completed September 20-22, 2017
- Extent of soils excavated September 27 to 28, 2017
- Test pit excavated on February 21, 2014
- Test pit excavated July 2014
- BCP Site 202 Franklin Street Property Boundary

Last Date Saved: 24 Sep 2019 Document Path: E:\GIS Mapping\4884S-13\Solop\202FranklinSMP\4884S-08 - BCP RI Sol Commercial COCs.SMP.mxd



NOTE:
 Test locations were determined using a Trimble Geo XH GPS unit with sub-foot accuracy. These locations are to be considered approximate.

Property boundary based on a Survey entitled, "Goodban Belt LLC of lands at 202 Franklin Street" dated November 25, 2013, prepared by D. Michael Canada, New York State Licensed Land Surveyor, 483 Union Street, Olean, NY 14760.

Aerial imagery provided by the New York State GIS Clearinghouse, date 2012.

*Surface soil from the vicinities of SS-04, SS-09 and SS-10 was relocated to a berm on the northern portion of the Site. Thus, the COC identified in the surface soil during the RI are depicted at the location of the soil berm.

DESIGNED BY	RLK	DATE	02-2015
DRAWN BY	CAH	DATE DRAWN	02-2015
SCALE	AS NOTED	DATE ISSUED	11-11-2019

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 Rochester, New York 14606
 New York, New York 10170

SITE MANAGEMENT PLAN

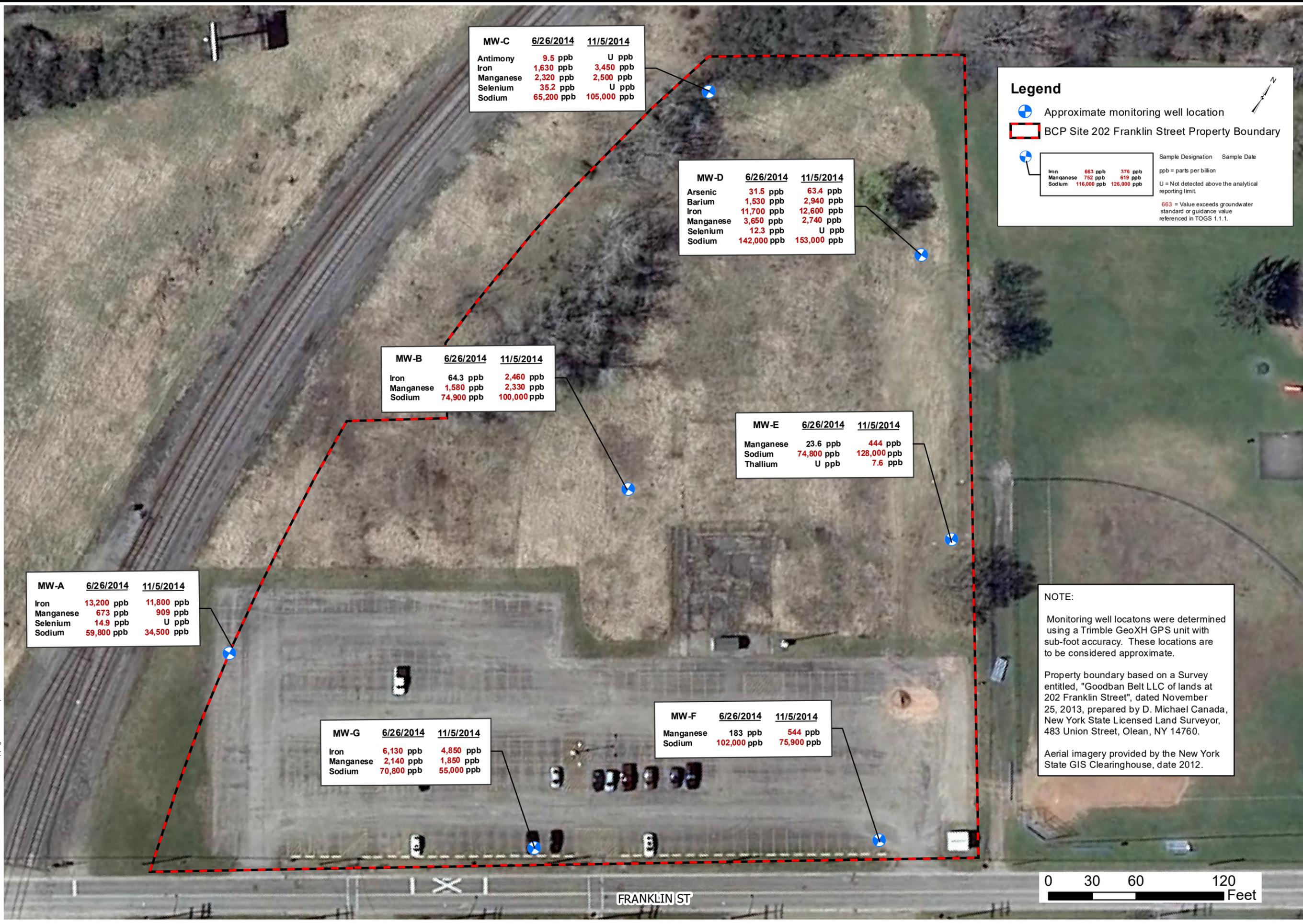
Project Title
 202 FRANKLIN STREET
 OLEAN, NEW YORK
 BCP SITE NO. C905043

Drawing Title
 Site Plan Showing Surface and Subsurface Soil Samples Containing Concentrations Exceeding Commercial Use SCO

Project No.
 4884S-13

FIGURE 8

Last Date Saved: 17 Jul 2019 Document Path: E:\GIS Mapping\4884S-13\Solepo202Franklin\SM\PI\4884S - 09 - BCP RI GW COCs SMP.mxd



MW-C	6/26/2014	11/5/2014
Antimony	9.5 ppb	U ppb
Iron	1,630 ppb	3,450 ppb
Manganese	2,320 ppb	2,500 ppb
Selenium	35.2 ppb	U ppb
Sodium	65,200 ppb	105,000 ppb

MW-D	6/26/2014	11/5/2014
Arsenic	31.5 ppb	63.4 ppb
Barium	1,530 ppb	2,940 ppb
Iron	11,700 ppb	12,600 ppb
Manganese	3,650 ppb	2,740 ppb
Selenium	12.3 ppb	U ppb
Sodium	142,000 ppb	153,000 ppb

MW-B	6/26/2014	11/5/2014
Iron	64.3 ppb	2,460 ppb
Manganese	1,580 ppb	2,330 ppb
Sodium	74,900 ppb	100,000 ppb

MW-E	6/26/2014	11/5/2014
Manganese	23.6 ppb	444 ppb
Sodium	74,800 ppb	128,000 ppb
Thallium	U ppb	7.6 ppb

MW-A	6/26/2014	11/5/2014
Iron	13,200 ppb	11,800 ppb
Manganese	673 ppb	909 ppb
Selenium	14.9 ppb	U ppb
Sodium	59,800 ppb	34,500 ppb

MW-G	6/26/2014	11/5/2014
Iron	6,130 ppb	4,850 ppb
Manganese	2,140 ppb	1,850 ppb
Sodium	70,800 ppb	55,000 ppb

MW-F	6/26/2014	11/5/2014
Manganese	183 ppb	544 ppb
Sodium	102,000 ppb	75,900 ppb

Legend

Approximate monitoring well location

BCP Site 202 Franklin Street Property Boundary

Sample Designation	Sample Date
Iron	663 ppb
Manganese	752 ppb
Sodium	116,000 ppb
Iron	376 ppb
Manganese	619 ppb
Sodium	126,000 ppb

ppb = parts per billion
U = Not detected above the analytical reporting limit.

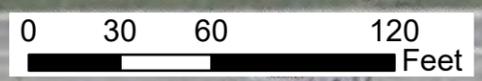
663 = Value exceeds groundwater standard or guidance value referenced in TOGS 1.1.1.

NOTE:

Monitoring well locations were determined using a Trimble GeoXH GPS unit with sub-foot accuracy. These locations are to be considered approximate.

Property boundary based on a Survey entitled, "Goodban Belt LLC of lands at 202 Franklin Street", dated November 25, 2013, prepared by D. Michael Canada, New York State Licensed Land Surveyor, 483 Union Street, Olean, NY 14760.

Aerial imagery provided by the New York State GIS Clearinghouse, date 2012.



DESIGNED BY	DATE
RLK	07-2019
DRAWN BY	DATE DRAWN
CAH	07-2019
SCALE	DATE ISSUED
AS NOTED	07-16-2019

day
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Environmental Consultants
Rochester, New York 14606
New York, New York 10170

Project Title
202 FRANKLIN STREET
OLEAN, NEW YORK
BCP SITE NO. C905043

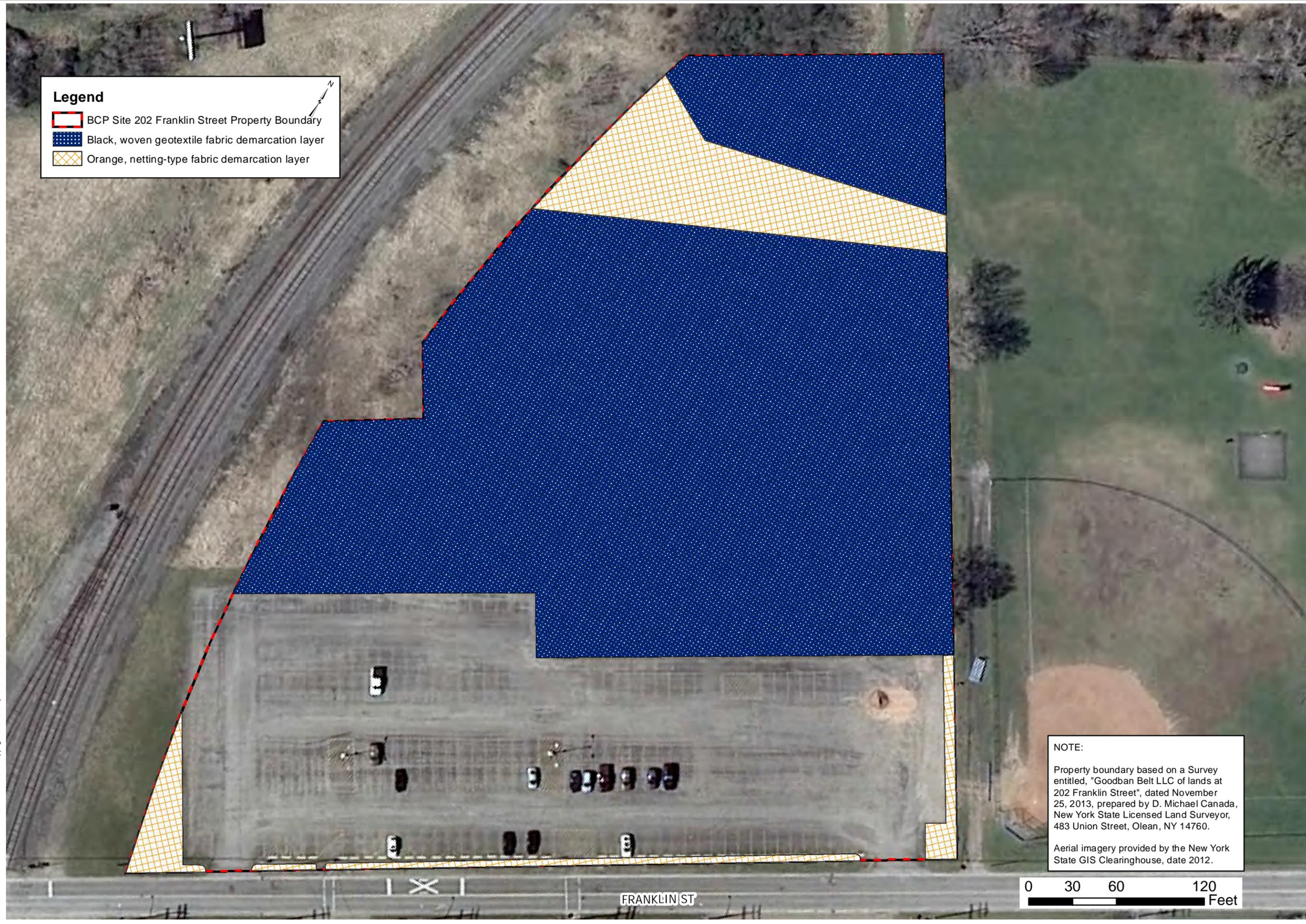
SITE MANAGEMENT PLAN
Drawing Title

Site Plan showing Concentrations in Remaining Groundwater
Samples that Exceed Standards or Guidance Values

Project No.
4884S-13

FIGURE 9

Last Date Saved: 11 Nov 2019 Document Path: E:\GIS Mapping\4884S-13\Site\202Franklin\3MP\4884S - 10_Sol.Cover.Extent_SMP.mxd



Legend

-  BCP Site 202 Franklin Street Property Boundary
-  Black, woven geotextile fabric demarcation layer
-  Orange, netting-type fabric demarcation layer

NOTE:

Property boundary based on a Survey entitled, "Goodban Belt LLC of lands at 202 Franklin Street", dated November 25, 2013, prepared by D. Michael Canada, New York State Licensed Land Surveyor, 483 Union Street, Olean, NY 14760.

Aerial imagery provided by the New York State GIS Clearinghouse, date 2012.



DESIGNED BY	RLK	DATE	09-2019
DRAWN BY	CAH	DATE DRAWN	09-2019
SCALE	AS NOTED	DATE ISSUED	11-11-2019

day
DAY ENVIRONMENTAL, INC.
 Environmental Consultants
 Rochester, New York 14606
 New York, New York 10170

Project Title
 202 FRANKLIN STREET
 OLEAN, NEW YORK
 BCP SITE NO. C905043

SITE MANAGEMENT PLAN
 Drawing Title

Soil Cover System Demarcation Layers

Project No.
 4884S-13

FIGURE 10

TABLES

TABLE 3A
 202 FRANKLIN STREET
 OLEAN, NEW YORK
 BCP SITE NO. C905043

SUMMARY OF DETECTED VOLATILE ORGANIC COMPOUNDS (VOCS) IN SURFACE SOIL SAMPLES

Contaminant	CAS Number	A Unrestricted Use (SCO)	B Restricted Commercial Use (SCO)	SS-01 6/27/2014	SS-02 6/27/2014	SS-03 6/27/2014	SS-04 6/27/2014	SS-05 6/27/2014	SS-06 6/27/2014	SS-07 6/27/2014	SS-08 6/27/2014	SS-09 6/27/2014	SS-10 6/27/2014	SS-11 6/27/2014
Acetone	67-64-1	0.05	500	0.003 J	0.02 J	0.0061 J	0.0081 J	0.056 J	A U J	0.018 J	U J	U J	U J	0.0039 J
Methylene chloride	75-09-2	NA	NA	U	U	U	U	0.0019	U	U	U	U	U	U
Total TICs				0.0199	U	U	U	U	U	U	U	U	U	U
Total VOCs and TICs				0.0229	0.02	0.0061	0.0081	0.0579	U	0.018	U	U	U	0.0039

Notes:

Values are in milligrams per kilogram (mg/kg) or parts per million (ppm)

SCOs are as referenced in 6 NYCRR Part 375-6, Remedial Program Soil Cleanup Objectives, dated December 14, 2006

J = Estimated Value

N = Considered To Be Positively Identified

NA = Not Available

U = Not Detected

UJ = The analyte was analyzed for, but was not detected. The associated quantitation limit is approximate.

A = Exceeds Unrestricted Use SCO

TABLE 3B
202 FRANKLIN STREET
OLEAN, NEW YORK
BCP SITE NO. C905043

SUMMARY OF DETECTED SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) IN SURFACE SOIL SAMPLES

Contaminant	CAS Number	A Unrestricted Use (SCO)	B Restricted Commercial Use (SCO)	SS-01 6/27/2014	SS-02 6/27/2014	SS-03 6/27/2014	SS-04 6/27/2014	SS-05 6/27/2014	SS-06 6/27/2014	SS-07 6/27/2014	SS-08 6/27/2014	SS-09 6/27/2014	SS-10 6/27/2014	SS-11 6/27/2014
1-Methylnaphthalene ¹	90-12-0	NA	NA	U	0.18 J	0.16 J	U	0.1 J	0.34 J	U	0.18 J	0.086 J	U	U
2-Methylnaphthalene	91-57-6	NA	NA	U	0.2 J	0.17 J	U	0.079 J	0.3 J	U	0.23 J	0.074 J	U	U
Acenaphthene	83-32-9	20	500	0.17 J	0.41	0.11 J	0.33 J	U	0.6	U	0.18 J	0.72	0.48	U
Acenaphthylene	208-96-8	100	500	U	0.2 J	0.29 J	0.081 J	U	0.19 J	U	U	0.083 J	U	U
Anthracene	120-12-7	100	500	0.36 J	0.82	0.56	1.2	U	1.4	0.16 J	0.45	2.1	1.6	0.12 J
Benzo(a)anthracene	56-55-3	1	5.6	1.5	A 1.7	A 1.7	A 3.8	A 0.21 J	2.6	A 0.58	0.92	8.8	AB 4.1	A 0.46
Benzo(a)pyrene	50-32-8	1	1	1.6	AB 1.4	AB 1.5	AB 3.7	AB 0.23 J	2.4	AB 0.59	0.75	U	4	AB 0.66
Benzo(b)fluoranthene	205-99-2	1	5.6	2.5	A 2	A 2	A 5.1	A 0.31 J	2.9	A 0.7	1	13	AB 5.8	AB 0.49
Benzo(g,h,i)perylene	191-24-2	100	500	1.2	0.74	1.6	2.9	0.25 J	2.3	0.53	0.66	7.6	2.9	1.1
Benzo(k)fluoranthene	207-08-9	0.8	56	0.98	A 0.78	0.76	2	A 0.13 J	1	A 0.29 J	0.35 J	5.2	A 2.1	A 0.16 J
Benzoic acid	65-85-0	NA	NA	U	0.47 J	0.19 J	U	1.5	0.15 J	U	0.13 J	U	U	0.15 J
Bis(2-ethylhexyl)phthalate	117-81-7	NA	NA	U	U	U	0.26 J	U	U	U	U	U	U	U
Carbazole	86-74-8	NA	NA	0.24 J	0.36 J	0.19 J	0.51	U	0.56	U	0.26 J	1.1	0.57	U
Chrysene	218-01-9	1	56	2	A 1.6	A 1.8	A 4.5	A 0.29 J	3	A 0.67	1	10	A 4.9	A 0.62
Dibenzo(a,h)anthracene	53-70-3	0.33	0.56	0.25 J	0.23 J	0.31 J	0.72	AB U	0.44	A 0.1 J	0.17 J	1.8	AB 0.64	AB U
Dibenzofuran	132-64-9	7	350	U	0.34 J	0.14 J	0.18 J	U	0.39 J	U	0.26 J	0.31 J	0.19 J	U
Di-n-butylphthalate	84-74-2	NA	NA	0.11 J	U	U	U	0.12 J	0.74	U	0.18 J	U	U	U
Fluoranthene	206-44-0	100	500	4.1	3.3	2.7	8.7	0.24 J	5.4	1	2	23	12 D	0.53
Fluorene	86-73-7	30	500	0.16 J	0.44	0.15 J	0.4	U	0.56	U	0.22 J	0.72	0.56	U
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	5.6	1.2	A 0.9	A 1.1	A 3.1	A 0.18 J	1.5	A 0.4 J	0.47	7.8	AB 3.2	A U
Naphthalene	91-20-3	12	500	U	0.27 J	0.14 J	U	U	0.4 J	U	0.21 J	U	U	U
Phenanthrene	85-01-8	100	500	2	3.1	1.7	5.1	0.15 J	6	0.7	2	12	6.6 D	0.44
Pyrene	129-00-0	100	500	3	2.5	2.6	7.8	0.26 J	4.9	0.91	1.3	20	8.4 D	0.57
Total TICs				21.82	12.74	19.99	24.61	9.5	29.52	9.89	9.05	15.68	19.87	12.34
Total SVOCs and TICs				43.19	34.68	39.86	74.991	13.549	67.59	16.52	21.97	130.07	77.91	17.64

Notes:

Values are in milligrams per kilogram (mg/kg) or parts per million (ppm)

SCOs are as referenced in 6 NYCRR Part 375-6, Remedial Program Soil Cleanup Objectives, dated December 14, 2006

D = Diluted Sample

J = Estimated Value

NA = Not Available

U = Not Detected

A = Exceeds Unrestricted Use SCO

B (Highlighted Value) = Exceeds Restricted Commercial Use SCO

¹ Analyte was not validated.

TABLE 3C
 202 FRANKLIN STREET
 OLEAN, NEW YORK
 BCP SITE NO. C905043

SUMMARY OF PESTICIDE/HERBICIDE/PCBS IN SURFACE SOIL SAMPLES

Contaminant	CAS Number	A Unrestricted Use (SCO)	B Restricted Commercial Use (SCO)	SS-01 6/27/2014		SS-02 6/27/2014		SS-03 6/27/2014		SS-04 6/27/2014		SS-05 6/27/2014		SS-06 6/27/2014		SS-07 6/27/2014		SS-08 6/27/2014		SS-09 6/27/2014		SS-10 6/27/2014		SS-11 6/27/2014		
4,4'-DDE	72-55-9	0.0033	62	U		U		U		U		0.0054 J	A	U		U		U		U		U		U		U
4,4'-DDT	50-29-3	0.0033	47	U		U J		0.03	A	U		U J		0.029	A	U J		U		U		U		U J		U
Aldrin	309-00-2	0.005	0.68	U		U		U		U		U		U		0.0036 J		0.0096 J	A	U		U		0.0039 J		U
alpha-BHC	319-84-6	0.02	3.4	U		U		U		U		0.0045 P, NJ		U		U J		U		U		U		U		U
alpha-Chlordane	5103-71-9	0.094	24	0.053		U		0.049 J		0.075 J		U		0.0085		U J		U		U J		0.042 J		0.0082 J		U
Endosulfan II	33213-65-9	2.4	200	U		U		0.0051 J		U		U J		U		U J		U		U		U		U J		U
Endosulfan sulfate	1031-07-8	2.4	200	0.034 P		U		U		U		U		U		U		U		U		U		U		U
Endrin aldehyde	7421-93-4	NA	NA	U		U J		U		U		U J		0.017 P, NJ		U J		U		U		U		U		U J
Methoxychlor	72-43-5	NA	NA	0.34		U		U		U		U		0.11 P, J		U J		U		U		U		U J		U
Polychlorinated biphenyls	1336-36-3	0.1	1	U		U		0.13 P,J	A	0.093		U		U		0.11	A	U		U		U		U		U

Notes:

Values are in milligrams per kilogram (mg/kg) or parts per million (ppm)

SCOs are as referenced in 6 NYCRR Part 375-6, Remedial Program Soil Cleanup Objectives, dated December 14, 2006

NA = Not Available

P = Lower of Two Values Reported From Primary And Confirmation Analyses When > 25% Difference Detected

U = Not Detected

J = Estimated Value

NJ = The detection is tentative in identification and estimated in value.

UJ = The analyte was analyzed for, but was not detected. The associated quantitation limit is approximate.

A = Exceeds Unrestricted Use SCO

TABLE 3D
202 FRANKLIN STREET
OLEAN, NEW YORK
BCP SITE NO. C905043

SUMMARY OF TAL METALS AND CYANIDE IN SURFACE SOIL SAMPLES

Contaminant	CAS Number	A Unrestricted Use (SCO)	B Restricted Commercial Use (SCO)	SS-01 6/27/2014	SS-02 6/27/2014	SS-03 6/27/2014	SS-04 6/27/2014	SS-05 6/27/2014	SS-06 6/27/2014	SS-07 6/27/2014	SS-08 6/27/2014	SS-09 6/27/2014	SS-10 6/27/2014	SS-11 6/27/2014						
Aluminum	7429-90-5	NA	NA	8320	9310	10800	2990	3900	6470	12400	2850	6390	6180	7570						
Antimony	7440-36-0	NA	NA	2.2 N	0.83 b,N	1.3 N	U N	0.69 b,N	U N	1.1 N,J	0.58 b,N	0.63 b,N	0.77 b,N	1.9 N						
Arsenic	7440-38-2	13	16	51.6 N	AB	12.4 N	24.8 N	AB	3.7 N	18.2 N	AB	3.4 N	14 N,J	A	20.4 N	AB	8.6 N	11.6 N	15.4 N	A
Barium	7440-39-3	350	400	230 N	131 N	183 N	31 N	97.5 N	143 N	135 N,J	44.7 N	58.5 N	89.9 N	105 N						
Beryllium	7440-41-7	7.2	590	0.91 N	0.46 N	0.88 N	0.14 b,N	0.67 N	0.22 N	0.66 N,J	0.46 N	0.32 N	0.45 N	0.55 N						
Cadmium	7440-43-9	2.5	9.3	2.1 N	0.46 N	0.38 N	0.04 b,N	0.082 b,N	0.16 b,N	0.43 N,J	0.39 N	0.21 b,N	0.44 N	0.49 N						
Calcium	7440-70-2	NA	NA	5160	1840	3380	2140	898	6520	1950	572	8970	6080	2110						
Chromium	7440-47-3	30	1,500	24.8 N	12.1 N	19.8 N	5.2 N	8.6 N	3.6 N	15.9 N,J	6.5 N	15.6 N	12.1 N	13.4 N						
Cobalt	7440-48-4	NA	NA	6.6 N	7.1 N	8.7 N	2.3 N	4.8 N	0.86 b,N	9 N,J	5.5 N	5.8 N	5.7 N	7.9 N						
Copper	7440-50-8	50	270	105 N	A	117 N	A	84.4 N	A	14.2 N	47.7 N	5.3 N	44.1 N,J	28.9 N	27.2 N	31.8 N	74.1 N	A		
Iron	7439-89-6	NA	NA	25100	18800	35200	7760	33100	3610	22300	20800	16300	17300	25700						
Lead	7439-92-1	63	1000	441	A	149	A	134	A	16.3	25	23.5	100	A	37.3	44.3	62.5	213	A	
Magnesium	7439-95-4	NA	NA	1310	1760	1840	1170	297	756	2140	313	3100	2090	1490						
Manganese	7439-96-5	1600	10,000	397	533	586	258	61.8	94.1	725	96.8	554	625	454						
Mercury	7439-97-6	0.18	2.8	0.081	0.44	A	0.12	0.097	0.029 b	0.12	0.072	0.05 b	0.011 b	0.056	0.077					
Nickel	7440-02-0	30	310	35.7 N	A	14.2 N	20.8 N	6 N	10.9 N	2.4 N	19.7 N,J	8.5 N	14.5 N	15 N	18.8 N					
Potassium	7440-09-7	NA	NA	1180	696	900	299	430	610	989	223	563	731	678						
Selenium	7782-49-2	3.9	1,500	7.2 N	A	1.1 b,N	2.3	U N	U N	U N	0.88 b,N,J	1.1 N	U N	1.5 N	0.88 b,N					
Silver	7440-22-4	2	1,500	0.28 b	0.17 b	0.38 b	U	U N	U	U	0.088 b	U	U	0.079 b						
Sodium	7440-23-5	NA	NA	180	20.1 b	44.9 b	93.3	43.4 b	327	30.3 b	12.3 b	30.3 b	59.8	26.1 b						
Thallium	7440-28-0	NA	NA	0.37 b,N	U N	U N	U N	U N	U N	U N	U N	U N	U N	U N						
Vanadium	7440-62-2	NA	NA	22.2 N	15.7 N	22.9 N	3.9 N	19.1 N	6.6 N	22.5 N,J	10.7 N	11 N	12.6 N	18.8 N						
Zinc	7440-66-6	109	10,000	333 N	A	210 N	A	139 N	A	80.3 N	32.5 N	46.9 N	124 N,J	A	77.1 N	91.6 N	114 N	A	215 N	A
Total Cyanide	NA	27	27	U	U	U	U	U	U	U	U	U	U	U						

Notes:

Values are in milligrams per kilogram (mg/kg) or parts per million (ppm)

SCOs are as referenced in 6 NYCRR Part 375-6, Remedial Program Soil Cleanup Objectives, dated December 14, 2006

b = Trace Concentration Below Reporting Limit And Equal To Or Above Detection Limit

N = Matrix Spike Recovery Falls Outside Control Limit

NA = Not Available

U = Not Detected

J = Estimated Value

A = Exceeds Unrestricted Use SCO

B (Highlighted Value) = Exceeds Restricted Commercial Use SCO

TABLE 4A
202 FRANKLIN STREET
OLEAN, NEW YORK
BCP SITE NO. C905043

SUMMARY OF DETECTED VOLATILE ORGANIC COMPOUNDS (VOCs) IN SOIL/FILL SAMPLES

Contaminant	CAS Number	A		MW-G (3') 6/13/2014	TB-102 (2') 6/11/2014	TB-103 (24') 6/12/2014	TB-104 (24') 6/12/2014	TB-105 (8-10') 6/11/2014	TB-106 (20') 6/11/2014	TB-106a (24') 6/19/2014	TB-107 (24') 6/13/2014	TB-108 (24') 6/12/2014	TP-01 (2') 7/30/2014	TP-02 (2.5') 7/30/2014
		Unrestricted Use (SCO)	Restricted Commercial Use (SCO)											
2-Butanone	78-93-3	NA	NA	U J	U J	U J	0.0012 J	U J	U J	U J	U J	U J	U J	U J
Acetone	67-64-1	0.05	500	0.035 J	0.0015 J	U J	0.0052 NJ	U J	0.0013 J	0.0074 J	U J	0.0052 J	U J	1.1 J A
Carbon disulfide	75-15-0	NA	NA	U J	U	U	U	U	U	U	U	0.001 J	U	U
cis-1,2-Dichloroethene	156-59-2	0.25	500	U J	U	U	U	U	U	U	U	U J	0.0014 J	U
Ethylbenzene	100-41-4	1	390	U J	U	U	U	U	U	U	U	U J	U	U
Isopropylbenzene	98-82-8	NA	NA	U J	U	U	U	U	U	U	U	U J	U	U
4-Isopropyltoluene	99-87-6	NA	NA	U	U	U	U	U	U	U	U	U	U	U
Methylene chloride	75-09-2	500	500	U J	U	U	U	U	U	0.0033 J+	U	U J	U	0.35
Naphthalene	91-20-3	12	500	U	0.0019 J	U	U	U	U	U	U	U	U	0.027 J
n-Butylbenzene	104-51-8	12	500	U J	U	U	U	U	U	U	U	U J	U	U
n-Propylbenzene	103-65-1	3.9	500	U	U	U	U	U	U	U	U	U	U	U
sec-Butylbenzene	135-98-8	11	500	U	U	U	0.0006 J	U	U	U	U	U	U	U
tert-Butylbenzene	98-06-6	5.9	500	0.021	U	U	0.012	U	U	0.0057	0.25	U	U	U
Toluene	108-88-3	0.7	500	U J	U	U	U	U	U	U	U	U J	U	0.011 J
Trichloroethene	79-01-6	0.7	200	U J	U	U	U J	U	U	U	U	U J	U	U
1,2,4-Trimethylbenzene ¹	95-63-6	3.6	190	U	U	U	U	U	U	U	U	U	U	0.021 J
1,3,5-Trimethylbenzene ¹	108-67-8	8.4	190	U	U	U	U	U	U	U	U	U	U	U
Mixed Xylenes	NA	0.26	500	U J	U	U	U	U	U	U	U	U J	U	U
Total TICs				21.7	U	U	2.73	U	U	1.096	66.7	0.143	U	U
VOCs + TICs				21.756	0.0034	U	2.749	U	0.0013	1.1124	66.95	0.1492	0.0014	1.509

Contaminant	CAS Number	A		TP-03 (6') 7/29/2014	TP-04 (1') 7/30/2014	TP-05 (1') 7/29/2014	TP-07 (3') 7/29/2014	TP-08 (3') 7/30/2014	TP-08 (12') 7/31/2014	TP-11 (2-3') 7/30/2014	TP-12 (2.5') 7/30/2014	TP-13 (9') 7/29/2014	TP-13 (12') 7/29/2014
		Unrestricted Use (SCO)	Restricted Commercial Use (SCO)										
2-Butanone	78-93-3	NA	NA	U J	U J	U J	U J	U J	U J	0.033 J	0.02 J	U J	U J
Acetone	67-64-1	0.05	500	0.0048 J	U J	U J	0.0005 J	U J	0.0039 J	0.2 J A	0.068 J A	0.047 J	0.12 J A
Carbon disulfide	75-15-0	NA	NA	U	U	U J	U R	U	U	0.004 J	U J	U	U
cis-1,2-Dichloroethene	156-59-2	0.25	500	0.0017 J	U	0.0032 J	0.0003 J	U	0.0022 J	U	0.0066 J	0.0012 J	0.0049 J
Ethylbenzene	100-41-4	1	390	U	U	U J	U J	U	U	0.0017 J	U J	U	0.0013 J
Isopropylbenzene	98-82-8	NA	NA	U	U	U J	U J	U	U	0.0013 J	U J	U	U
4-Isopropyltoluene	99-87-6	NA	NA	U	U	U J	U	U	U	0.004 J	U	U	U
Methylene chloride	75-09-2	500	500	0.0031 J	U	U	0.0004 J	U	U	0.032 J	U J	0.05	0.02
Naphthalene	91-20-3	12	500	U	U	U	U	U	U	0.0089 J	0.0013 J	U	U
n-Butylbenzene	104-51-8	12	500	U	U	U	U	U	U	0.0025 J	U	U	U
n-Propylbenzene	103-65-1	3.9	500	U	U	U	U	U	U	0.0038 J	U	U	U
sec-Butylbenzene	135-98-8	11	500	U	U	U	U	U	U	U	U	U	U
tert-Butylbenzene	98-06-6	5.9	500	U	U	U	U	U	U	U	0.0015 J	U	U
Toluene	108-88-3	0.7	500	U	U	U J	U J	U	U	0.0047 J	U J	U	U
Trichloroethene	79-01-6	0.7	200	0.0042 J	U	U J	U J	U	U	U	U J	U	U
1,2,4-Trimethylbenzene ¹	95-63-6	3.6	190	U	U	U	U	U	U	0.036 J	U	U	U
1,3,5-Trimethylbenzene ¹	108-67-8	8.4	190	U	U	U	U	U	U	0.012 J	U	U	U
Mixed Xylenes	NA	0.26	500	U	U	U J	U J	U	U	0.0155 J	U J	U	U
Total TICs				U	U	0.0087	0.0018	U	U	0.165	0.327	U	U
VOCs + TICs				0.0138	U	0.0119	0.003	U	0.0061	0.5244	0.4244	0.0982	0.1462

Values are in milligrams per kilogram (mg/kg) or parts per million (ppm)

SCOs are as referenced in 6 NYCRR Part 375-6, Remedial Program Soil Cleanup Objectives, dated December 14, 2006

¹ Analyte not validated.

