Note: This file differs from its original in that *Appendix A- Analytical Data Reports-* has been removed to a separate file due to its extremely large size. Appendix A can be found in file:
WorkPlan.BCP.C152248.2019-10-04.RAWP_AppendixA_Data_Reports.pdf

GEI Consultants

Consulting
Engineering and
Scientists

Remedial Action Work Plan

71 New Street Huntington, New York
NYSDEC BCP Site Number: C152248

Prepared for:
New York State Department of Environmental Conservation
Division of Environmental Remediation
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On Behalf of:
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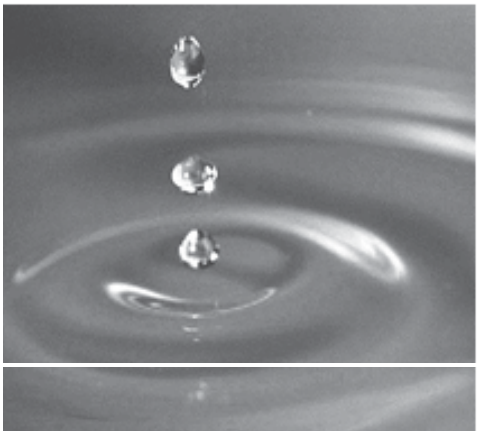

Edward Bradshaw.
Project Manager

Gary A. Rozmus, P.E.
Senior Engineer

Certification

I, Gary A. Rozmus, certify that I am currently a NYS registered professional engineer and that this Remedial Action Work 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).

I certify that all information and statements in this certification are true. I understand that a false statement made herein is punishable as Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

_____ _____

NYS Professional Engineer # 056744 Date

It is a violation of Article 145 of New York State Education Law for any person to alter this document in any way without the express written verification of adoption by any New York State licensed engineer in accordance with Section 7209(2), Article 145, New York State Education Law.

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Acronyms and Abbreviations

Analytical Services Protocol	ASP
Brownfield Cleanup Agreement	BCA
Brownfield Cleanup Program	BCP
Benzene, Toluene, Ethylbenzene, and Xylenes	BTEX
Construction and Demolition Debris	C&D
Community Air Monitoring Program	CAMP
Construction Health and Safety Plan	HASP
Contaminants of Concern	COC
Concourse Village West Owner LLC	Concourse Village
The Construction Quality Assurance Plan	CQAP
Cubic Yards	CY
Division of Materials Management	DMM
Data Usability Summary Report	DUSR
Environmental Conservation Law	ECL
Engineering Controls	ECs
Electronic Data Deliverable	EDD
Enhanced Fluid Recovery	EFR
Environmental Information Management System	EIMS
Environmental Laboratory Accreditation Program	ELAP
EnviroTrac Ltd.	EnviroTrac
Environmental Project Data Statements Company	EPDSCO
Environmental Site Assessment	ESA
Final Engineering Report	FER
Feet Below Ground Surface	ft. bgs
GEI Consulting, Inc., P.C.	GEI
Ground Penetrating Radar	GPR
GTA Engineering Services of New York, P.C.	GTA
Hazardous Waste Operations and Emergency Response	HAZWOPER
Institutional controls	ICs
In Situ Chemical Oxidation	ISCO
Liters Per Minute	L/min
Low-density Polyethylene	LDPE
MS	Matrix Spike
MSDs	Matrix Spike Duplicates
Micrograms per Liter	µg/L

Nanogram per Liter	ng/L
New York State Department of Environmental Conservation	NYSDEC
Operation and Maintenance	O&M
Occupational Safety and Health Administration	OSHA
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Polychlorinated Biphenyls	PCBs
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URS Corporation	URS
United States Environmental Protection Agency	USEPA
United States Geological Survey	USGS
Underground Storage Tanks	USTs
Volatile Organic Compounds	VOCs

Executive Summary

71 New Street Huntington, LLC (the "Applicant") entered into a Brownfield Cleanup Agreement ("BCA") with the New York State Department of Environmental Conservation ("NYSDEC" or the "Department") in November 2017 to investigate, remediate, and redevelop the property located at 71 New Street, Huntington, New York and is identified as Section 69, Block 5, and Lot 34 on the Suffolk County Tax Map (the "Site").

The existing building has been demolished, and a new three-story building with a footprint of 3,074 sf will be built on the south side of the property. The structure will extend along the property lines and include a basement. The first floor will be approximately 3,074 sf and will be used for office space. The second and third stories will be approximately 5,869 sf each, and will overhang the western portion of the parking area. The second and third stories will contain approximately 10 apartments. Re-configured parking areas will frame the northern half of the property and continue under the west portion of the building. Landscaped areas will be included which could be used by apartment residents. An on-site storm water recharge system (i.e. drywell or similar) will be installed under the parking area.

Site Description/Physical Setting/Site History

The Site is located at 71 New Street, Huntington, New York and is identified as Section 69, Block 5, and Lot 34 on the Suffolk County Tax Map. The Site is approximately 13,120 sf in area and bounded by an office building to the north, New Street to the east, beyond which lies a parking lot, a dentist/doctor's office to the west, and a commercial building to the south occupied by a health and fitness facility. The remainder of the block that the Site occupies is developed with office buildings, dentist/doctor's offices, and residential buildings.

Prior to demolition, the Site was improved with a two-story wood framed commercial building with a basement which was occupied as a law publishing office. The remainder of the property, post demolition, includes an asphalt-paved parking lot to the west and north of the former building, and landscaped areas to the east and south of the building.

Electric, water, sanitary sewer, and gas lines are located subsurface throughout the eastern portion of the property. A vent pipe, potentially for an old underground storage tank (UST), was observed to the north of the former building.

The Site was initially developed in the late 1800s with a dwelling/residence. On the 1930 Sanborn Map, the structures on the Site are similar to those in prior maps, however, it is now indicated that the building is being used as both a dwelling and an undertaker. These conditions remain on subsequent Sanborn Maps through the 1968 Sanborn Map. At the time of the Phase I ESA, the building was utilized as a law publishing office. The Phase I ESA also indicated a closed NYSDEC Spill Case for the Site. The spill reportedly involved an

UST vent overfill on February 1, 1992. The incident was investigated and remediated to the satisfaction of the NYSDEC and the spill case was closed on February 3, 1992. The UST was reported as a 1,000-gallon heating oil tank, located along the north side of the building.

Summary of the Remedial Investigation

There is currently no established Soil Cleanup Objective (SCO) by the NYSDEC for formaldehyde but, due to the historic use of the Site and concentrations observed in soil and groundwater, an Action Limit was generated for this specific compound by Suffolk County Department of Health Services (SCDHS) for cleanup. The Action Limit for this compound was set as 1 milligram per kilogram (mg/kg). The summary of findings is based on the RI, as well as information gathered from previous investigations conducted at the Site, included formaldehyde as a Contaminate of Concern:

Soil

The stratigraphy of the Site from the surface down consisted of fill soils; glacial sand deposits; silt and low plasticity clay; and sand with silt and gravel. The fill layer extended to a maximum depth of 11.5 feet below ground surface (ft bgs), and a clay confining layer was encountered at various depths between approximately 23 to 50 ft bgs.

Formaldehyde SCDHS Action Limit exceedances were identified in shallow to deep soil across the Site, with elevated readings observed near the northern suspected drywells (maximum of 22 mg/Kg in the 12 to 14 ft bgs interval) and the southern suspected subsurface vault (maximum of 12.8 mg/Kg in the 5 to 10 ft bgs interval). The only exceedances of the Restricted Residential SCOs (RRUSCOs), which are applicable to the Site, were one (1) detection of lead (570 mg/Kg) in the 0 to 5 ft bgs interval near the southern suspected subsurface vault, and one (1) detection of indeno(1,2,3-cd)pyrene (660 mg/Kg) in the 13 to 15 ft bgs interval near the UST. Several other compounds also exceeded the Unrestricted Use SCOs (UUSCOs), but not the RRUSCOs, including three metals, two pesticides, and total polychlorinated biphenyls in the soil near the northern suspected drywells; three metals and two pesticides near the southern suspected subsurface vault; one semi-volatile organic compound near the UST; two metals in the sediment of the rear exterior stairway drain; and the volatile organic compound (VOC) acetone in the soil across the Site.

The source of the formaldehyde impacts is likely the northern suspected drywells and the southern suspected subsurface vault. The ground-penetrating radar survey conducted during the Phase II Environmental Subsurface Investigation did trace a drainage pipe extending from the basement floor drain towards the southern suspected subsurface vault. The Underground Storage Tank (UST) is likely the source of the indeno(1,2,3-cd)pyrene impacts. No source was identified for the lead impacts, and lead is naturally occurring.

Groundwater

Perched water was observed in all the soil borings at approximately 21.5-23.5 ft bgs, above the silt and clay deposits. The regional groundwater table was observed at approximately 32-41 ft bgs., with recorded groundwater elevations contoured from 36.49-38.09 ft bgs. Based on the Site-specific groundwater depths and calculated elevations, groundwater flows beneath the Site in a northwesterly direction.

Groundwater exceedances of the 6NYCRR Part 703.5 Class GA Ambient Water Quality Standards (AWQS) were limited to formaldehyde and metals. Formaldehyde was only detected in the three (3) groundwater samples collected during previous investigation in the center of the Site in the vicinity of the northern suspected drywells and the southern suspected subsurface vault. Formaldehyde was not detected in the four (4) groundwater samples collected around the perimeter of the Site during the RI. This further indicates that the suspected drywells and subsurface vault are likely the source of the formaldehyde impacts.

Metals impacts were detected in the groundwater across the Site. The total metals impacts are likely due to soil particles entrained in the samples, and the dissolved metals impacts are related to background conditions or road salt application.

Several per- and polyfluorylalkys substances (PFAS) compounds were detected in the groundwater. Perfluorooctanoic acid and perfluorooctanesulfonic acid were detected below the United States Environmental Protection Agency (USEPA) established health advisory level. No USEPA advisory levels have been set for the remaining PFAS compounds. The remaining PFAS compounds were compared to a screening level of 100 ng/L for any individual compound and 500 ng/L for the total PFAS concentration, based on NYSDEC recommendations for other NYSBCP sites. No individual PFAS compounds were detected at a concentration above 100 ng/L, and the total PFAS concentrations were below the screening level of 500 ng/L.

Soil Vapor

Several petroleum-related, chlorinated, non-chlorinated, and refrigerant VOCs were detected in the soil vapor and sub-slab soil vapor samples collected. Many of these compounds were also detected in the indoor and outdoor air samples, but at lower concentrations. Formaldehyde was detected in the indoor and outdoor air. Petroleum-related VOCs were generally detected at higher concentrations in the sub-slab soil vapor samples. Chlorinated VOCs were only detected in one soil vapor sample in the southwest portion of the Site, as well as the indoor and outdoor air samples. Carbon tetrachloride was detected at a concentration in the indoor air for which the New York State Department of Health Guidance matrix response would be to identify sources and resample or mitigate. The remaining

chlorinated VOCs included in the NYSDOH Guidance were detected at concentrations that would require no further action.

Qualitative Human Health Exposure Assessment

The following section summarizes the exposure assessment based on data collected during the historical investigations:

An exposure assessment was completed based on data collected during the historical investigations. Prior to the start of the RA and redevelopment excavation activities, there was no potential exposure to soil, groundwater or soil vapor. Following the start of excavation activities, an exposure pathway may be completed when the building is fully demolished/the foundation elements are removed and the asphalt parking lot located on the Site is removed and excavation activities fully commence. There is also a potential that receptors, limited to on-Site personnel, may be exposed to the fill layers currently on-Site and the impacted groundwater, if excavation is completed below the groundwater table. Petroleum-related and chlorinated VOCs in soil vapor are within background levels and future construction will include an evaluation of potential soil vapor mitigation.

Summary of the Remedy

A Track 4 cleanup is proposed consisting of the following remedial components:

1. A remedial design program to verify the components of the conceptual design and provide the details necessary for the construction, operation and maintenance, and monitoring of the remedial program.