J = Estimated Value

NA = Not Available

U = Not Detected

R = The sample results are rejected due to deficiencies in meeting quality control limits

A = Exceeds Unrestricted Use SCO

J+ = The analyte was positively identified; the numerical value is an estimated quantity that may be biased high.

TABLE 4B
202 FRANKLIN STREET
OLEAN, NEW YORK
BCP SITE NO. C905043

SUMMARY OF DETECTED SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) IN SOIL/FILL SAMPLES

Contaminant	CAS Number	A Unrestricted Use (SCO)	B Restricted Commercial Use (SCO)	MW-G (3') 6/13/2014	TB-102 (2') 6/11/2014	TB-103 (24') 6/12/2014	TB-104 (24') 6/12/2014	TB-105 (8-10') 6/11/2014	TB-106 (20') 6/11/2014	TB-106a (24') 6/19/2014	TB-107 (24') 6/13/2014	TB-108 (24') 6/12/2014	TP-A (3') 2/21/2014	TP-B (1.5') 2/21/2014	TP-B (5') 2/21/2014	TP-C (4') 2/21/2014	TP-D (8') 2/21/2014	TP-G (2') North 2/21/2014
1-Methylnaphthalene	90-12-0	NA	NA	0.17 J	U	U	U	U	U	U	U	U	NT	NT	NT	NT	NT	NT
2-Methylnaphthalene	91-57-6	NA	NA	0.23 J	U	U	U	U	U	U	U	U	NT	NT	NT	NT	NT	NT
2,4-Dimethylphenol	105-67-9	NA	NA	U	U	U	U	U	U	U	U	U	NT	NT	NT	NT	NT	NT
2-Methylphenol	95-48-7	NA	500	U	U	U	U	U	U	U	U	U	NT	NT	NT	NT	NT	NT
4-Methylphenol	106-44-5	NA	500	U	U	U	U	U	U	U	U	U	NT	NT	NT	NT	NT	NT
Acenaphthene	83-32-9	20	500	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Acenaphthylene	208-96-8	100	500	U	U	U	U	U	U	U	U	U	U	U	U	U	U	2.85 J
Anthracene	120-12-7	100	500	0.087 J	U	U	U	U	U	U	U	U	U	U	U	U	U	13.7
Benzo(a)anthracene	56-55-3	1	5.6	0.39 J	U	U	U	U	U	U	U	U	2.95 J	A	U	U	7.8	AB 9.95
Benzo(a)pyrene	50-32-8	1	1	0.45	U	U	U	U	U	U	U	U	2.4 J	AB	U	U	10.3	AB 9.98
Benzo(b)fluoranthene	205-99-2	1	5.6	0.67	U	U	U	U	U	U	U	U	2.16 J	A	U	U	9.7	AB 12.9
Benzo(g,h,i)perylene	191-24-2	100	500	0.38 J	U	U	U	U	U	U	U	U	U	1.94	0.29 J	U	9.64	9.53
Benzo(k)fluoranthene	207-08-9	0.8	56	0.21 J	U	U	U	U	U	U	U	U	2.13 J	A	U	U	9.19	A 8.03
Bis(2-ethylhexyl)phthalate	117-81-7	NA	NA	U	0.09 J	0.11 J	U	U	0.078 J	U	U	U	NT	NT	NT	NT	NT	NT
Butylbenzylphthalate	85-68-7	NA	NA	U	U	U	U	U	U	U	U	U	NT	NT	NT	NT	NT	NT
Carbazole	86-74-8	NA	NA	U	U	U	U	U	U	U	U	U	NT	NT	NT	NT	NT	NT
Chrysene	218-01-9	1	56	0.54	U	U	U	U	U	U	U	U	3.08 J	A	U	0.253 J	12.3	A 13
Dibenzo(a,h)anthracene	53-70-3	0.33	0.56	0.098 J	U	U	U	U	U	U	U	U	U	U	U	U	U	3.08 J
Dibenzofuran	132-64-9	7	350	U	U	U	U	U	U	U	U	U	NT	NT	NT	NT	NT	NT
Di-n-butylphthalate	84-74-2	NA	NA	U	U	U	U	U	U	U	U	U	NT	NT	NT	NT	NT	NT
Fluoranthene	206-44-0	100	500	0.63	U	U	U	U	U	U	U	U	6.38	U	U	U	22	13.9
Fluorene	86-73-7	30	500	U	U	U	U	U	U	U	U	U	U	U	U	U	U	2.01 J
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	5.6	0.3 J	U	U	U	U	U	U	U	U	U	U	U	U	7.13	AB 9.07
Naphthalene	91-20-3	12	500	0.15 J	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Phenanthrene	85-01-8	100	500	0.32 J	U	U	U	U	U	U	U	U	6.41	U	0.258 J	U	9.62	11.9
Phenol	108-95-2	0.33	500	U	U	U	U	U	U	U	U	U	NT	NT	NT	NT	NT	NT
Pyrene	129-00-0	100	500	0.65	U	U	U	U	U	U	U	U	5.94	U	0.283 J	U	18.2	14.9
Total TICs				9.78 NJ	3.2	3.6	8.58	3.53	3.19	9.34	15.47	5.91	43.67	11.402	6.213	381.2	59.02	115.37
SVOCs + TICs				15.055	3.29	3.71	8.58	3.53	3.268	9.34	15.47	5.91	75.12	13.342	7.297	381.2	174.9	250.17

Contaminant	CAS Number	A Unrestricted Use (SCO)	B Restricted Commercial Use (SCO)	TP-G (2') South 2/21/2014	TP-I (5") 2/21/2014	TP-J (2') 2/21/2014	TP-01 (2') 7/30/2014	TP-02 (2.5') 7/30/2014	TP-03 (6') 7/29/2014	TP-04 (1') 7/30/2014	TP-05 (1') 7/29/2014	TP-07 (3') 7/29/2014	TP-08 (3') 7/30/2014	TP-08 (12') 7/31/2014	TP-11 (2-3') 7/30/2014	TP-12 (2.5') 7/30/2014	TP-13 (9') 7/29/2014	TP-13 (12') 7/29/2014
1-Methylnaphthalene	90-12-0	NA	NA	NT	NT	NT	0.3 J	0.13 J	U	0.42	U	U	U	U	0.29 J	0.24 J	0.14 J	U
2-Methylnaphthalene	91-57-6	NA	NA	NT	NT	NT	0.21 J	0.11 J	U	0.34 J	U	U	U	U	0.28 J	0.2 J	0.16 J	U
2,4-Dimethylphenol	105-67-9	NA	NA	NT	NT	NT	U	U	U	U	U	U	0.13 J	U	0	U	U	U
2-Methylphenol	95-48-7	NA	500	NT	NT	NT	U	U	U	U	U	U	0.16 J	U	U	U	U	U
4-Methylphenol	106-44-5	NA	500	NT	NT	NT	U	U	U	U	U	U	0.27 J	U	0.15 J	U	U	U
Acenaphthene	83-32-9	20	500	6.92 J	U	U	0.77	U	U	0.11 J	U	U	U	U	0.34 J	0.38 J	0.24 J	U
Acenaphthylene	208-96-8	100	500	U	U	U	0.42	U	U	U	U	0.084 J	U	U	U	0.15 J	0.16 J	U
Anthracene	120-12-7	100	500	21.9	U	U	2.78	2.3	0.16 J	U	U	0.18	0.18 J	U	0.82	0.77	1.1	0.38 J
Benzo(a)anthracene	56-55-3	1	5.6	28.6	AB 51.8 J	AB 5.45	A 5.2	A 3.1 J	A 0.39	0.39	U	0.51	0.34	U	1.4	A 2	A 1.9 NJ	A 0.98
Benzo(a)pyrene	50-32-8	1	1	22.2	AB 88.1 J	AB 4.53	AB 3.6	AB 3.3 J	AB 0.21 J	0.089 J	0.56	0.36	U	2.5	AB 1.7	AB 1.9	AB 1.9	AB
Benzo(b)fluoranthene	205-99-2	1	5.6	19.8	AB U	U	A 4.4	A 4.3	A 2.1 J	A 0.32 J	U	0.66	0.47	U	2	A 2.3	A 2.3	A 1.3
Benzo(g,h,i)perylene	191-24-2	100	500	13.6	124	A 2.83	2.5	3.3 J	0.66	0.15 J	0.18 J	0.72	0.18	U	3	1.1	U	1.9
Benzo(k)fluoranthene	207-08-9	0.8	56	19	A U	U	A 3.44	A 1.9	A 1.6 J	A 0.11 J	U	0.25 J	0.21	U	0.44 J	0.81	A 0.71	0.38 J
Bis(2-ethylhexyl)phthalate	117-81-7	NA	NA	NT	NT	NT	U	U	U	U	U	U	U	U	U	U	U	U
Butylbenzylphthalate	85-68-7	NA	NA	NT	NT	NT	U	U	U	U	U	U	U	U	U	U	0.48	1.2
Carbazole	86-74-8	NA	NA	NT	NT	NT	0.58	U	U	U	U	0.088 J	U	U	0.34 J	0.34 J	0.53	0.29 J
Chrysene	218-01-9	1	56	28.1	A 79.8 J	AB 5.56	A 4.5	A 3.1 J	A 0.41	U	U	0.6	0.41	U	2	A 2.1	A 1.7	A 1.6
Dibenzo(a,h)anthracene	53-70-3	0.33	0.56	5.47 J	AB U	U	AB 1.21 J	AB 0.75	AB 0.57 J	AB 0.13 J	U	U	U	U	0.66	AB 0.31 J	0.41	A U
Dibenzofuran	132-64-9	7	350	NT	NT	NT	0.47	U	U	0.18 J	U	U	U	U	0.33 J	0.26 J	0.34 J	U
Di-n-butylphthalate	84-74-2	NA	NA	NT	NT	NT	U	U	U	U	U	U	0.46 J	U	0.38 J	U	0.53	0.18 J
Fluoranthene	206-44-0	100	500	61.5	U	U	12.2	10 D	0.34 J	U	U	0.88	0.75	U	2.9	4.1	3.8	1.6
Fluorene	86-73-7	30	500	11.7	U	U	1.29 J	0.86	U	0.11 J	U	U	U	U	0.42 J	0.34 J	0.42	U
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	5.6	16.3	AB U	U	A 2.6	A 2.6	A 1	A 0.15 J	U	0.43	0.22	U	1.4	A 1.2	A U	0.6 J
Naphthalene	91-20-3	12	500	8.87	U	U	0.946 J	0.18 J	U	0.16 J	U	U	U	U	0.47 J	0.19 J	0.28 J	U
Phenanthrene	85-01-8	100	500	73.9	U	U	12.1	8.5 D	0.75 J	U	U	0.7	0.53 J	U	3.5	3.7	3.7	1.3
Phenol	108-95-2	0.33	500	NT	NT	NT	U	U	U	U	U	U	0.75	A U	U	U	U	U
Pyrene	129-00-0	100	500	46.1	111	A 9.26	7.4 D	5.7 J	U	0.49	U	0.75	0.49	U	2.1	3	2.2	1.1
Total TICs				183.29	1,708	41.58	26.28	79.9	5.37	18.12	4.97	6.41	4.81	8.7	23.85	9.75	15.79	10.45
SVOCs + TICs				567.25	2163	110.18	83.62	105.16	6.03	23.69	5.239	12.952	10.72	8.7	49.57	34.94	38.79	25.16

Values are in milligrams per kilogram (mg/kg) or parts per million (ppm)

SCOs are as referenced in 6 NYCRR Part 375-6, Remedial Program Soil Cleanup Objectives, dated December 14, 2006

¹ Analyte not validated.

D = Diluted Sample NA = Not Available NT = Not Tested J = Estimated Value U = Not Detected NJ = The detection is tentative in identification and estimated in value. Although there is presumptive evidence of the analyte, the result should be used with caution as a potential false positive

A = Exceeds Unrestricted Use SCO B (Highlighted Value) = Exceeds Restricted Commercial Use SCO

TABLE 4C
 202 FRANKLIN STREET
 OLEAN, NEW YORK
 BCP SITE NO. C905043

SUMMARY OF DETECTED PESTICIDE/HERBICIDE/PCBS IN SOIL/FILL SAMPLES

Contaminant	CAS Number	A		TB-104 (24') 6/12/2014	TB-105 (8-10') 6/11/2014	TP-B (1.5') 2/21/2014	TP-C (4') 2/21/2014	TP-01 (2') 7/30/2014	TP-02 (2.5') 7/30/2014	TP-03 (6') 7/29/2014	TP-04 (1') 7/30/2014	TP-05 (1') 7/29/2014	TP-07 (3') 7/29/2014	TP-08 (3') 7/30/2014	TP-08 (12') 7/31/2014	TP-11 (2-3') 7/30/2014	TP-12 (2.5') 7/30/2014	TP-13 (9') 7/29/2014	TP-13 (12') 7/29/2014			
		Unrestricted Use (SCO)	B Restricted Commercial Use (SCO)																			
4,4'-DDD	72-54-8	0.0033	92	U J	U	NT	NT	0.0064 J	A	U	U J	0.011 P, NJ	A	U	U	U J	U	U	U	U		
4,4'-DDE	72-55-9	0.0033	62	U J	U	NT	NT	U	U	U J	U J	U	U	0.006 P, J	A	U J	U	U	U J	U		
4,4'-DDT	50-29-3	0.0033	47	U J	U	NT	NT	U J	0.014 J	A	U J	U J	U J	0.012 J	A	U J	U J	U J	U J	0.024 J	A	U J
Aldrin	309-00-2	0.005	0.68	U J	U	NT	NT	U	U	U J	U J	U	U	U	U J	U J	U	U	U	U J	U	
alpha-BHC	319-84-6	0.02	3.4	U J	U	NT	NT	U	0.012 J	U J	U J	U	U	U J	U J	U	U	U	0.0051 J	U		
alpha-Chlordane	5103-71-9	0.094	24	U J	U	NT	NT	U	0.009 P, NJ	U J	U J	U	U J	U J	U J	U	U	U	U J	U J		
Dieldrin	60-57-1	0.005	1.4	U J	U	NT	NT	U	U	U J	U J	U	U J	U J	U J	U	U	U	U	U		
Endosulfan II	33213-65-9	2.4	200	U	U	NT	NT	U	U	U J	U J	U	U	U J	U J	U	U	U	U J	U		
Endosulfan sulfate	1031-07-8	2.4	200	U J	U	NT	NT	U J	0.047 J	U J	U J	U J	0.0037 R	U J	U J	U J	0.018 P, J	U J	U J	U J		
Endrin aldehyde	7421-93-4	NA	NA	U J	U	NT	NT	U	U	U J	0.0075 P, NJ	U	U	U J	U J	U	U	U	U J	0.59 J		
Endrin ketone	53494-70-5	NA	NA	U J	U	NT	NT	0.01 J	U	U J	U J	U	U	U J	U J	U	U	U	U J	U J		
gamma-BHC (Lindane)	58-89-9	0.1	9.2	U J	U	NT	NT	U	U	U J	U J	U	U J	U J	U J	U	U	U	U J	U		
gamma-Chlordane	5103-74-2	NA	NA	U J	U	NT	NT	0.0027 P, NJ	U	U J	U J	U	U	U J	U J	U	U	U	U	U J		
Heptachlor epoxide	1024-57-3	NA	NA	U J	U	NT	NT	U	U	U J	U J	U	U	U J	U J	U	U	U	0.0051 P, J	U		
Polychlorinated biphenyls	1336-36-3	0.1	1	U	U	U J	U J	U	U	U	U	U	0.056 P, J	U	U	U	U J	0.12	A	0.2	A	

Values are in milligrams per kilogram (mg/kg) or parts per million (ppm)

SCOs are as referenced in 6 NYCRR Part 375-6, Remedial Program Soil Cleanup Objectives, dated December 14, 2006

NT = Not Tested

NJ = The detection is tentative in identification and estimated in value. Although there is presumptive evidence of the analyte, the result should be used with caution as a potential false positive and/or elevated quantitative value.

R = The sample results are rejected due to deficiencies in meeting quality control limits

J = Estimated Value

NA = Not Available

P = Lower of Two Values Reported From Primary And Confirmation Analyses When > 25% Difference Detected

U = Not Detected

A = Exceeds Unrestricted Use SCO

TABLE 4D
202 FRANKLIN STREET
OLEAN, NEW YORK
BCP SITE NO. C905043

SUMMARY OF TAL METALS AND CYANIDE IN SOIL/FILL SAMPLES

Contaminant	CAS Number	A Unrestricted Use (SCO)	B Restricted Commercial Use (SCO)	MW-G (3') 6/13/2014	TB-102 (2') 6/11/2014	TB-103 (24') 6/12/2014	TB-104 (24') 6/12/2014	TB-105 (8-10') 6/11/2014	TB-106 (20') 6/11/2014	TB-106a (24') 6/19/2014	TB-107 (24') 6/13/2014	TB-108 (24') 6/12/2014	TP-A (3') 2/21/2014	TP-B (1.5') 2/21/2014	TP-B (5') 2/21/2014	TP-C (4') 2/21/2014	TP-G (2') North 2/21/2014	
Aluminum	7429-90-5	NA	NA	6870 *	19300 *	5300 *	5930 *	6340 *	3940 *	3900	5210 *	2710 *	10,900	3,820	9,510	7,610	5,470	
Antimony	7440-36-0	NA	NA	0.82 b,N	U N	0.4 b,N	U N	0.45 b,N	0.5 b,N	U	U N	0.5 b,N	U	U	U	U	U	
Arsenic	7440-38-2	13	16	29.4	AB 8.1	7.2	8.7	6.3	4.6	5.7	11.1	7.7	60.2	AB 14.3	A 15.1	A 7.64	26.3	AB
Barium	7440-39-3	350	400	156	55.5	76.5	44.8	32.4	22.7	49 b	38.8	26.9	161	89.9	99.2	193	86.7	
Beryllium	7440-41-7	7.2	590	0.65	0.5	0.2 b	0.22 b	0.26	0.19 b	0.17 J	0.18 b	0.14 b	2.82	0.537 J	0.962	U	0.534 J	
Cadmium	7440-43-9	2.5	9.3	0.22 b	0.14 b	0.12 b	0.094 b	0.13 b	0.16 b	0.036 J	0.076 b	0.09 b	4.77	A 3.03	A 3.16	A 4.2	A 3.7	A
Calcium	7440-70-2	NA	NA	5490	2020	68000	52700	52000	27800	38000	23900	54500	15,800	2,610	6,150	78,000	5,870	
Chromium	7440-47-3	30	1,500	13.1	19.6	7.1	7.6	8.1	4.4	4.8	4.9	3.7	30.7	A 11.7	13.1	18	12	
Cobalt	7440-48-4	NA	NA	4.4	11.6	4.1	4.5	4.4	4.6	3.7	4.6	2.5	13.8	6.33	9.92	3.37 J	6.27 J	
Copper	7440-50-8	50	270	215	A 18.8	21	20.6	22.7	13.9	18	19.9	15.9	105	A 130	A 59	A 20.7	41.9	
Iron	7439-89-6	NA	NA	19100 *	25100 *	13000 *	12700 *	12900 *	11200 *	9400	12300 *	8010 *	31,300	22,400	25,600	9,420	28,300	
Lead	7439-92-1	63	1000	388	A 16.7	7.2	7.2	8.1	4.6	7.2	9.1	9.1	119	A 126	A 139	A 280	A 85.7	A
Magnesium	7439-95-4	NA	NA	1000 *	3900 *	6770 *	9820 *	6610 *	2560 *	5600 b	3500 *	6110 *	4,910	865	1,360	3,520	1,140	
Manganese	7439-96-5	1600	10,000	78.9	601	713	557	634	394	620	371	854	549	163	896	300	290	
Mercury	7439-97-6	0.18	2.8	0.2	A 0.029 b	U	0.0036 b	0.0031 b	U	0.0039 J	U	U	0.159	0.055	0.121	0.362	A 0.299	A
Nickel	7440-02-0	30	310	12 *	17.7 *	10.5 *	10.9 *	11.4 *	9.9 *	9	10.6 *	5.7 *	27.7	16.7	25.1	9.65	15.6	
Potassium	7440-09-7	NA	NA	602	1630	578	704	737	387	460	494	320	1,670	317	745	797	595	
Selenium	7782-49-2	3.9	1,500	4.1 b	A U	U	U	U	0.82 b	U	U	U	U	U	U	U	U	
Silver	7440-22-4	2	1,500	0.35	0.12	U	U	U	U	U	U	U	U	U	U	U	U	
Sodium	7440-23-5	NA	NA	357	217	78.8	76	74.9	35.1 b	63 b	45.4 b	99	326 J	U	U	170 J	U	
Thallium	7440-28-0	NA	NA	0.9 b	U	0.57 b	0.43 b	U	U	U	U	U	U	U	U	U	U	
Vanadium	7440-62-2	NA	NA	16.6 *	30.6 *	8.1 *	8.4 *	10.2 *	5.9 *	6.4	7.9 *	6.1 *	26.6	15.7	17	53.3	17.6	
Zinc	7440-66-6	109	10,000	87.1 N*	67.7 N*	63.4 N*	58.1 N*	94.8 N*	158 N*	A 46 b	55.4 N*	38.9 N*	1,160	A 274	A 459	A 882	A 220	A
Total Cyanide	NA	27	27	NT	NT	NT	U	U	NT	NT	NT	NT	NT	NT	NT	NT	NT	

Contaminant	CAS Number	A Unrestricted Use (SCO)	B Restricted Commercial Use (SCO)	TP-G (2') South 2/21/2014	TP-J (2') 2/21/2014	TP-01 (2') 7/30/2014	TP-02 (2.5') 7/30/2014	TP-03 (6') 7/29/2014	TP-04 (1') 7/30/2014	TP-05 (1') 7/29/2014	TP-07 (3') 7/29/2014	TP-08 (3') 7/30/2014	TP-08 (12') 7/31/2014	TP-11 (2-3') 7/30/2014	TP-12 (2.5') 7/30/2014	TP-13 (9') 7/29/2014	TP-13 (12') 7/29/2014	
Aluminum	7429-90-5	NA	NA	5,030	5,430	4310	1910	12900	1170	18400	8710	7110	21700	5380	9260	6550	6760	
Antimony	7440-36-0	NA	NA	U	U	0.76 b	1.9	2.2	0.67 bN	6.2	1.4 N, J	U	U N	1.4 b	0.7 bN	1.8 N	2.2 N	
Arsenic	7440-38-2	13	16	27.4	AB 14.3	A 9.9	7.6	23.7	AB 39.8	AB 25	AB 10.2	22.3	AB 6.4	6.5	62.2	AB 12.3	25.2	AB
Barium	7440-39-3	350	400	59.4	179	207	240	126	78.7 E*	436	AB 872 E*	AB 196	74.2 E*	101	160 E*	99.3 E*	606 E*	AB
Beryllium	7440-41-7	7.2	590	0.532 J	0.998	0.19 b	0.054 b	0.44	0.28	0.19 b	0.16 b	1.1	0.87	0.18 b	0.57	0.12 b	0.18 b	
Cadmium	7440-43-9	2.5	9.3	4.56	A 2.83	A 0.28 b	0.53	0.61	0.21 b*	16.3	AB 0.78 *, J	2.8	A 1.1 *	0.51	0.41 *	1.6 *	7.3 *	A
Calcium	7440-70-2	NA	NA	3,220	3,770	22800	451	3490	1670	4260	77300	5380	10400	601	2340	64000	61200	
Chromium	7440-47-3	30	1,500	11.5	14.1	9.1	81.8	A 22.5	7.2 E	100	A 12 E	16.8	51.4 E	A 103	A 18 E	22.9 E	52.7 E	A
Cobalt	7440-48-4	NA	NA	6.33	5.67 J	4.3	0.95 b	5.5	1.7 bE	28.3	3.8 E, J	5.5	4.9 E	2.2 b	6 E	4.9 E	16.4 E	
Copper	7440-50-8	50	270	40.6	A 166	A 40.4	38.2	202	A 21.1	357	AB 53.7	A 111	A 14	41.5	375	AB 54.9	A 271	AB
Iron	7439-89-6	NA	NA	37,000	18,700	13000	1700	19000	12400 E*	239000	17800 E*, J	16300	16400 E*	2550	22800	41500 E*	202000 E*	
Lead	7439-92-1	63	1000	48.4	100	A 437	A 635	A 327	A 35.9 E	1150	AB 1200 E, J	AB 296	A 102 E	A 656	A 1470 E	AB 95.1 E	A 347 E	A
Magnesium	7439-95-4	NA	NA	1,090	718	1670	87.4	1720	201 E	756	7320 E	949	18700 E	196	1620 E	7260 E	7840 E	
Manganese	7439-96-5	1600	10,000	269	120	271	10.6	318	25.9 E	2800	A 455 E	78.2	337 E	22.1	106 E	456 E	1190 E	
Mercury	7439-97-6	0.18	2.8	0.0705	0.0408	1.2	A 0.22	A 0.16	0.25	A 0.06	0.069	0.082	0.03 B	0.58	A 0.31	A 0.3	A 0.2	A
Nickel	7440-02-0	30	310	14.5	19.3	8.1	9.8	14.4	5 E	68	A 10.1 E, J	41.1	A 13.3 E	13.8	28.5 E	14.2 E	37.3 E	A
Potassium	7440-09-7	NA	NA	529	545	502	45.1 b	545	259	313	747	601	2070	74.1 b	1220	660	1110	
Selenium	7782-49-2	3.9	1,500	U	U	0.9 b	2.9	2.9	2.5	U	U	2.2	3.4	U	8.7	A U	U	
Silver	7440-22-4	2	1,500	U	U	U	0.3 b	U	0.1 b	U	0.14 b	U	U	0.45 b	0.4 b	0.21 b	3.7	A
Sodium	7440-23-5	NA	NA	U	192 J	175	12.3 b	34.8 b	72	75.5	142	181	922	20.1 b	1790	153	174	
Thallium	7440-28-0	NA	NA	U	U	U	U	U	1.1	U	0.88 b	1.1 b	U	0.68 b	0.46 b	U	U	
Vanadium	7440-62-2	NA	NA	17.7	19.5	10.2	4.2	17.2	15.1 E*	5.2	16.9 E*	21.8	43.6 E*	5.7	27.6 E*	21.3 E*	82.2 E*	
Zinc	7440-66-6	109	10,000	280	A 96	180	A 376	A 323	A 22 NE*	8800	A 369 NE*, J	A 387	A 71.8 NE*	467	A 172 NE*	A 225 NE*	A 925 NE*	A
Total Cyanide	NA	27	27	NT	NT	U	4.4 J	U	U N	U	1 bN, J	U	0.94 bN, J	3.3 J	U N	0.68 bN, J	1.3 N,J	

Values are in milligrams per kilogram (mg/kg) or parts per million (ppm)

SCOs are as referenced in 6 NYCRR Part 375-6, Remedial Program Soil Cleanup Objectives, dated December 14, 2006

b = Trace Concentration Below Reporting Limit And Equal To Or Above Detection Limit J = Estimated Value E = Estimated Concentration N = Matrix Spike Recovery Falls Outside Control Limit NA = Not Available U = Not Detected NT = Not Tested * = RPD Duplicate Analyses Outside Control Limit
A = Exceeds Unrestricted Use SCO B (Highlighted Value) = Exceeds Restricted Commercial Use SCO

**TABLE 5A
202 FRANKLIN STREET
OLEAN, NEW YORK
BCP SITE NO. C905043**

SUMMARY OF DETECTED VOLATILE ORGANIC COMPOUNDS (VOCs) IN GROUNDWATER SAMPLES

Contaminant	CAS Number	X Groundwater Standard or Guidance Value	MW-A		MW-B		MW-C		MW-D		MW-E		MW-F		MW-G	
			6/27/14	11/05/14	6/26/14	11/05/14	6/26/14	11/05/14	6/26/14	11/05/14	6/25/14	11/05/14	6/25/14	11/06/14	6/26/14	11/06/14
tert-Butylbenzene ⁽¹⁾	98-06-6	5	1.4 J	U	U	U	U	U	1.1 J	U	U	U	U	U	U	U
Total VOCs			1.4	U	0	U	0	U	1.1	U	0	U	0	U	0	0
Total TICs			7	U	6.3	U	7.4	U	8.4	U	9.5	U	7.9	U	100.5	201.9
Total VOCs and TICs			8.4	U	6.3	U	7.4	U	9.5	U	9.5	U	7.9	U	100.5	201.9

Notes

µg/L = micrograms per Liter or parts per billion (ppb).

Groundwater Standards or Guidance Values as referenced in New York State Department of Environmental Conservation (NYSDEC) Technical and Guidance Series (TOGS) 1.1.1 dated June 1998 as amended by the NYSDEC's supplemental table dated

TIC = Tentatively Identified Compound

U = The analyte was analyzed for, but was not detected above the associated reported quantitation limit. Refer to the analytical laboratory report for the associated reported quantitation limit

NA = Not Available

J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than the method detection limit. The concentration given is an approximate value.

(1) Analyte not validated.

**TABLE 5B
202 FRANKLIN STREET
OLEAN, NEW YORK
BCP SITE NO. C905043**

SUMMARY OF DETECTED SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) IN GROUNDWATER SAMPLES

Contaminant	CAS Number	X Groundwater Standard or Guidance Value	MW-A		MW-B		MW-C		MW-D		MW-E		MW-F		MW-G	
			6/27/14	11/05/14	6/26/14	11/05/14	6/26/14	11/05/14	6/26/14	11/05/14	6/25/14	11/05/14	6/25/14	11/06/14	6/26/14	11/06/14
Bis(2-chloroethyl)ether	111-44-4	NA	U	U	U	U	U	U	U	U	U	U	U	U	1 J	U
Total SVOCs			U	U	U	0	U	U	U	U	U	0	U	U	1	0
Total TICs			17.7	90.2	16.4	6.8	18.8	5	12.4	4.6	16.8	19.4	38.4	9.7	105	53.8
Total SVOCs and TICs			17.7	90.2	16.4	6.8	18.8	5	12.4	4.6	16.8	19.4	38.4	9.7	106	53.8

Notes

µg/L = micrograms per Liter or parts per billion (ppb).

Groundwater Standards or Guidance Values as referenced in New York State Department of Environmental Conservation (NYSDEC) Technical and Guidance Series (TOGS) 1.1.1 dated June 1998 as amended by the NYSDEC's supplemental table

TIC = Tentatively Identified Compound

U = The analyte was analyzed for, but was not detected above the associated reported quantitation limit. Refer to the analytical laboratory report for the associated reported quantitation limit

NA = Not Available

J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than the method detection limit. The concentration given is an approximate value.

**TABLE 5C
202 FRANKLIN STREET
OLEAN, NEW YORK
BCP SITE NO. C905043**

SUMMARY OF PESTICIDES AND PCBs IN GROUNDWATER SAMPLES

Contaminant	^X Groundwater Standard or Guidance Value	MW-A 6/27/14	MW-B 6/26/14	MW-C 6/26/14	MW-D 6/26/14	MW-E 6/25/14	MW-F 6/25/14	MW-G 6/26/14
Pesticides	NA	U	U	U	U J	U	U	U
PCBs	0.09	U J	U	U	U J	U	U	U

Notes

µg/L = micrograms per Liter or parts per billion (ppb).

Groundwater Standards or Guidance Values as referenced in New York State Department of Environmental Conservation (NYSDEC) Technical and Guidance Series (TOGS) 1.1.1 dated June 1998 as amended by the NYSDEC's supplemental table dated April 2000.

U = The analyte was analyzed for, but was not detected above the associated reported quantitation limit. Refer to the analytical laboratory report for the associated reported quantitation limit

NA = Not Available

UJ = The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise

**TABLE 5D
202 FRANKLIN STREET
OLEAN, NEW YORK
BCP SITE NO. C905043**

SUMMARY OF DETECTED TAL METALS IN GROUNDWATER SAMPLES

Contaminant	X Groundwater Standard or Guidance Value	MW-A		MW-B		MW-C		MW-D		MW-E		MW-F		MW-G	
		6/27/14	11/05/14	6/26/14	11/05/14	6/26/14	11/05/14	6/26/14	11/05/14	6/25/14	11/05/14	6/25/14	11/06/14	6/26/14	11/06/14
Aluminum	NA	U	U	U	U	82.6 b	U	3040	U	U	U	U	U	175 b	U
Antimony	3	U	U	U	U	9.5 b X	U	U	U	U	U	U	U	U	U
Arsenic	25	U	U	4.6 b	U	U	U	31.5 X	63.4 X	U	U	5.0 b	U	9.0 b	U
Barium	1,000	216	204	191 b	290	80.6 b	101.0 b	1530 X	2490 X	103 b	222	282	330	955	786
Calcium	NA	81800	103000	139000	149000	204000	222000	139000	141000	123000	154000	149000	119000	178000	145000
Chromium	50	U	U	U	U	U	U	3.7 b	U	0.77 b	U	U	U	U	U
Cobalt	NA	U	U	U	1.60 b	5.1 b	3.9 b	4.1 b	U	U	U	U	U	U	U
Copper	200	U	U	U	U	4.5 b	4.2 b	16.8 b	U	U	U	U	U	U	U
Iron	300	13200 X	11800 X	64.3 b	2460.0 X	1630 X	3450 X	11700 X	12600 X	179 b	96.3 b	U	44.8 b	6130 X	4850 X
Lead	25	U	U	U	U	5.6	U	8.9 b	U	U	U	U	U	U	U
Magnesium	35,000	4460	5260	21700	23400	18700	23100	26000	26000	15900	24300	21900	17600	19600	15800
Manganese	300	673 X	909 X	1580 X	2330 X	2320 X	2500 X	3650 X	2740 X	23.6 b	444.0 X	183	544 X	2140 X	1850 X
Nickel	100	U	U	5.2 b	3.4 b	10.2	6.4 b	9.5 b	1.1 b	0.85	1.9 b	U	0.87 b	U	U
Potassium	NA	5330	5020 E,J	3880	4200	6320	6330 E	4490	4260 E	3230	4210 E	4100	4270 E	3290	3560 E
Selenium	10	14.9 b X	U	U	U	35.2 X	U	12.3 b X	U	U	U	U	U	U	U
Sodium	20,000	59800 X	34500 X	74900 X	100000 X	65200 X	105000 X	142000 X	153000 X	74800 X	128000 X	102000 X	75900 X	70800 X	55000 X
Thallium	0.5	U	U	U	U	U	U	U	U	U	7.6 b X	U	U	U	U
Vanadium	NA	U	U	U	1.2 b	U	U	4.8 b	U	U	U	U	U	U	U
Zinc	2,000	U	U	U	U	22.5 b	U	54.1	U	5.9 b	U	U	U	U	U

Notes

µg/L = micrograms per Liter or parts per billion (ppb).

Groundwater Standards or Guidance Values as referenced in New York State Department of Environmental Conservation (NYSDEC) Technical and Guidance Series (TOGS) 1.1.1 dated June 1998 as amended by the NYSDEC's supplemental table dated April 2000.

U = The analyte was analyzed for, but was not detected above the associated reported quantitation limit. Refer to the analytical laboratory report for the associated reported quantitation limit

J- = The analyte was positively identified; however, the associated numerical value is an estimated quantity that may be biased low.

b = indicates a concentration below thereporting limit and equal to or above the detection limit

E = an estimated concentration due to the presence of interferences

NA = Not Available

31.5 X = Exceeds Groundwater Standard or Guidance Value

TABLE 6
202 FRANKLIN STREET
OLEAN, NEW YORK
BCP SITE NO. C905043

SUMMARY OF MONITORING WELL LOCATION DETAILS, CONSTRUCTION, GROUNDWATER ELEVATIONS
AND ANALYTICAL PARAMETERS FOR LONGTERM MONITORING

Monitoring Well ID Sample Locations	Well Location	UTM NAD 83 Coordinates (ft) (northing/easting)	Well Diameter (inches)	Elevation (above mean sea level)						Analytical Parameters to be Analyzed Year 1
				Casing	Surface	Screen Top	Screen Bottom	Groundwater		
								7/10/2014	11/5/2014	
MW-A	On-site perimeter (up-gradient)	763496.8 1186801.0	1	1427.70	1428.04	1411.80	1401.80	1412.66	1410.17	TAL Metals
MW-B	On-site	763736.2 1186986.0	2	1429.95	1427.72	1412.45	1402.45	1412.44	1410.02	TAL Metals
MW-C	On-site perimeter (up-gradient)	763995.0 1186888.3	2	1429.34	1426.69	1417.34	1407.34	1412.71	1410.27	TAL Metals
MW-D	On-site	763978.7 1187071.6	2	1428.08	1426.12	1412.08	1402.08	1412.52	1410.09	TAL Metals
MW-E	On-site perimeter (down-gradient)	763824.9 1187192.4	2	1427.40	1427.81	1409.40	1399.40	1412.59	1409.90	TAL Metals
MW-F	On-site perimeter (down-gradient)	763624.6 1187259.2	2	1428.53	1428.92	1411.03	1401.03	1411.78	1409.31	TAL Metals
MW-G	On-site perimeter (down-gradient)	763493.8 1187059.7	2	1429.26	1429.66	1411.76	1401.76	1412.39	1410.05	TAL Metals

Notes:

Detection Limits and Minimum Reporting Limits to be achieved by ELAP-certified Laboratory are those provided in DEC document entitled "Exhibit C Target Compound Lists (TCLs) and Contract Required Quantitation Limits (CRQLs), provided in Appendix G.

APPENDIX A
LIST OF SITE CONTACTS

APPENDIX A – LIST OF SITE CONTACTS

Name	Phone/Email Address
Silence Dogood, LLC c/o Jeff Belt [Site Owner and Remedial Party]	716 913 7878 / jeff.belt@solepoxy.com
Raymond L. Kampff. [Qualified Environmental Professional]	585 454 0210 x108 / rkampff@daymail.net
Tony Lopes [NYSDEC DER Project Manager]	716 851 7220 / anthony.lopes@dec.ny.gov
Chad Staniszewski [NYSDEC Regional HW Engineer]	716-851-7220/ chad.staniszewski@dec.ny.gov
Phillips Lytle LLP c/o Adam S. Walters [Remedial Party Attorney]	716 847 7023 / awalters@phillipslytle.com

APPENDIX B
EXCAVATION WORK PLAN (EWP)

APPENDIX B – EXCAVATION WORK PLAN (EWP)

B-1 NOTIFICATION

At least 15 days prior to the start of any activity that is anticipated to encounter remaining contamination, the site owner or their representative will notify the NYSDEC. Table 1 includes contact information for the above notification. The information on this table will be updated as necessary to provide accurate contact information. A full listing of site-related contact information is provided in Appendix A.

Table [1]: Notifications*

Tony Lopes [NYSDEC DER Project Manager]	716 851 7220 / anthony.lopes@dec.ny.gov
Chad Staniszewski [NYSDEC Regional HW Engineer]	716 851 7220 / chad.staniszewski@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 H 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.

A community air monitoring plan will also be included in the notification when excavation activities are planned in areas where contaminated materials (e.g., soil, fill, etc.) may be disturbed.

B-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 B-6 and B-7 (respectively) of this Appendix.

B-3 SOIL STAGING METHODS

Depending upon the quantity of material excavated, impacted materials may be located directly into trucks for transport and off-Site for disposal, placed within roll-off containers and/or placed in a soil stockpile. 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.

B-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.

B-5 MATERIALS TRANSPORT OFF-SITE

All transport of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded.

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 obtained by the transporter prior to transporting contaminated material off-Site. 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; (f) overall safety in transport; and (g) community input (where necessary).

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

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

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

B-6 MATERIALS DISPOSAL OFF-SITE

As determined by characterization results, soil, fill or solid waste deemed to be impacted that is 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).

B-7 MATERIALS REUSE ON-SITE

In the event that excavation activities at the Site encounter potentially contaminated materials the materials may be re-used on-Site in accordance with guidelines set forth below in this EWP. Chemical criteria for on-Site re-use of material that have been approved by NYSDEC are those set forth in 6 NYCRR Part 375 Table 375-6.8(a) and Table 375-6.8(b). 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.

In order to qualify for on-Site re-use as cover or off-Site re-use, the material must:

- Be free of extraneous debris or solid waste
- Consist of soil or other unregulated materials as set forth in 6NYCRR Part 360.
- Be tested at the rate outlined in Table B-7-A

Table B-7-A			
Required number of Soil Samples to determine re-use suitability of excavated on-Site soils			
Contaminant	VOCs	SVOCs	
		Inorganics PCBs/Pesticides	
Soil Quantity (yd ³)	Discrete Samples	Composite	Discrete Samples/Composite
0-50	1	1	3-5 discrete samples from different locations in the fill or soil to be re-used 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 NYSDEC DER Project Manager		

Based on the testing outcome, soil may be re-used on-site as cover or off-site in the following manner:

- Soil that meets the Unrestricted Use SCOs set forth in 6 NYCRR Part 375 Table 375-6.8(a) may be re-used without restriction on-Site (backfill, cover, etc.) or off-Site.
- Soil that meets the Restricted Commercial Use SCOs [set forth in 6 NYCRR Part 375 Table 375-6.8(b)] may be re-used on-Site without restriction (backfill, cover, etc.).
- Soil that exceeds Restricted Commercial Use SCOs [set forth in 6 NYCRR Part 375 Table 375-6.8(b)] may be re-used on-Site; however, it must be 1) placed below the existing cover system, or 2) placed below a new cover system meeting NYSDEC requirements. The location where it is re-used must be documented.

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.

B-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.

B-9 COVER SYSTEM RESTORATION

After the completion of soil removal and any other invasive activities the cover system will be restored in a manner that complies with the decision document. The existing cover system is

comprised of a minimum of 12 inches of clean soil and/or asphalt pavement. The demarcation layer, consisting of orange snow fencing material or black geotextile 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.

B-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 the Restricted Commercial SCOs as referenced in 6 NYCRR 375-638(b). Soils that meet 'exempt' fill requirements under 6 NYCRR Part 360, but do not meet backfill or cover soil objectives for this site, will not be imported onto the site without prior approval by NYSDEC. Solid waste will not be imported onto the site.

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

B-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.

B-12 EXCAVATION CONTINGENCY PLAN

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

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

B-13 COMMUNITY AIR MONITORING PLAN

Refer to Appendix H for a copy of the site-specific Health and Safety Plan that includes a community air monitoring plan.

Exceedances of action levels listed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers on the day of exceedance. All data is to be reported in the final report for the excavation activity.

B-14 ODOR CONTROL PLAN

This odor control plan is capable of controlling emissions of nuisance odors off-site. If nuisance odors are identified at the site boundary, or if odor complaints are received, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of any other complaints about the project. Implementation of all odor controls, including the halt of work, is the responsibility of the 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, etc.

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.

B-15 DUST CONTROL PLAN

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

- Dust suppression will be achieved through the use of a dedicated on-site water truck for road wetting. The truck will be equipped with a water cannon capable of spraying water directly onto off-road areas including excavations and stockpiles.
- Clearing and grubbing of larger sites will be done in stages to limit the area of exposed, unvegetated soils vulnerable to dust production.
- Gravel will be used on roadways to provide a clean and dust-free road surface.
- On-site roads will be limited in total area to minimize the area required for water truck sprinkling.

B-16 OTHER NUISANCES

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

B-17 REPORTING

A report is to be submitted to the NYSDEC within 90 days of completion of the activities performed under this EWP. This report shall contain a summary of the activities performed; a summary of all data gathered and results; information about any media that was removed from the Site: volume, contamination levels, area from which removed; and any other information that may

be indicate a change to the “remaining contamination” that is at the Site. Such changes may require revision of the SMP.

APPENDIX C
RESPONSIBILITIES of OWNER and REMEDIAL PARTY

APPENDIX C
RESPONSIBILITIES of
OWNER and REMEDIAL PARTY

Responsibilities

The responsibilities for implementing the Site Management Plan (“SMP”) for 202 Franklin Street site (the “site”), number C905043, are divided between the site owner(s) and a Remedial Party, as defined below. The owner(s) is/are currently listed as:

Silence Dogood, LLC (the “owner”).

Solely for the purposes of this document and based upon the facts related to a particular site and the remedial program being carried out, the term Remedial Party (“RP”) refers to any of the following: certificate of completion holder, volunteer, applicant, responsible party, and, in the event the New York State Department of Environmental Conservation (“NYSDEC”) is carrying out remediation or site management, the NYSDEC and/or an agent acting on its behalf. The RP is:

Silence Dogood, LLC, 211 Franklin Street Olean, NY

Nothing on this page shall supersede the provisions of an Environmental Easement, Consent Order, Consent Decree, agreement, or other legally binding document that affects rights and obligations relating to the site.

Site Owner’s Responsibilities:

- 1) The owner shall follow the provisions of the SMP as they relate to future construction and excavation at the site.
- 2) In accordance with a periodic time frame determined by the NYSDEC, the owner shall periodically certify, in writing, that all Institutional Controls set forth in a(n) Environmental Easement remain in place and continue to be complied with. The owner shall provide a written

certification to the RP, upon the RP's request, in order to allow the RP to include the certification in the site's Periodic Review Report (PRR) certification to the NYSDEC.

- 3) In the event the site is delisted, the owner remains bound by the Environmental Easement and shall submit, upon request by the NYSDEC, a written certification that the Environmental Easement is still in place and has been complied with.
- 4) The owner shall grant access to the site to the RP and the NYSDEC and its agents for the purposes of performing activities required under the SMP and assuring compliance with the SMP.
- 5) The owner is responsible for assuring the security of the remedial components located on its property to the best of its ability. In the event that damage to the remedial components or vandalism is evident, the owner shall notify the site's RP and the NYSDEC in accordance with the timeframes indicated in Section 1.3 -Notifications.
- 6) In the event some action or inaction by the owner adversely impacts the site, the owner must notify the site's RP and the NYSDEC in accordance with the time frame indicated in Section 1.3 - Notifications and (ii) coordinate the performance of necessary corrective actions with the RP.
- 7) The owner must notify the RP and the NYSDEC of any change in ownership of the site property (identifying the tax map numbers in any correspondence) and provide contact information for the new owner of the site property. 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) The RP remains ultimately responsible for maintaining the engineering controls.
- 9) 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.

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.

APPENDIX D
ENVIRONMENTAL EASEMENT



Cattaraugus County Clerk
Alan Bernstein

Instrument Number
201910479

Cattaraugus County Center 303 Court Street
Little Valley, NY 14755
716-938-2297
Fax: 716-938-2773

Document Type: EASEMENT

Receipt Number: 19-8751
Instrument Number: 201910479
Date/Time: 09/30/2019 03:28 PM

Deed Information

Transfer Tax \$0.00

First Grantor: SILENCE DOGOOD LLC
First Grantee: NEW YORK STATE PEOPLE

Town: CO - OLEAN (CITY)

Pages: 10

Mortgage Serial No.:

Transfer Tax Number: 00502

Mortgage Information

Basic Tax
Local Tax
Additional Tax
Special Tax

Total Mortgage Tax \$0.00
Taxable Amount

Return To:

PHILLIPS LYTTLE
ONE CANALSIDE
ENV
BUFFALO NY 14203

State of New York
County of Cattaraugus

This sheet constitutes the Clerk endorsement required by Section 316-A(5) & Section 319 of the Real Property Law of the State of New York.

Alan Bernstein

Cattaraugus County Clerk

Please do not remove this page



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

THIS INDENTURE made this 27th day of August, 2019 between Owner(s) Silence Dogood LLC, having an office at 211 Franklin Street, Olean, New York 14760, County of Cattaraugus, 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 202 Franklin Street in the City of Olean, County of Cattaraugus and State of New York, known and designated on the tax map of the County Clerk of Cattaraugus as tax map parcel numbers: Section 94.040 Block 1 Lot 3, being the same as that property conveyed to Grantor by deed dated December 4, 2013 and recorded in the Cattaraugus County Clerk's Office in Instrument No. 209005-001. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 5.159 +/- acres, and is hereinafter more fully described in the Land Title Survey dated November 23, 2013 and last revised March 18, 2015 prepared by D. Michael Canada, L.L.S., 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: C905043-05-14, 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 Cattaraugus 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: C905043
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.

Silence Dogood LLC:

By: [Handwritten Signature]

Print Name: JEFF BELT

Title: MANAGER Date: Aug 13, 2019

Grantor's Acknowledgment

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

On the 13 day of Aug, in the year 20 19 before me, the undersigned, personally appeared Jeff Belt, 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.

Sharon See
Notary Public - State of New York

SHARON M. SEE
Notary Public, State of New York
Reg. No. 01SE6377914
Qualified in Cattaraugus County
Commission Expires July 16, 2022

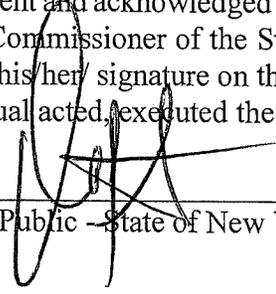
THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting by and Through the Department of Environmental Conservation as Designee of the Commissioner,

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

Grantee's Acknowledgment

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

On the 27th day of August, 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

Environmental Easement Description

202 Franklin Street

Beginning at the intersection of the north bounds of Franklin Street with the east bounds of lands of Southern Tier Rail Authority LLC, thence along the east bounds of lands of Southern Tier Rail Authority:

- 1) along a curve to the right, with a radius of 1432.69', a arc length of 338.04' which is subtended by a chord of N 5-34-22 W, a distance of 337.26' to a point**
- 2) N 59-28-08 E, a distance of 68.03' to a point**
- 3) N 30-28-00 W, a distance of 51.78' to a point**
- 4) along a curve to the right, with a radius of 1240.79', a arc length of 266.80' which is subtended by a chord of N 13-20-34 E, a distance of 266.29' to a point, thence along the south bounds of Interstate Route 86: along a curve to the right, with a radius of 5544.58', a arc length of 174.67' which is subtended by a chord of N 60-12-59 E, a distance of 174.66' to a point thence S 30-06-22 E, through the lands of Silence Dogood LLC, a distance of 547.88' to a point,**

thence S 59-32-00 W along the north bounds of Franklin Street, a distance of 565.54' to the point of beginning.

Contains 5.159 acres +/-



Recording Office Time Stamp

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

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

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

Federal employer identification number
(if applicable) 14-6013200

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

Name and telephone number of person to contact

	Name(s) of Grantor Of Easement or License	Address of Property	Consideration Given For Easement or License
1.	Silence Dogood LLC	211 Franklin Street, Olean, New York	0
2.	Silence Dogood LLC	202 Franklin Street, Olean, New York	
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			

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

Signature of Grantee

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

New York State Department of Environmental Conservation

Name of grantee

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

NYSDEC Attorney

Title

APPENDIX E
MONITORING WELL BORING AND CONSTRUCTION
LOGS

TEST BORING LOGS:
TB-101 THROUGH TB-108



DAY ENVIRONMENTAL, INC.

ENVIRONMENTAL CONSULTANTS

AN AFFILIATE OF DAY ENGINEERING, P.C.

Project #: 4884S-13
 Project Address: 202 Franklin Street
Olean, New York
 DAY Representative: Z. Tennies
 Drilling Contractor: Nothnagle Drilling
 Sampling Method: Auger & Macrocore

Ground Elevation: NA Datum: NA
 Date Started: 6/12/2014 Date Ended: 6/12/2014
 Borehole Depth: 12.0' Borehole Diameter: 2 1/4 inches
 Completion Method: Well Installed Backfilled with Grout Backfilled with Cuttings
 Water Level (Date): NA

Test Boring TB-101

Page 1 of 1

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	Sample Description	Notes
1						0.0	Asphalt pavement above broken Asphalt and Gravel	
						0.0	Black, fine to coarse Sand intermixed with Coal fragments, Brick, Concrete, moist (FILL)	
2	NA	S-1	0-4	85	NA	0.0	Mottled, orange/brown, Clayey SAND, some Silt, little Gravel, moist	
3						0.0		
4						0.0		
5						0.0		
6	NA	S-2	4-8	80	NA	0.0	Brown, fine to medium SAND, some Gravel, little Silt, moist	
7						0.0		
8						0.0		
9						0.0	...SAND and GRAVEL	
10	NA	S-3	8-12	75	NA	0.0		
11						0.0		
12							Bottom of Test Boring @ 12.0'	
13								
14								
15								
16								

- Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
 2) Stratification lines represent approximate boundaries. Transitions may be gradual.
 3) PID readings are referenced to a benzene standard measured in the headspace above the sample using a MiniRae 2000 equipped with a 10.6 eV lamp.
 4) NA = Not Available or Not Applicable
 5) Headspace PID readings may be influenced by moisture

Test Boring TB-101

1563 LYELL AVENUE
 ROCHESTER, NEW YORK 14606
 (585) 454-0210
 FAX (585) 454-0825

www.dayenvironmental.com

420 LEXINGTON AVENUE, SUITE 300
 NEW YORK, NEW YORK 10170
 (212) 986-8645
 FAX (212) 986-8657



DAY ENVIRONMENTAL, INC.

ENVIRONMENTAL CONSULTANTS

AN AFFILIATE OF DAY ENGINEERING, P.C.

Project #: 4884S-13
 Project Address: 202 Franklin Street
Olean, New York
 DAY Representative: Z. Tennies
 Drilling Contractor: Nothnagle Drilling
 Sampling Method: Auger & Macrocore

Ground Elevation: NA Datum: NA
 Date Started: 6/12/2014 Date Ended: 6/12/2014
 Borehole Depth: 12.0' Borehole Diameter: 2 1/4 inches
 Completion Method: Well Installed Backfilled with Grout Backfilled with Cuttings
 Water Level (Date): NA

Test Boring TB-102

Page 1 of 1

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	Sample Description	Notes
1				33			Asphalt Pavement Concrete Slab	0.2' - 2.0' Auger through concrete slab
2						0.0	Broken Concrete, Cinders and Pieces of Asphalt (FILL)	
3	NA	S-1	2-4	90	NA		0.0 Brown, Sandy CLAY, little medium to coarse Gravel, moist	
4						0.0		
5						0.0		
6	NA	S-2	4-8	65	NA		0.0 0.0	
7						0.0	Yellow/Brown, Silty SAND, moist	
8						0.0	Fine to medium SAND, trace Silt, moist	
9						0.0		
10	NA	S-3	8-12	33	NA		0.0 Brown, SAND and GRAVEL, trace Silt, moist	
11						0.0		
12							Bottom of Test Boring @ 12.0'	
13								
14								
15								
16								

- Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
 2) Stratification lines represent approximate boundaries. Transitions may be gradual.
 3) PID readings are referenced to a benzene standard measured in the headspace above the sample using a MiniRae 2000 equipped with a 10.6 eV lamp.
 4) NA = Not Available or Not Applicable
 5) Headspace PID readings may be influenced by moisture

Test Boring TB-102

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DAY ENVIRONMENTAL, INC.

ENVIRONMENTAL CONSULTANTS

AN AFFILIATE OF DAY ENGINEERING, P.C.

Project #: 4884S-13
 Project Address: 202 Franklin Street
Olean, New York
 DAY Representative: Z. Tennies
 Drilling Contractor: Nothnagle Drilling
 Sampling Method: Auger & Macrocore

Ground Elevation: NA Datum: NA
 Date Started: 6/12/2014 Date Ended: 6/12/2014
 Borehole Depth: 28.0' Borehole Diameter: 8 inches
 Completion Method: Well Installed Backfilled with Grout Backfilled with Cuttings
 Water Level (Date): NA

Test Boring TB-103

Page 1 of 2

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
1	NA	S-1	0-2	40	NA		0.0	Asphalt and Sub-Base	No Sample 2-4 feet; auger through concrete to 4'
2							0.0	Brown/Black Sand and Gravel, little Silt, trace Bricks, trace broken Asphalt (FILL)	
3								Concrete Slab	
4									
5							0.0	Gray/Black, Sand, some Gravel, little Silt, trace Concrete (FILL)	
6	NA	S-2	4-8	38	NA		0.0	Brown, medium SAND, little Gravel, trace Silt, moist	
7							0.0		
8							0.0		
9	NA	S-3	8-10	25	NA		0.0	Dark Brown, coarse SAND and GRAVEL, little Silt, moist	
10							0.0	...Gray/Brown	
11							0.0		
12	NA	S-4	10-14	12	NA		0.0		
13							0.0		
14							0.0		
15	NA	S-5	14-18	38	NA		0.0		
16							0.0		

- Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
 2) Stratification lines represent approximate boundaries. Transitions may be gradual.
 3) PID readings are referenced to a benzene standard measured in the headspace above the sample using a MiniRae 2000 equipped with a 10.6 eV lamp.
 4) NA = Not Available or Not Applicable
 5) Headspace PID readings may be influenced by moisture

Test Boring TB-103

1563 LYLELL AVENUE
 ROCHESTER, NEW YORK 14606
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ENVIRONMENTAL CONSULTANTS

AN AFFILIATE OF DAY ENGINEERING, P.C.