2. Soil Excavation - The existing on-Site building will be demolished prior to start of excavation activities and materials that cannot be reused on-Site will be taken off-site for proper disposal to implement the remedy. The entire Site will be excavated as follows for redevelopment purposes:

    - Removal of on-Site soils to redevelopment grade of 10 ft bgs where building foundations shall be installed;
    - Removal of the northern suspected drywell structures and removal of on-Site soils in this area to 15 ft bgs;
    - Removal of the southern suspected subsurface vault structure and removal of on-Site soils in this area to 10 ft bgs;
    - Removal of on-Site soil where the on-Site storm water recharge system (i.e. drywell or similar) will be installed; and

- Excavation and off-site disposal will be completed for any USTs and associated piping, or other structures encountered.

This material has been identified as either contaminated during the RI activities, i.e. soils identified as containing concentrations of contaminants exceeding the Department's RRSCOs, as defined by NYCRR Part 375-6.8, or was classified as formaldehyde-impacted material that exceeds SCDHS Action Limits during the completion of a geotechnical investigation of the Site. These contaminated soils will be removed from the Site and properly disposed of at a regulated facility.

3. If a source of groundwater contamination is identified on-Site, an appropriate groundwater remedy will be determined during implementation of this RAWP.

4. Implementation of an Engineering Control (EC) in the form of a composite cover system consisting of concrete cover, concrete building foundation and slabs, asphalt, permeable pavers, and clean soil cover in areas of the Site not overlain by an impervious surface. Upon completion of the redevelopment, the entirety of the Site will be either paved or under a building slab.

5. Recording of an Environmental Easement, including Institutional Controls (ICs), to prevent future exposure to any residual contamination remaining at the Site.

    a. Requires the remedial party or site owner to completed and submit to the Department a periodic certification of ECs/ICs in accordance with Part 375-1.8(h)(3);
    b. Allows the use and development of the controlled property for restricted residential use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
    c. Restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYCDOH; and
    d. Requires compliance with the Department-approved SMP.

6. A Site Management Plan (SMP) will be utilized, which will include the following:

- An IC/EC Plan that identifies all use restrictions and engineering controls for the Site and details the steps and media-specific requirements necessary to ensure the following IC/EC remain in place and effective:

- Institutional Controls: The Environmental Easement discussed above.

- Environmental Controls: The cover system discussed in Paragraph 4 above. The plan includes, but may not be limited to:

- An Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- Descriptions of the provisions of the environmental easement including any land use, and groundwater use restrictions;
- A provision for evaluation of the potential for soil vapor intrusion for any occupied building on the Site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- Should a building foundation or building slab be removed in the future, a cover system consistent with that described above will be placed in any areas where the upper two feet of exposed surface soil exceed the applicable SCOs;
- Provisions for the management and inspection of the identified engineering controls;
- Maintaining site access controls and Department notifications; and
- The steps necessary for the periodic reviews and certification of the IC/EC.

- A Monitoring Plan to assess the performance and effectiveness of the remedy will be included in the SMP. The plan includes, but may not be limited to:
  - Monitoring of groundwater to assess the performance and effectiveness of the remedy;
  - A schedule of monitoring and frequency of submittals to the Department; and
  - Monitoring for vapor intrusions for any buildings on the Site, as may be required by the IC/EC Plan discussed above.

1. Introduction

71 New Street Huntington, LLC entered into a Brownfield Cleanup Agreement (BCA) with the New York State Department of Environmental Conservation (NYSDEC) in September 2017, to investigate and potentially remediate a 13,120-square foot (sf) property located at 71 New Street (Tax Section 69, Block 5, Lot 34) in Huntington, New York (the "Site"). 71 New Street Huntington, LLC is a Volunteer in the NYSDEC Brownfield Cleanup Program (BCP), with the Site identified as BCP Site No. C152248. Restricted residential use is proposed for the property. When completed, the Site will contain a three-story building with a footprint of 3,074-sf on the south side of the property.

This RAWP summarizes the nature and extent of contamination as determined from data gathered during historical investigations, the Remedial Investigation (RI), performed in June and July 2018. It provides an evaluation of a Track 4 cleanup and other applicable Remedial Action (RA) alternatives, their associated costs, and the recommended and preferred remedy. The remedy described in this document is consistent with the procedures defined in DER Technical Guidance for Site Investigation and Remediation (DER-10) and complies with all applicable standards, criteria, and guidance. The remedy described in this document also complies with all applicable Federal, State, and local laws, regulations and requirements. The RI for this Site did not identify fish and wildlife resources. A formal Remedial Design document will not be prepared.

1.1 Site Location and Surrounding Property Description

The Site is located at 71 New Street, Huntington, New York and is identified as Section 69, Block 5, and Lot 34 on the Suffolk County Tax Map (see **Figure 1**). The Site is approximately 13,120 sf in area and bounded by an office building to the north, New Street to the east, beyond which lies a parking lot, a dentist/doctor's office to the west, and a commercial building to the south occupied by a health and fitness facility. The remainder of the block that the Site occupies is developed with office buildings, dentist/doctor's offices, and residential buildings. A boundary map is attached to the BCA as required by Environmental Conservation Law (ECL) Title 14 Section 27-1419, with the Site Plan attached as **Figure 2**.

The Site, prior to demolition of the building, was improved with a two-story wood framed commercial building with a basement. The remainder of the property includes an asphalt-paved parking lot to the west and north of the building, and landscaped areas to the east and south of the building.

Electric, water, sanitary sewer, and gas lines are located subsurface throughout the eastern portion of the property. A vent pipe, potentially for an old underground storage tank (UST), was observed to the north of the former building.

1.2 Contemplated Redevelopment Plan

The RA to be performed under the RAWP is intended to make the Site protective of human health and the environment consistent with the contemplated end use. The proposed redevelopment plan and end use is described here to provide the basis for this assessment.

Once all impacted soils have been removed from the site, a new three-story building with a footprint of 3,074 sf will be built on the south side of the property. The structure will extend along the property lines and include a basement. The first floor will be approximately 3,074 sf and will be used for office space. The second and third stories will be approximately 5,869 sf each and will overhang the western portion of the parking area. The second and third stories will contain approximately 10 apartments. Re-configured parking areas will frame the northern half of the property and continue under the west portion of the building. Landscaped areas will be included which could be used by apartment residents. An on-site storm water recharge system (i.e. drywell or similar) will be installed under the parking area.

Drawings associated with the re-development were included as an Appendix of the GEI Consultants, Inc., P.C. (GEI) Remedial Investigation Report (RIR).

1.3 Current Site Conditions

During this time period, Implementation of the RA commenced in advance of a final approved RAWP or NYSDEC Decision Document. These activities shall be noted as deviations in the Final Engineering Report (FER):

- Following acceptance into the BCP, the Volunteer commenced demolition of the single, two-story wood framed commercial building located within the Site boundary. No other RA field activities have been completed during this time, pending final RAWP approval and generated of the DD.

2. Description of Site History and Investigation Findings

Several previous investigations have been conducted at the Site. As part of this RI, GEI reviewed the Phase I Environmental Site Assessment (ESA) prepared by Middleton Environmental Inc. (MEI), a Phase II Environmental Subsurface Investigation (ESI) report, and a Geotechnical Investigation report both prepared by GEI. The previous investigation reports were provided as an Appendix in GEI's RIR. The findings of the Site history, the historical investigations, and the most recent investigations completed by GEI, are summarized in this section.

2.1 Site History

The Site was initially developed in the late 1800s with a dwelling/residence. On the 1930 Sanborn Map, the structures on the Site are similar to those in prior maps, however, it is now indicated that the building is being used as both a dwelling and an undertaker. These conditions remain on subsequent Sanborn Maps through the 1968 Sanborn Map. At the time of the Phase I ESA, the building was utilized as a law publishing office. The Phase I ESA also indicated a closed NYSDEC Spill Case for the Site. The spill reportedly involved an UST vent overfill on February 1, 1992. The incident was investigated and remediated to the satisfaction of the NYSDEC and the spill case was closed on February 3, 1992. The UST was reported as a 1,000-gallon heating oil tank, located along the north side of the building.

2.2 Summary of Previous Reports and Investigations

Several previous investigations have been conducted at the Site, specifically a Phase I Environmental Site Assessment (ESA) prepared by Middleton Environmental Inc. (MEI), a Phase II Environmental Subsurface Investigation (ESI) report, and a Geotechnical Investigation report, and an additional Phase II ESI, both prepared by GEI. The previous investigation reports were provided as appendices in GEI's RIR, with a brief summary below.

2.2.1 2017 Middleton Environmental Inc. Phase I ESA

MEI performed a Phase I ESA in 2017. The results of the Phase I ESA indicated that the property had been formerly utilized by an undertaker. A closed NYSDEC petroleum spill (Spill No. 91-11282) was also identified for the Site. The spill was assigned on February 1, 1992 when a vent over-fill occurred. The spill incident was investigated and remediated to the satisfaction of the NYSDEC and the spill file was closed on February 3, 1992.

Two recognized environmental conditions (RECs) for the Site were identified:

- According to the property manager, an approximately 1,000-gallon heating oil UST was abandoned-in-place. A vent pipe was observed on the north side of the building. However, there was no documentation pertaining to any past tank tests or abandonment information. MEI recommended that soil borings be extracted from the perimeter of this UST to determine if any contamination from past tank leakage impacted the subsurface.

- A floor drain was observed inside the basement area of the building. The floor drain did not show any signs of chemical or petroleum staining. Based on the past usage of the Site, MEI recommended that the floor drain be dye tested to determine the discharge location. MEI also recommended that a sample of the sediment from the base of the drain or cesspool/drywell be extracted and analyzed to determine if any contamination from past embalming activities impacted the subsurface.

2.2.2 2017 GEI Consultants, Inc., P.C. Geotechnical Report

GEI performed a geotechnical investigation and prepared a Geotechnical Report dated February 2, 2017. Five (5) soil borings were advanced to 25 feet below ground surface (ft bgs) to develop recommendations for the foundation design and construction of the proposed three-story mixed-use building. The soil stratigraphy, from the surface down, consisted of topsoil in the unpaved areas underlain by fill and native soils. The fill consisted of fine-grained soils with gravel and some debris (brick) and extended to depths of 2 to 8 ft bgs. The fill was underlain by native soils, consisting of narrowly graded sand to a silty sand, to the boring termination depth.

One of the borings in the northern portion of the Site encountered a void from approximately 2 to 6 ft bgs. This area was further investigated in the GEI Phase II ESI, discussed in Section 2.2.3..

2.2.3 2017 GEI Consultants, Inc., P.C. Phase II ESI

GEI performed a subsurface investigation in February 2017, a supplemental subsurface investigation in March 2017, and prepared a Phase II ESI report dated May 10, 2017. The ESI was performed to further investigate the former use of the Site as a funeral parlor, the closed NYSDEC Spill and UST, the basement floor drain, a drain located within the landing of a rear exterior stairway, and the two suspected subsurface drywells in the northern portion of the Site. As part of the initial investigation, a geophysical survey was conducted, five (5) soil borings were performed (SB-1 through SB-5), four (4) soil samples were collected, and three (3) groundwater samples (GW-1 through GW-3) were collected. The supplemental

investigation included three (3) soil borings (DS-1 through DS-3) and the collection of six (6) soil samples.

Based on the findings of the Phase II ESI, the following conclusions were reached:

- The soil at the UST area was marginally impacted by SVOCs. No petroleum-impacts were noted.

- The soil at the two-northern suspected storm water drywells was impacted by formaldehyde and metals, and the soil at the southern suspected subsurface vault was impacted by solely formaldehyde.

- All groundwater samples were impacted by formaldehyde and metals exceeding the New York State 6 NYCRR Part 703.5 Glass GA Ambient Water Quality Standards (AWQS). It is noted that the metals results were of non-filtered samples and that dissolved levels in groundwater could be lower; however, based on the detected concentrations and exceedances noted, it is likely that elevated metals concentrations are present in the groundwater.

Though there is no NYSDEC Soil Cleanup Objective (SCO) for formaldehyde, Suffolk County Department of Health Services (SCDHS) has established cleanup objectives and action levels for this specific compound for soil through the Article 12 Standard Operating Procedure No. 9-95 Action Levels (Article 12). As stated in Article 12, "the Department may require additional analysis to be performed based on the chemicals stored, or in use, at a site". Due to the historic use of the Site as a funeral parlor, an "Action Level" for formaldehyde was established by SCDHS of 1 milligram per kilogram (mg/kg)

2.3 Summary Remedial Investigations Performed

A Remedial Investigation (RI) was conducted by GEI in June and July 2017. The objective of the investigation was to obtain valid data to evaluate and define the nature, extent, and degree of formaldehyde, the primary contaminant of concern (COC) on-Site as determined by SCDHS, SVOCs, and metals impacts previously identified on-Site. To accomplish these goals, the following tasks were completed during the field investigation:

- Advancement of 12 soil borings site wide and the collection of 53 soil samples for laboratory analysis to evaluate soil quality;

- Installation of four (4) monitoring wells and the collection of four (4) groundwater samples for chemical analysis to evaluate groundwater quality; and

- Installation of four (4) soil vapor probes and two (2) sub-slab soil vapor probes and the collection of four (4) soil vapor samples, two (2) sub-slab soil vapor samples, two (2) indoor air samples, and one (1) outdoor air sample for chemical analysis.

Soil, groundwater, and soil vapor samples were collected during the RI to determine the nature, magnitude, and extent of contamination occurring in various media on-Site. The soil boring numbers (SB-6 through SB-13) were continued from the Phase II ESI (SB-1 through SB-5).

The data collected during the investigations are compared with the Standards, Criteria and Guidance values (SCGs) applicable to each medium sampled, and include:

- Soil: NYSDEC 6NYCRR Part 375 Environmental Remediation Programs: Part 375-6.8: Soil Cleanup Objectives for Unrestricted and Restricted Residential Use (UUSCOs and RRUSCOs);
- Groundwater: New York State 6NYCRR Part 703.5 Class GA Ambient Water Quality Standards (AWQS); and
- Air: No established criteria exist for soil vapor; however, the data is compared to the New York State Department of Health (NYSDOH) for Evaluating Soil Vapor Intrusion in the New York State dated October 2006 and the May 2017 revised Soil Vapor/Indoor Air Matrix, to evaluate the need for mitigation.

2.3.1 Geophysical Survey and Utility Mark-Outs

A geophysical survey was previously conducted on-Site during the 2017 GEI Phase II ESI, utilizing ground penetrating radar (GPR) and a magnetometer, to determine the existence of any subsurface anomalies indicative of USTs or drainage structures, and to locate on-Site utilities. As discussed above, an anomaly indicative of an approximately 1,000-gallon UST was observed on the north side of the building, two anomalies indicative of subsurface drywells were observed on the north side of the Site, and an anomaly indicative of a subsurface drainage structure was observed to the south of the building in-line with a drainage pipe that was traced from the basement floor drain.

2.3.2 Soil Borings

A total of 12 soil borings (SB-6 through SB-13 and MW-1 through MW-4) were advanced at the Site. Four (4) soil borings (SB-6 through SB-9) were advanced around the exterior of the two suspected drywells located in the northern portion of the Site, and three (3) soil borings (SB-10 through SB-12) were advanced around the exterior of the suspected subsurface vault located to the south of the building. Additionally, one (1) soil boring was advanced within the approximate area of the suspected vault (SB-13), although the suspected vault lid was not found. These soil borings were planned to extend to the water table, anticipated at

approximately 35 ft bgs, but a clay confining layer was encountered from approximately 30 to 35 ft bgs at all eight (8) soil boring locations. Perched water was also present above the clay confining layer. Therefore, the drywell and vault soil borings terminated at 35 ft bgs and did not extend beyond the clay layer.

Four (4) groundwater monitoring well soil borings (MW-1 through MW-4) were advanced around the perimeter of the Site, and monitoring wells were installed, as described below. The monitoring well soil borings were advanced approximately 10 feet into the water table, and the downgradient soil boring (MW-4) was advanced approximately 30 feet into the water table.

One composite soil sample, except for the VOC sample, was collected from every 5-foot interval of the drywell and vault soil borings and sent for laboratory analysis. The VOC sample was collected as a grab sample from each 5-foot interval. Perched water was encountered from approximately 21.5 to 23.5 feet bgs. Samples from the soil borings were collected and sent for laboratory analysis that exhibited indications of impacts (e.g., staining and odor), or if no impacts were detected, the sample directly above the water table was analyzed. In total, 53 soil samples were collected using either a Geoprobe® or hand augers. Hand augers were utilized for shallow soil sampling, i.e., less than 5 ft bgs. Soil cores were obtained using a stainless steel and a macro-core sampler with an internal acetate liner. Soil cores were field-screened using a PID, which measures relative concentrations of VOCs in the soil. The PID was calibrated at the beginning of each field day with 100 ppm isobutylene calibration gas.

Soil samples were collected continuously and inspected for impacts (e.g., staining and odor). No petroleum odors, staining, or significantly elevated PID readings were noted in soil headspace at the soil boring locations.

Soil samples were properly transported to TestAmerica Laboratories, Inc., a NYSDOH Environmental Laboratory Accreditation Program (ELAP)-certified laboratory under chain-of-custody procedures and analyzed for the following:

- Target Compound List (TCL) VOCs by United States Environmental Protection Agency (USEPA) Method 8260C;
- TCL SVOCs by USEPA Method 8270D;
- Target Analyte List (TAL) Metals by USEPA Method 6020B;
- Herbicides by USEPA Method 8151A;
- Pesticides by USEPA Method 8081B;
- Polychlorinated Biphenyls (PCBs) by USEPA Method 8082A; and

- Formaldehyde by USEPA Method 8315A.

If two consecutive samples from the drywell or vault soil borings indicated that no compounds exceeded the regulatory limits, the remaining samples were not analyzed. The samples from the 25 to 30-foot bgs interval in borings SB-6 through SB-9 were only analyzed for previous compounds/analytical suites that had exceeded the regulatory limits in the overlying samples. In a call later in the day on July 3, 2018, the NYSDEC stated that the samples should be analyzed for all compounds, instead of only analyzing for compounds where exceedances were noted, as was done at SB-6 through SB-9. This was carried out for the samples from borings SB-10 through SB-13.

Soil analytical data are provided in **1**. The analytical results of soil samples exceeding the NYSDEC SCOs and SCDHS Action Limits for specifically formaldehyde are summarized on **Figure 3**. The lab reports are found in **Appendix A**. Soil borings logs are included in **Appendix B**.

2.3.3 Monitoring Wells

Four (4) 2-inch schedule 40 polyvinyl chloride (PVC) monitoring wells (MW-1 through MW-4) were installed on-Site to intersect the groundwater interface. The three upgradient wells (MW-1 through MW-3) were installed to depths of 48 to 50 ft bgs, with at least 9 feet of 0.010-inch slot screen within the groundwater and approximately 1-foot of screen above. Monitoring well MW-1 was screened from 40-50 ft bgs, MW-2 was screened from 38-48 ft bgs, and MW-3 was screened from 35-50 ft bgs, due to clay present from approximately 30-47 ft bgs. The downgradient monitoring well, MW-4, which was expected to be the downgradient well, was installed at a depth of 60 ft bgs, and was screened (0.010-inch slot) from 30-60 ft bgs. Each monitoring well was completed with a Morie #1 sand pack to two feet above top-of-screen, two feet of wetted bentonite pellets, and tremie-grout to the surface. Each well was finished with an expanding well cap and an 8-inch road box. Monitoring well construction logs are included in **Appendix B**.

The monitoring wells were developed using a high flow pump and were monitored for drawdown and recovery. Monitoring wells MW-1 through MW-3 would drawdown completely during development and then recharge. These wells were pumped dry and allowed to recharge several times. Monitoring well MW-4 was purged until the turbidity dropped below 50 nephelometric turbidity units.

The sampling was conducted using low-flow sampling methodology with dedicated and decontaminated sampling equipment. Prior to collecting the groundwater samples, the depth to groundwater and the total well depth was measured at each of the groundwater monitoring wells using a water level meter accurate to 0.01 ft. No free phase product was detected in any of the groundwater monitoring wells during installation, purging, or sampling.

Perched water was observed in all the soil borings at approximately 21.5-23.5 ft bgs, above the silt and clay deposits. The regional groundwater table was observed at approximately 36.49 – 38.09 ft bgs. A groundwater contour map showing Site-specific groundwater measurements, elevations, and the estimated groundwater flow direction is provided in **Figure 4**.

Groundwater samples collected were properly transported to TestAmerica Laboratories, Inc., a NYSDOH ELAP-certified laboratory under chain-of-custody procedures and analyzed for the following:

- TCL VOCs by USEPA Method 8260C;
- TCL SVOCs by USEPA Method 8270D;
- Dissolved TAL Metals by USEPA Method 6020B;
- Formaldehyde by USEPA Method 8315A;
- Phenols by USEPA Method 420;
- 1,4-Dioxane by USEPA Method 8270D; and
- Per- and Polyfluoroalkyl Substances (PFAS) by USEPA Method 537.

Groundwater analytical data are provided in **Table 2**. The analytical results of groundwater samples exceeding these standards are summarized on **Figure 5**. The lab reports are found in **Appendix A**.

2.3.4 Soil Vapor Points

Soil vapor, sub-slab soil vapor, indoor air, and outdoor air sampling was also completed at the Site during the RI. Four (4) soil vapor samples (SV-1 through SV-4), two (2) sub-slab soil vapor samples (SSSV-1 and SSSV-2), two (2) indoor air samples (IA-1 and IA-2), and one (1) outdoor air sample (OA-1) were collected.

The soil vapor probes (SV-1 through SV-4) were installed using 1-inch diameter steel drill rods advanced using direct-push drilling methods to a depth of 6 ft bgs. The soil vapor probes consisted of a prefabricated 2-3-inch perforated steel vapor probe tip attached to 3/8-inch diameter low-density polyethylene (LDPE) plastic riser tubing. Once driven to depth, the rods were removed leaving only the tip and the tubing. A 4-inch diameter coring saw was used to install the sub-slab soil vapor probes (SSSV-1 and SSSV-2) directly below the basement slab. The soil vapor and sub-slab vapor boreholes were backfilled with #2 Morie well-grade gravel. A surface seal was placed using an impermeable clay seal installed within the last 6 inches of the probe-hole annulus from surface grade level. The vapor wells were purged using a hand pump after installation.

VOC samples were collected in 6-liter Summa canisters which were certified clean by the laboratory and analyzed using USEPA Method TO-15. Phenol samples were collected using 150-mg XAD-7 tubes and analyzed using NIOSH Method 2546. Formaldehyde indoor air and outdoor air samples were collected using SKC UMEX-100 passive samplers and analyzed using USEPA Method 8315A. There was no way to expose the formaldehyde passive sampling device to the soil vapor, so soil vapor and SSSV samples were not submitted for formaldehyde analysis. The flow rate of both purging and sampling did not exceed 0.2 liters per minute (L/min). Prior to collection, each soil vapor and SSSV sampling point was purged of three sample volumes using a hand pump. The VOC and formaldehyde samples were collected over a period of eight hours, and the phenol samples were collected over a period of four hours. The phenol sampling medium can only be exposed to the air for a period of four hours.

As part of the vapor intrusion evaluation, a tracer gas was used in accordance with NYSDOH protocols to verify the integrity of the soil vapor and SSSV probe seal. Helium was used as the tracer gas and an inverted bucket served to keep it in contact with the probe during testing. A portable monitoring device was used to analyze a sample of soil vapor for the tracer prior to and at the end of sampling. Helium readings were below the required 10% both before and after sampling, indicating that the probe seals remained intact. Upon completion of sampling, the soil vapor and SSSV probes were removed from the borehole, the borehole was filled with bentonite powder and hydrated, and the surface patched.

Pertinent information including sample identification, date and time of sample collection, identity of samplers, sampling depth, sampling methods and devices, soil vapor purge volumes, volume of soil vapor extracted, vacuum of canisters before and after the samples are collected, apparent moisture content of the sampling zone, and chain-of-custody protocols were recorded. Soil vapor, SSSV, indoor air, and outdoor air samples collected were properly transported to TestAmerica Laboratories, Inc., a NYSDOH ELAP-certified laboratory under chain-of-custody procedures.

Soil vapor, SSSV, indoor and outdoor air analytical data are provided in **Table 3**. A map showing air detections is provided as **Figure 6**.