Project #: 4884S-13
 Project Address: 202 Franklin Street
Olean, New York
 DAY Representative: Z. Tennies
 Drilling Contractor: Nothnagle Drilling
 Sampling Method: Auger & Macrocore

Test Boring TB-103

Page 2 of 2

Ground Elevation: NA Datum: NA
 Date Started: 6/12/2014 Date Ended: 6/12/2014
 Borehole Depth: 28.0' Borehole Diameter: 4"
 Completion Method: Well Installed Backfilled with Grout Backfilled with Cuttings
 Water Level (Date): NA

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
17							0.0		
18							0.0	...medium to coarse SAND, little Gravel	
19	NA	S-6	18-20	70	NA		0.0		
20							0.0	...medium to coarse SAND and sub-rounded GRAVEL, little Silt	
21							0.0		
22	NA	S-7	20-24	45	NA		0.0	...wet	
23							0.0		
24							0.0		
25	NA	S-8	24-28	70	NA		0.0		
26							0.0	Gray, GRAVEL, some coarse Sand, little Silt	
27							0.0		
28								Bottom of Test Boring @ 28.0'	
29									
30									
31									
32									

- Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
 2) Stratification lines represent approximate boundaries. Transitions may be gradual.
 3) PID readings are referenced to a benzene standard measured in the headspace above the sample using a MiniRae 2000 equipped with a 10.6 eV lamp.
 4) NA = Not Available or Not Applicable
 5) Headspace PID readings may be influenced by moisture

Test Boring TB-103

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DAY ENVIRONMENTAL, INC.

ENVIRONMENTAL CONSULTANTS

AN AFFILIATE OF DAY ENGINEERING, P.C.

Project #: 4884S-13
 Project Address: 202 Franklin Street
Olean, New York
 DAY Representative: Z. Tennies
 Drilling Contractor: Nothnagle Drilling
 Sampling Method: Auger & Macrocore

Ground Elevation: NA Datum: NA
 Date Started: 6/12/2014 Date Ended: 6/12/2014
 Borehole Depth: 28.0' Borehole Diameter: 8 inches
 Completion Method: Well Installed Backfilled with Grout Backfilled with Cuttings
 Water Level (Date): ~ 13.0' (6/12/14)

Test Boring TB-104

Page 1 of 2

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
1							0.0	Asphalt and Sub-base	
2	NA	S-1	0-4	70	NA		0.0	Brown/Black, Sand and Gravel, little Silt, trace crushed Brick, trace Cinders (FILL)	
3							0.0	Black, mottled Brown, Sandy CLAY, moist	
4							0.0	...Brown	
5							0.0	...some Gravel	
6	NA	S-2	4-8	58	NA		0.0	Brown, SAND and GRAVEL, some Silt, moist	
7							0.0		
8							0.0	...little Silt	
9	NA	S-3	8-10	70	NA		0.0		
10							0.0	...SAND and sub-rounded GRAVEL	
11							0.0		
12	NA	S-4	10-14	38	NA		0.0		
13							0.0		
14							0.0	...Gray/Brown, wet	
15	NA	S-5	14-18	52	NA		0.0		
16							0.0		

- Notes:**
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 - 2) Stratification lines represent approximate boundaries. Transitions may be gradual.
 - 3) PID readings are referenced to a benzene standard measured in the headspace above the sample using a MiniRae 2000 equipped with a 10.6 eV lamp.
 - 4) NA = Not Available or Not Applicable
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Test Boring TB-104

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 Drilling Contractor: Nothnagle Drilling
 Sampling Method: Auger & Macrocore

Ground Elevation: NA Datum: NA
 Date Started: 6/12/2014 Date Ended: 6/12/2014
 Borehole Depth: 28.0' Borehole Diameter: 8 inches
 Completion Method: Well Installed Backfilled with Grout Backfilled with Cuttings
 Water Level (Date): ~ 13.0' (6/12/14)

Test Boring TB-104

Page 2 of 2

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
17							0.0		
18							0.0		
19	NA	S-6	18-20	20	NA		0.0	Gray/Brown, coarse SAND, little Gravel, trace Silt, wet	
20							0.0	Gray/Brown, coarse SAND and sub-rounded GRAVEL, little Silt, wet	
21								...Gray, trace Silt	Strong Petroleum Odor PID malfunction
22	NA	S-7	20-24	50	NA		NA		
23									
24								Gray, coarse SAND, little sub-rounded Gravel, wet	
25								...medium to coarse SAND	
26	NA	S-8	24-28	88	NA		NA		
27									
28								Bottom of Test Boring @ 28.0'	
29									
30									
31									
32									

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 Project Address: 202 Franklin Street
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 DAY Representative: Z. Tennies
 Drilling Contractor: Nothnagle Drilling
 Sampling Method: Auger & Split Spoon

Ground Elevation: NA Datum: NA
 Date Started: 6/11/2014 Date Ended: 6/12/2014
 Borehole Depth: 24.0' Borehole Diameter: 8 inches
 Completion Method: Well Installed Backfilled with Grout Backfilled with Cuttings
 Water Level (Date): 14.9' (6/12/14) through augers

Test Boring TB-105

Page 1 of 2

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
1	2	S-1	0-2	10	4		0.0	TOPSOIL with organics	Augered to 8'
	2						0.0	Black/Brown, Silty Sand intermixed with railroad Ballast, broken red Bricks (FILL)	
	2						0.0		
2	4	S-2	2-4	10	8		0.0		
	3						0.0		
3	4	S-3	4-6	55	18		0.0	...little Ash, little Tar (Roofing material?)	
	4						0.0		
4	6	S-4	6-7.5	40	31		0.0	frequent Red Bricks	
	8						0.0	Gray, Silty Sand intermixed with broken red Bricks, Ash, Cinders, pieces of Concrete (FILL)	
5	10	S-5	8-10	48	18		0.0	Concrete Slab	
	3						0.0		
6	18	S-6	10-12	70	24		0.0	No sample 7.5' - 8.0'	
	13						0.0	Gray, coarse Sand, broken Concrete, red Brick and Mortar, trace Tar (FILL)	
7	50/3	S-7	12-14	60	25		0.0	Gray/Brown, medium dense, coarse SAND, some Gravel, trace Silt, moist	
							0.0		
8		S-8	14-16	52	18		0.0	...Brown, little Silt, wet	
							0.0		
9							0.0		
							0.0		
10							0.0		
							0.0		
11							0.0		
							0.0		
12							0.0		
							0.0		
13							0.0		
							0.0		
14							0.0		
							0.0		
15							0.0		
							0.0		
16							0.0		
							0.0		

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 4) NA = Not Available or Not Applicable
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Test Boring TB-105

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 Sampling Method: Auger & Macrocore

Test Boring TB-105

Page 2 of 2

Ground Elevation: NA Datum: NA
 Date Started: 6/11/2014 Date Ended: 6/12/2014
 Borehole Depth: 24.0' Borehole Diameter: 8 inches
 Completion Method: Well Installed Backfilled with Grout Backfilled with Cuttings
 Water Level (Date): 14.9' (6/12/14)

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
17	11	S-9	16-18	63	25	NA	0.0	Brown, coarse SAND, some Gravel, little Silt, wet	
	12						0.0		
	13						0.0		
18	5	S-10	18-20	10	15	NA	0.0		
	5						0.0		
	10						0.0		
19	5	S-11	20-22	48	14	NA	0.0	...little Gravel	
	5						0.0		
	9						0.0		
20	5	S-12	22-24	70	26	NA	0.0	...coarse to medium SAND	
	5						0.0		
	9						0.0		
21	5	S-12	22-24	70	26	NA	0.0	...some sub-angular Gravel	
	5						0.0		
	9						0.0		
22	10	S-12	22-24	70	26	NA	0.0	...coarse to medium SAND	
11	0.0								
15	0.0								
23	15	S-12	22-24	70	26	NA	0.0	...some sub-angular Gravel	
15	0.0								
16	0.0								
24	16	S-12	22-24	70	26	NA	0.0	...some sub-angular Gravel	
16	0.0								
16	0.0								
24								Bottom of Test Boring @ 24.0'	
25									
26									
27									
28									
29									
30									
31									
32									

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 Project Address: 202 Franklin Street
Olean, New York
 DAY Representative: Z. Tennies
 Drilling Contractor: Nothnagle Drilling
 Sampling Method: Auger & Split Spoon

Ground Elevation: NA Datum: NA
 Date Started: 6/11/2014 Date Ended: 6/12/2014
 Borehole Depth: 20.0' Borehole Diameter: 8 inches
 Completion Method: Well Installed Backfilled with Grout Backfilled with Cuttings
 Water Level (Date): 13.8 (6/11/14) through augers

Test Boring TB-106

Page 1 of 2

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
1							0.0	TOPSOIL and Roots	
							0.0	Black, Cinders, Coal fragments, fine to medium Sand, moist (FILL)	
2	NA	S-1	0-4	NA	NA		0.0	Silty SAND, trace Gravel, trace Clay, moist	
3							0.0		
4							0.0		
5							0.0	Brown, fine to medium GRAVEL, some Sand, little Silt, moist	
6	NA	S-2	4-8	NA	NA		0.0		
7							0.0		
8							0.0		
9							0.0		
10	NA	S-3	8-12	NA	NA		0.0		
11							0.0		
12							0.0		
13							0.0		
14	NA	S-4	12-14	NA	NA		0.0	...wet	
15							0.0		
16							0.0		

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 Drilling Contractor: Nothnagle Drilling
 Sampling Method: Auger & Macrocore

Ground Elevation: NA Datum: NA
 Date Started: 6/11/2014 Date Ended: 6/12/2014
 Borehole Depth: 20.0' Borehole Diameter: 8 inches
 Completion Method: Well Installed Backfilled with Grout Backfilled with Cuttings
 Water Level (Date): 13.8 (6/11/14) through augers

Test Boring TB-106

Page 2 of 2

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
17							0.0	Brown, fine to medium GRAVEL, some Sand, little Silt, wet	
18	NA	S-5	16-20	NA	NA	0.0			
19						0.0			
20						0.0			
20								Gray/Brown, fine to medium SAND, little Gravel, trace Silt, wet	
21								Bottom of Test Boring @ 20.0'	
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
32									

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Test Boring TB-106

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 Drilling Contractor: Nothnagle Drilling
 Sampling Method: Auger & Macrocore

Ground Elevation: NA Datum: NA
 Date Started: 6/19/2014 Date Ended: 6/19/2014
 Borehole Depth: 48.0' Borehole Diameter: 8 inches
 Completion Method: Well Installed Backfilled with Grout Backfilled with Cuttings
 Water Level (Date): 20.0' (6/19/14) through augers

Test Boring TB-106A

Page 1 of 2

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
20							49.1	Auger 0 - 20.0 ft. and begin sampling	Petroleum Odor ↓ Faint Petroleum Odor ↓
21	NA	S-1	20-24	21	NA	80.9		Gray, angular GRAVEL, some Sand, wet	
22									
23							107		
24							98.2		
25								...little coarse Sand	
26	NA	S-2	24-28	38	NA	807	44.5	...SAND and angular GRAVEL, frequent Cobbles noted during augering	
27									
28							40.4		
29							31.2		
30	NA	S-3	28-32	41	NA	287	18.7		
31							56.1		
32							40.2	Gray/Brown, Clayey SAND, trace Gravel, wet	
33							17.9	...Sandy CLAY	
34	NA	S-4	32-36	21	NA	159	43.7		
35							24.5		

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Test Boring TB-106A

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 Drilling Contractor: Nothnagle Drilling
 Sampling Method: Auger & Macrocore

Ground Elevation: NA Datum: NA
 Date Started: 6/19/2014 Date Ended: 6/19/2014
 Borehole Depth: 48.0' Borehole Diameter: 8 inches
 Completion Method: Well Installed Backfilled with Grout Backfilled with Cuttings
 Water Level (Date): 20.0' (6/19/14) through augers

Test Boring TB-106A

Page 1 of 2

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
36								Gray/Brown, Sandy CLAY, trace Gravel, wet	Faint Petroleum Odor
37							No Sample 36' - 40'		
38									
39									
40							2.0	Gray-Brown, Sandy CLAY, trace Silt, wet	Very Faint to no Petroleum Odor
41						6.7			
42	NA	S-6	40-44	100	NA		4.9		
43							0.1		
44							4.9		
45							15.7		
46	NA	S-7	44-48	74	NA	20.5	16.8	Bottom of Test Boring @ 48.0'	No Petroleum Odor
47							14.3		
48							17.6		
49									
50									
51									

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Test Boring TB-106A

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 Sampling Method: Auger & Macrocore

Test Boring TB-107

Page 1 of 2

Ground Elevation: NA Datum: NA
 Date Started: 6/13/2014 Date Ended: 6/13/2014
 Borehole Depth: 28.0' Borehole Diameter: 8 inches
 Completion Method: Well Installed Backfilled with Grout Backfilled with Cuttings
 Water Level (Date): 18.8' (6/13/14) through augers

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
1							0.0	Asphalt and Sub-base	
							0.0	Brown, Sand, some Gravel, little Silt, moist (FILL)	
2	NA	S-1	0-4	62	NA		0.0	Black, Sand and Gravel, some Cinders, little crushed red Brick, moist (FILL)	
							0.0	...Gray-Black	
3							0.0	Concrete	
							0.0	Brown-Gray, Sandy CLAY, little Gravel, moist	
4							0.0		
5							0.0	Brown/Gray, SAND and sub-angular GRAVEL, trace Silt, moist	
6	NA	S-2	4-8	28	NA		0.0		
7							0.0		
8							0.0		
9	NA	S-3	8-10	92	NA		0.0		
10							0.0		
11							0.0		
12	NA	S-4	10-14	44	NA		0.0	...Tan to Brown	
13							0.0		
14							0.0		
15	NA	S-5	14-18	30	NA		0.0	...Brown, SAND and medium to coarse angular GRAVEL	
16							0.0		

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Test Boring TB-107

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Ground Elevation: NA Datum: NA
 Date Started: 6/13/2014 Date Ended: 6/13/2014
 Borehole Depth: 28.0' Borehole Diameter: 8 inches
 Completion Method: Well Installed Backfilled with Grout Backfilled with Cuttings
 Water Level (Date): 18.8' (6/13/14) through augers

Test Boring TB-107

Page 2 of 2

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
17								Gray, SAND and medium to coarse GRAVEL, trace Silt, moist	
18								Gray, SAND, little Gravel, wet	Faint Petroleum Odor ↓
19	NA	S-6	18-20	82	NA	44	Gray, SAND and sub-angular GRAVEL, trace Silt, wet		
20						53.6			
21						70.1	...GRAVEL, some coarse Sand		
22	NA	S-7	20-24	54	NA		...SAND and GRAVEL, some Silt		
23						53.2			
24						52.4			
25						205	Gray, coarse SAND, some Gravel, wet		
26	NA	S-8	24-28	75	NA		Gray, Sandy CLAY, trace Gravel, wet		
27						415			
28								Bottom of Test Boring @ 28.0'	
29									
30									
31									
32									

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Test Boring TB-107

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Test Boring TB-108

Page 1 of 2

Ground Elevation: NA Datum: NA
 Date Started: 6/11/2014 Date Ended: 6/12/2014
 Borehole Depth: 28.0' Borehole Diameter: 8 inches
 Completion Method: Well Installed Backfilled with Grout Backfilled with Cuttings
 Water Level (Date): 15.7 (6/12/14) through augers

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
1							0.0	Topsoil and Roots	
2	NA	S-1	0-4	38	NA		0.0	Bricks intermixed with Black fine to medium Sand, Coal fragments, moist (FILL)	
3							0.0	Brown, Sandy CLAY, little Gravel interbedded with layers of tan/brown Silty Clay, moist	
4							0.0		
5							0.0	Brown, Sandy GRAVEL, little Silt, moist	
6	NA	S-2	4-8	5	NA		0.0		
7							0.0		
8							0.0		
9							0.0		
10	NA	S-3	8-12	33	NA		0.0		
11							0.0		
12							0.0		
13							0.0	Brown, fine to coarse SAND with pockets of Clayey Silt, moist	
14	NA	S-4	12-16	38	NA		0.0	Brown, Sandy GRAVEL, little Silt, moist	
15							0.0	...wet	
16							0.0	...tan/brown	

- Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
 2) Stratification lines represent approximate boundaries. Transitions may be gradual.
 3) PID readings are referenced to a benzene standard measured in the headspace above the sample using a MiniRae 2000 equipped with a 10.6 eV lamp.
 4) NA = Not Available or Not Applicable
 5) Headspace PID readings may be influenced by moisture

Test Boring TB-108

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DAY ENVIRONMENTAL, INC.

ENVIRONMENTAL CONSULTANTS

AN AFFILIATE OF DAY ENGINEERING, P.C.

Project #: 4884S-13
 Project Address: 202 Franklin Street
Olean, New York
 DAY Representative: Z. Tennies
 Drilling Contractor: Nothnagle Drilling
 Sampling Method: Auger & Macrocore

Ground Elevation: NA Datum: NA
 Date Started: 6/11/2014 Date Ended: 6/12/2014
 Borehole Depth: 28.0' Borehole Diameter: 8 inches
 Completion Method: Well Installed Backfilled with Grout Backfilled with Cuttings
 Water Level (Date): 15.7 (6/12/14) through augers

Test Boring TB-108

Page 2 of 2

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
17								Brown, SAND and sub-angular to rounded GRAVEL, little Silt, wet	
18	NA	S-5	16-20	34	NA				
19								Gray, sub-rounded to angular GRAVEL, some Sand, wet	Petroleum Odor
20									
21								...faint sheet on water	
22	NA	S-6	20-24	55	NA				
23								Bottom of Test Boring @ 28.0'	
24									
25									
26	NA	S-7	24-28	52	NA				
27									
28									
29									
30									
31									
32									

- Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
 2) Stratification lines represent approximate boundaries. Transitions may be gradual.
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 4) NA = Not Available or Not Applicable
 5) Headspace PID readings may be influenced by moisture

Test Boring TB-108

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TEST BORING LOGS:
MW-A THROUGH MW-G



DAY ENVIRONMENTAL, INC.

ENVIRONMENTAL CONSULTANTS

AN AFFILIATE OF DAY ENGINEERING, P.C.

Project #: 4884S-13
 Project Address: 211 Franklin Street
Olean, NY
 DAY Representative: Z. Tennies
 Drilling Contractor: Applus
 Sampling Method: Direct Push & Split Spoon

Ground Elevation: NA Datum: NA
 Date Started: 9/10/2013 Date Ended: 9/10/2013
 Borehole Depth: 27.0' Borehole Diameter: 8 inches
 Completion Method: Well Installed Backfilled with Grout Backfilled with Cuttings
 Water Level (Date): 18.8' (9/10/13) through augers

Test Boring MW-A

Page 1 of 2

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
1							0.0	Brown, fine to medium Sand, some Roots, little Red Brick (FILL)	<p>Test boring advanced to 10 feet via direct-push methods and completed to 27 feet with H S A with split spoon samples collected at 5-foot intervals.</p>
2	NA	S-1	0-4	69	NA		0.0	Brown-Red, fine to medium SAND, little coarse Gravel, damp	
3							0.0	...Gray-Black, trace fine Gravel	
4							0.0	Gray-Brown, SAND, trace fine Gravel, damp	
5							0.0		
6	NA	S-2	4-8	38	NA		0.0		
7							0.0		
8							0.0	...fine to medium SAND	
9	NA	S-3	8-10	10	NA		0.0	Gray-Brown, medium to coarse GRAVEL, some Sand, damp	
10							0.0		
11	NA	S-4	10-12	78	NA		0.2	Gray-Brown, Silty fine to coarse SAND, little medium coarse Gravel, damp	
12							0.0		
13									
14									
15	NA	S-5	14-16	75	54		3.1		
16							14.7		

- Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
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 4) NA = Not Available or Not Applicable
 5) Headspace PID readings may be influenced by moisture

Test Boring MW-A

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Project #: 4884S-13
 Project Address: 211 Franklin Street
Olean, NY
 DAY Representative: Z. Tennies
 Drilling Contractor: Applus
 Sampling Method: Direct Push & Split Spoon

Ground Elevation: NA Datum: NA
 Date Started: 9/10/2013 Date Ended: 9/10/2013
 Borehole Depth: 27.0' Borehole Diameter: 8 inches
 Completion Method: Well Installed Backfilled with Grout Backfilled with Cuttings
 Water Level (Date): 18.8' (9/10/13) through augers

Test Boring MW-A

Page 2 of 2

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
17									
18									
19									
20									
21		S-6	20-22	67	57	-	101 25.7 81.1	Very dense, Gray, Silty fine to coarse SAND and medium to coarse GRAVEL, moist petroleum/chemical odor	
22									
23									
24									
25							13	...wet	
26		S-7	25-27	65	44	-	42.2 121	...Dense	
27								End of Boring @ 27.0'	
28									
29									
30									
31									
32									

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 4) NA = Not Available or Not Applicable
 5) Headspace PID readings may be influenced by moisture

Test Boring MW-A

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Project #: 4884S-13
 Project Address: 202 Franklin Street
Olean, New York
 DAY Representative: Z. Tennies
 Drilling Contractor: Nothnagle Drilling
 Sampling Method: Auger & Split Spoon

Ground Elevation: NA Datum: NA
 Date Started: 6/11/2014 Date Ended: 6/12/2014
 Borehole Depth: 27.5' Borehole Diameter: 8 inches
 Completion Method: Well Installed Backfilled with Grout Backfilled with Cuttings
 Water Level (Date): NA

Test Boring MW-B

Page 1 of 2

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
1							0.0	TOPSOIL, ROOTS	
							0.0	Broken Concrete	
2	NA	S-1	0-4	32	NA		0.0	Frequent Bricks	
3							0.0		
4							0.0		
5							0.0		
6	NA	S-2	4-8	38	NA		0.0	Gray, Gravel, some Ash, moist (FILL)	
7							0.0	Brown, Silty fine to coarse SAND, trace rounded Gravel, moist	
8							0.0	Brown, SAND and fine to medium GRAVEL, trace Silt, moist	
9							0.0		
10	NA	S-3	8-12	50	NA		0.0		
11							0.0		
12							0.0		
13							0.0	...frequent Cobbles during augering	
14	NA	S-4	12-16	40	NA		0.0	...trace Clay	
15							0.0		
16							0.0	...wet	

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 4) NA = Not Available or Not Applicable
 5) Headspace PID readings may be influenced by moisture

Test Boring MW-B

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Project #: 4884S-13
 Project Address: 202 Franklin Street
Olean, New York
 DAY Representative: Z. Tennies
 Drilling Contractor: Nothnagle Drilling
 Sampling Method: Auger & Macrocore

Ground Elevation: NA Datum: NA
 Date Started: 6/11/2014 Date Ended: 6/12/2014
 Borehole Depth: 28.0' Borehole Diameter: 8 inches
 Completion Method: Well Installed Backfilled with Grout Backfilled with Cuttings
 Water Level (Date): NA

Test Boring MW-B

Page 2 of 2

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
17							0.0		
18	NA	S-5	16-20	52	NA		0.0		
19							0.0	...fine to coarse SAND and fine to medium GRAVEL	
20							0.0		
21							0.0		
22	NA	S-6	20-24	45	NA		0.0		
23							916	...Gray, wet	Petroleum Odor
24									
25									
26	NA	S-7	24-28	50	NA			Gray, sub-angular GRAVEL, some Sand, wet	Faint Petroleum Odor
27									
28								Bottom of Test Boring @ 27.5'	
29									
30									
31									
32									

- Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
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Test Boring MW-B

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Project #: 4884S-13
 Project Address: 202 Franklin Street
Olean, New York
 DAY Representative: Z. Tennies
 Drilling Contractor: Nothnagle Drilling
 Sampling Method: Auger & Split Spoon

Ground Elevation: NA Datum: NA
 Date Started: 6/11/2014 Date Ended: 6/12/2014
 Borehole Depth: 24.0' Borehole Diameter: 8 inches
 Completion Method: Well Installed Backfilled with Grout Backfilled with Cuttings
 Water Level (Date): NA

Test Boring MW-C

Page 1 of 2

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
1	NA	S-1	0-4	75	NA		0.0	Topsoil, Roots Black, fine to medium Sand, intermixed with Brick, Wood fragments (railroad ties?), moist (FILL)	
2							0.0	Black Cinders and fine to coarse Sand, moist (FILL)	
3							0.0	Brown Silty fine to medium SAND, wet	
4							0.0		
5							0.0		
6	NA	S-2	4-8	40	NA		0.0		
7							0.0		
8							0.0		
9							0.0		
10	NA	S-3	8-12	35	NA		0.0	Tan, Light Brown, Sandy CLAY, trace Gravel, trace Silt, wet	
11							0.0		
12							0.0		
13							0.0	Brown, SAND and GRAVEL, trace Silt, wet	
14	NA	S-4	12-16	40	NA		0.0		
15							0.0		
16							0.0		

- Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
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 4) NA = Not Available or Not Applicable
 5) Headspace PID readings may be influenced by moisture

Test Boring MW-C

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Project #: 4884S-13
 Project Address: 202 Franklin Street
Olean, New York
 DAY Representative: Z. Tennies
 Drilling Contractor: Nothnagle Drilling
 Sampling Method: Auger & Macrocore

Ground Elevation: NA Datum: NA
 Date Started: 6/11/2014 Date Ended: 6/12/2014
 Borehole Depth: 24.0' Borehole Diameter: 8 inches
 Completion Method: Well Installed Backfilled with Grout Backfilled with Cuttings
 Water Level (Date): NA

Test Boring MW-C

Page 2 of 2

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
17							0.0		
18	NA	S-5	16-20	38	NA		0.0		
19							0.0	...rust staining	
20							0.0		
21							0.0	Brown, fine to medium SAND, trace rounded Gravel, wet	
22	NA	S-6	20-24	40	NA		0.0	Gray/Brown, SAND and angular GRAVEL, trace Silt, wet	
23							0.0		
24							0.0		
25								Bottom of Test Boring @ 24.0'	
26									
27									
28									
29									
30									
31									
32									

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 5) Headspace PID readings may be influenced by moisture

Test Boring MW-C

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Project #: 4884S-13
 Project Address: 202 Franklin Street
Olean, New York
 DAY Representative: Z. Tennies
 Drilling Contractor: Nothnagle Drilling
 Sampling Method: Auger & Macrocore

Ground Elevation: NA Datum: NA
 Date Started: 6/11/2014 Date Ended: 6/11/2014
 Borehole Depth: 26.0' Borehole Diameter: 8 inches
 Completion Method: Well Installed Backfilled with Grout Backfilled with Cuttings
 Water Level (Date): NA

Test Boring MW-D

Page 1 of 2

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
1	2	S-1	0-2	58	7		0.0	Topsoil and Roots	
	3						0.0	Gray/Brown, Sand, little Gravel, Asphalt (FILL)	
	4						0.0		
2	3	S-2	2-4	25	3		0.0		
	2						0.0		
3	1	S-3	4-6	10	2		0.0	...little Glass, crushed red Brick	
	2						0.0		
4	1	S-4	6-8	25	0		0.0	Very soft, Brown, Clayey SAND, trace Gravel, little Organic material, moist	
	1						0.0		
	1						0.0		
5	1	S-5	8-10	43	1		0.0	...little fine to medium Gravel	
	1						0.0		
6	4	S-6	10-12	40	8		0.0	Loose, Brown, SAND, little fine to medium Gravel, trace Silt, moist	
	4						0.0		
	4						0.0		
7	7	S-7	12-14	53	21		0.0	Medium Dense, Gray/Brown, SAND and fine to coarse GRAVEL, trace Silt, moist	
	9						0.0		
	12						0.0		
8	5	S-8	14-16	55	14		0.0	...Gray/Black	
	7						0.0		
9	7						0.0	...Brown	
	7						0.0		
10	7						0.0		
	7						0.0		

- Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
 2) Stratification lines represent approximate boundaries. Transitions may be gradual.
 3) PID readings are referenced to a benzene standard measured in the headspace above the sample using a MiniRae 2000 equipped with a 10.6 eV lamp.
 4) NA = Not Available or Not Applicable
 5) Headspace PID readings may be influenced by moisture

Test Boring MW-D

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Project #: 4884S-13
 Project Address: 202 Franklin Street
Olean, New York
 DAY Representative: Z. Tennies
 Drilling Contractor: Nothnagle Drilling
 Sampling Method: Auger & Macrocore

Ground Elevation: NA Datum: NA
 Date Started: 6/11/2014 Date Ended: 6/11/2014
 Borehole Depth: 26.0' Borehole Diameter: 8 inches
 Completion Method: Well Installed Backfilled with Grout Backfilled with Cuttings
 Water Level (Date): NA

Test Boring MW-D

Page 2 of 2

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
17	12	S-9	16-18	33	25		0.0	Medium Dense, Brown, medium to coarse SAND, little Gravel, trace Silt, wet	
	12						0.0	Medium Dense, Brown, medium to coarse SAND and GRAVEL, trace Silt, wet	
18	12	S-10	18-20	70	30		0.0		
	14						0.0		
19	16	S-11	20-22	20	16		0.0	...medium to coarse SAND and medium to coarse GRAVEL, trace Clay	
	13						0.0		
20	6	S-12	22-24	30	30		0.0	...no Clay, wet	
	6						0.0		
21	10	S-13	24-26	95	34		0.0	...dense	
	13						0.0		
22	8	S-12	22-24	30	30		0.0		
	13						0.0		
23	17	S-13	24-26	95	34		0.0		
	20						0.0		
24	16	S-13	24-26	95	34		0.0		
	21						0.0		
25	14	S-13	24-26	95	34		0.0		
	10						0.0		
26								Bottom of Test Boring @ 26.0'	
27									
28									
29									
30									
31									
32									

- Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
 2) Stratification lines represent approximate boundaries. Transitions may be gradual.
 3) PID readings are referenced to a benzene standard measured in the headspace above the sample using a MiniRae 2000 equipped with a 10.6 eV lamp.
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 5) Headspace PID readings may be influenced by moisture

Test Boring MW-D

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Project #: 4884S-13
 Project Address: 202 Franklin Street
Olean, New York
 DAY Representative: Z. Tennies
 Drilling Contractor: Nothnagle Drilling
 Sampling Method: Auger & Macrocore

Ground Elevation: NA Datum: NA
 Date Started: 6/12/2014 Date Ended: 6/12/2014
 Borehole Depth: 28.0' Borehole Diameter: 8 inches
 Completion Method: Well Installed Backfilled with Grout Backfilled with Cuttings
 Water Level (Date): NA

Test Boring MW-E

Page 1 of 2

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
1							0.0	Topsoil, Organic Material	
							0.0	Broken Asphalt and Concrete, little Sand, little Gravel (FILL)	
2	NA	S-1	0-4	42	NA		0.0	Black, medium to coarse Sand, little Gravel, broken Asphalt, trace red Bricks and Concrete, moist (FILL)	
3							0.0	...frequent broken red Bricks	
4							0.0	Brown, Clayey Sand intermixed with Ash, broken Bricks, moist (FILL)	
5							0.0	Brown, Clayey SAND, trace Gravel, moist	
6	NA	S-2	4-8	59	NA		0.0	Brown, SAND, some Gravel, trace Silt, moist	
7							0.0	...fine to medium SAND, little Gravel	
8							0.0		
9	NA	S-3	8-10	60	NA		0.0	...some Gravel	
10							0.0	Brown, coarse SAND and angular GRAVEL, trace Silt, moist	
11							0.0		
12	NA	S-4	10-14	55	NA		0.0		
13							0.0		
14							0.0		
15	NA	S-5	14-18	42	NA		0.0		
16							0.0		

- Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
 2) Stratification lines represent approximate boundaries. Transitions may be gradual.
 3) PID readings are referenced to a benzene standard measured in the headspace above the sample using a MiniRae 2000 equipped with a 10.6 eV lamp.
 4) NA = Not Available or Not Applicable
 5) Headspace PID readings may be influenced by moisture

Test Boring MW-E

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DAY ENVIRONMENTAL, INC.