2.4 Geological and Hydrogeological Conditions

Based upon GEI's RI and Geotechnical Report, the subsurface conditions, in order of increasing depth, consist of: fill soils; glacial sand deposits; silt and low plasticity clay; and sand with silt and gravel. The fill typically consists of sand with gravel and silty sand with varying amounts of red brick and concrete and was observed up to 11.5 ft bgs on the Site. The glacial sand deposits underlying the surficial fill layer typically consisted of sand with gravel, silty sand, and sandy gravel extending to depths of approximately 23-31.5 ft bgs. Underlying the glacial sand deposits was silt, sandy silt and clay, and clay extending to

depths up to 50 ft bgs. This layer was underlain by sand with gravel and silty sand, with some interbedded silt and clay, extending to the termination depth of the borings.

The topography of the area slopes consistently downward from southwest to northeast with a range of elevation starting from 79 ft along the western boundary of the Site and sloping down to 73 ft along New Street, as surveyed using NAVD 88.

2.5 Contamination Conditions

The following sections provide a summary of the contamination identified during the most recent RI.

2.5.1 Conceptual Model of Site Contamination

Based on the results of previous investigations and data collected during the RI conducted at the Site indicate that impacts are present in soil, groundwater and to a lesser extent, in soil vapor. The soil impacts are primarily limited to formaldehyde, and to a lesser extent lead and indeno(1,2,3-cd)pyrene. Groundwater impacts at the Site are limited to metals. The source of formaldehyde is likely the northern suspected drywells and southern suspected subsurface vault. The metals exceedances in groundwater are likely due to background conditions or are related to road salt application (sodium).

2.5.2 Description of Areas of Concern

Prior to and during implementation of the RI, the following Areas of Concern (AOC) were identified and investigated:

- The former use of the property as a funeral parlor (highly likely the source of the formaldehyde impacts in soil and groundwater);
- The closed NYSDEC Spill Case for the Site. The spill reportedly involved an UST vent overfill on February 1, 1992. The incident was investigated and remediated to the satisfaction of the NYSDEC and the spill case was closed on February 3, 1992. The UST was reported as a 1,000-gallon heating oil tank, located along the north side of the building, which was not confirmed to be present during previous investigations;
- The floor drain in the southwestern portion of the building basement. The drain may have been associated with the discharge of embalming fluids when the funeral parlor was in operation. This drain may have been connected to an exterior subsurface drywell outside the adjacent southern building wall;
- A drain located within the landing of a rear exterior stairway; and

- A suspected subsurface drywell located along the northern property line.

2.5.3 Identification of Standards, Criteria and Guidance

As defined in the DER-10, SCGs are the New York State regulations or statutes that dictate the cleanup standards, standards of control and other substantive environmental protection requirements, criteria, or limitations which are generally applicable, consistently applied, officially promulgated, and are directly applicable to a remedial action.

The SCGs that apply to this Site are:

- 6 NYCRR § 375-1: General Remedial Program Requirements;
- 6 NYCRR§ 375-3: Brownfield Cleanup Program;
- 6 NYCRR§ 375-6: Remedial Program Soil Cleanup Objectives;
- NYSDEC TOGS 1.1.1 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations;
- Guidance for Evaluating Soil Vapor Intrusion in New York; and
- DER-10 Technical Guidance for Site Investigation and Remediation.

2.5.4 Soil/Fill Contamination

The RI confirmed the presence of contaminated as the primary contaminant on-Site. Analytical lab data indicates Site-wide impacts of formaldehyde, metals and SVOCs in soil above the Restricted Residential Use SCOs.

A total of 12 soil borings (SB-6 through SB-13 and MW-1 through MW-4) were advanced at the Site. Four (4) soil borings (SB-6 through SB-9) were advanced around the exterior of the two suspected drywells located in the northern portion of the Site, and three (3) soil borings (SB-10 through SB-12) were advanced around the exterior of the suspected subsurface vault located to the south of the building. Additionally, one (1) soil boring was advanced within the approximate area of the suspected vault (SB-13), although the suspected vault lid was not found.

2.5.4.1 Northern Suspected Drywells

A total of 24 soil samples were collected in the area adjacent to the two northern suspected drywells. No samples exceeded the UUSCOs or RRUSCOs for SVOCs or herbicides. No samples exceeded RRUSCOs for VOCs, pesticides, metals, and PCBs.

The SCDHS Action Level was exceeded in 10 samples, with a maximum concentration of 2.4 mg/kg in the SB-8 20 to 22.5 ft bgs sample. The formaldehyde SCDHS Action Level

exceedances were identified at all four (4) sample locations and were found in the shallow to deep sample intervals.

The only VOC to exceed the UUSCOs was acetone in 14 samples, with a maximum concentration of 160 µg/Kg in the duplicate sample of SB-9 15 to 20-ft bgs.

Metal exceeded the UUSCOs in two (2) shallow soil samples from two (2) sample locations, with a maximum of 139 mg/kg for lead at SB-8 (0 to 5-ft bgs) and a maximum of 0.77 mg/kg for mercury at SB-9 (5 to 10-ft bgs).

Pesticides 4,4'-dichlorodiphenyldichloroethylene (DDE) (maximum of 17 µg/kg at the SB-8 0 to 5 ft bgs interval) and 4,4'-dichlorodiphenyltrichloroethane (DDT) (maximum of 16 µg/kg at the SB-8 0 to 5 ft bgs interval) exceeded the UUSCOs in the 0 to 5 ft bgs interval in two (2) soil samples from two (2) sample locations each.

The total PCBs concentration exceeded the UUSCOs in eight (8) samples. The maximum of 770 µg/kg was detected at SB-9 5 to 10 ft bgs interval. The total PCBs UUSCO exceedances were identified at all four (4) sample locations and were found in the shallow to deep sample intervals. No exceedances of individual PCB compounds were identified.

2.5.4.2 Southern Suspected Subsurface Vault

A total of 25 soil samples were collected adjacent to this vault. No samples exceeded the UUSCOs or RRUSCOs for SVOCs, PCBs, or herbicides. No samples exceeded RRUSCOs for VOCs or pesticides.

Formaldehyde detections exceeded the SCDHS Action Level in eight (8) samples, with a maximum of 12.8 mg/kg detected in the 5 to 10-ft. bgs interval at SB-12. The formaldehyde SCDHS Action Level exceedances were identified at three (3) sample locations (SB-10 through SB-12) and were found in the shallow to deep sample intervals.

The only VOC to exceed the UUSCOs was acetone in 14 samples, with a maximum concentration of 130 µg/kg in the SB-10 5 to 10 ft bgs sample. The acetone UUSCO exceedances were identified at all four (4) sample locations and were found throughout the sampling column.

Metal RRUSCO exceedances were limited to lead in one (1) sample, SB-13 from 0 to 5 ft bgs, with a concentration of 570 mg/kg. Lead also exceeded the UUSCOs in the 0 to 5 ft bgs interval at the other three (3) sample locations, with a maximum concentration of 158 mg/Kg at the SB-10 location. Mercury exceeded the UUSCOs in the SB-10 0 to 5 ft bgs sample (0.19 mg/kg), and zinc exceeded the UUSCOs in the SB-13 0 to 5 ft bgs sample (183 mg/kg).

The pesticides 4,4'-DDE (4.2 µg/Kg in the SB-12 0 to 5 ft bgs interval) and 4,4'-DDT (maximum of 10 µg/kg in the SB-13 0 to 5 ft bgs interval) exceeded the UUSCOs in the 0 to 5 ft bgs interval at one (1) and two (2) sample locations, respectively.

2.5.4.3 Site Characterization Soil Sampling

Four (4) monitoring well soil borings (MW-1 through MW-4) were advanced around the perimeter of the Site, with soil samples being collected at the groundwater interface elevation. No samples exceeded the UUSCOs or RRUSCOs for SVOCs, PCBs, pesticides, herbicides, or metals. No samples exceeded RRUSCOs for VOCs.

Formaldehyde (maximum of 2.05 mg/Kg in the MW-3 20 to 23.5 ft bgs interval) exceeded the SCDHS Action Levels in three (3) sample locations (MW-2 through MW-4).

The only VOC to exceed the UUSCOs was acetone in two sample locations (MW-1 and MW-3), with a maximum concentration of 58 µg/kg in the MW-3 20 to 23.5 ft bgs sample

2.5.5 On-Site Groundwater Contamination

Data collected during the RI was sufficient to delineate the distribution of contaminants in groundwater at the Site, with a total of four (4) samples collected upgradient, downgradient, and within the BCP Site. Groundwater beneath the Site is impacted by metals above the NYSDEC TOGS for GA groundwater. The metals exceedances are likely due to background conditions or are related to road salt application (sodium).

2.5.5.1 Comparison of Groundwater with SCGs

Based on the Site-specific groundwater depths and calculated elevations, groundwater flows northwesterly beneath the Site. The groundwater laboratory analysis results were compared to NYSDEC TOGS for Class GA groundwater. A total of four (4) groundwater samples were collected during completion of the RI from temporary monitoring wells.

No samples exceeded the AWQS for VOCs or SVOCs. There were no detections of formaldehyde or 1,4-dioxane in the four (4) samples collected.

Metals exceedances of the AWQS were identified in each of the four (4) monitoring wells sampled during the RI. Dissolved manganese (maximum of 5,250 µg/L in MW-3) and dissolved sodium (maximum of 63,700 µg/L in MW-4) were detected above the AWQS in all four (4) wells. The metals exceedances are likely due to background conditions or are related to road salt application (sodium).

All four (4) monitoring wells sampled exhibited trace levels of PFAS. The USEPA established a health advisory of 70 parts per trillion for PFOA and PFOS, based upon an

assessment of the latest peer-reviewed science to provide drinking water system operators and state, tribal, and local officials with information on the health risks of these chemicals. The maximum detected concentrations of PFOA and PFOS, as well as their combined concentration, is below the 70 parts per trillion health advisory level. It should be noted that the health advisory only applies to drinking water, and the Site is served by public water. No advisory levels have been set for the remaining PFAS compounds. The remaining PFAS compounds were compared to a screening level of 100 ng/L for any individual compound and 500 ng/L for the total PFAS concentration, based on NYSDEC recommendations for other NYSBCP sites. No individual PFAS compounds were detected at a concentration above 100 ng/L, and the maximum total PFAS concentration was 95.32 ng/L in the MW-1 sample, which is below the screening level of 500 ng/L.

2.5.6 On-Site Soil Vapor Contamination

Four (4) soil vapor samples (SV-1 through SV-4), two (2) sub-slab soil vapor samples (SSSV-1 and SSSV-2), two (2) indoor air samples (IA-1 and IA-2), and one (1) outdoor air sample (OA-1) were collected.

2.5.6.1 Comparison of Soil Vapor with SCGs

Several petroleum-related, chlorinated, non-chlorinated, and refrigerant VOCs were detected in the soil vapor and sub-slab soil vapor samples collected. Many of these compounds were also detected in the indoor and outdoor air samples, but at lower concentrations. Petroleum-related VOCs were detected in each of the six (6) soil vapor and sub-slab soil vapor samples; however, the concentrations were generally higher in the sub-slab soil vapor samples (SSSV-1 and SSSV-2). The petroleum-related compounds detected included benzene, toluene, ethylbenzene, o-xylene, and p- & m- xylenes (BTEX), in addition to 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, 1,3-butadiene, 1,3-dichlorobenzene, 2,2,4-trimethylpentane, 4-ethyltoluene, n-butane, n-hexane, n-heptane, n-propylbenzene, and styrene.

Chlorinated VOCs were detected in soil vapor sample SV-1 and the indoor and outdoor air samples. Chlorinated compounds detected included carbon tetrachloride, chloroform, chloromethane, cis-1,2-dichloroethene (cis-1,2-DCE), methylene chloride, tetrachloroethene (PCE), and trichloroethene (TCE).

Other noteworthy VOCs detections included the non-chlorinated solvents acetone and methyl ethyl ketone, at maximum concentrations of 1,600 micrograms per cubic meter ($\mu g/m^3$) and 5,200 $\mu g/m^3$, respectively, in SV-2.

Formaldehyde was detected in the indoor and outdoor air samples, at a maximum concentration of 49 $\mu g/m^3$ in IA-1.