ENVIRONMENTAL CONSULTANTS

AN AFFILIATE OF DAY ENGINEERING, P.C.

Project #: 4884S-13
 Project Address: 202 Franklin Street
Olean, New York
 DAY Representative: Z. Tennies
 Drilling Contractor: Nothnagle Drilling
 Sampling Method: Auger & Macrocore

Ground Elevation: NA Datum: NA
 Date Started: 6/12/2014 Date Ended: 6/12/2014
 Borehole Depth: 28.0' Borehole Diameter: 8 inches
 Completion Method: Well Installed Backfilled with Grout Backfilled with Cuttings
 Water Level (Date): NA

Test Boring MW-E

Page 2 of 2

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
17	NA	S-6	14-18				0.0	Brown, coarse SAND and angular GRAVEL, trace Silt, moist	
18							0.0		
19	NA	S-7	18-20	25	NA		0.0	Brown, fine to medium SAND, some Gravel, little Silt, wet	
20							0.0	Brown, fine to medium SAND and angular GRAVEL, trace Silt, wet	
21							0.0	...fine to medium SAND, some Gravel	
22	NA	S-8	20-24	78	NA		0.0	...medium to coarse SAND and sub-rounded GRAVEL	
23							0.0		
24							0.0	Brown-Gray, coarse SAND, little Gravel, trace Silt, wet	
25							0.0	Gray, SAND and angular GRAVEL, wet	
26	NA	S-9	24-28	52	NA		0.0		
27							0.0		
28							0.0		
29								Bottom of Test Boring @ 28.0'	
30									
31									
32									

- Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
 2) Stratification lines represent approximate boundaries. Transitions may be gradual.
 3) PID readings are referenced to a benzene standard measured in the headspace above the sample using a MiniRae 2000 equipped with a 10.6 eV lamp.
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 5) Headspace PID readings may be influenced by moisture

Test Boring MW-E

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AN AFFILIATE OF DAY ENGINEERING, P.C.

Project #: 4884S-13
 Project Address: 202 Franklin Street
Olean, New York
 DAY Representative: Z. Tennies
 Drilling Contractor: Nothnagle Drilling
 Sampling Method: Auger & Macrocore

Ground Elevation: NA Datum: NA
 Date Started: 6/12/2014 Date Ended: 6/12/2014
 Borehole Depth: 28' Borehole Diameter: 8 inches
 Completion Method: Well Installed Backfilled with Grout Backfilled with Cuttings
 Water Level (Date): NA

Test Boring MW-F

Page 1 of 2

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
1							0.0	Asphalt	
2	NA	S-1	0-4	24	NA		0.0	Black, fine to coarse Sand with Brick, Concrete, Slag/Coal, moist (FILL)	No Sample - Brick fragments in drill spoil
3							0.0		
4							0.0	Sandy CLAY, little Gravel, moist	
5							0.0		
6	NA	S-2	4-8	40	NA		0.0	Brown, SAND and GRAVEL, little Clay, little Silt, moist	
7							0.0		
8							0.0	...no Clay	
9							0.0		
10	NA	S-3	8-12	40	NA		0.0		
11							0.0	Yellow/Brown, fine to medium SAND, some angular Gravel, trace Silt, moist	
12							0.0	Brown, SAND and GRAVEL, trace Silt, moist	
13							0.0		
14	NA	S-4	12-16	45	NA		0.0	...Yellow/Brown, SAND and angular Gravel	
15							0.0		
16							0.0		

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Test Boring MW-F

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Project #: 4884S-13
 Project Address: 202 Franklin Street
Olean, New York
 DAY Representative: Z. Tennies
 Drilling Contractor: Nothnagle Drilling
 Sampling Method: Auger & Macrocore

Ground Elevation: NA Datum: NA
 Date Started: 6/12/2014 Date Ended: 6/12/2014
 Borehole Depth: 28' Borehole Diameter: 8 inches
 Completion Method: Well Installed Backfilled with Grout Backfilled with Cuttings
 Water Level (Date): NA

Test Boring MW-F

Page 2 of 2

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
17							0.0	Yellow/Brown, SAND and GRAVEL, trace Silt, moist	
18	NA	S-5	16-20	2.4	NA		0.0	Sandy CLAY	
19							0.0	Brown, fine to medium GRAVEL, some fine to coarse Sand, moist ...wet	
20							0.0	...medium subrounded GRAVEL, some fine to coarse Sand	
21							0.0		
22	NA	S-6	20-24	2.6	NA		0.0		
23							0.0		
24							0.0	...fine to medium angular GRAVEL	
25							0.0		
26	NA	S-8	24-28	NA	NA		0.0		
27							0.0	Gray/Brown, SAND and fine to coarse GRAVEL, trace Silt, wet	
28								Bottom of Test Boring @ 28.0'	
29									
30									
31									
32									

- Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
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Test Boring MW-F

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AN AFFILIATE OF DAY ENGINEERING, P.C.

Project #: 4884S-13
 Project Address: 202 Franklin Street
Olean, New York
 DAY Representative: Z. Tennies
 Drilling Contractor: Nothnagle Drilling
 Sampling Method: Auger & Macrocore

Ground Elevation: NA Datum: NA
 Date Started: 6/13/2014 Date Ended: 6/13/2014
 Borehole Depth: 28.0' Borehole Diameter: 8 inches
 Completion Method: Well Installed Backfilled with Grout Backfilled with Cuttings
 Water Level (Date): NA

Test Boring MW-G

Page 1 of 2

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
1							0.0	Asphalt and Sub-base	
							0.0	Brown, Sand and Gravel, moist (FILL)	
2	NA	S-1	0-4	55	NA		0.0	Black, Sand, some Gravel, Cinders, moist (FILL)	
							0.0	Brown, Sandy CLAY, little Gravel, moist	
3							0.0		
4							0.0	Brown, fine to medium SAND, little Gravel, moist	
5							0.0	Dark Brown, SAND and GRAVEL, trace Silt, moist	
6	NA	S-2	4-8	22	NA		0.0		
7							0.0		
8							0.0		
9							0.0		
10	NA	S-3	8-12	49	NA		0.0	...some fractured Cobbles	
11							0.0		
12							0.0	...Tan-Brown	
13							0.0		
14	NA	S-4	12-16	62	NA		0.0		
15							0.0		
16							0.0		

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Test Boring MW-G

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Project #: 4884S-13
 Project Address: 202 Franklin Street
Olean, New York
 DAY Representative: Z. Tennes
 Drilling Contractor: Nothnagle Drilling
 Sampling Method: Auger & Macrocore

Ground Elevation: NA Datum: NA
 Date Started: 6/13/2014 Date Ended: 6/13/2014
 Borehole Depth: 28.0' Borehole Diameter: 8 inches
 Completion Method: Well Installed Backfilled with Grout Backfilled with Cuttings
 Water Level (Date): NA

Test Boring MW-G

Page 1 of 2

Depth (ft)	Blows per 0.5 ft.	Sample Number	Sample Depth (ft)	% Recovery	N-Value or RQD%	Headspace PID (ppm)	PID Reading (ppm)	Sample Description	Notes
17							0.0	Gray/Brown, SAND and Gravel, little Silt, moist	
18	NA	S-5	16-20	46	NA		0.0		
19							0.0		
20							0.0	...wet	
21							139	Gray, SAND and GRAVEL, trace Silt, wet	Strong Petroleum Odor ↓
22	NA	S-6	20-24	55	NA		305		
23							222		
24							313	419	
25							1385	...medium to coarse SAND, some Gravel	
26	NA	S-7	24-28	44	NA		538	...coarse SAND and GRAVEL	
27							618		
28								Bottom of Test Boring @ 28.0'	
29									
30									
31									
32									

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Test Boring MW-G

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MONITORING WELL INSTALLATION DIAGRAMS



DAY ENVIRONMENTAL, INC.

ENVIRONMENTAL CONSULTANTS
AN AFFILIATE OF DAY ENGINEERING, P.C.

MONITORING WELL CONSTRUCTION DIAGRAM

Project #: 4884S-13			MONITORING WELL MW-A
Project Address: 211 Franklin Street			
Olean, New York	Ground Elevation: 1428.04'	Datum: NAVD83	
DAY Representative: Z. Tennes	Date Started: 9/10/2013	Date Ended: 9/10/2013	
Drilling Contractor: Applus			

Refer to Test Boring Log TB-01 for Soil Description		<p><u>Flush Mount</u> Top of Casing 0.34 ft. below ground surface</p> <p><u>4.0</u> Depth to Bottom of Bentonite Surface Patch (ft) Backfill Type <u>Soil</u></p> <p><u>13.9</u> Depth to Top of Bentonite Seal (ft) <u>14.9</u> Depth to Bottom of Bentonite Seal (ft)</p> <p><u>15.9</u> Depth to Top of Well Screen (ft)</p> <p><u>4.0</u> Diameter of Borehole (in)</p> <p>Backfill Type <u>Sand</u></p> <p><u>1.0</u> Inside Diameter of Well (in)</p> <p>Type of Pipe <u>PVC</u> Screen slot size <u>10 Slot</u></p> <p><u>25.9</u> Depth to Bottom of Well Screen (ft) <u>27.0</u> Depth to Bottom of Borehole (ft)</p>

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
2) NA = Not Available or Not Applicable

MONITORING WELL MW-A

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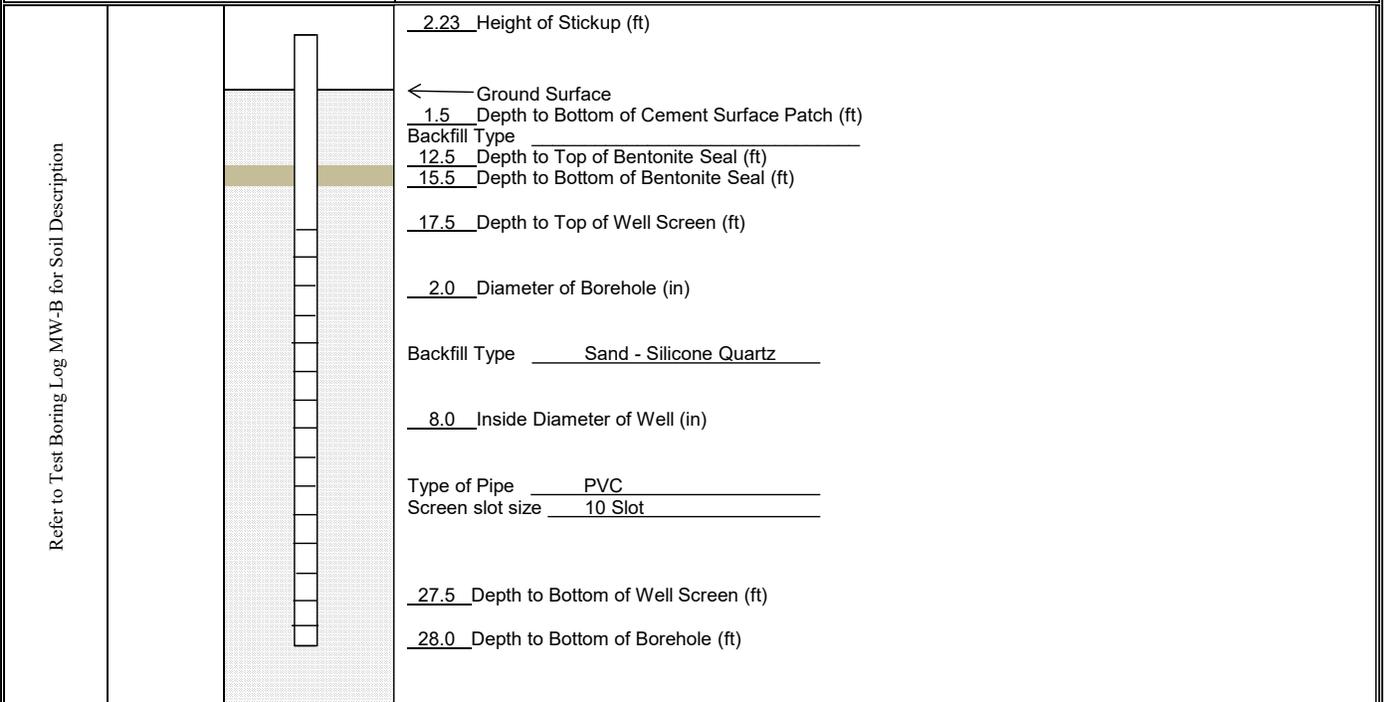
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MONITORING WELL CONSTRUCTION DIAGRAM

Project #: 4884S-13			MONITORING WELL MW-B
Project Address: 202 Franklin Street Olean, NY	Ground Elevation: 1427.72'	Datum: NAVD83	
DAY Representative: Z. Tennes	Date Started: 6/12/2014	Date Ended: 6/12/2014	
Drilling Contractor: Nothnagle			



Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
 2) NA = Not Available or Not Applicable

MONITORING WELL MW-B

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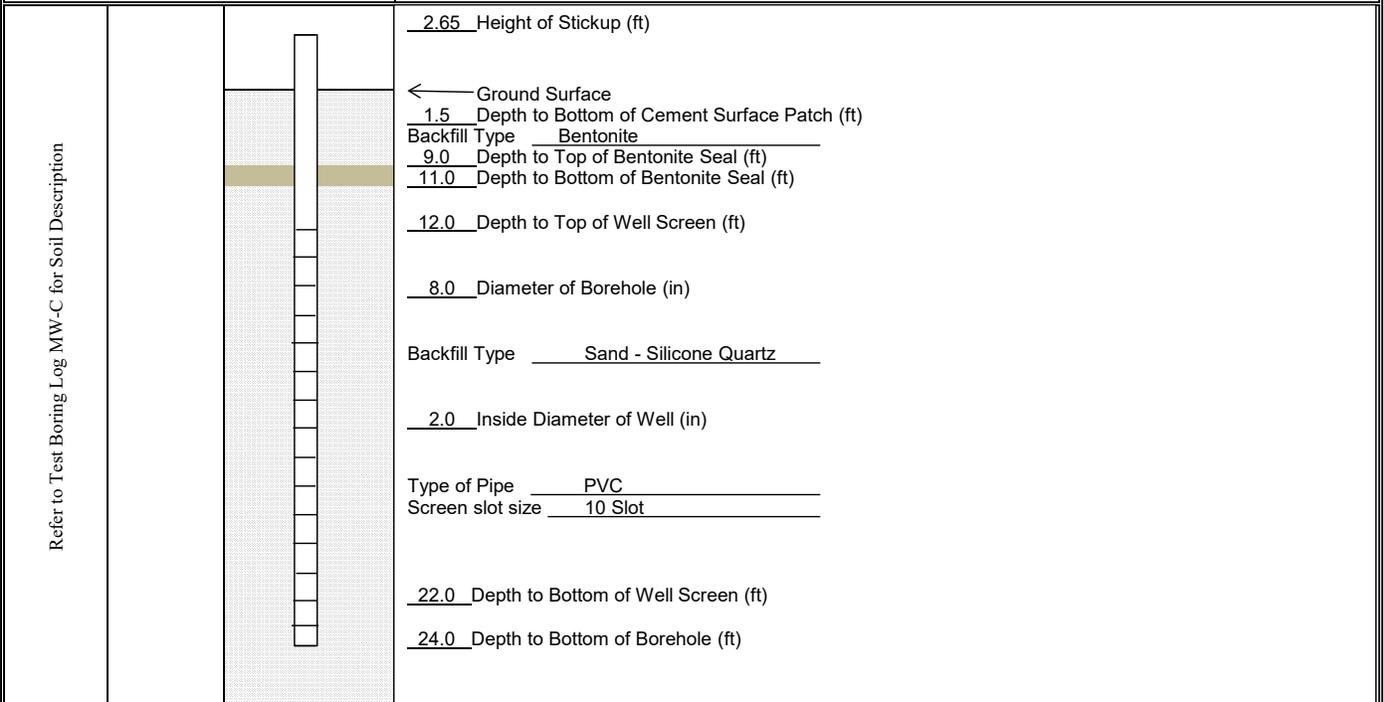
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AN AFFILIATE OF DAY ENGINEERING, P.C.

MONITORING WELL CONSTRUCTION DIAGRAM

Project #: 4884S-13			MONITORING WELL MW-C
Project Address: 202 Franklin Street Olean, NY	Ground Elevation: 1426.69'	Datum: NAVD83	
DAY Representative: Z. Tennes	Date Started: 6/11/2014	Date Ended: 6/12/2014	
Drilling Contractor: Nothnagle			



Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
 2) NA = Not Available or Not Applicable

MONITORING WELL MW-C

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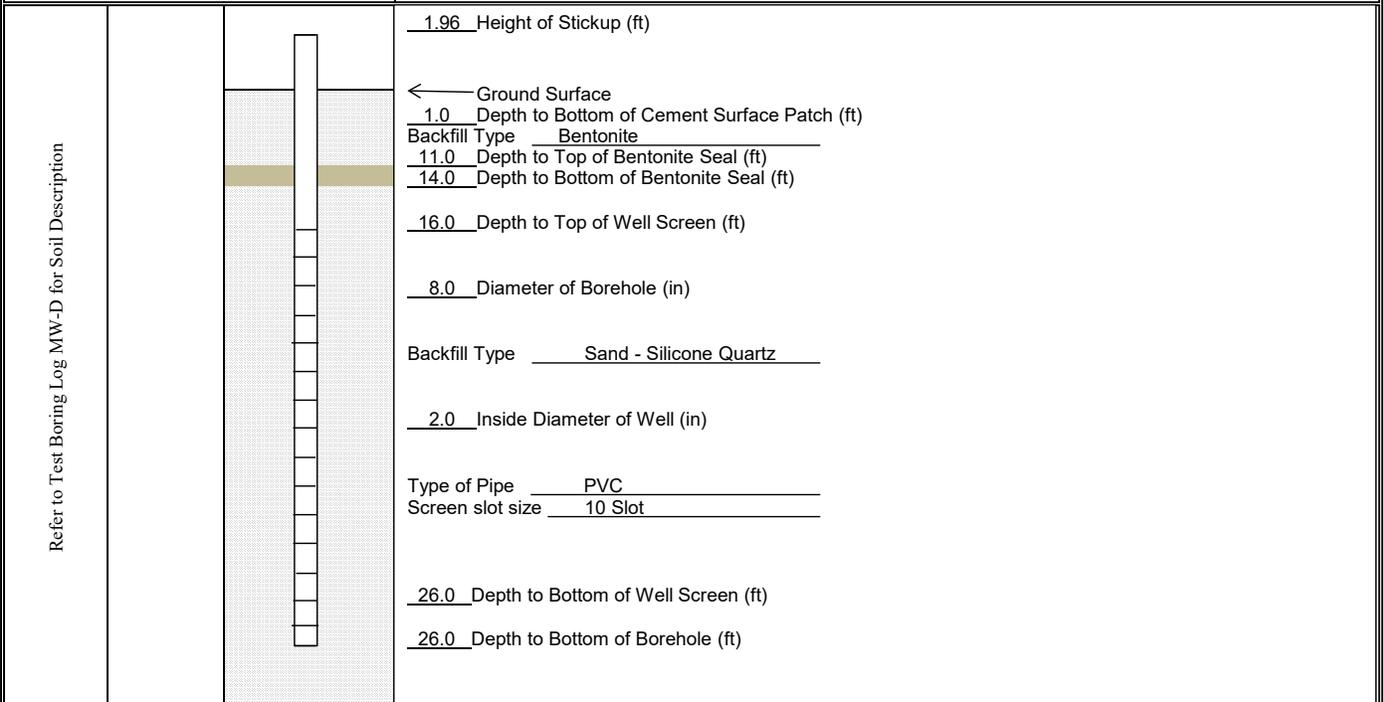
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MONITORING WELL CONSTRUCTION DIAGRAM

Project #: 4884S-13			MONITORING WELL MW-D
Project Address: 202 Franklin Street Olean, NY	Ground Elevation: 1426.12'	Datum: NAVD83	
DAY Representative: Z. Tennes	Date Started: 6/11/2014	Date Ended: 6/11/2014	
Drilling Contractor: Nothnagle			



Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
 2) NA = Not Available or Not Applicable

MONITORING WELL MW-D

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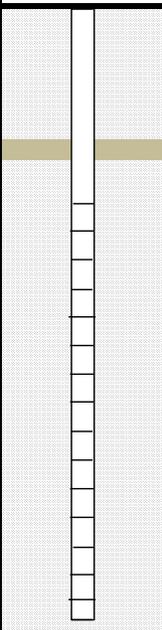
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AN AFFILIATE OF DAY ENGINEERING, P.C.

MONITORING WELL CONSTRUCTION DIAGRAM

Project #: 4884S-13			MONITORING WELL MW-F
Project Address: 202 Franklin Street			
Olean, NY	Ground Elevation: 1428.92'	Datum: NAVD83	
DAY Representative: Z. Tennes	Date Started: 6/12/2014	Date Ended: 6/12/2014	
Drilling Contractor: Nothnagle			

Refer to Test Boring Log MW-F for Soil Description		<p><u>Flush Mount</u> Top of Casing 0.39 ft. below ground surface</p> <p><u>1.0</u> Depth to Bottom of Cement Surface Patch (ft) Backfill Type <u>Bentonite</u></p> <p><u>13.5</u> Depth to Top of Bentonite Seal (ft) <u>15.5</u> Depth to Bottom of Bentonite Seal (ft)</p> <p><u>17.5</u> Depth to Top of Well Screen (ft)</p> <p><u>8.0</u> Diameter of Borehole (in)</p> <p>Backfill Type <u>Sand - Silicone Quartz</u></p> <p><u>2.0</u> Inside Diameter of Well (in)</p> <p>Type of Pipe <u>PVC</u> Screen slot size <u>10 Slot</u></p> <p><u>27.5</u> Depth to Bottom of Well Screen (ft) <u>28.0</u> Depth to Bottom of Borehole (ft)</p>

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
 2) NA = Not Available or Not Applicable

MONITORING WELL MW-F

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MONITORING WELL CONSTRUCTION DIAGRAM

Project #: 4884S-13			MONITORING WELL MW-G
Project Address: 202 Franklin Street			
Olean, NY	Ground Elevation: 1429.66'	Datum: NAVD83	
DAY Representative: Z. Tennes	Date Started: 6/13/2014	Date Ended: 6/13/2014	
Drilling Contractor: Nothnagle			

Refer to Test Boring Log MW-G for Soil Description		<p><u>Flush Mount</u> Top of Casing 0.40 ft. below ground surface</p> <p><u>1.0</u> Depth to Bottom of Cement Surface Patch (ft) Backfill Type <u>Bentonite</u></p> <p><u>15.5</u> Depth to Top of Bentonite Seal (ft) <u>16.5</u> Depth to Bottom of Bentonite Seal (ft)</p> <p><u>17.5</u> Depth to Top of Well Screen (ft)</p> <p><u>8.0</u> Diameter of Borehole (in)</p> <p>Backfill Type <u>Sand - Silicone Quartz</u></p> <p><u>2.0</u> Inside Diameter of Well (in)</p> <p>Type of Pipe <u>PVC</u> Screen slot size <u>10 Slot</u></p> <p><u>27.5</u> Depth to Bottom of Well Screen (ft) <u>28.0</u> Depth to Bottom of Borehole (ft)</p>

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
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MONITORING WELL MW-G

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SURFACE SOIL SAMPLE COLLECTION LOGS

202 FRANKLIN STREET
OLEAN, NEW YORK
NYSDEC BCP SITE NO C905043

Sample Collection Log - Surface Soil Samples
June 27, 2014

Sample Designation	Sample Time	PID Headspace (ppm)	Sample Description
SS-01	8:00	0.0	Dark brown, silty Sand and fine to medium Gravel, trace Brick Fragments, Roots, damp
SS-02	8:20	0.0	Dark brown, silty Sand, little Gravel, Roots, damp
SS-03	8:40	0.0	Dark brown/black, silty Sand, some Gravel, Roots, damp
SS-04	9:05	0.0	Brown, Sand and medium-rounded Gravel, little Silt, Roots, damp
SS-05	9:25	0.0	Black, loamy Sand, some Cinders, some Coal Fragments, Roots, damp
SS-06	9:55	0.0	Brown, silty Sand, little Gravel, little Brick Fragments, Roots, damp
SS-07	10:10	0.0	Brown, clayey Sand, some Gravel, Roots, damp
SS-08	10:30	0.0	Black, Sand, some Cinders, some Slag, some Brick Fragments, little Silt, Roots, damp
SS-09	10:40	0.0	Pea Gravel, some fine to coarse Sand, trace Silt, damp
SS-10	10:55	0.0	Brown, silty Sand, some fine to medium Gravel, Roots, damp
SS-11	11:10	0.0	Black, Sand, little Silt, little Gravel, little Coal Fragments, Roots, damp

Notes:

ppm = parts per million

TEST PIT LOGS

**202 Franklin Street,
Olean, New York
NYSDEC BCP Site No. 905043**

Subsurface Conditions- Test Pits TP-A through TP-J

Test Pit ID	Approximate Depth of Test Pit (ft.)	Materials Encountered	Remarks
TP-A	6.0	0-0.3': silty Sand and Gravel [FILL] 0.3'-Bottom of Hole (BOH): Gray/Brown, silty Sand and Gravel intermixed with frequent Bricks and Concrete, occasional Scrap metal, Piping, Cinders and Ash, moist [Fill]	Sample collected @ 3 ft. [TP-A(3')] and tested for TAL metals, SVOCs (PAHs) plus TICs
TP-B	6.0	0-0.4': silty Sand, some f/m Gravel, moist [Fill] 0.4'-5.5': Dark Brown/Black, Sand, some fine to medium (f/m) Gravel intermixed with Cinders and Ash, moist [Fill] 5.5'-BOH: Brown, silty SAND, some fine Gravel, moist	Sample collected @ 1.5 ft. [TP-B (1.5')] and tested for TAL metals, PCBs, SVOCs (PAHs) plus TICs Decaying railroad ties @ 2.0 ft. Sample collected @ 5 ft. [TP-B (5')] and tested for TAL metals, SVOCs (PAHs) plus TICs
TP-C	6.0	0-0.3': silty Sand and Gravel [FILL] 0.3'-BOH (concrete floor): Gray/Brown, silty Sand and Gravel intermixed with frequent Bricks, and lesser amounts of Cinders, Concrete, Scrap Metal, Pipe, Electrical Conduit, occasional black tar-like material, moist [FILL]	Sample collected @ 4 ft. [TP-C (4')] and tested for TAL metals, PCBs, SVOCs (PAHs) plus TICs
TP-D	8.0	0-BOH: Dark Brown/Gray, silty Sand, little f/m Gravel, intermixed with frequent Brick and Concrete, occasional Scrap Metal, trace amounts of Wood/Paper, moist [FILL] ...wet at 8 ft.	Sample collected @ 8 ft. [TP-D(8')] and tested for SVOCs (PAHs) plus TICs
TP-E	0.5	0-0.5': silty Sand and Gravel [FILL]	Equipment refusal on concrete pad no samples collected
TP-F	11.0	0-0.3': silty Sand and Gravel [FILL] 0.3'-BOH: Gray/Brown, silty Sand, some f/m Gravel intermixed with frequent Bricks and Concrete, occasional Scrap metal and Pipe, moist [FILL]	No samples submitted for testing
TP-G	3.0	0-0.3': silty Sand and Gravel [FILL] 0.3'-3': Dark Brown/Black, silty fine Sand, intermixed with Cinders, Coal fragments, and Ash, moist	Samples collected at 2 ft. [TP-G(2') south and TP-G(2') north] and tested for TAL metals, PCBs, SVOCs (PAHs) plus TICs
TP-H	9.0	0-0.4': silty Sand, some f/m Gravel, moist [Fill] 0.4'-BOH: Dark Brown, silty Sand, little fine to coarse (f/c) Gravel, some Brick, occasional Scrap Metal and Concrete, moist	No samples submitted for testing
TP-I	2.5	0-0.3': silty Sand and Gravel [FILL] 0.3'-1.0: Black, Cinders, Ash and Coal fragments 1.0'-BOH: Tan/Brown, fine Sand, trace Silt, moist [FILL]	Sample collected @ 0.4 ft. [TP-I(5'')] and tested for SVOCs (PAHs) plus TICs
TP-J	6.0	0-0.4': silty Sand, some f/m Gravel, moist [Fill] 0.4'-2.5': Gray/Green, fine Sand, some Silt, little Ash, Cinders and Slag, moist [FILL] 2.5'-BOH (concrete floor): Light Brown, medium to coarse (m/c) SAND, trace Silt, moist	Sample collected @ 2 ft. [TP-I (2')] and tested for TAL metals, and SVOCs (PAHs) plus TICs

Project #: 4884S-13
 Project Address: 202 Franklin Street
 Olean, New York
 DAY Representative: Z. Tennes
 Contractor: Richard Peck Construction
 Equipment: Hitachi 160 LC Excavator w/40"

Date: 7/30/2014
 Test Pit Depth: 12.0'
 Depth to Water: Not encountered

TEST PIT TP-01

Page 1 of 1

Depth (ft)	PID Reading (ppm)	PID Headspace (ppm)	Sample Description	Notes
1-	0	0	TOPSOIL and Organic Material Concrete Slab Black, Sand and Cinders intermixed with red bricks, metal, broken concrete, glass (FILL)	1-
2-			...gray/black	2-
3-			...light brown, trace clayey Silt	3-
4-			Brown, SAND and GRAVEL, trace Silty Clay, wet	4-
5-				5-
6-				6-
7-				7-
8-	0.1	0.1	...Gravel, some Sand, little Cobbles	8-
9-				9-
10-				10-
11-				11-
12-				12-
Bottom of Test Pit @ 12.0'				



View of TP-01 excavation sidewall, facing northwest

- Notes:**
- 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
 - 2) Stratification lines represent approximate boundaries. Transitions may be gradual.
 - 3) PID readings are referenced to a benzene standard measured in the headspace above the sample using a MiniRae 2000 equipped with a 10.6 eV lamp.
 - 4) NA = Not Available or Not Applicable

TEST PIT TP-01



Project #: 4884S-13
 Project Address: 202 Franklin Street
 Olean, New York
 DAY Representative: Z. Tennes
 Contractor: Richard Peck Construction
 Equipment: Hitachi 160 LC Excavator w/40"

Date: 7/30/2014
 Test Pit Depth: 13.3'
 Depth to Water: Not encountered

TEST PIT TP-02

Depth (ft)	PID Reading (ppm)	PID Headspace (ppm)	Sample Description	Notes
1-	0.1		TOPSOIL and Organic Material	
1-	0.1		Gray/Black, Sand, some Gravel, intermixed with Ash, Shingles, broken/crushed red Bricks (FILL)	
2-	0.2	0.3	...frequent layered Gray/Black Paper material with tar-like binder	
3-			Light Brown, SAND, some Gravel, little Clay, moist	
4-	0.1		Brown, medium to coarse SAND and GRAVEL, trace Silt, moist	
5-				
6-				
7-				
8-	0.2	0.2	...some Cobbles	
9-				
10-	0.1	0.1		
11-				
12-	0.1	0.1		
13-			Bottom of Test Pit @ 13.3'	



View of TP-02, facing east

- Notes:
- 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
 - 2) Stratification lines represent approximate boundaries. Transitions may be gradual.
 - 3) PID readings are referenced to a benzene standard measured in the headspace above the sample using a MiniRae 2000 equipped with a 10.6 eV lamp.
 - 4) NA = Not Available or Not Applicable

TEST PIT TP-02



Project #: 4884S-13
 Project Address: 202 Franklin Street
 Olean, New York
 DAY Representative: Z. Tennes
 Contractor: Richard Peck Construction
 Equipment: Hitachi 160 LC Excavator w/40"

Date: 7/29/2014
 Test Pit Depth: 13.1'
 Depth to Water: Not encountered

TEST PIT TP-03

Depth (ft)	PID Reading (ppm)	PID Headspace (ppm)	Sample Description	Notes
1-	0.3	0.3	TOPSOIL Black, Cinders/Ballast, some red Brick, Concrete, trace Metal, Ash (FILL)	1-
2-	0.1	0.3		2-
3-	0.3	0.3	Tan/Brown, Sand, some Gravel, little Clay, little cobbles(FILL)	3-
4-				4-
5-	0.1			5-
6-	0.2	0.1	Black, Cinders/Ballast, intermixed with pieces of Metal, Concrete and trace Crushed Brick (FILL)	6-
7-			Brown, SAND, some Gravel, Cobbles trace Silt, moist	7-
8-				8-
9-				9-
10-				10-
11-				11-
12-	0.1	0.1		12-
13-				13-
Bottom of Test Pit @ 13.1'				

No Photo Available

- Notes:
- 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
 - 2) Stratification lines represent approximate boundaries. Transitions may be gradual.
 - 3) PID readings are referenced to a benzene standard measured in the headspace above the sample using a MiniRae 2000 equipped with a 10.6 eV lamp.
 - 4) NA = Not Available or Not Applicable

TEST PIT TP-03



Project #: 4884S-13
 Project Address: 202 Franklin Street
 Olean, New York
 DAY Representative: Z. Tennies
 Contractor: Richard Peck Construction
 Equipment: Hitachi 160 LC Excavator w/40"

Date: 7/30/2014
 Test Pit Depth: 12.0'
 Depth to Water: Not encountered

TEST PIT TP-04

Depth (ft)	PID Reading (ppm)	PID Headspace (ppm)	Sample Description	Notes
0.3	0.3		TOPSOIL and Organic Material	
1-	0.3	0.3	Black, Cinders/Ballast, little Gravel, Organic Material (FILL)	
			Tan, Clayey Sand, some Gravel, little Cinders/Ballast (FILL)	1-
2-	0.3			2-
3-	0.3	0.3	Tan, Clayey SAND, some Gravel, little Cobbles, moist	3-
4-				4-
5-			Brown, coarse SAND and GRAVEL, some Cobbles, trace Clay, moist	5-
6-				6-
7-				7-
8-				8-
9-				9-
10-	0.2	0.2	...medium to coarse SAND, some fine to coarse Gravel, some Cobbles	10-
11-			...coarse SAND and GRAVEL	11- Caved In
12-				12-
Bottom of Test Pit @ 12.0'				



View of TP-04, facing east

- Notes:
- 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
 - 2) Stratification lines represent approximate boundaries. Transitions may be gradual.
 - 3) PID readings are referenced to a benzene standard measured in the headspace above the sample using a MiniRae 2000 equipped with a 10.6 eV lamp.
 - 4) NA = Not Available or Not Applicable

TEST PIT TP-04



Project #: 4884S-13
 Project Address: 202 Franklin Street
 Olean, New York
 DAY Representative: Z. Tennies
 Contractor: Richard Peck Construction
 Equipment: Hitachi 160 LC Excavator w/40"

Date: 7/29/2014
 Test Pit Depth: 12.0'
 Depth to Water: Not encountered

TEST PIT TP-05

Depth (ft)	PID Reading (ppm)	PID Headspace (ppm)	Sample Description	Notes
1-	0.1	0.1	Black, Ballast/Cinders, large chunks of Metal, some rusted Wire, little Charcoal, little crushed red Brick, Paper (FILL)	1-
2-			Brown, SAND, some Gravel, little Clay, moist	2-
3-				3-
4-				4-
5-			Brown-Gray, SAND and GRAVEL, trace Silt, moist	5-
6-				6-
7-				7-
8-				8-
9-	0.1		...GRAVEL, some Sand	9-
10-				10-
11-	0.1	0.2		11-
12-			Bottom of Test Pit @ 12.0'	12-



View of TP-05, facing south

- Notes:
- 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
 - 2) Stratification lines represent approximate boundaries. Transitions may be gradual.
 - 3) PID readings are referenced to a benzene standard measured in the headspace above the sample using a MiniRae 2000 equipped with a 10.6 eV lamp.
 - 4) NA = Not Available or Not Applicable

TEST PIT TP-05



Project #: 4884S-13
 Project Address: 202 Franklin Street
 Olean, New York
 DAY Representative: Z. Tennies
 Contractor: Richard Peck Construction
 Equipment: Hitachi 160 LC Excavator w/40"

Date: 7/29/2014
 Test Pit Depth: 12.2'
 Depth to Water: Not encountered

TEST PIT TP-06

Depth (ft)	PID Reading (ppm)	PID Headspace (ppm)	Sample Description	Notes
1-		0.1	Black, Cinders/Ballast, chunks of Concrete, red Brick, trace red Brick, crushed, little Metal Wires, trace Plastic, Paper material (FILL)	1-
2-	0.2			2-
3-	0.1		Brown, SAND, some Gravel, little Clay, moist	3-
4-				4-
5-			...SAND and GRAVEL, trace Silt	5-
6-				6-
7-				7-
8-			...some Cobbles	8-
9-	0.1	0.2		9-
10-				10-
11-				11-
12-	0.2	0.2		12-
Bottom of Test Pit @ 12.2'				



View of TP-06, partially excavated, facing east

- Notes:
- 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
 - 2) Stratification lines represent approximate boundaries. Transitions may be gradual.
 - 3) PID readings are referenced to a benzene standard measured in the headspace above the sample using a MiniRae 2000 equipped with a 10.6 eV lamp.
 - 4) NA = Not Available or Not Applicable

TEST PIT TP-06

Project #: 4884S-13
 Project Address: 202 Franklin Street
 Olean, New York
 DAY Representative: Z. Tennes
 Contractor: Richard Peck Construction
 Equipment: Hitachi 160 LC Excavator w/40"

Date: 7/29/2014
 Test Pit Depth: 10.4'
 Depth to Water: Not encountered

TEST PIT TP-07

Page 1 of 1

Depth (ft)	PID Reading (ppm)	PID Headspace (ppm)	Sample Description	Notes
1-	0.1	0.1	Topsoil, with Organic Material, trace Gravel	
2-			Red/Black Sand, broken Concrete slabs and red Bricks, large Metal pieces (guard rail?), some crushed red Brick, little Gravel, trace Glass, Paper, Rebar (FILL)	
3-	0.1	0.2		
4-				
5-				
6-				
7-				
8-	12.1	0.1		
9-				
10-	0.3	0.2	Concrete Floor Slab	
11-			Equipment Refusal @ 10.4'	
12-				



View of TP-07 excavation spoils, facing north

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
 2) Stratification lines represent approximate boundaries. Transitions may be gradual.
 3) PID readings are referenced to a benzene standard measured in the headspace above the sample using a MiniRae 2000 equipped with a 10.6 eV lamp.
 4) NA = Not Available or Not Applicable

TEST PIT TP-07

Project #: 4884S-13
 Project Address: 202 Franklin Street
Olean, New York
 DAY Representative: Z. Tennes
 Contractor: Richard Peck Construction
 Equipment: Hitachi 160 LC Excavator w/40"

Date: 7/31/2014
 Test Pit Depth: 12.0'
 Depth to Water: Not encountered

TEST PIT TP-8

Page 1 of 1

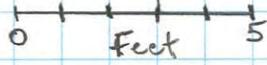
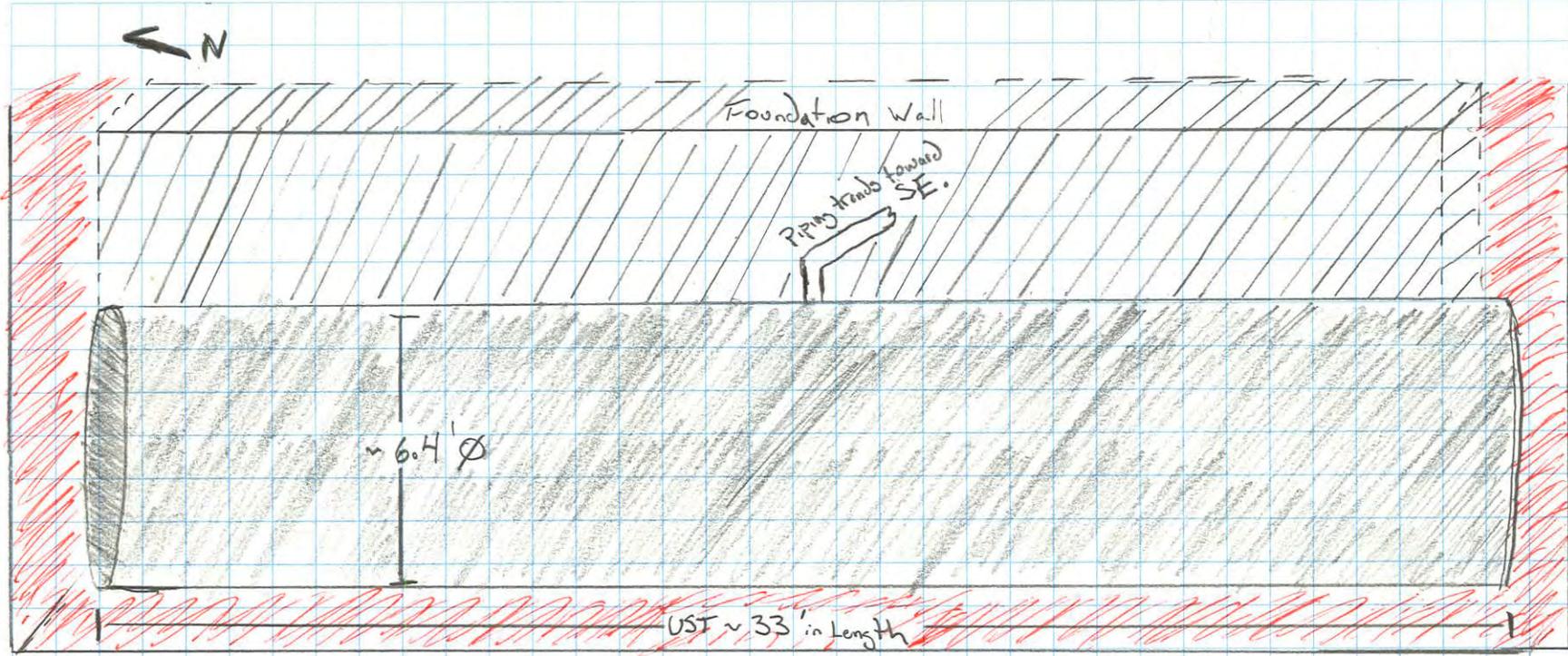
Depth (ft)	PID Reading (ppm)	PID Headspace (ppm)	Sample Description	Notes
1-	0.3	0.3	Topsoil and Organic Material	Concrete foundation wall along east side of test pit
			Reworked Soil (FILL)	
			Layer of Resin/Glue above layer of Paper-like material (FILL)	
2-	0.3	0.3	Gray/Black, medium to coarse Sand, some medium gravel intermixed with Cinders/Ballast, trace Clay, moist (FILL)	
3-	0.9	49.7		
4-			Tan, Clayey coarse SAND and GRAVEL, some Cobbles, moist	
5-				
6-				
7-			...Gray	
8-				
9-				
10-				
11-	0.1	0.1	Black, fine to medium Sand (FILL)	Soil description for western side of tank, see attached photo
12-	0.1	0.1	Tan, Clayey coarse SAND and GRAVEL, some Cobbles, moist	
			Bottom of Hole @ 12.0'	Top of Tank encountered
				Bottom of Tank



View of west sidewall and south endwall of tank in TP-08, facing north

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
 2) Stratification lines represent approximate boundaries. Transitions may be gradual.
 3) PID readings are referenced to a benzene standard measured in the headspace above the sample using a MiniRae 2000 equipped with a 10.6 eV lamp.
 4) NA = Not Available or Not Applicable

TEST PIT TP-8



TP-08-
Excavated ~ 12.0' bgs on West/North/South edges of UST

Project #: 4884S-13
 Project Address: 202 Franklin Street
 Olean, New York
 DAY Representative: Z. Tennes
 Contractor: Richard Peck Construction
 Equipment: Hitachi 160 LC Excavator w/40"

Date: 7/30/2014
 Test Pit Depth: 12.3'
 Depth to Water: Not encountered

TEST PIT TP-09

Page 1 of 1

Depth (ft)	PID Reading (ppm)	PID Headspace (ppm)	Sample Description	Notes
0	0	0.1	TOPSOIL with Organics, some Gravel	
1-			Black/Gray, Sand, Ballast/Cinders, some red Brick, broken Concrete, little Shingles, Glass, crushed red Brick (FILL)	1-
2-	0.1	0.1		2-
3-			Tan, Clayey SAND, some Gravel, moist	3-
4-	0.1			4-
5-			Brown, coarse SAND and GRAVEL, trace Silt, moist	5-
6-				6-
7-				7-
8-				8-
9-			...GRAVEL, some Sand	9-
10-				10-
11-				11-
12-	0.2	0.2		12-
Bottom of Test Pit @ 12.3'				



View of TP-09, facing north

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
 2) Stratification lines represent approximate boundaries. Transitions may be gradual.
 3) PID readings are referenced to a benzene standard measured in the headspace above the sample using a MiniRae 2000 equipped with a 10.6 eV lamp.
 4) NA = Not Available or Not Applicable

TEST PIT TP-09



Project #: 4884S-13
 Project Address: 202 Franklin Street
 Olean, New York
 DAY Representative: Z. Tennies
 Contractor: Richard Peck Construction
 Equipment: Hitachi 160 LC Excavator w/40"

Date: 7/30/2014
 Test Pit Depth: 12.0'
 Depth to Water: Not encountered

TEST PIT TP-10

Depth (ft)	PID Reading (ppm)	PID Headspace (ppm)	Sample Description	Notes
1-	0.2		TOPSOIL and Organics Tan, SAND, little Clay, trace Gravel, moist	1-
2-	0.2		Medium to coarse SAND, little Gravel, trace Silt, moist	2-
3-				3-
4-	0.2	0.2	Brown, coarse SAND and GRAVEL, trace Silt, moist	4-
5-				5-
6-				6-
7-				7-
8-		0.0		8-
9-				9-
10-				10-
11-				11-
12-		0.0		12-
Bottom of Test Pit @ 12.0'				



View of TP-10, facing north

- Notes:
- 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
 - 2) Stratification lines represent approximate boundaries. Transitions may be gradual.
 - 3) PID readings are referenced to a benzene standard measured in the headspace above the sample using a MiniRae 2000 equipped with a 10.6 eV lamp.
 - 4) NA = Not Available or Not Applicable

TEST PIT TP-10



Project #: 4884S-13
 Project Address: 202 Franklin Street
 Olean, New York
 DAY Representative: Z. Tennes
 Contractor: Richard Peck Construction
 Equipment: Hitachi 160 LC Excavator w/40"

Date: 7/30/2014
 Test Pit Depth: 13.5'
 Depth to Water: Not encountered

TEST PIT TP-11

Page 1 of 1

Depth (ft)	PID Reading (ppm)	PID Headspace (ppm)	Sample Description	Notes
1-	0.0	0.1	TOPSOIL Brown, Silty Sand and Gravel/Cobbles, moist (FILL)	1-
2-	0.0	0.0	...Black ...Brown ...little Clay, Black, fibrous material (paper) in layers	2-
3-	0.0	0.0	Tan/Brown, Sandy CLAY, some Gravel, some Cobbles, moist	3-
4-				4-
5-				5-
6-				6-
7-			Brown, coarse SAND and GRAVEL, some Cobbles, moist	7-
8-	0.0	0.0		8-
9-				9-
10-				10-
11-				11-
12-	0.2	0.2	...wet	12-
Bottom of Test Pit @ 13.5'				



View of TP-11, facing east

- Notes:
- 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
 - 2) Stratification lines represent approximate boundaries. Transitions may be gradual.
 - 3) PID readings are referenced to a benzene standard measured in the headspace above the sample using a MiniRae 2000 equipped with a 10.6 eV lamp.
 - 4) NA = Not Available or Not Applicable

TEST PIT TP-11

Project #: 4884S-13
 Project Address: 202 Franklin Street
 Olean, New York
 DAY Representative: Z. Tennies
 Contractor: Richard Peck Construction
 Equipment: Hitachi 160 LC Excavator w/40"

Date: 7/30/2014
 Test Pit Depth: 8.5'
 Depth to Water: Not encountered

TEST PIT TP-12

Page 1 of 1

Depth (ft)	PID Reading (ppm)	PID Headspace (ppm)	Sample Description	Notes
1-	2.1		ASPHALT Asphalt and Sub-base Material (FILL)	1-
2-	17.5	6.1	Gray/Black, Sand and fine to coarse Gravel intermixed with Cobbles, Brick, Wood, moist (FILL)	2-
3-		8.0		3-
4-			Gray, Clayey SAND and fine to coarse GRAVEL some Cobbles, wet	4-
5-				5-
6-				6-
7-				7-
8-	0.6	0.5		8-
9-			Bottom of Test Pit @ 8.5'	9-
10-				10-
11-				11-
12-				12-



View of TP-12, facing north

- Notes:
- 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
 - 2) Stratification lines represent approximate boundaries. Transitions may be gradual.
 - 3) PID readings are referenced to a benzene standard measured in the headspace above the sample using a MiniRae 2000 equipped with a 10.6 eV lamp.
 - 4) NA = Not Available or Not Applicable

TEST PIT TP-12



Project #: 4884S-13
 Project Address: 202 Franklin Street
 Olean, New York
 DAY Representative: Z. Tennies
 Contractor: Richard Peck Construction
 Equipment: Hitachi 160 LC Excavator w/40"

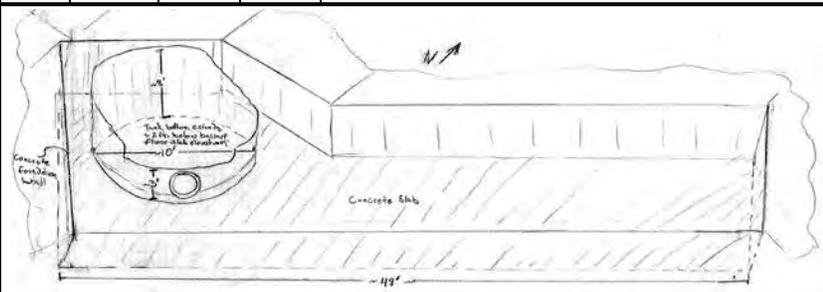
Date: 7/29/2014
 Test Pit Depth: 12.0'
 Depth to Water: Not encountered

TEST PIT TP-13

Depth (ft)	PID Reading (ppm)	PID Headspace (ppm)	Sample Description	Notes
1-	0.3		Brown, Topsoil (Sandy), some Organic Material, little Gravel, trace Silt	Concrete foundation wall along west end of test pit
2-			Red/Black, Sand intermixed with Red Brick, some broken Concrete, Metal*, little Rebar, Ballast, trace Glass, trace Paper (FILL)	*Metal includes: apparent highway guard rail, sheet metal, structural steel beam drain pipe, etc.
3-				
4-	0.3	0.3		Encountered top of tank in north wall of excavation.
5-				
6-				Vertical steel tank, cut open with top removed (see attached sketch)- filled with demolition debris. Excavated demolition debris from tank and attempted to penetrate tank floor.
7-				
8-				
9-	0.3 0.2	0.3 0.3	Concrete Floor Slab	
10-			Equipment Refusal @ 9.5'	
11-				
12-	0.2	1.2		Bottom of tank extends to 12 ft bgs. Equipment refusal in tank @ 12' bgs.

Profile Sketch

View of Tank in TP-13, facing north



- Notes:
- 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
 - 2) Stratification lines represent approximate boundaries. Transitions may be gradual.
 - 3) PID readings are referenced to a benzene standard measured in the headspace above the sample using a MiniRae 2000 equipped with a 10.6 eV lamp.
 - 4) NA = Not Available or Not Applicable

TEST PIT TP-13

APPENDIX F
FIELD SAMPLING PLAN

APPENDIX F – FIELD SAMPLING PLAN

Groundwater Sampling Methodology

- In order to minimize the potential re-suspension of solids in the bottom of the well, well depths will not be measured prior to or during low-flow purging and sampling. Well depth information will be obtained from: 1) measurements collected during well development; 2) from well logs; or 3) will be measured after sampling is completed.
- Subsequent to obtaining static water level measurements and monitoring the wells for free LNAPL, the following low-flow purge and sample techniques will be used to collect a groundwater sample from each well:
 - A portable bladder pump connected to new disposable polyethylene tubing will be lowered and positioned at or slightly above the mid-point of the water column within the well screen when the screened interval is set in relatively homogeneous material. When the screened interval is set in heterogeneous materials, the pump will be positioned adjacent to the zone of highest hydraulic conductivity (as defined by geologic samples). Care will be taken to install and lower the bladder pump slowly in order to minimize disturbance of the water column.
 - The pump will be connected to a control box that is operated on compressed gas (nitrogen, air, etc.) and is capable of varying pumping rates. An in-line flow-through cell attached to a Horiba U-22 water quality meter (or similar equipment) will be connected to the bladder pump effluent tubing to measure water quality data.
 - The pump will be started at a pumping rate of 100 ml/min or less (for pumps that can not achieve a flow rate this low, the pump will be started at the lowest pump rate possible). The water level in the well will be measured and the pump rate will be adjusted (i.e., increased or decreased) until the drawdown is stabilized. In order to establish the optimum flow-rate for purging and sampling, the water level in the well will be measured on a periodic basis (i.e., every one or two minutes) using an electronic water level meter or an oil/water interface meter. When the water level in the well has stabilized (i.e., use goal of <0.33 ft. of constant drawdown), the water level measurements will be collected less frequently.
 - While purging the well at the stabilized water level, water quality indicator parameters will be monitored on a three to five-minute basis with the Horiba U-52 water quality meter (or similar equipment). Water quality indicator parameters will be considered stabilized when the parameter readings listed below are generally achieved after three consecutive readings:
 - pH (+ 0.1);
 - specific conductance (+ 3%);
 - dissolved oxygen (+ 10 %);

- oxidation-reduction potential (+ 10 mV);
 - temperature (+ 10%); and
 - turbidity (+ 10%, when turbidity is greater than 10 NTUs)
- Following stabilization of the water quality parameters, the flow-through cell will be disconnected and a groundwater sample will be collected from the bladder pump effluent tubing. The pumping rate during sampling will remain at the established purging rate or it may be adjusted downward to minimize aeration, bubble formation, or turbulent filling of sample containers. A pumping rate below 250 ml/min will be used when collecting VOC samples.
 - The procedures and equipment used during the purging and groundwater sampling, and the field measurement data obtained, will be documented in the field and recorded on Monitoring Well Sampling Logs.
 - During sampling, the following parameters will be measured using a water quality meter(s) and will later be presented on Monitoring Well Sampling Logs:
 - Dissolved Oxygen (DO)
 - Conductivity
 - Oxidation/Reduction Potential (redox)
 - pH
 - Temperature
 - Turbidity

The procedures and equipment used during the purging and groundwater sampling, and the field measurement data obtained, will be documented in the field and recorded on Monitoring Well Sampling Logs.

In addition to the 7 samples collected from the long-term groundwater monitoring system, one field blank sample and one MS/MSD sample will be collected and submitted under chain-of-custody control to a NYSDOH ELAP-certified analytical laboratory and tested via ASP protocol for the following:

- TAL metals

Analytical methods references (for preparation and analysis of the samples) and well as field sampling SOPs that will be used are indicated below.

ANALYTICAL METHOD REFERENCE <i>(Include document title, method name/number, revision number, date)</i>
1a. SW846 Method 6010C, ICP-AES Metals, August 2008
2a. SW846 Methods 7470/7471 CVAA Mercury, February 2007

FIELD SAMPLING SOPs <i>(Include document title, date, revision number, and originator's name)</i>
1c. Field Sampling and Decontamination SOP, Day Environmental, Inc.
2c. NYSDEC DER-10/Technical Guidance for Site Investigation and Remediation

APPENDIX G
QUALITY ASSURANCE PROJECT PLAN

APPENDIX G – QUALITY ASSURANCE PROJECT PLAN

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1.0 INTRODUCTION

This project-specific Quality Assurance Project Plan (QAPP) was prepared in accordance with Section 2.4 of the New York State Department of Environmental Conservation (NYSDEC) document titled *DER-10, Technical Guidance for Site Investigation and Remediation* dated May 2010 (DER-10). This QAPP provides quality assurance/quality control (QA/QC) protocols and guidance that are to be followed when conducting sampling and analysis as part of the long-term monitoring program, or during intrusive work requiring media monitoring, at the property addressed as 202 Franklin Street, Olean, New York (Site). The QAPP also provides procedures to be used during sampling of environmental media, other field activities, and the analytical laboratory testing of samples. The components of the QAPP are provided herein.

1.1 Project Scope and Project Goals

The QAPP applies to the aspects of the project associated with the collection of field data, the collection and analytical laboratory testing of field samples and QA/QC samples, and the evaluation of the quality of the data that is generated. Specifically, the investigation will include a geophysical survey, passive soil gas testing, utility assessment, surface soil sampling, soil borings and subsurface soil sampling, monitoring well installation and groundwater sampling, aquifer physical characteristic evaluations, an underground storage tank (UST) excavation and removal, and a basement/vault assessment that may include confined space entry. A summary of the anticipated number, type, and test parameters to be submitted for analytical laboratory testing is provided in Table 6. Detailed discussions of the project scope and project goals are provided in the RI/RAA Work Plan. In general, the project goal is to obtain sufficient information to characterize the nature and extent of contamination at the Site sufficiently to develop remedial alternatives for the Site.

2.0 QUALITY ASSURANCE/QUALITY CONTROL

As part of this QAAP, QA/QC protocol and procedures have been developed and are described below. The objective of the QA/QC protocol and procedures is to ensure that the information, data, and decisions associated with this project are technically sound and properly documented. The QA/QC protocol and procedures also pertain to the collection, evaluation, and review of activities and data that are part of this project.

2.1 Operation and Calibration of On-Site Monitoring Equipment

On-site monitoring equipment will play a significant role in meeting the long-term monitoring objectives and to determine the appropriate personal protective equipment (PPE) as noted in the health and safety plan (HASP). The on-site, monitoring equipment may include volatile organic compound (VOC) monitors, particulate monitors, air quality monitors, oil/water interface probes, an electronic static water level indicator; water quality monitors, and global position system (GPS) instrumentation. Operation and calibration of on-site monitoring equipment that are anticipated for use during the RI are discussed below.

2.1.1 VOC Monitoring Equipment

Real-time monitoring for VOCs will be conducted to evaluate the onsite groundwater monitoring wells prior to sample collection. The primary field instrument for monitoring VOCs during the RI will be a photoionization detector (PID). It is anticipated that a Minirae 2000 PID (or equivalent) equipped with a 10.7 eV lamp, or a MiniRae PPB RAE PID will be used during this project. An accredited firm/testing laboratory will calibrate the equipment on a yearly basis. During fieldwork, the PID will be calibrated on a daily basis in accordance with the manufacturer's specifications. Isobutylene gas will be used to calibrate the PID prior to use and as necessary during fieldwork.