Phenols were detected in all samples at concentrations ranging from 186–188 µg/m³.

As noted above, there are no standards for soil vapor. The NYSDOH has developed volatile chemical matrices in the NYSDOH Guidance which compare SSSV concentrations to indoor air concentrations to determine a recommended action. There are matrices for PCE, TCE, cis-1,2-DCE, 1,1-dichloroethene (1,1-DCE), carbon tetrachloride, 1,1,1-trichloroethane (1,1,1-TCA), methylene chloride, and vinyl chloride. 1,1-DCE, 1,1,1-TCA, and vinyl chloride were not detected in any of the samples. None of the regulated compounds were identified in the SSSV samples, and TCE, 1,1,1-TCA, 1,1-DCE and cis-1,2-DCE were also not identified in the indoor air samples. PCE was detected in the IA-1 (0.23 µg/m^3) indoor air sample, which along with the non-detect result in the co-located sub-slab sample (SSSV-1), is within the no further action range, according to the NYSDOH Guidance. Carbon tetrachloride was detected in the IA-1 (0.39 µg/m^3) and IA-2 (2.9 µg/m^3) indoor air samples, but not in the co-located sub-slab samples. The NYSDOH Guidance matrix response to the IA-2 concentrations in indoor air and sub-slab vapor would be to identify sources and resample or mitigate. Methylene chloride was detected the IA-2 (0.69 µg/m^3) indoor air sample, but not in the associated sub-slab sample, and is within the no further action range.

The concentrations detected in the soil vapor samples cannot strictly be compared to the matrices since there is no associated indoor air sample; however, they can be used as a reference. PCE (50 µg/m^3), TCE (4.1 µg/m^3), cis-1,2-DCE (9.2 µg/m^3), carbon tetrachloride (0.41 µg/m^3), and methylene chloride (1.8 µg/m^3) were detected in the SV-1 soil vapor sample; which would fall within the no further action range if it were a sub-slab sample with no associated indoor air detection. TCE (29 µg/m^3) and carbon tetrachloride (0.41 µg/m^3) were also detected in the OA-1 outdoor air sample. The TCE concentration is above the air guideline value of 2 µg/m^3.

2.6 Environmental and Public Health Assessments

2.6.1 Qualitative Human Health Exposure Assessment

People may contact contaminants in soil or groundwater if they dig below the surface or contact contaminated groundwater. People are not drinking the contaminated groundwater because the area is served by a public water supply that obtains water from a different source not affected by this contamination. Formaldehyde in the soil may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. The potential exists for the inhalation of site contaminants due to soil vapor intrusion for future on-Site buildings. Sampling indicates soil vapor intrusion is not a concern for off-site buildings.

2.6.1.1 Contaminant Fate and Transport

The objective of the qualitative exposure assessment is to identify potential receptors and pathways for human exposure to the COC that are present at, or migrating from, the Site. COCs are identified as those exceeding the applicable standards, be they NYSDEC or SCDHS standards. The identification of exposure pathways describes the route that the COC takes to travel from the source to the receptor. An identified pathway indicates that the potential for exposure exists; it does not imply that exposures actually occur.

A Qualitative Human Health Exposure Assessment (QHHEA) was performed to determine whether the Site poses an existing or future health hazard to the Site's exposed or potentially exposed population. The sampling data from the RI were evaluated to determine whether there is any health risk by characterizing the exposure setting, identifying exposure pathways, and evaluating contaminant fate and transport. This QHHEA was prepared in accordance with Appendix 3B and Section 3.3 (b) 8 of the NYSDEC Draft DER-10 Technical Guidance for Site Investigation and Remediation.

2.6.1.2 Existence of Human Health Exposure

An exposure pathway begins with a source and mechanism of contaminant release resulting in the contamination of a receiving matrix (environmental medium). A complete exposure pathway also requires a point of potential contact with the contaminated matrix (i.e., exposure point), an exposure route (i.e., inhalation, ingestion, or dermal contact), and a receptor population. If an exposure pathway is not complete because it does not include a contaminated matrix, a point of potential contact, an exposure route, or a receptor, then no risk exists.

2.6.1.3 Nature, Extent, Fate and Transport of Contaminants (Potential Exposure Points)

Following completion of the RI, it was determined that the formaldehyde was present in shallow to deep soil across the Site. Though there is no SCO set by NYSDEC, an Action Limit was generated for this specific compound by SCDHS for cleanup due to the historic use of the Site and concentrations observed in soil and groundwater. As such, formaldehyde is considered the main COC for this Site with an Action Limit of 1 mg/kg. The potential for exposure to on site soils exists but is limited until the start of the RA excavation, as the lots were capped by asphalt parking and/or buildings. During implementation of the RA and excavation activities, on-Site receptors will be limited to contractors and employees of the existing businesses, Site representatives and visitors accessing the areas of the property may be exposed to the soil currently on-Site.

Groundwater exceedances of AWQS were limited to formaldehyde and metals. Formaldehyde was only detected in the groundwater samples collected in the vicinity of the

northern drywells and the southern subsurface vault. Formaldehyde was not detected in the four (4) groundwater samples collected around the perimeter of the Site during the RI. This indicates that the drywells and subsurface vault are likely the source of the formaldehyde impacts. Metals impacts were detected in the groundwater across the Site, but are likely due to soil particles entrained in the samples, and the dissolved metals impacts are related to background conditions or road salt application. Groundwater will not be exposed at the Site, and because the Site is served by the public water supply, groundwater is not used at the Site; therefore, there is no potential for exposure. There are no surface water bodies within the vicinity of the Site.

Lastly, several petroleum-related, chlorinated, non-chlorinated, and refrigerant VOCs were detected in the soil vapor and sub-slab soil vapor samples collected. Many of these compounds were also detected in the indoor and outdoor air samples, but at lower concentrations, indicating that these detections may be indicative of typical background level concentrations.

2.6.1.4 Potential Routes of Exposure

An exposure pathway is how receptors come into contact with a Site-derived contaminant. Three potential primary routes exist by which contaminants can enter the body:

1. Ingestion of water, fill, or soil
2. Inhalation via soil vapor intrusion
3. Dermal contact with water, fill, soil, or building materials

The inhalation of contaminated soil vapor through release to outdoor air and into on-Site and off-site buildings presents a minimal potential route of exposure because it is assumed as impacted soil is removed the soil vapor will dilute and dissipate.

2.6.1.5 Receptor Populations

Though the single on-Site building has been demolished, the foundation elements still remain. As such, the Site is currently capped by structures and paved parking areas. On-Site receptors are limited to patrons and employees of the existing businesses, site representatives and visitors accessing the areas of the property.

2.6.1.6 Overall Human Health Exposure Assessment

On-Site Conditions: During intrusive construction work, potential routes of exposure will be through ingestion or dermal contact to fill. Inhalation of particulates released by trespassers or Site representatives accessing the construction Site could also present a potential route of exposure (although likely minimal) to on-Site and off-Site receptors. Ingestion or dermal

contact with groundwater is not likely due to the depth of groundwater at the Site, and the required use of the public water supply system.

Implementation of the RAs outlined in this RAWP will prevent the potential exposure pathways from becoming complete.

2.7 Remedial Action Objectives

Based on the results of the Remedial Investigation, the following Remedial Action Objectives (RAOs) have been identified for this Site.

2.7.1 Soil

RAOs for Public Health Protection

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

RAOs for Environmental Protection

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

2.7.2 Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater containing contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of, volatiles emanating from contaminated groundwater.

RAOs for Environmental Protection

- Restore groundwater aquifer, to the extent practicable, to pre-disposal/pre-release conditions.
- Remove the source of ground water contamination.

2.7.3 Soil Vapor

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at the Site.

3. Description of Remedial Action Plan

The following is a detailed description of the alternatives analysis and remedy selection process to address impacted media. This section of the RAWP was prepared in accordance with Part 375 – 3.8(f), Part 375 – 1.8(f), and Section 4.3 of DER-10. As required, a minimum of two remedial alternatives (one being an unrestricted use scenario) were evaluated, as follows:

- One alternative that will achieve unrestricted use relative to on-Site soil without the use of institutional or engineering controls; and
- One alternative assuming a restricted residential cleanup scenario for on-Site areas (which is more protective than the current commercially zoned use and reasonably anticipated future use), coupled with the use of institutional and engineering controls.

The remedial alternatives considered are as follows:

Remedial Alternative 1: No Action

- Site shall remain as is, with no remedial activities completed.

Remedial Alternative 2: Track 1 Unrestricted Use Cleanup:

- Demolition of the Site parking structure to access soils underlain for removal and disposal.
- Removal of all on-Site soils to bedrock or Track 1 Unrestricted Use SCOs and proper disposal.
- During implementation of the RAWP it will be determined if groundwater contamination is attributable to an on-Site source, the known off-site source and associated plume, and/or a previously unidentified off-Site source.
- If a source of groundwater contamination is identified on-Site, as potentially identified during completion of the RI, an appropriate groundwater remedy and design will be determined during implementation of this RAWP.

Remedial Alternative 3: Track 4 Restricted Residential Cleanup Contingency

- Demolition of the Site structures to access soils underlain for removal and disposal.

- Removal of on-Site soils to redevelopment grade of 10 ft bgs where building foundations shall be installed.
- Removal of the northern suspected drywell structures and removal of on-Site soils in this area to 15 ft bgs.
- Removal of the southern suspected subsurface vault structure and removal of on-Site soils in this area to 10 ft bgs.
- Removal of on-Site soil where the on-Site storm water recharge system (i.e. drywell or similar) will be installed.
- Removal of the UST and impacted soil in accordance with NYSDEC requirements.
- If a source of groundwater contamination is identified on-Site, an appropriate groundwater remedy will be determined during implementation of this RAWP.
- Implementation of an Engineering Control (EC) in the form of a composite cover system consisting of concrete cover, concrete building foundation and slabs, asphalt, permeable pavers, and clean soil cover in areas of the Site not overlain by an impervious surface.
- Implementation of an EC in the form of a vapor barrier installed beneath the building slab and outside of foundation walls.
- Recording of an Environmental Easement, including Institutional Controls (ICs), to prevent future exposure to any residual contamination remaining at the Site.
- Preparation of a Site Management Plan (SMP) for long term management of residual contamination as required by the Environmental Easement, including plans for: (1) ICs and ECs, (2) monitoring, (3) operation and maintenance, and (4) reporting.

3.1 Evaluation of Remedial Alternatives

The goal of the remedy selection process is to select a remedy that is protective of human health and the environment taking into consideration the current, intended, and reasonably anticipated future use of the property. Each remedial alternative is evaluated based on the factors listed below:

1. Protection of human health and the environment;

2. Compliance with standards, criteria, and guidelines SCGs;

3. Short-term effectiveness and impacts;
4. Long-term effectiveness and permanence;
5. Reduction of toxicity, mobility, or volume of contaminated material;
6. Implementability;
7. Cost effectiveness;
8. Community Acceptance; and
9. Land use.

The following remedial SCGs apply to the project, and are the performance criteria used to determine if the RAOs have been met:

- 6 NYCRR Part 375-6 Soil Cleanup Objectives;
- New York State Groundwater Quality Standards – 6 NYCRR Part 703;
- NYSDEC Ambient Water Quality Standards and Guidance Values – TOGS 1.1.1;
- NYSDEC Draft DER-10 Technical Guidance for Site Investigation and Remediation – December 2002 (or later version if available);
- NYSDEC Draft Brownfield Cleanup Program Guide – May 2004;
- NYSDOH Generic Community Air Monitoring Program (CAMP);
- NYS Waste Transporter Permits – 6 NYCRR Part 364;
- NYS Solid Waste Management Requirements – 6 NYCRR Part 360 and Part 364;
- DER-23 (January 2010);
- 6 NYCRR Part 372 – Hazardous Waste Manifest System and Related Standards for Generators, Transporters and Facilities (November 1998);
- 6 NYCRR Subpart 374-1 – Standards for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities (November 1998);
- 6 NYCRR Subpart 374-3 – Standards for Universal Waste (November 1998);

- 6 NYCRR Part 375 – Environmental Remediation Programs (December 2006);
- 6 NYCRR Part 613 – Handling and Storage of Petroleum (February 1992);
- 40 CFR Part 280 – Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks; and
- 29 CFR Part 1910.120 – Hazardous Waste Operations and Emergency Response.

3.1.1 Evaluation of Remedial Alternative 1: No Action

The No Action alternative involves no active monitoring or remediation. This alternative would not address the subsurface impacts present and would not achieve the threshold criteria of 1) overall protection of human health and the environment, or 2) conformance with SCGs required by DER-10. Since this alternative does not address the threshold criteria, it was eliminated from further evaluation.

3.1.2 Evaluation of Remedial Alternative 2: Track 1 Unrestricted Use Cleanup

This alternative would include removal and/or treatment of all contaminated soil on-Site to comply with UUSCOs. This would include, but is not limited to, demolition of the existing building and removal of any petroleum storage tanks, fill ports, and vent lines, including the drywells. If a source of groundwater contamination is identified on-Site, an appropriate groundwater remedy and design will be determined during implementation of this RAWP.

Endpoint samples will be collected and analyzed to evaluate if UUSCOs are achieved. If endpoint samples do not meet UUSCOs further excavation will be completed, both horizontally and vertically, until end-point samples meet the UUSCOs or bedrock is encountered.

1. Protection of human health and the environment – Satisfied, as it would achieve the RAOs through source removal.
2. Compliance with SCGs – Satisfied, as all contamination would be removed and all RAOs would be achieved.
3. Short-term effectiveness and impacts – This Alternative would be effective in reducing soil and potential soil vapor contamination in the short term, as all contaminated soil will be removed from the Site. There is, however, a risk of short-term impacts to Site workers and the community, as the process of excavating contaminated soil may cause the release of dust and organic vapors. This risk will be

controlled by employing health and safety procedures, and dust and/or odor control protocols throughout remediation and construction.

4. Long-term effectiveness and permanence – Satisfied, as potential exposure pathways identified in the QHHEA would no longer remain and RAOs would be achieved.

5. Reduction of toxicity, mobility, or volume of contaminated material – This Alternative removes all the contaminated soil and historical fill at the Site, the toxicity, mobility, and the volume of contaminants would be greatly reduced.

6. Implementability – This Alternative is not fully implementable, as the removal of material with exceedances above UUSCOs is limited to the foundation limits of the proposed redevelopment. Removal of horizontal exceedances outside this foundation perimeter would potentially require excavation into roadways, sidewalks, and beneath adjacent building structures. An aggressive support of excavation (SOE) would need to be designed and utilized during the work to allow excavation of the unsaturated material vertically to, at minimum, groundwater elevations averaging approximately 37 ft. bgs.

7. Cost effectiveness – This Alternative is the least cost-effective, as it will require extensive SOE to excavate the Site to the property extents if end-point samples at the proposed redevelopment grade exceed to the UUSCOs. Additional sampling and removal of soil would also make the cost effectiveness of the project decrease.

8. Community acceptance – Satisfied, as this alternative would result in the cleanup of the Site so redevelopment can occur.

9. Land use – Satisfied, as this Alternative would result in the cleanup of the Site for Unrestricted Use.

3.1.3 Evaluation of Remedial Alternative 3: Track 4 Restricted Residential Cleanup

Alternative 3 involves at a minimum the excavation and off-Site disposal of fill and impacted soils in the upper 10 ft bgs range within the proposed building footprint, removal of the northern suspected drywell structures and the southern suspected subsurface vault structure and excavation and off-Site disposal of fill and impacted soil in the upper 15 ft bgs in the area of the northern suspected drywells and in the upper 10 ft bgs in the area of the southern suspected subsurface vault (see **Figure 7**), removal of the UST and excavation and off-Site disposal of fill and impacted soil in accordance with NYSDEC requirements, excavation and off-Site disposal of fill and impacted soil in the footprint of the on-Site storm water recharge system, and the upper 2 ft bgs outside the building footprint to the east. A total of approximately 1,100 cubic yards (CY) of material will be removed from the Site in

preparation for the redevelopment. Endpoint samples will be collected and analyzed when the Site has been excavated to final development grade, ranging in depth from 2 to 15 ft. bgs.

The existing building has been demolished and the planned new construction of a commercial building at the Site will include a vapor barrier. In addition, once the building is constructed, it will be evaluated for potential impacts due to soil vapor intrusion prior to occupancy.

A BCP Track 4 cleanup allows for Institutional Controls/Engineering Controls (ICs/ECs) to be implemented for long-term management of the Site and to prevent future exposure to any residual contamination. As such, an environmental easement would be recorded for the Site to implement the controls and a SMP would be prepared to provide a detailed description of the procedures required to managed residual contamination left in place following completion of the RA.

1. Protection of human health and the environment – Satisfied, as all soil in the upper 2 ft. of the Site would be excavated and removed from the Site, thus meeting Track 4 cleanup provisions.

2. Compliance with SCGs – Satisfied, as RAOs would be achieved by removing the potential for human and environmental exposures to chemical constituents above RRSCOs by removal of formaldehyde-impacted soil.

3. Short-term effectiveness and impacts – This Alternative would be effective in reducing soil and soil vapor contamination in the short term, as all contaminated soil will be removed from the Site. There is, however, a risk of short-term impacts to Site workers and the community, as the process of excavating contaminated soil may cause the release of dust and organic vapors. This risk will be controlled by employing health and safety procedures, and dust and/or odor control protocols throughout remediation and construction.

4. Long-term effectiveness and permanence – Satisfied, as implementation of ICs and ECs would prevent future exposure to any residual contamination, thus achieving the RAOs.

5. Reduction of toxicity, mobility, or volume of contaminated material – Satisfied, as this Alternative removes approximately 1,100 CY of impacted soil. The volume of contaminants would be greatly reduced, as well as any potential soil sources affecting soil vapor concentrations.

6. Implementability – Satisfied, as contaminated soil removal could be completed in a short timeframe and the equipment and personnel needed to perform the proposed remedial actions are readily available.

7. Cost effectiveness – Satisfied, as this Alternative is the most cost effective. Under this alternative, approximately 1,100 CY of contaminated soil would be excavated and disposed of off-Site.

8. Community acceptance – Satisfied, as this Alternative would result in the cleanup of the Site so redevelopment can occur.

9. Land use – Satisfied, as this alternative would result in the cleanup of the Site to Restricted Residential use.

3.2 Selection of the Preferred Remedy

Remedial Alternative 1 (no action) allows 71 New Street Site (Site No. C152248) to remain in its current condition. This remedial alternative was reviewed and found to be unacceptable, since it would not achieve the RAOs and SCDHS soil exceedances of formaldehyde would remain on-Site. Therefore, this remedial alternative is not considered a feasible solution. Remedial Alternative 2 (Track 1) would achieve the RAOs, but it is not cost-effective or implementable from a redevelopment standpoint. Therefore, this remedial alternative is not considered a feasible solution.

Remedial Alternative 3 (Track 4) achieves the RAOs while being cost-effective. After careful consideration with respect to the evaluation criteria listed, Remedial Alternative 3 is determined to be the preferred remedy, since it adequately addresses the subsurface formaldehyde contamination with the most cost-effective approach.

3.2.1 Surrounding Property Uses

The surrounding property usage is primarily commercial and residential. The Site is approximately 13,120 sf in area and bounded by an office building to the north, New Street to the east, beyond which lies a parking lot, a dentist/doctor's office to the west, and a commercial building to the south occupied by a health and fitness facility. The remainder of the block that the Site occupies is developed with office buildings, dentist/doctor's offices, and residential buildings.

3.2.2 Citizen Participation

A citizen participation plan is attached as **Appendix C**.

3.2.3 Environmental Justice Concerns

Currently, there are no known Environmental Justice concerns at the Site.

3.2.4 Land Use Designations

The proposed building on the Site three-story building with a footprint of 3,074 sf will be built on the south side of the property. The structure will extend along the property lines and include a basement. The first floor will be approximately 3,074 sf and will be used for office space. The second and third stories will be approximately 5,869 sf each and will overhang the western portion of the parking area. The second and third stories will contain approximately 10 apartments. Re-configured parking areas will frame the northern half of the property and continue under the west portion of the building. Landscaped areas will be included which could be used by apartment residents. An on-site storm water recharge system (i.e. drywell or similar) will be installed under the parking area.

The proposed use is consistent with existing zoning for the property.

3.2.5 Population Growth Patterns

The population of the Town of Huntington is expected to increase in the future. This project will help provide necessary housing units to meet that need.

3.2.6 Accessibility to Existing Infrastructure

The Site is located within walking distance of public transportation, bus routes and is approximately 1 mile from the Long Island Railroad Huntington Station stop. The area is also supplied with municipal sewers and water, electric, telephone, natural gas, and fiber-optic lines.

3.2.7 Proximity to Cultural Resources

The Site is located near the Paramount Theater.

3.2.8 Proximity to Natural Resources

Heckscher Park is located approximately 0.5 miles from the project Site. Additionally, the Huntington Harbor and Cold Spring Harbor waterfronts are located approximately 1.25-miles east and west, respectively, of the project Site.

3.2.9 Proximity to Floodplains

The Site is not located within a floodplain.

3.2.10 Geography and Geology of the Site

The soil stratigraphy, from the surface down, consisted of topsoil in the unpaved areas underlain by fill and native soils. The fill consisted of fine-grained soils with gravel and some debris (brick) and extended to depths of 2 to 8 ft bgs. The fill was underlain by native soils, consisting of narrowly graded sand to a silty sand, to the boring termination depth. Soil borings are included as **Appendix B**.

3.2.11 Current Institutional Controls.

Currently, there are no known ICs on the Site.

3.3 Summary of Selected Remedial Action

A Track 4 cleanup is proposed consisting of the following remedial components:

7. A remedial design program to verify the components of the conceptual design and provide the details necessary for the construction, operation and maintenance, and monitoring of the remedial program.

8. Soil Excavation - The existing on-Site building will be demolished prior to start of excavation activities and materials that cannot be reused on-Site will be taken off-site for proper disposal to implement the remedy. The entire Site will be excavated as follows for redevelopment purposes:

    - Removal of on-Site soils to redevelopment grade of 10 ft bgs where building foundations shall be installed;
    - Removal of the northern suspected drywell structures and removal of on-Site soils in this area to 15 ft bgs;
    - Removal of the southern suspected subsurface vault structure and removal of on-Site soils in this area to 10 ft bgs;
    - Removal of on-Site soil where the on-Site storm water recharge system (i.e. drywell or similar) will be installed; and
    - Excavation and off-site disposal will be completed for any USTs and associated piping, or other structures encountered.

    This material has been identified as either contaminated during the RI activities, i.e. soils identified as containing concentrations of contaminants exceeding the Department's RRSCOs, as defined by NYCRR Part 375-6.8, or was classified as formaldehyde-impacted material that exceeds SCDHS Action Limits during the

completion of a geotechnical investigation of the Site. These contaminated soils will be removed from the Site and properly disposed of at a regulated facility.

9. If a source of groundwater contamination is identified on-Site, an appropriate groundwater remedy will be determined during implementation of this RAWP.

10. Implementation of an Engineering Control (EC) in the form of a composite cover system consisting of concrete cover, concrete building foundation and slabs, asphalt, permeable pavers, and clean soil cover in areas of the Site not overlain by an impervious surface. Upon completion of the redevelopment, the entirety of the Site will be either paved or under a building slab.

11. Recording of an Environmental Easement, including Institutional Controls (ICs), to prevent future exposure to any residual contamination remaining at the Site.

    a. Requires the remedial party or site owner to completed and submit to the Department a periodic certification of ECs/ICs in accordance with Part 375-1.8(h)(3);
    b. Allows the use and development of the controlled property for restricted residential use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
    c. Restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYCDOH; and
    d. Requires compliance with the Department-approved SMP.

12. A SMP will be utilized, which will include the following:

- An IC/EC Plan that identifies all use restrictions and engineering controls for the Site and details the steps and media-specific requirements necessary to ensure the following IC/EC remain in place and effective:

- Institutional Controls: The Environmental Easement discussed above.