2.1.2 Particulate Monitoring Equipment

Particulate monitoring will be conducted during intrusive activities as noted in the Community Air Monitoring Plan (CAMP) portion of the HASP. It is anticipated that the particulate air monitoring will be conducted using a real-time aerosol monitor (RATM) particulate meter. An accredited firm/testing laboratory will calibrate the equipment on a yearly basis. During fieldwork, the particulate meter will be regularly calibrated in accordance with the manufacturer's specifications. Measurements will be

collected along the upwind perimeter of the intrusive investigation activities to determine the amount of particulates naturally occurring in the air (i.e., background concentrations) as per the requirements of the CAMP.

2.1.3 Global Positioning System Equipment

A GPS unit will be used to obtain the precise locations of sampling points and significant site features. It is anticipated that a Trimble GeoXH will be used during this project. The GPS location accuracy of less than 1 horizontal foot is the data quality objective for this project. The GPS unit will be calibrated as needed in accordance with the manufacturer's specifications. The GPS location data will be projected using a coordinate system and datum relevant to the region of the Site (e.g., NAD 1983 State Plane New York West).

2.1.4 Miscellaneous Field Monitoring Equipment

Several other pieces of miscellaneous field monitoring equipment will be used as part of the project including:

- An electronic static water level indicator;
- An oil/water interface meter, and;
- A Horiba U-52 water quality meter (or equivalent) that measures pH, specific conductivity, temperature, dissolved oxygen, oxygen-reduction potential, and turbidity.

These meters will be calibrated, operated, and maintained in accordance with the manufacturer's instructions.

2.2 Well Development

In the event that it is necessary to re-develop one or more of the existing monitoring wells prior to completing a periodic groundwater monitoring event, the following procedure will be followed. Monitoring wells will be developed by utilizing either a new dedicated disposable bailer with dedicated cord, and/or a pump and dedicated disposable tubing depending on the field conditions. No fluids will be added to the wells during development without prior approval of the NYSDEC, and well development equipment will be decontaminated prior to development of each well.

The well development procedure is listed below:

- Obtain pre-development static water level and oil/water interface reading for presence of LNAPL or DNAPL using a Heron Model HO1.L oil/water interface probe or similar instrument;
- Calculate water/sediment volume in the well;

- Obtain initial field water quality measurements (e.g., pH, specific conductivity, turbidity, temperature, and PID readings). The pH, specific conductivity, turbidity and temperature readings will be obtained using Horiba U-22 water quality meter (or similar equipment);
- Select development method and set up equipment depending on method used;
- Alternate water agitation methods (e.g., moving a bailer or pump tubing up and down inside the screened interval) and water removal methods (e.g., pumping or bailing) in order to suspend and remove solids from the well;
- Obtain field water quality measurements for every two to five gallons of water removed. Record water quantities and rates removed;
- Stop development when the following water quality criteria are met and at least 10 well volumes have been removed;
 - Water is clear and free of sediment and turbidity is less than 50 nephelometric turbidity units (NTUs);
 - pH is ± 0.1 standard unit between readings;
 - Specific conductivity is $\pm 3\%$ between readings, and;
 - Temperature is $\pm 10\%$ between readings.
 - Obtain post-development water level readings; and
 - Document development procedures, measurements, quantities, etc.

Pertinent information for each well will be recorded on well development logs

2.3 Groundwater Sampling Procedure

Groundwater samples will be collected by utilizing a low-flow pump. Each groundwater monitoring event will consist of the following activities, which will be documented as necessary to provide a record of the work completed:

- Prior to purging and sampling, static water level measurements will be taken from each well included in the long-term groundwater monitoring system using an oil/water interface meter. The presence of LNAPL will be evaluated by using visual observations and the oil/water interface meter at each well location.
- In order to minimize the potential re-suspension of solids in the bottom of the well, well depths will not be measured prior to or during low-flow purging and sampling. Well depth information will be obtained from: 1) measurements collected during well development; 2) from well logs; or 3) will be measured after sampling is completed.
- Subsequent to obtaining static water level measurements and monitoring the wells for free LNAPL, the following low-flow purge and sample techniques will be used to collect a groundwater sample from each well:

- A portable bladder pump connected to new disposable polyethylene tubing will be lowered and positioned at or slightly above the mid-point of the water column within the well screen when the screened interval is set in relatively homogeneous material. When the screened interval is set in heterogeneous materials, the pump will be positioned adjacent to the zone of highest hydraulic conductivity (as defined by geologic samples). Care will be taken to install and lower the bladder pump slowly in order to minimize disturbance of the water column.
- The pump will be connected to a control box that is operated on compressed gas (nitrogen, air, etc.) and is capable of varying pumping rates. An in-line flow-through cell attached to a Horiba U-22 water quality meter (or similar equipment) will be connected to the bladder pump effluent tubing to measure water quality data.
- The pump will be started at a pumping rate of 100 ml/min or less (for pumps that cannot achieve a flow rate this low, the pump will be started at the lowest pump rate possible). The water level in the well will be measured and the pump rate will be adjusted (i.e., increased or decreased) until the drawdown is stabilized. In order to establish the optimum flow-rate for purging and sampling, the water level in the well will be measured on a periodic basis (i.e., every one or two minutes) using an electronic water level meter or an oil/water interface meter. When the water level in the well has stabilized (i.e., use goal of <0.33 ft. of constant drawdown), the water level measurements will be collected less frequently.
- While purging the well at the stabilized water level, water quality indicator parameters will be monitored on a three to five-minute basis with the Horiba U-22 water quality meter (or similar equipment). Water quality indicator parameters will be considered stabilized when the parameter readings listed below are generally achieved after three consecutive readings:
 - pH (+ 0.1);
 - specific conductance (+ 3%);
 - dissolved oxygen (+ 10 %);
 - oxidation-reduction potential (+ 10 mV);
 - temperature (+ 10%); and
 - turbidity (+ 10%, when turbidity is greater than 10 NTUs)
- Following stabilization of the water quality parameters, the flow-through cell will be disconnected and a groundwater sample will be collected from the bladder pump effluent tubing. The pumping rate during sampling will remain at the established purging rate or it may be adjusted downward to minimize aeration, bubble formation, or turbulent filling of sample containers. A pumping rate below 250 ml/min will be used when collecting VOC samples.

- The procedures and equipment used during the purging and groundwater sampling, and the field measurement data obtained, will be documented in the field and recorded on Monitoring Well Sampling Logs.
- During sampling, the following parameters will be measured using a water quality meter(s) and will later be presented on Monitoring Well Sampling Logs:
 - Dissolved Oxygen (DO)
 - Conductivity
 - Oxidation/Reduction Potential (redox)
 - pH
 - Temperature
 - Turbidity

The procedures and equipment used during the purging and groundwater sampling, and the field measurement data obtained, will be documented in the field and recorded on Monitoring Well Sampling Logs.

3.0 EQUIPMENT DECONTAMINATION PROCEDURES

In order to reduce the potential for cross-contamination of samples collected during this project, the following procedures will be implemented to ensure that the data collected (primarily the laboratory data) is acceptable.

It is anticipated that most of the materials used to assist in obtaining samples will be disposable one-time use materials (e.g., sampling containers, pump tubing, latex gloves, etc.). However, when equipment must be re-used (e.g., static water level indicator, split bladder pump, etc.), it will be decontaminated by at least one of the following methods:

- Steam clean the equipment within a dedicated decontamination area; or
- Rough wash in tap water; wash in mixture of tap water and Alconox-type soap; double rinse with deionized or distilled water; and air dry and/or dry with clean paper towel.

The effectiveness of the equipment decontamination of non-dedicated sampling equipment such as the low flow bladder pump will be evaluated via analytical laboratory testing of field blanks (e.g., rinsate samples). Decontamination liquids and disposable equipment and PPE will be containerized and left on-site until a proper disposal method is determined.

4.0 SAMPLE HANDLING AND CUSTODY REQUIREMENTS

During sampling activities, personnel will wear disposable latex or nitrile gloves. Between collection of samples, personnel performing the sampling will discard used latex gloves and put on new gloves to preclude cross-contamination between samples. As few personnel as possible will handle samples or be in charge of their custody prior to shipment to the analytical laboratory.

New laboratory-grade sample containers will be used to collect samples. Sufficient volume will be collected to ensure that the laboratory has adequate sample volume to perform the specified analyses. Samples with zero headspace will be collected when VOC analysis is going to be performed. Samples will be kept on ice in a cooler for shipment to the analytical laboratory.

Samples will be preserved as specified by the analytical laboratory for the type of parameters and matrices being tested. The required amount of preservatives will be added by the analytical laboratory to the sample containers prior to delivery to the Site. The sample preservation requirements and holding times will be in accordance with the NYSDEC ASP requirements.

4.1 Chain-Of-Custody

Samples that are collected for subsequent testing as part of this project will be handled using chain-of-custody control. Chain-of-custody documentation will accompany samples from their inception to their analysis, and copies of chain-of-custody documentation will be included with the laboratory's report. The chain-of-custody will include the date and time the sample was collected, the sample identity and sampling location, the requested analysis, and any request for accelerated turnaround time.

4.2 Sample Labels

Sample labels for field samples and QC samples with adhesive backing will be placed on sample containers in order to identify the sample. Sample information will be clearly

written on the sample labels using waterproof ink. Sufficient sample information will be provided on the label to allow for cross-reference with the field sampling records or sample logbook.

The following information will be provided on each sample label:

- Name of company;
- Initials of sampler;
- Date and time of collection;
- Sample identification;
- Intended analyses; and
- Preservation required.

4.3 Custody Seals

Custody seals are preprinted adhesive-backed seals that are designed to break if disturbed. Seals will be signed and dated before being placed on the shipping cooler. Seals will be placed on one or more location on each shipping cooler as necessary to ensure security. Shipping tape will be placed over the seals on the coolers to ensure that the seals are not accidentally broken during shipment. Sample receipt personnel at the laboratory will check and document whether the seals on the shipping coolers are intact when received.

4.4 Sample Identification

The following format will be used on the labels affixed to sample containers to identify samples:

MW-A xx/xx/xx	Groundwater sample with monitoring well letter and month / day /year
TB xx/xx/xx	Trip Blank sample with month/day /year
FB xx/xx/xx	Field Blank sample (rinsate) with month/day /year

As an example, assuming the first project sample is a groundwater sample collected from a monitoring well MW-A on July 1, 2020, the sample will be designated as MW-A_07/01/20.

4.5 Transportation of Samples

Samples will be handled, packaged and shipped in accordance with applicable regulations, and in a manner that does not diminish their quality or integrity. Samples will be delivered to the laboratory within the holding times indicated for the specific analysis and sample media.

5.0 ANALYTICAL LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

The ELAP-certified analytical laboratory test results will be reported in NYSDEC Analytical Services Protocol (ASP) Category B deliverable reports. Analytical laboratory test results for soil samples will be reported on a dry-weight basis. The ELAP-certified analytical laboratory will make every effort to analyze the samples using the lowest practical quantitation limits (PQLs) possible for air and groundwater samples. In addition, analytical laboratory results will be provided to the NYSDEC using the NYSDEC's Equis Format.

The ELAP-certified analytical laboratory will provide internal QA/QC checks that are required by NYSDEC ASP and/or USEPA contract laboratory protocol (CLP) protocol, such as analyses performed, spike blanks, internal standards, surrogate samples, calibration standards, and reference standards. Laboratory results will be compared to data quality indicators in accordance with the ELAP-certified analytical laboratory QAP/SOP and the NYSDEC ASP.

In order to provide control over the collection, analysis, review, and interpretation of analytical laboratory data, the following QA/QC samples will be included as part of this project.

- During each periodic groundwater monitoring event, one trip blank sample, one field blank sample (i.e., equipment rinsate sample) and one matrix spike/matrix spike duplicate (MS/MSD) sample will be collected and submitted under chain-of-custody control and tested via ASP protocol for TAL metals (except the trip blank, which would only be tested for TCL VOCs plus TICs).

5.1 Data Usability Summary Report

A qualified data validator will be retained to complete a data usability summary report (DUSR) on the Category B deliverables analytical laboratory data that is generated as part of the long-term monitoring program. The DUSR will be conducted in accordance with the provisions set forth in Appendix 2B of *DER-10, Technical Guidance for Site Investigation and Remediation* dated May 2010. The findings of the DUSR will be incorporated in the periodic review report and will present the results of data validation, including a summary assessment of laboratory data packages, sample preservation and chain of custody procedures, and a summary assessment of precision, accuracy, representativeness, comparability, and completeness for each analytical method.

5.2 Reporting

Analytical and QC data will be included in the periodic review report. The periodic review report will summarize the environmental work and provide evaluation of the data that is generated, including the validity of the results in the context of QA/QC procedures.

6.0 RECORD KEEPING AND DATA MANAGEMENT

SMP monitoring activities will be documented in a bound field book on a daily basis. Information that will be recorded in the field book will include:

- Dates and time work is performed;
- Details on work being performed;
- Details on field equipment being used;
- Field evidence of contamination such as staining, odors, degree of saturation, etc.
- Field meter measurements collected during monitoring activities;
- Sampling locations and depths measured in tenths of feet;
- Measurements of sample locations, and test locations, excavations, etc.;
- Personnel and equipment on-site;
- Weather conditions; and
- Other pertinent information as warranted.

In addition, the field notes will be converted into logs for each sampling and monitoring event completed as part of the SMP.

Differential GPS, swing ties from existing surveyed site structures, and/or a licensed surveyor will be used to collect spatial data. The spatial data will be plotted using integrated GIS and/or computer-aided design (CAD) mapping.

7.0 ACRONYMS

ASP	Analytical Services Protocol
ASTM	American Society for Testing and Materials
CAD	Computer-Aided Design
CAMP	Community Air Monitoring Plan
CLP	Contract Laboratory Protocol
DNAPL	Dense Non-Aqueous Phase Liquid
DUSR	Data Usability Summary Report
ELAP	Environmental Laboratory Approval Program
GPS	Global Positioning System
HASP	Health and Safety Plan
IDW	Investigation-Derived Waste
LFL	Lower Flammable Limit
LNAPL	Light Non-Aqueous Phase Liquid
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NAD	North American Datum
NAPL	Non-Aqueous Phase Liquid
NTU	Nephelometric Turbidity Units
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
OSHA	Occupational Safety and Health Administration
PID	Photoionization Detector
PPE	Personal Protective Equipment
PQL	Practical Quantitation Limit
PVC	Polyvinyl Chloride
QAP	Quality Assurance Plan
QAPP	Quality Assurance Project Plan
QA/QC	Quality Assurance/Quality Control
RQL	Reported Quantitation Limit
RTAM	Real-Time Aerosol Monitor
SOP	Standard Operating Procedure
SMP	Site Management Plan
SVOC	Semi-Volatile Organic Compounds
TCL	Target Compound List
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound

APPENDIX H
HEALTH AND SAFETY PLAN

HEALTH AND SAFETY PLAN

**REMEDIAL INVESTIGATION
202 FRANKLIN STEET
OLEAN, NEW YORK**

NYSDEC SITE NUMBER C905043-05-14

Prepared by: Day Environmental, Inc.
1563 Lyell Avenue
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Project No.: 4884S-13

Date: May 2014

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ATTACHMENTS

Attachment 1	Figure 1 - Route for Emergency Services
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1.0 INTRODUCTION

Day Environmental, Inc. (DAY) prepared this Health and Safety Plan (HASP) outlining policies and procedures to protect workers and the public from potential environmental hazards during the Remedial Investigation described in the Remedial Investigation/Remedial Alternatives Analysis (RI/RAA) Work Plan for the property addressed 202 Franklin Street, Olean, County of Cattaraugus, New York (the Site). The location of the approximate 5.4 acre Site is depicted on the map included as Figure 1. Currently the Site consists of an of vacant grass/weed covered land with some scattered trees and an approximate 2.2-acre paved parking lot that services the industrial facility located to the south (i.e., at 211 Franklin Street).

Although the HASP focuses on the specific work activities planned for the Site, it must remain flexible due to the nature of this work. Conditions may change and unforeseen situations can arise that require deviations from the original HASP

1.1 Site History/Overview

The Site is located in an industrial-use area in the City of Olean, Cattaraugus County, New York. The Site is bound to the north by the Southern Tier Expressway (i.e., Interstate 86), to the east by an athletic field and a residential neighborhood beyond, to the south by Franklin Street and a manufacturing facility beyond, and to the west a railroad right of way (ROW) and commercial-use properties beyond. Historically, the Site was improved with several buildings that operated as manufacturing facilities. Specific information regarding the previous use of the Site is provided below.

Facility	Approximate Dates of Operation	Remarks
United Wood Alcohol Company	1909-1925	Manufacturer of wood alcohol (methanol)
Seaman Container	1925-1930	Manufacturer of paper pails containers, coolers, etc.
Olean Bag Company	1925-1930	Sewing operations
Avery Ware Corporation	1930-1941	Manufacturer of wastebaskets, vases, etc. from reprocessed waste paper pulp
Fibre Forming Corporation	1941-1956	Manufacturer of wastebaskets, vases, etc. from reprocessed waste paper pulp

Recognized Environmental Conditions (RECs) pertaining to the Site, that were identified a Phase I Environmental Site Assessment (ESA) completed by DAY in November 2013 include:

- Materials and waste products associated with the manufacture of wood alcohol; chemicals and waste products associated with waste paper pulp product manufacturing including paints, enamels and asphalt.
- Petroleum products, coal, and ash associated with power plants/boilers fueling operations at these facilities.
- Railroad spurs were present in various areas of the Site and apparent railroad ballast material was observed on the ground surface of the Site.
- The historical use of the adjoining and nearby properties revealed a long history of industrial use of the area including an oil refinery, which extended to the northeast, north, northwest, west and southwest of the Site. Numerous oil storage tanks, processing equipment and pipelines were located on the refinery complex. Other industries, which were located in the vicinity of the Site, may have used, stored and disposed of hazardous/petroleum products/wastes.
- The NYSDEC spills database identified four spills at off-site properties, including: the adjoining property to the west/northwest (“Former Socony Vacuum” site); the adjoining property to the west/southwest (“Offsite Scott Rotary Seal BCP Site”); and two properties located approximately 0.25 miles north (“MJ Painting Contractor” site and “Offsite Homer Street BCP Site”). These four spills were attributed to the historic presence of an oil refinery operated by a predecessor to ExxonMobil. Off-site contaminant migration, potentially toward the assessed property, was identified at each of these spill sites.
- An approximate 500-acre area [in the vicinity of the Site] has been designated as a Brownfield Opportunity Area (BOA). This designation suggests recognition that environmental contamination may be present based on historical industrial uses.

A Preliminary Phase II ESA report dated October 17, 2013 identified the following relative to the Site:

- Beginning at a depth of about 20 feet (ft.) below ground surface (bgs), photoionization detector (PID) readings in excess of 100 parts per million (ppm) were measured above soil samples collected from test boring TB-01 (advanced on the western portion of the Site), and these samples exhibited a petroleum-like odor. A maximum PID reading of 121 ppm was measured above the bottom-most sample collected from test boring TB-01 at a depth of about 26 ft. bgs, and this sample exhibited petroleum-like odors.
- A peak PID reading of 275 ppm was measured above a groundwater sample collected from monitoring well MW-A (installed in test boring TB-01). This sample exhibited a petroleum-like odor and petroleum-type sheen was observed on its surface.

- The laboratory reported a total petroleum hydrocarbon (TPH) concentration of 139 mg/l or ppm in the groundwater sample collected from monitoring well MW-A. The TPH was classified as ‘unidentified petroleum product’. However, the laboratory indicated that the GC fingerprint of the petroleum product identified in groundwater sample MW-A was similar to #2 Fuel Oil and/or other oil, including lubricating, cutting, and silicon oil.
- The concentration of tert-butylbenzene detected in the groundwater sample from MW-A [i.e., 5.38 ug/L or parts per billion (ppb)] exceeds the corresponding NYSDEC groundwater quality standard of 5 ug/l or ppb.

1.2 Planned Activities Covered by HASP

This HASP is intended to be used during field activities conducted at the Site as outlined in the RI/RAA Work Plan. Currently, identified activities include:

- Site Preparation
- Geophysical Survey
- Surface Soil Sampling
- Test Pit Excavations
- Completion of Soil Borings
- Monitoring Well Construction and Sampling
- Handling of Investigation Derived Waste Management

This HASP can be modified to cover other site activities as deemed appropriate. The owner of the property, its contractors, and other site workers will be responsible for the development and/or implementation of health and safety provisions associated with site activities.

2.0 KEY PERSONNEL AND MANAGEMENT

The Project Manager (PM) and Site Safety Officer (SSO) are responsible for formulating health and safety requirements, and implementing the HASP.

2.1 Project Manager

The PM has the overall responsibility for the project and will coordinate with the SSO to ensure that the goals of the project are attained in a manner consistent with the HASP requirements.

2.2 Site Safety Officer

The SSO has responsibility for administering the HASP relative to site activities, and will be in the field while activities are in progress. The SSO's operational responsibilities will be monitoring, including personal and environmental monitoring, ensuring personal protective equipment (PPE) maintenance, and identification of protection levels. The air monitoring data obtained by the SSO will be available for review by regulatory agencies and other on-site personnel.

2.3 Employee Safety Responsibility

Each employee is responsible for personal safety as well as safety of others in the area. The employee will use the equipment provided in a safe and responsible manner as directed by the SSO.

2.4 Key Safety Personnel

The following individuals are anticipated to share responsibility for health and safety of DAY representatives at the Site.

DAY Project Manager

Raymond Kampff

DAY Site Safety Officer

William Batiste, Charles Hampton,
or Zachary Tennies

3.0 SAFETY RESPONSIBILITY

Contractors, consultants, state or local agencies, or other parties, and their employees, involved with this project will be responsible for their own safety while on-site. Their employees will be required to understand the information contained in this HSAP, and must follow the recommendations that are made in this document. As an alternative, contractors, consultants, state or local agencies, or other parties, and their employees, involved with this project can utilize their own health and safety plan for this project as long as it is found acceptable to the New York State Department of Health (NYSDOH) and /or the Cattaraugus County Health Department (CCHD).

4.0 JOB HAZARD ANALYSIS

There are many hazards associated with environmental work on a site, and this HASP discusses some of the anticipated hazards for the Site. The hazards listed below deal specifically with those hazards associated with the management of potentially contaminated media (e.g. soil, fill, etc.).

4.1 Chemical Hazards

Chemical substances can enter the unprotected body by inhalation, skin absorption, ingestion, or injection (i.e., a puncture wound, etc.). A contaminant can cause damage to the point of contact or can act systemically, causing a toxic effect at a part of the body distant from the point of initial contact.

A list of selected constituents that have been detected at the Site, and constituents that may be detected based upon historic operations that were conducted on the Site, are presented below. This list also presents the Occupational Safety and Health Administration (OSHA) permissible exposure limits (PELs), National Institute for Occupational Safety and Health (NIOSH) recommended exposure limits (RELs), and NIOSH immediately dangerous to life or health (IDLH) levels.

CONSTITUENT	OSHA PEL	NIOSH REL	IDLH
tert-butylbenzene	NA	NA	NA
Lead	0.05 mg/m ³	0.05 mg/m ³	100 mg/m ³
PAHs ¹	0.2 mg/m ³	0.1 mg/m ³	80 mg/m ³
PCBs	0.5 mg/m ³	0.01 mg/m ³	5 mg/m ³

NA = Not Available

The potential routes of exposure for these analytes and chemicals include inhalation, ingestion, skin absorption and/or skin/eye contact. The potential for exposure through any one of these routes will depend on the activity conducted. The most likely routes of exposure for these activities that are performed during environmental activities at the Site include inhalation and skin/eye contact.

4.2 Physical Hazards

There are physical hazards associated with this project, which might compound the chemical hazards. Hazard identification, training, adherence to the planned environmental measures, and careful housekeeping can prevent many problems or accidents arising from physical hazards. Potential physical hazards associated with this project and suggested preventative measures include:

¹ PAH exposure limits listed as coal tar pitch volatiles in 1910.1000 Table Z-1 and NIOSH Pocket Guide to Chemical Hazards.

- Slip/Trip/Fall Hazards – Some areas may have wet or frozen surfaces that will greatly increase the possibility of inadvertent slips. Caution must be exercised when using steps and stairs due to slippery surfaces in conjunction with the fall hazard. Good housekeeping practices are essential to minimize the trip hazards.
- Small Quantity Flammable Liquids – Small quantities of flammable liquids will be stored in “safety” cans and labeled according to contents.
- Electrical Hazards – Electrical devices and equipment shall be de-energized prior to working near them. All extension cords will be kept out of water, protected from crushing, and observed regularly to ensure structural integrity. Temporary electrical circuits will be protected with ground fault circuit interrupters. Only qualified electricians are authorized to work on electrical circuits. Heavy equipment (e.g., excavator, backhoe, drill rig) shall not be operated within 10 feet of high voltage lines, unless proper protection from the high voltage lines is provided by the appropriate utility company.
- Noise – Work around large equipment often creates excessive noise. The effects of noise can include:
 - Workers being startled, annoyed, or distracted.
 - Physical damage to the ear resulting in pain, or temporary and or/permanent hearing loss.
 - Communication interference that may increase potential hazards due to the inability to warn of danger and proper safety precautions to be taken.

Proper hearing protection will be worn as deemed necessary. In general, feasible administrative or engineering controls shall be utilized when on-site personnel are subjected to noise exceeding an 8-hour time weighted average (TWA) sound level of 90 decibels on the A-weighted scale (dBA). In addition, whenever employee noise exposures equal or exceed an 8-hour TWA sound level of 85 dBA, employers shall administer a continuing, effective hearing conservation program as described in the OSHA Regulation 29 Code of Federal Rules (CFR) Part 1910.95.

- Heavy Equipment – Each morning before start-up, heavy equipment will be checked to ensure safety equipment and devices are operational and ready for immediate use.
- Subsurface and Overhead Hazards – Before any excavation activity, efforts will be made to determine whether underground utilities and potential overhead hazards will be encountered. Underground utility clearance must be obtained prior to subsurface work.
- Excavation and Trenching Hazards – Excavations and trenches (i.e., test pits and removal of underground storage tanks) required during the course of this project will be completed in accordance with the requirements of 29 CFR 196 Part P (OSHA Excavations Regulation). As shown in 29 CFR 196.652(a)(1)(ii), excavations that are greater than 5 feet in depth require an adequate protective

system prior to entry by qualified personnel. The SSO will be responsible for identifying excavations that require protective systems and their implementation. Adequate protective systems will be designed and implemented as required in Part P of the applicable regulation.

Qualified personnel should remain at least 3 feet from edge of sidewalls of excavation and should view excavation from end walls to avoid cave-in. Samples from excavation should be collected using remote methods such as with an excavator bucket.

4.3 Environmental Hazards

Environmental factors such as weather, wild animals, insects, snakes and irritant plants can pose a hazard when performing outdoor tasks. The SSO shall make reasonable efforts to alleviate these hazards should they arise.

4.3.1 Heat Stress

The combination of warm ambient temperature and protective clothing increases the potential for heat stress. In particular,

- Heat rash
- Heat cramp
- Heat exhaustion
- Heat stroke

Site workers will be encouraged to increase consumption of water or electrolyte-containing beverages such as Gatorade[®] when the potential for heat stress exists. In addition, workers are encouraged to take rests whenever they feel any adverse effects that may be heat-related. The frequency of breaks may need to be increased upon worker recommendation to the SSO.

4.3.2 Exposure to Cold

With outdoor work in the winter months, the potential exists for hypothermia and frostbite. Protective clothing greatly reduces the possibility of hypothermia in workers. However, personnel will be instructed to wear warm clothing and to stop work to obtain more clothing if they become too cold. Employees will also be advised to change into dry clothes if their clothing becomes wet from perspiration or from exposure to precipitation.

5.0 SITE CONTROLS

To prevent migration of contamination caused through tracking by personnel or equipment, work areas, and personal protective equipment staging/decontamination areas will be specified prior to beginning operations.

5.1 Site Zones

In the area where contaminated materials present the potential for worker exposure (work zone), personnel entering the area must wear the mandated level of protection for the area. A "transition zone" shall be established where personnel can begin and complete personal and equipment decontamination procedures. This can reduce potential off-site migration of contaminated media. Contaminated equipment or clothing will not be allowed outside the transition zone (e.g., on clean portions of the Site) unless properly containerized for disposal. Operational support facilities will be located outside the transition zone (i.e., in a "support zone"), and normal work clothing and support equipment are appropriate in this area. If possible, the support zone should be located upwind of the work zone and transition zone.

5.2 General

The following items will be requirements to protect the health and safety of workers during implementation of activities that disturb contaminated material.

- Eating, drinking, chewing gum or tobacco, smoking, or any practice that increased the probability of hand to mouth transfer and ingestion of contamination shall not occur in the work zone and/or transition zone during disturbance of contaminated material.
- Personnel admitted in the work zone shall be properly trained in health and safety techniques and equipment usage.
- No personnel shall be admitted in the work zone without the proper safety equipment.
- Proper decontamination procedures shall be followed before leaving the Site.

6.0 PROTECTIVE EQUIPMENT

This section addresses the various levels of PPE, which are or may be required at this job site. Personnel entering the work zone and transition zone shall be trained in the use of the anticipated PPE to be utilized.

6.1 Anticipated Protection Levels

The following table summarizes the protection levels (refer to Section 6.2) anticipated for tasks to be implemented during this project.

TASK	PROTECTION LEVEL	COMMENTS/MODIFICATIONS
Site mobilization	D	
Site preparation	D	
Intrusive work	C/Modified D/D	Based on air monitoring, and SSO discretion.
Decontamination Area	D	
Site breakdown and demobilization	D	

It is anticipated that work conducted as part of this project will be performed in Level D or modified Level D PPE. If conditions are encountered that require Level A or Level B PPE, the work will immediately be stopped. The appropriate government agencies (e.g., City of Olean, NYSDEC, NYSDOH, CCHD, etc.) will be notified and the proper health and safety measures will be implemented (e.g., develop and implement engineering controls, upgrade in PPE, etc.). If conditions are encountered that require Level C PPE, the work will be temporarily suspended and the work site will be evaluated to limit exposure prior to implementing Level C PPE.

6.2 Protection Level Descriptions

This section lists the minimum requirements for each protection level. Modifications to these requirements can be made upon approval of the SSO. If Level A, Level B, and/or Level C PPE is required, Site personnel that enter the work zone and/or transition zone must be properly trained and certified in the use of those levels of PPE.