- Environmental Controls: The cover system discussed in Paragraph 4 above. The plan includes, but may not be limited to:

    - An Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;

    - Descriptions of the provisions of the environmental easement including any land use, and groundwater use restrictions;

- A provision for evaluation of the potential for soil vapor intrusion for any occupied building on the Site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- Should a building foundation or building slab be removed in the future, a cover system consistent with that described above will be placed in any areas where the upper two feet of exposed surface soil exceed the applicable SCOs;
- Provisions for the management and inspection of the identified engineering controls;
- Maintaining site access controls and Department notifications; and
- The steps necessary for the periodic reviews and certification of the IC/EC.

- A Monitoring Plan to assess the performance and effectiveness of the remedy will be included in the SMP. The plan includes, but may not be limited to:
  - Monitoring of groundwater to assess the performance and effectiveness of the remedy;
  - A schedule of monitoring and frequency of submittals to the Department; and
  - Monitoring for vapor intrusions for any buildings on the Site, as may be required by the IC/EC Plan discussed above.

4. Remedial Action Program

4.1 Governing Documents

4.1.1 Site Specific Health & Safety Plan

A Site-specific Health and Safety Plan (HASP) has been prepared for the 71 New Street Site and is included as **Appendix D**. All remedial work performed under this plan will be in full compliance with governmental requirements, including Site and worker safety requirements mandated by Federal Occupational Safety and Health Administration (OSHA).

Work zone safety and security monitoring will be performed for the health and safety of workers in accordance with action levels and guidance outlined in the HASP. The Community Air Monitoring Program (CAMP) will be performed as described in Section 4.1.5.

The HASP, CAMP, and requirements defined in this RAWP pertain to all remedial and invasive work performed at the Site until the issuance of a Certificate of Completion. The Volunteer and associated parties preparing the remedial documents submitted to the State and those performing the construction work, are completely responsible for the preparation of an appropriate HASP and for the appropriate performance of work according to that plan and applicable laws.

The Site Safety Coordinator will be Edward Bradshaw. A resume for this individual in included in **Appendix E**.

4.1.2 Construction Quality Assurance Plan (CQAP)

The Construction Quality Assurance Plan (CQAP) for all construction activities provides a detailed description of the observation and testing activities that will be used to monitor construction quality and confirm that the remedial construction is in conformance with the remediation objectives and specifications. Any sampling associated with this project will be conducted in accordance with the CQAP, which includes detailed field screening and sampling methodologies and sample submittal and reporting requirements. The CQAP includes the project team responsible for implementing the remediation requirements and provisions set forth in this RAWP. The CQAP has been prepared for the selected Excavation/Remedial Contractor by GEI and is included as **Appendix F**.

4.1.3 Soil/Materials Management Plan

The Soil/Materials Management Plan (SMMP) was prepared for 71 New Street and is included in Section 5.4. The SMMP includes detailed plans for managing all soils/materials that are disturbed at the Site, including excavation, handling, storage, transport, and disposal. It also includes all the procedures that will be applied to assure effective, nuisance-free performance in compliance with all applicable federal, state, and local laws and regulations.

4.1.4 Storm-Water Pollution Prevention Plan (SWPPP)

The erosion and sediment controls will be in conformance with requirements presented in the New York State Guidelines for Urban Erosion and Sediment Control. As necessary, hay bales, silt fencing and/or concrete barrier and will be installed around the entire perimeter of the remedial construction area and inspected daily to ensure that they are operating appropriately. Discharge locations will be inspected to determine whether erosion control measures are effective in preventing significant impacts to receptors. All necessary repairs shall be made immediately. Accumulated sediments will be removed as required to keep the sediment control measures check functional.

Selected erosion and sediment control measures will be installed prior to ground disturbance and maintained through the duration of construction to minimize the discharge of pollutants and prevent a violation of the water quality standards in conformance with the *New York Standards and Specifications for Erosion and Sediment Control* (November 2016).

The Site is exempt from the NYSDEC State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (Permit No. GP-02-01) requirement as the area disturbed on the site will be less than one acre in size.

4.1.5 Community Air Monitoring Plan (CAMP)

Real-time air monitoring for particulate levels at the perimeter of the work area will be performed. Continuous monitoring will be performed for all ground intrusive activities.

Exceedances of action levels observed during performance of the CAMP will be reported to the NYSDEC Project Manager and included in the Daily Report. For a full schematic of CAMP standard operating procedures please reference **Appendix G** of this report.

4.1.6 Site Operations Plan

The Remedial Engineer is responsible to ensure that all later document submittals for this remedial project, including contractor and sub-contractor document submittals, are in compliance with this RAWP.

4.1.7 Citizen Participation Plan

A certification of mailing will be sent by the Volunteer to the NYSDEC project manager following the distribution of all Fact Sheets and notices that includes: (1) certification that the Fact Sheets were mailed, (2) the date they were mailed; (3) a copy of the Fact Sheet, (4) a list of recipients (contact list); and (5) a statement that the repository was inspected on (specific date) and that it contained all of applicable project documents.

No changes will be made to approved Fact Sheets authorized for release by NYSDEC without written consent of the NYSDEC. No other information, such as brochures and flyers, will be included with the Fact Sheet mailing.

The approved Citizen Participation Plan for this project is attached in **Appendix C**.

Document repositories have been established at the following locations and contain all applicable project documents:

Huntington Public Library
338 Main Street, Huntington, NY 11743
Attn: Joanne Adam
Phone: 631-427-5165
Hours: 9 am – 5 pm

NYSDEC
Division of Environmental Remediation
50 Circle Road
Stony Brook, NY 11790
Attn: John Sheehan, P.G.
Phone: 631 444-0244
Hours: Monday – Friday 9 am – 4 pm (call for appointment)

4.2 General Remedial construction information

4.2.1 Project Organization

The Site Owner/NYSDEC BCP Volunteer 71 New Street Huntington, LLC is providing oversight of Site activities associated with completion of the redevelopment. The Contractor to complete excavation and development activities has yet to be determined. GEI is the environmental consultant and remedial engineer for the Owner/Volunteer. GEI will coordinate and manage in conjunction with 71 New Street Huntington, LLC and/or their designee, site sampling and analysis program, material testing, data reduction, QA/QC, data

validation, analysis, and reporting. GEI will direct the sampling activities, coordinate laboratory and remediation activities.

Resumes of key personnel involved in the Remedial Action are included in **Appendix E**.

4.2.2 Remedial Engineer

The Remedial Engineer for this project will be Gary A. Rozmus. The Remedial Engineer is a registered professional engineer licensed by the State of New York. The Remedial Engineer will have primary direct responsibility for implementation of the remedial program for the 71 New Street Site (NYSDEC BCP Site No. C152248-09-17). The Remedial Engineer will certify in the FER that the remedial activities were observed by qualified environmental professionals under his supervision and that the remediation requirements set forth in the RAWP and any other relevant provisions of ECL 27-1419 have been achieved in full conformance with that Plan. Other Remedial Engineer certification requirements are listed later in this RAWP.

The Remedial Engineer will oversee the work of other contractors and subcontractors involved in all aspects of remedial construction, including soil excavation, stockpiling, characterization, removal and disposal, air monitoring, emergency spill response services, import of back fill material, and management of waste transport and disposal. The Remedial Engineer will be responsible for all appropriate communication with NYSDEC and NYSDOH.

The Remedial Engineer will review all pre-remedial plans submitted by contractors for compliance with this RAWP and will certify compliance in the FER.

The Remedial Engineer will provide the certifications listed in Section 10.1 in the FER.

4.2.3 Remedial Action Construction Schedule

A proposed schedule for the major elements of the remedial construction and portions of the redevelopment construction are presented in Section 11.0.

4.2.4 Work Hours

The hours for operation of remedial construction will conform to the Town of Huntington Building Department (THBD) construction code requirements or according to specific variances issued by that agency. NYSDEC will be notified by the Volunteer of any variances issued by the THBD. NYSDEC reserves the right to deny alternate remedial construction hours.

4.2.5 Site Security

Security for the work, equipment, materials, supplies, facilities, personnel, and incidentals will be provided throughout the performance of the work at the Site. The Site will be surrounded by perimeter fencing in accordance with the THBD construction and building code requirements. The fences and gates will be closed and locked when there is no activity on the Site and any breaks or gaps will be repaired immediately. Temporary fencing will supplement the perimeter fencing to delineate and secure the area of ongoing remediation activities within the Site such as soil stockpiles, and health and safety exclusion zones.

Site security measures will be included in the SOP. The SOP is detailed in Section 3.0 of the CQAP, which has been included as **Appendix F**.

4.2.6 Traffic Control

The Remediation Contractor/General Contractor will be responsible for providing all necessary personnel and materials (i.e., traffic lanes, safety cones) to control traffic entering and exiting the Site and for coordinating traffic control measures, as necessary. The route will be selected based on the existing access roads and an effort to limit transportation of work vehicles through neighboring residential and commercial areas and may be modified based on input from the community prior to the start of construction.

4.2.7 Contingency Plan

Though every effort will be made to prevent an unauthorized release, there is the potential for such an event to occur during completion of the Remedial Action. The following is a contingency plan for the containment and cleanup of hazardous waste if a release occurs. If a hazardous waste spill or material release occurs, if safe, the Site Safety Officer (SSO), as identified in the HASP, or their representative will immediately assess the magnitude and potential seriousness of the spill or release based on the following:

- Safety Data Sheets (SDS) for the material spilled or released;
- Source of the release or spillage of hazardous material;
- An estimate of the quantity released and the rate at which it is being released;
- The direction in which the spill or air release is moving;
- Personnel who may be or may have been in contact with the material, or air release, and possible injury or sickness as a result;
- Potential for fire and/or explosion resulting from the situation; and

- Estimates of area under influence of release.

If the spill or release is determined to be within the on-Site emergency response capabilities, the SSO will verify implementation of the necessary remedial action. If the release is beyond the capabilities of the Site personnel, personnel will be evacuated from the immediate area and the local fire department will be contacted. The SSO will notify the Project Manager and the Safety Team.

All small hazardous spills/environmental releases shall be contained as close to the source as possible. Whenever possible, the Safety Data Sheets will be consulted to assist in determining the best means of containment and cleanup. For small spills, absorbent materials such as sand, sawdust, or commercial sorbents should be placed directly on the substance to contain the spill and aid recovery. Any acid or caustic spills should be diluted or neutralized carefully prior to attempting recovery. Berms of earthen or sorbent materials can be used to contain the leading edge of the spills. Drains or drainage areas shall be blocked. All spill-containment materials will be properly disposed. An exclusion zone of 50 to 100 ft. around the spill area should be established depending on the size and type of the spill.

Refueling of sampling equipment will be done with National Fire Protection Association-approved safety cans and by approved United States Coast Guard (USCG) refueling methods. Fuel will be stored in containers meeting applicable fuel storage safety regulations. Refueling of any equipment will take place off Site. Fuel will not be stored on-Site. Fuel present on-Site will be contained in the fuel tanks of the vehicles or equipment required to perform the work tasks previously described.

The Emergency Coordinator should take the following steps:

1. Determine the nature, identity, and amounts of major spill components;

2. Make sure all unnecessary persons are removed from the spill area;

3. Notify appropriate response teams and authorities;

4. Use proper personal protective equipment (PPE) in consultation with the SSO and information provided on the SDS for the spilled material;

5. If a flammable liquid, gas, or vapor is involved, remove all ignition sources and use non-sparking and/or explosive proof equipment to contain or clean up the spill (diesel only vehicles, air operated pumps, etc.);

6. If possible, try to stop the leak with appropriate material;

7. Remove all surrounding materials that can react or compound with the spill; and

8. Notify the Client Project Manager immediately.

4.2.8 Worker Training and Monitoring

All those who enter the work area while intrusive activities are being performed must recognize and understand the potential hazards to health and safety.

Construction personnel will be responsible for identifying potential hazards in the work zone. The project manager will be responsible for insuring that the training is conducted. Others who enter the Site must be accompanied by a suitably-trained construction worker. In addition, any Site workers within the "work zone" will have received the OSHA 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training and will be under a medical monitoring program.

4.2.9 Agency Approvals

The Volunteer has addressed all State Environmental Quality Review Act (SEQRA) requirements for this Site. All permits or government approvals required for remedial construction have been, or will be, obtained prior to the start of remedial construction.

The planned end use for the Site will not change and is in conformance with the current zoning for the property. A Certificate of Completion will not be issued for the project unless conformance with zoning designation is demonstrated.