6.2.1 Level D

Level D consists of the following:

- Safety glasses
- Hard hat when working with heavy equipment

- ❑ Steel-toed or composite-toed work boots
- ❑ Protective gloves during sampling or handling of potentially contaminated media
- ❑ Work clothing as prescribed by weather

6.2.2 *Modified Level D*

Modified Level D consists of the following:

- ❑ Safety glasses with side shields
- ❑ Hard hat when working with heavy equipment
- ❑ Steel-toed or composite-toed work boots
- ❑ Protective gloves during sampling or handling of potentially contaminated media
- ❑ Outer protective wear, such as Tyvek coverall [Tyveks (Sarans) and polyvinyl chloride (PVC) acid gear will be required when workers have a potential to be exposed to impacted liquids or impacted particulates].

6.2.3 *Level C*

Level C consists of the following:

- ❑ Air-purifying respirator with appropriate cartridges
- ❑ Outer protective wear, such as Tyvek coverall [Tyveks (Sarans) and PVC acid gear will be required when workers have a potential to be exposed to impacted liquids or particulates].
- ❑ Hard hat when working with heavy equipment
- ❑ Steel-toed or composite-toed work boots
- ❑ Nitrile, neoprene, or PVC overboots, if appropriate
- ❑ Nitrile, neoprene, or PVC gloves, if appropriate
- ❑ Face shield (when projectiles or splashes pose a hazard)

6.2.4 *Level B*

Level B protection consists of the items required for Level C protection with the exception that an air-supplied respirator is used in place of the air-purifying respirator. Level B PPE is not anticipated to be required during this project. If the need for level B PPE becomes evident, activities in the affected area will be stopped until conditions are further evaluated, and any necessary modifications to the HASP have been approved by the PM and SSO. Subsequently, the appropriate safety measures (including Level B PPE) must be implemented prior to commencing site activities.

6.2.5 *Level A*

Level A protection consists of the items required for Level B protection with the addition of a fully-encapsulating, vapor-proof suit capable of maintaining positive pressure. Level A PPE is not anticipated to be required during this project. If the need for level A PPE becomes evident, activities in the affected area will be stopped until conditions are further evaluated, and any necessary modifications to the HASP have been approved by the PM and SSO. Subsequently, the appropriate safety measures (including Level A PPE) must be implemented prior to commencing site activities.

6.3 Respiratory Protection

Any respirator used will meet the requirements of the OSHA 29 CFR 1910.134. Both the respirator and cartridges specified shall be fit-tested prior to use in accordance with OSHA regulations (29 CFR 1910). Air purifying respirators shall not be worn if contaminant levels exceed designated use concentrations. The workers will wear respirators with approval for: organic vapors less than 1,000 ppm; and dusts, fumes and mists with a TWA less than 0.05 milligrams per cubic meter (mg/m^3).

No personnel who have facial hair, which interferes with respirator sealing surface, will be permitted to wear a respirator and will not be permitted to work in areas requiring respirator use.

Only workers who have been certified by a physician as being physically capable of respirator usage shall be issued a respirator. Personnel unable to pass a respiratory fit test or without medical clearance for respirator use will not be permitted to enter or work in areas that require respirator protection.

7.0 DECONTAMINATION PROCEDURES

This section describes the procedures necessary to ensure that both personnel and equipment are free from contamination when they leave the work site.

7.1 Personnel Decontamination

Personnel involved with activities that involve disturbing contaminated media will follow the decontamination procedures described herein to ensure that material which workers may have contacted in the work zone and/or transition zone does not result in personal exposure and is not spread to clean areas of the Site. This sequence describes the general decontamination procedure. The specific stages can vary depending on the Site, the task, and the protection level, etc.

1. Leave work zone and go to transition zone
2. Remove soil/debris from boots and gloves
3. Remove boots
4. Remove gloves
5. Remove Tyvek suit and discard, if applicable
6. Remove and wash respirator, if applicable
7. Go to support zone

7.2 Equipment Decontamination

Decontamination procedures for equipment are presented as Section 4.0 of the Quality Assurance Project Plan (QAPP).

7.3 Disposal

Disposable clothing will be disposed in accordance with applicable regulations. Liquids (e.g., decontamination water, etc.) or solids (e.g., soil) generated by remedial activities will be disposed in accordance with applicable regulations.

8.0 AIR MONITORING

During activities that have the potential to disturb contaminated soil, fill material, or groundwater, air monitoring will be conducted in order to determine airborne particulate and contamination levels. This ensures that respiratory protection is adequate to protect personnel against the chemicals that are encountered and that chemical contaminants are not migrating off-site. Additional air monitoring may be conducted at the discretion of the SSO. Readings will be recorded and be available for review.

The following chart describes the direct reading instrumentation that will be utilized and appropriate action levels.

Monitoring Device	Action Level	Response/Level of PPE
PID Volatile Organic Compound Meter	< 1 ppm in breathing zone, sustained 5 minutes	<u>Level D</u>
	1-25 ppm in breathing zone, sustained 5 minutes	Cease work, implement measures to reduce air emissions when the work is performed, etc. If levels can not be brought below 1 ppm in the breathing zone, then upgrade PPE to <u>Level C</u>
	26-250 ppm in breathing zone, sustained 5 minutes	<u>Level B</u> , Stop work, evaluate the use of engineering controls, etc.
	>250 ppm in breathing zone	<u>Level A</u> , Stop work, evaluate the use of engineering controls, etc.
RTAM Particulate Meter	< 100 $\mu\text{g}/\text{m}^3$ over an integrated period not to exceed 15 minutes.	Continue working
	> 100 $\mu\text{g}/\text{m}^3$	Cease work, implement dust suppression, change in way work performed, etc. If levels can not be brought below 150 $\mu\text{g}/\text{m}^3$, then upgrade PPE to <u>Level C</u>

8.1 Particulate Monitoring

During activities where contaminated materials (e.g., soil, fill, etc.) may be disturbed, air monitoring will include real-time monitoring for particulates using a real-time aerosol monitor (RTAM) particulate meter at the perimeter of the work zone in accordance with the Final DER-10 Technical Guidance for Site Investigation and Remediation dated May 2010. DER-10 uses an action level of 100 $\mu\text{g}/\text{m}^3$ (0.10 mg/m^3) over background conditions for an integrated period not to exceed 15 minutes. If the action level is

exceeded, or if visible dust is encountered, then work shall be discontinued until corrective actions are implemented. Corrective actions may include dust suppression, change in the way work is performed, and/or upgrade of personal protective equipment.

8.2 Volatile Organic Compound Monitoring

During activities where contaminated materials may be disturbed, a photoionization detector (PID) will be used to monitor total VOCs in the ambient air. The PID will prove useful as a direct reading instrument to aid in determining if current respiratory protection is adequate or needs to be upgraded. The SSO will take measurements before operations begin in an area to determine the amount of VOCs naturally occurring in the air. This is referred to as a background level. Levels of VOCs will periodically be measured in the air at active work sites, and at the transition zone when levels are detected above background in the work zone.

8.3 Community Air Monitoring Plan

During activities that have the potential to disturb contaminated soil, fill material, or groundwater, this Community Air Monitoring Plan (CAMP) will be implemented. The CAMP includes real-time monitoring for VOCs and particulates (i.e., dust) at the downwind perimeter of each designated work area when activities with the potential to release VOCs or dust are in progress at the Site. This CAMP is based on the NYSDOH Generic CAMP included as Appendix 1A of the NYSDEC document titled “*DER-10, Technical Guidance for Site Investigation and Remediation*” dated May 2010. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences/businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of project activities.

Exterior Investigations

The most significant nearby receptor is the residential housing located along North Union Street to the east of the Site. Due to proximity of the houses, at least one of the CAMP stations will be placed between the area of intrusive activities and the receptor. In addition, one CAMP monitoring station will be placed on the downwind Site perimeter, and the upwind Site perimeter will be periodically monitored to obtain background levels. [Note: The specific locations will be determined based upon wind conditions at the time of fieldwork.] A Site Plan depicting potential CAMP station locations is provided on Figure 2.

The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air. Reliance on the CAMP should not preclude simple, common sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Continuous monitoring will be conducted during ground intrusive activities involving potentially contaminated soil, fill material or groundwater. Ground intrusive activities include, but are not limited to, test pitting or trenching, advancement/installation of test borings or monitoring wells, etc.

Periodic monitoring for VOCs will be conducted during non-intrusive activities involving potentially contaminated soil, fill material or groundwater where deemed appropriate (e.g., during collection of soil samples or groundwater samples, etc.).

8.3.1 VOC Monitoring, Response Levels, and Actions

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

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

The 15-minute readings must be recorded and made available for NYSDEC and NYSDOH personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

8.3.2 *Particulate Monitoring, Response Levels, and Actions*

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

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed $150 \mu\text{g}/\text{m}^3$ above the upwind level and provided that no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than $150 \mu\text{g}/\text{m}^3$ above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within $150 \mu\text{g}/\text{m}^3$ of the upwind level and in preventing visible dust migration.

Readings will be recorded and made available for review.

9.0 EMERGENCY CONTINGENCY PLAN

This section presents the emergency contingency plan (ECP) describing the procedures to be performed in the event of an emergency (e.g., fire, spill, tank/drum release, etc.). To provide first-line assistance to field personnel in the case of illness or injury, the following items will be made immediately available on the Site:

- ❑ First-aid kit;
- ❑ Portable emergency eye wash; and
- ❑ Supply of clean water.

9.1 Emergency Telephone Numbers

The following telephone numbers are listed in case there is an emergency at the Site:

Fire/Police Department:	911
Poison Control Center:	(800) 222-1222
<u>NYSDEC</u> Environmental Remediation Spill Hotline	(716) 851-7220 (800) 457-7362
<u>NYSDOH</u> Public Health Duty Officer	(866) 881-2809
<u>CCHD</u> 24 Hour Hotline	(716) 373-8010 ext. 3980
<u>SOLEPOXY</u> Mark Wendel	(716) 378-8546
<u>DAY ENVIRONMENTAL, INC.</u> Raymond Kampff	(585) 454-0210 x108
<u>Nearest Hospital:</u>	Olean General Hospital 515 Main Street, Olean, NY 14760 (716) 373-2600 (Main) (716) 375-2675 (Emergency Department)
Directions to the Hospital:	Head northeast on Franklin Street toward North Union Street for approximately 0.1 miles. Turn right on N. Union Street and proceed approximately 0.8 miles. Continue onto Main Street and travel approximately 0.1 miles, then turn left into Olean General Hospital (Figure 1).

9.2 Evacuation

During activities involving potential disturbance of contaminated soil, fill material, or groundwater, a log of each individual entering and leaving the Site will be kept for emergency accounting practices. Although unlikely, it is possible that a site emergency could require evacuating personnel from the Site. If required, the SSO will give the appropriate signal for site evacuation (i.e., hand signals, alarms, etc.).

All personnel shall exit the Site and shall congregate in an area designated by the SSO. The SSO shall ensure that all personnel are accounted for. If someone is missing, the SSO will alert emergency personnel. The appropriate government agencies will be notified as soon as possible regarding the evacuation, and any necessary measures that may be required to mitigate the reason for the evacuation.

9.3 Medical Emergency

In the event of a medical emergency involving illness or injury to one of the on-site personnel, Emergency Medical Services (EMS) and the appropriate government agencies should be notified immediately. The area in which the injury or illness occurred shall not be entered until the cause of the illness or injury is known. The nature of injury or illness shall be assessed. If the victim appears to be critically injured, administer first aid and/or cardio-pulmonary resuscitation (CPR) as needed. If appropriate, instantaneous real-time air monitoring shall be done in accordance with air monitoring outlined in Section 8.0 of this HASP.

9.4 Contamination Emergency

It is unlikely that a contamination emergency will occur; however, if such an emergency does occur, the specific work area shall be shut down and immediately secured. If an emergency rescue is needed, notify Police, Fire Department and EMS units immediately. Advise them of the situation and request and expedient response. The appropriate government agencies shall be notified immediately. The area in which the contamination occurred shall not be entered until the arrival of trained personnel who are properly equipped with the appropriate PPE and monitoring instrumentation as outlined in Section 8.0 of this HASP.

9.5 Fire Emergency

In the event of a fire on-site, all non-essential site personnel shall be evacuated to a safe, secure area. The Fire Department will be notified immediately, and advised of the situation and the identification of any hazardous materials involved. The appropriate government agencies shall be notified as soon as possible.

The four classes of fire along with their constituents are as follows:

- Class A: Wood, cloth, paper, rubber, many plastics, and ordinary combustible materials.
- Class B: Flammable liquids, gases and greases.
- Class C: Energized electrical equipment.
- Class D: Combustible metals such as magnesium, titanium, sodium, and potassium.

Small fires on-site may be actively extinguished; however, extreme care shall be taken while in this operation. Approaches to the fire shall be done from the upwind side if possible. Distance from on-site personnel to the fire shall be close enough to ensure proper application of the extinguishing material but far enough away to ensure that the personnel are safe. The proper extinguisher shall be utilized for the Class(es) of fire present on the site. If possible, the fuel source shall be cut off or separated from the fire. Care must be taken when performing operations involving the shut-off of valves and manifolds, if present.

Examples of proper extinguishing agent as follows:

- Class A: Water
Water with 1% AFFF Foam (Wet Water)
Water with 6% AFFF or Fluorprotein Foam
ABC Dry Chemical
- Class B: ABC Dry Chemical
Purple K
Carbon Dioxide
Water with 6% AFFF Foam
- Class C: ABC Dry Chemical
Carbon Dioxide
- Class D: Metal-X Dry Powder

No attempt shall be made against large fires these shall be handled by the Fire Department.

9.6 Spill or Air Release

In the event of a spill or air release of hazardous materials on-site, the specific area of the spill or release shall be shut down and immediately secured. The area in which the spill or release occurred shall not be entered until the cause can be determined and site safety

can be evaluated. Non-essential site personnel shall be evacuated to a safe and secure area. The appropriate government agencies shall be notified as soon as possible. The spilled or released material shall be immediately indentified and appropriate containment measures shall be implemented, if possible. Real-time air monitoring shall be implemented as outlined in Section 8.0 of this HSAP. If the materials are unknown, Level B protection is mandatory. If warranted, samples of the materials shall be acquired to facilitate identification.

9.7 Locating Containerized Waste and/or Underground Storage Tanks

In the event that unanticipated containerized waste (e.g., drums) and/or USTs are located during remedial activities, the work must be stopped in the specific area until site safety can be evaluated and addressed. Non-essential Site personnel shall not work in the immediate area until conditions including possible exposure hazards are addressed. The appropriate government agencies shall be notified as soon as possible. The SSO shall monitor the area as outlined in Section 8.0 of this HASP.

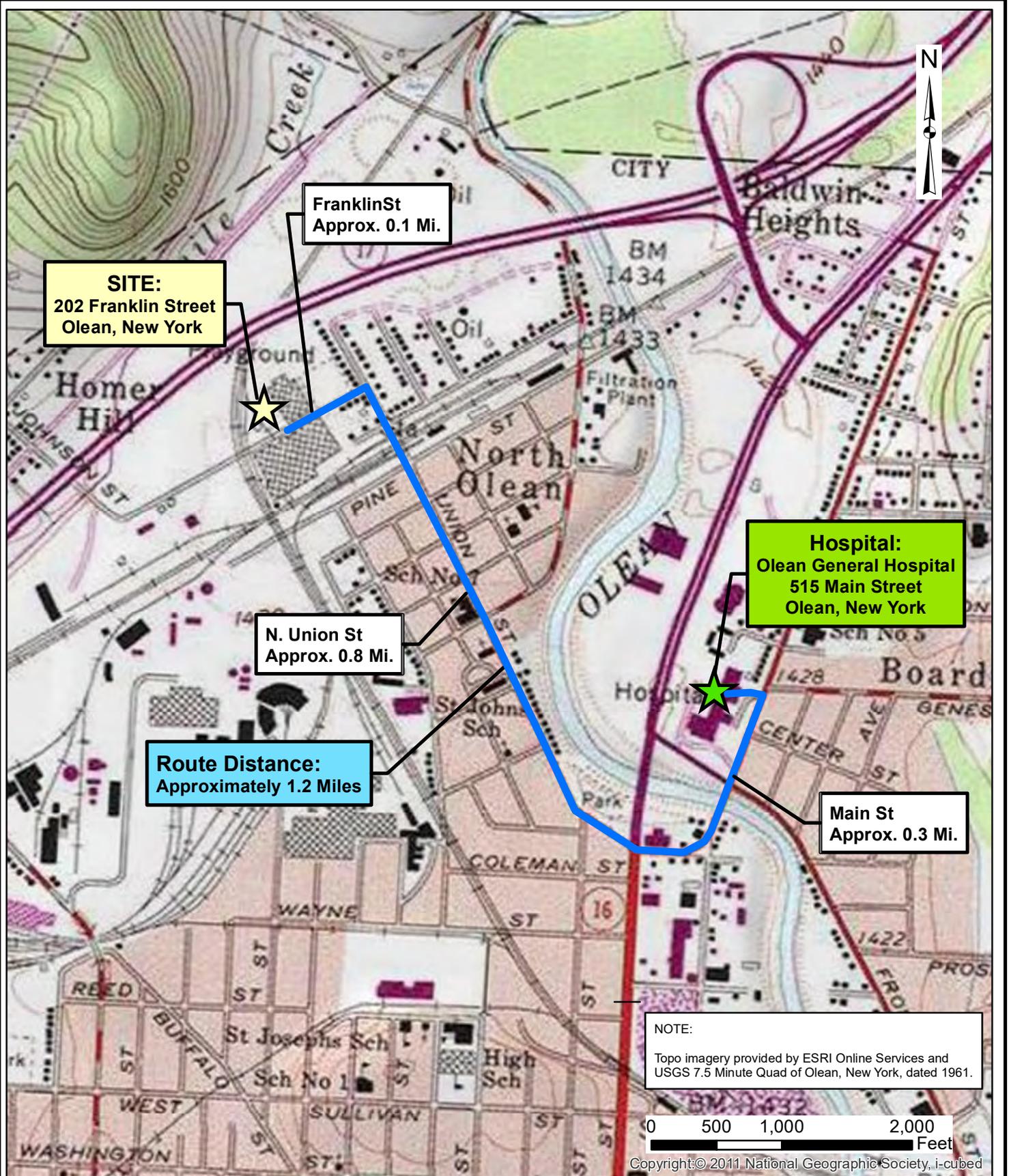
Prior to any handling, unanticipated containers will be visually assessed by the SSO to gain as much information as possible about their contents. As a precautionary measure, personnel shall assume that unlabelled containers and/or tanks contain hazardous materials until their contents are characterized. To the extent possible based upon the nature of the containers encountered, actions may be taken to stabilize the area and prevent migration (e.g., placement of berms, etc.). Subsequent to initial visual assessment and any required stabilization, properly trained personnel will sample, test, remove, and dispose of any containers and/or tanks, and their contents. After visual assessment and air monitoring, if the material remains unknown, Level B protection is mandatory.

10.0 ABBREVIATIONS

AFFF	Aqueous Film Forming Foams
BCP	Brownfield Cleanup Program
BOA	Brownfield Opportunity Area
CAMP	Community Air Monitoring Program
CCHD	Cattaraugus County Health Department
CFR	Code of Federal Regulations
CPR	Cardio-Pulmonary Resuscitation
DAY	Day Environmental, Inc.
dBA	Decibels on the A-Weighted Scale
ECP	Emergency Contingency Plan
EMS	Emergency Medical Service
ESA	Environmental Site Assessment
GC	Gas Chromatograph
HASP	Health and Safety Plan
IDLH	Immediately Dangerous to Life or Health
mg/m ³	Milligram Per Meter Cubed
NIOSH	National Institute for Occupational Safety and Health
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
PID	Photoionization Detector
PM	Project Manager
PM-10	Particulate Matter Less Than 10 Micrometers In Diameter
PPE	Personal Protection Equipment
ppb	Parts Per Billion
ppm	Parts Per Million
PVC	Polyvinyl Chloride
QAPP	Quality Assurance Project Plan
REC	Recognized Environmental Condition
REL	Recommended Exposure Limit
RI/RAA	Remedial Investigation/Remedial Alternatives Analysis
ROW	Right-of-Way
RTAM	Real-Time Aerosol Monitor
SCG	Standards, Criteria and Guidance
SSO	Site Safety Officer
TPH	Total Petroleum Hydrocarbon
TWA	Time-Weighted Average
µg/m ³	Micrograms Per Meter Cubed
UST	Underground Storage Tank
VOC	Volatile Organic Compound

Attachment 1

Figure 1 – Route for Emergency Services



Date	11-1-2013
Drawn By	RJM
Scale	AS NOTED

day
DAY ENVIRONMENTAL, INC.
 Environmental Consultants
 Rochester, New York 14606
 New York, New York 10170

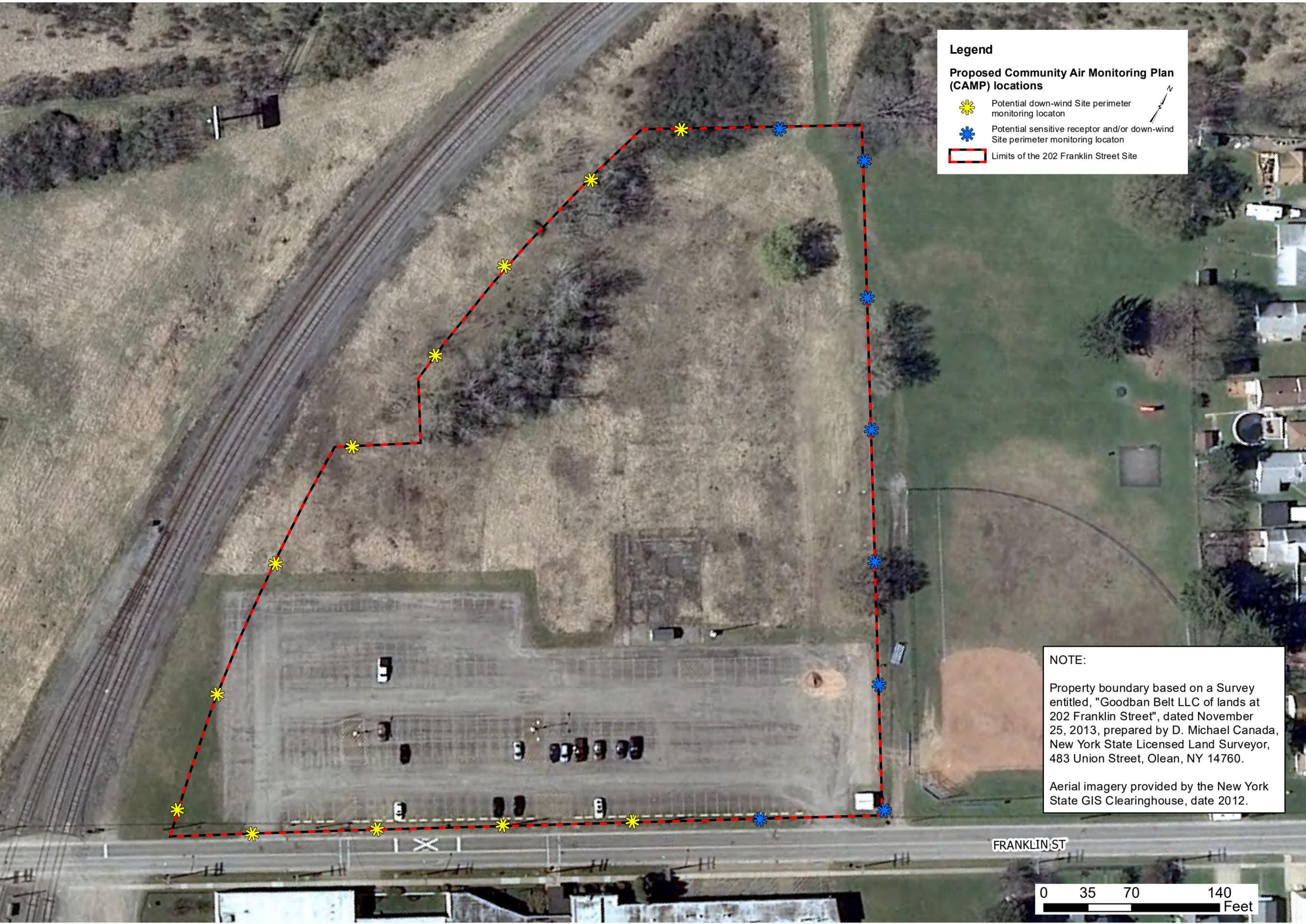
Project Title	202 FRANKLIN STREET OLEAN, NEW YORK
Drawing Title	HEALTH AND SAFETY PLAN Route to Emergency Services

Project No.	4884S-13
	FIGURE 1

Attachment 2

Figure 1 – Site Plan Depicting Tentative CAMP Station Locations

Last Date Saved: 02 Dec 2013 Document Path: \\Smeht-w\7\pct\GIS\GIS Mapping\4884S-13\Site\po\202\Franklin\4884S-25 - CAMP Plan.mxd



Legend

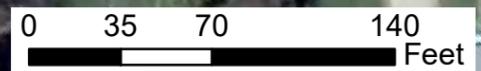
Proposed Community Air Monitoring Plan (CAMP) locations

-  Potential down-wind Site perimeter monitoring location
-  Potential sensitive receptor and/or down-wind Site perimeter monitoring location
-  Limits of the 202 Franklin Street Site

NOTE:

Property boundary based on a Survey entitled, "Goodban Belt LLC of lands at 202 Franklin Street", dated November 25, 2013, prepared by D. Michael Canada, New York State Licensed Land Surveyor, 483 Union Street, Olean, NY 14760.

Aerial imagery provided by the New York State GIS Clearinghouse, date 2012.



DESIGNED BY	RLK	DATE	11-2013
DRAWN BY	CPS	DATE DRAWN	11-2013
SCALE	AS NOTED	DATE ISSUED	11-18-2013

day
DAY ENVIRONMENTAL, INC.
 Environmental Consultants
 Rochester, New York 14606
 New York, New York 10170

Project Title	202 FRANKLIN STREET OLEAN, NEW YORK
HEALTH AND SAFETY PLAN	
Drawing Title	Proposed Community Air Monitoring Plan Locations

Project No.	4884S-13
FIGURE 2	

APPENDIX I
SITE MANAGEMENT FORMS

Site-Wide Inspection Form
211 Franklin Street
City of Olean, New York
NYSDEC Site Number: C905038

Date of Inspection Site Visit:

Personnel Performing Inspection Site Visit:

Affiliation of Personnel:

- 1. Check integrity of impermeable portions (e.g., concrete and asphalt) of cover system, include whether any sloughing, cracks, settlement, damage, etc.**

Discuss observations and any corrective actions:

- 2. Check integrity of permeable portions (e.g., soil) of cover system, include whether any sloughing, cracks, settlement, damage, etc.**

Discuss observations and any corrective actions:

- 3. Check integrity of vegetative cover (e.g., grass), include whether any dead areas, erosion, etc.**

Discuss observations and any corrective actions:

4. Groundwater Monitoring Well Assessment

Discuss observations and any corrective actions:

Summary of Green Remediation Metrics for Site Management

Site Name: _____ Site Code: _____
 Address: _____ City: _____
 State: _____ Zip Code: _____ County: _____

Initial Report Period (Start Date of period covered by the Initial Report submittal)

Start Date: _____

Current Reporting Period

Reporting Period From: _____ To: _____

Contact Information

Preparer's Name: _____ Phone No.: _____

Preparer's Affiliation: _____

I. Energy Usage: Quantify the amount of energy used directly on-site and the portion of that derived from renewable energy sources.

	Current Reporting Period	Total to Date
Fuel Type 1 (e.g. natural gas (cf))		
Fuel Type 2 (e.g. fuel oil, propane (gals))		
Electricity (kWh)		
Of that Electric usage, provide quantity:		
Derived from renewable sources (e.g. solar, wind)		
Other energy sources (e.g. geothermal, solar thermal (Btu))		

Provide a description of all energy usage reduction programs for the site in the space provided on Page 3.

II. Solid Waste Generation: Quantify the management of solid waste generated on-site.

	Current Reporting Period (tons)	Total to Date (tons)
Total waste generated on-site		
OM&M generated waste		
Of that total amount, provide quantity:		
Transported off-site to landfills		
Transported off-site to other disposal facilities		
Transported off-site for recycling/reuse		
Reused on-site		

Provide a description of any implemented waste reduction programs for the site in the space provided on Page 3.

III. Transportation/Shipping: Quantify the distances travelled for delivery of supplies, shipping of laboratory samples, and the removal of waste.

	Current Reporting Period (miles)	Total to Date (miles)
Standby Engineer/Contractor		
Laboratory Courier/Delivery Service		
Waste Removal/Hauling		

Provide a description of all mileage reduction programs for the site in the space provided on Page 3. Include specifically any local vendor/services utilized that are within 50 miles of the site.

IV. Water Usage: Quantify the volume of water used on-site from various sources.

	Current Reporting Period (gallons)	Total to Date (gallons)
Total quantity of water used on-site		
Of that total amount, provide quantity:		
Public potable water supply usage		
Surface water usage		
On-site groundwater usage		
Collected or diverted storm water usage		

Provide a description of any implemented water consumption reduction programs for the site in the space provided on Page 3.

V. Land Use and Ecosystems: Quantify the amount of land and/or ecosystems disturbed and the area of land and/or ecosystems restored to a pre-development condition (i.e. Green Infrastructure).

	Current Reporting Period (acres)	Total to Date (acres)
Land disturbed		
Land restored		

Provide a description of any implemented land restoration/green infrastructure programs for the site in the space provided on Page 3.

<p>Description of green remediation programs reported above (Attach additional sheets if needed)</p>
<p>Energy Usage:</p>
<p>Waste Generation:</p>
<p>Transportation/Shipping:</p>
<p>Water usage:</p>
<p>Land Use and Ecosystems:</p>
<p>Other:</p>

<p>CERTIFICATION BY CONTRACTOR</p> <p>I, _____ (Name) do hereby certify that I am _____ (Title) of the Company/Corporation herein referenced and contractor for the work described in the foregoing application for payment. According to my knowledge and belief, all items and amounts shown on the face of this application for payment are correct, all work has been performed and/or materials supplied, the foregoing is a true and correct statement of the contract account up to and including that last day of the period covered by this application.</p> <p>_____</p> <p style="text-align: center;">Date Contractor</p>

APPENDIX J
REMEDIAL SYSTEM OPTIMIZATION
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REMEDIAL SYSTEM OPTIMIZATION FOR [Site Name]

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