All permits or government approvals required for remedial construction have been, or will be, obtained prior to the start of remedial construction.

Waste acceptance letters for soil disposal have been obtained from Clean Earth for disposal at their facilities, located in Pennsylvania, are in **Appendix H**. This list will be updated, as necessary, in the FER.

4.2.10 NYSDEC BCP Signage

The NYSDEC has verbally approved waiving the BCP signage.

4.2.11 Emergency Contact Information

An emergency contact sheet with names and phone numbers is included in the Site-specific HASP (**Appendix D**). That document defines the specific project contacts for use by NYSDEC and NYSDOH in the case of a day or night emergency.

4.3 Site Preparation

Prior to conducting any intrusive activities for Site remediation activities, the work zone(s), designated entry points, soil stockpile staging areas, decontamination zones, and truck routes will be established, as applicable. The Site plan will be updated as necessary to reflect any changes in operations during the intrusive work. Dust control measures will be implemented; additional details of Site preparation activities are provided in the following sections. A HASP for the Site has been established and is in **Appendix D**. The preparatory tasks are described in more detail below.

4.3.1 Mobilization

Prior to commencing the remediation construction activities, the Remediation and General Contractor will setup temporary support facilities (i.e. electrical power, water, telephone service, security, etc.) and the following mobilization and Site preparation activities:

- Identification and markout of all aboveground and underground utilities;
- De-energizing, turning off and disconnecting existing subsurface utility services known to be present in the work area (e.g., water, gas, electric, and sewer);
- Mobilization of remediation equipment and materials;
- Traffic control measures;
- Work zone demarcation;
- Installation of erosion control devices in accordance with Section 4.3.2;
- Installation of perimeter air monitoring system;
- Removal of concrete at or below the surface of the Site;
- Installation of temporary facilities; and
- Installation of decontamination facilities.

4.3.2 Erosion and Sedimentation Controls

Soil erosion and sediment control measures for management of storm water will be installed in accordance with the New York Guidelines for Urban Erosion and Sediment Control. Erosion and sediment control measures which will be limited to hay bales, will be installed around the entire perimeter of the remedial construction area and inspected daily and after any significant storm events to ensure that they are operating appropriately. Discharge

locations will be inspected to determine whether erosion control measures are effective in preventing significant impacts to receptors. All necessary repairs shall be made immediately. Accumulated sediments will be removed as required to keep the hay bale check functional. The following measures shall be implemented as a component of the erosion and sediment controls:

- Efforts will be made to minimize the amount of soil exposed during construction. Erosion control measures will be implemented during construction to keep soil in place.

- Temporary stabilization measures will immediately be applied on all disturbed areas where work is delayed.

- All disturbed areas, except roadways, which will remain unfinished for more than 30-days shall be temporarily seeded with 1/2-lb. of rye grass or mulched with 100-lbs. of straw or hay per 1,000 sf. Roadways shall be stabilized as rapidly as practicable by the installation of the base course.

- Sediment control measures will be installed at any location where surface runoff from disturbed areas may flow offsite to prevent sediment from being transported out of the designated work areas. Given the proposed sequencing of construction, the project location, width of ground disturbance, and duration of disturbance, significant surface runoff from the project area is not anticipated.

- Sediment tracked onto the roadway will be removed or cleaned as necessary.

A crushed stone path will be constructed by the general contractor at all truck entrances for the Site. All trucks will drive over this path prior to leaving to contain all site soils on-Site and eliminate migration of soils onto nearby roadways from truck tires.

4.3.3 Utility Marker and Easements Layout

The Volunteer and its contractors are solely responsible for the identification of utilities that might be affected by work under the RAWP and implementation of all required, appropriate, or necessary health and safety measures during performance of work under this RAWP. The Volunteer and its contractors are solely responsible for safe execution of all invasive and other work performed under this RAWP. The Volunteer and its contractors must obtain any local, State, or Federal permits or approvals pertinent to such work that may be required to perform work under this RAWP. Approval of this RAWP by NYSDEC does not constitute satisfaction of these requirements.

4.3.4 Sheeting and Shoring

Appropriate management of structural stability of on-Site or off-Site structures during on-Site activities include excavation is the sole responsibility of the Volunteer and its contractors. The Volunteer and its contractors are solely responsible for safe execution of all invasive and other work performed under this Plan. The Volunteer and its contractors must obtain any local, State, or Federal permits or approvals that may be required to perform work under this Plan. Further, the Volunteer and its contractors are solely responsible for the implementation of all required, appropriate, or necessary health and safety measures during performance of work under the approved Plan.

4.3.5 Equipment and Material Staging

Staging and storage of equipment and materials will be contained within the secured Site. By the nature of the work involved in this project, equipment and materials will be moved to different areas within the secured Site as work progresses.

4.3.6 Decontamination Plan

The Decontamination Plan is an aspect of the Construction Control Measures, which is detailed in Section 6.0 of the CQAP (**Appendix F**).

Decontamination wastewater and used cleaning fluids will be collected and disposed of in accordance with applicable state and federal regulations.

4.3.7 Site Fencing

The Site will be secured with a locking fence that will be placed around the entire perimeter. During all remedial activities, access to the Site will be limited and all persons entering the Site will be required to sign a log book and meet all applicable health and safety requirements. The Site will be secured during non-working hours. If necessary, security patrols will be implemented during non-working hours.

4.3.8 Demobilization

In conjunction with the remedial activities, the Site will be prepared for the construction activities required for the development, mainly the building foundation and basement. All temporary structures not required for the subsequent construction work, excluding the single, two-story wood framed commercial building that has already been demolished, will be removed. Materials used in constructing the waste staging area (e.g., plastic sheeting, haybales) will be removed and disposed properly. Soil underlying the plastic sheeting in the waste staging area will be inspected for any visual staining or evidence of waste materials.

Any impacts to the soil in this area will be removed and disposed as well. All equipment will be decontaminated prior to leaving the Site.

4.4 Reporting

All daily and monthly Reports will be prepared and maintained on-Site and included in the FER. The following sections provide a summary of reports that will be prepared and maintained throughout the RA.

4.4.1 Daily Reports

Daily activity reports will be prepared and maintained on-Site for compilation and record management.

Daily reports will be submitted to NYSDEC and NYSDOH Project Managers at minimum, once a week with the previous weeks' reports, and will include:

- An update of progress made during the reporting day;
- Locations of work and quantities of material imported and exported from the Site;
- References to Site-specific map for Site activities;
- A summary of any and all complaints with relevant details (names, phone numbers);
- A summary of CAMP findings, including excursions;
- An explanation of notable Site conditions.

Daily reports are not intended to be the mode of communication for notification to the NYSDEC of emergencies (accident, spill), requests for changes to the RAWP or other sensitive or time critical information. However, such conditions must also be included in the daily reports. Emergency conditions and changes to the RAWP will be addressed directly to NYSDEC Project Manager via personal communication.

Daily Reports will include a description of daily activities keyed to a Site-specific map for the Site that identifies work areas. These reports will include a summary of air sampling results, odor and dust problems, and corrective actions, and all complaints received from the public.

The NYSDEC assigned project number will appear on all reports.

4.4.2 Monthly Reports

Monthly reports will be submitted to NYSDEC and NYSDOH Project Managers within one week following the end of the month of the reporting period and will include:

- Activities relative to the Site during the previous reporting period and those anticipated for the next reporting period, including a quantitative presentation of work performed (i.e. tons of material exported and imported, etc.);
- Description of approved activity modifications, including changes of work scope and/or schedule;
- Sampling results received following internal data review and validation, as applicable; and,
- An update of the remedial schedule including the percentage of project completion, unresolved delays encountered or anticipated that may affect the future schedule, and efforts made to mitigate such delays.

4.4.3 Other Reporting

Photographs will be taken of all remedial activities and submitted to NYSDEC in digital (JPEG) format as an attachment to the Daily Reports. Photos will illustrate all remedial program elements and will be of acceptable quality. Representative photos will be provided of each contaminant source, source area and Site structures before, during and after remediation. Photos will be included in the daily reports as needed, and a comprehensive collection of photos will be included in the FER.

Job-site record keeping for all remedial work will be appropriately documented. These records will be maintained on-Site at all times during the project and be available for inspection by NYSDEC and NYSDOH staff.

4.4.4 Complaint Management Plan

Any complaints received from the public regarding nuisances or other Site conditions will be communicated within 24-hours to NYSDEC and NYSDOH, investigated and remedied, if required.

4.4.5 Deviations from the Remedial Action Work Plan

Any required deviations from this RAWP will be discussed by Volunteer's representatives with the NYSDEC. At that time, the reasons for necessary deviations from the approved RAWP will be explained and the effect of the required deviations on the overall remedy will

be evaluated. If the deviation is deemed to be a significant change to the RAWP by the NYSDEC, a description and reasons for the proposed change will be emailed to the NYSDEC Project Manager for review and written approval. All deviations from the RAWP will be fully documented in the FER in the following manner:

- Reasons for deviating from the approved RAWP;
- Approval process to be followed for changes/editions to the RAWP; and
- Effect of the deviations on overall remedy.

5. Remedial Action: Material Removal from Site

In the area beneath the existing building as well as the southern subsurface vault, soils will be excavated to a depth of 10 ft bgs where building foundations are to be installed. Additionally, the subsurface vault structure shall be removed for disposal as construction and demolition debris (C&D waste. Excavation at the northern drywell structures will be to 15 ft bgs and the drywell structures shall be removed.

During the excavation activities, any existing subsurface structures will be demolished and removed when encountered to the extent required to remove formaldehyde-contaminated soil and soils exceeding SCDHS Guidance Values. The debris will be managed as discussed in the Section 5.4. This material, if encountered, will be managed as described below and disposed of in accordance with all federal, state, and local regulations. If encountered within the excavation area, these materials will be cut or broken into lengths or pieces suitable for off-Site disposal in accordance with approved disposal facility requirements. If this type of debris is not visually impacted, it will be disposed of as C&D at an approved licensed C&D disposal facility. If the debris is visually impacted, it will be either decontaminated (if possible) and managed as non-impacted C&D or sampled for waste characterization purposes and disposed of at an appropriate approved facility.

Excavated material slated for off-Site disposal will be disposed in accordance with the Soil and Materials Management Plan. Excavated soils will be stockpiled for a period of time less than 24-hours and will be loaded from this stockpile directly into trucks. When the stockpiled soils have been exhausted, the trucks will be live-loaded directly from the excavation footprint. All trucks removing material from the Site will be loaded on-Site and properly decontaminated before leaving the Site.

Following excavation, end-point soil samples will be collected in accordance with the remedial performance evaluation described in Section 5.2.2.

5.1 Soil Cleanup Objectives

The proposed alternative is pursuing a Track 4 cleanup, where all other soil/ fill above the Track 4 Restricted Residential SCOs and/or SCDHS Action Limits for formaldehyde present at minimum depths less than 2 ft. bgs will be addressed through the Site cover.

Soil and materials management on-Site and off-Site will be conducted in accordance with the SMP as described below.

UST closures will, at a minimum, conform to criteria defined in DER-10.

5.2 Remedial Performance Evaluation (Post Excavation End-Point Sampling)

End-point sampling and reporting will be conducted in accordance with the DER-10 and the CQAP and is discussed in the sections below.

5.2.1 End-Point Sampling Frequency

End-point samples will be collected to verify compliance with Restricted Residential SCOs. End-point excavation bottom samples will be collected at a frequency of one sample per 900 sf of excavation bottom and sidewall samples will be collected at a frequency of one sample per 30 linear feet of the excavation in accordance with NYSDEC DER-10 Section 5.4. The end-point samples will be analyzed for VOCs, SVOCs, formaldehyde, Pesticides/Herbicides, and Metals to comply with the proposed RRSCOs and SCDHS Action Limits for formaldehyde. End-point sample locations are as shown on **Figure 8**.

5.2.2 Methodology

Each sample will be inspected for visual evidence of contamination (i.e., staining, presence of petroleum, or odors) and field screened for VOCs using a PID. Soil samples to be submitted for analysis will be placed in a laboratory sample jar and transported to the laboratory in an iced container. Laboratory analysis will be performed by a NYSDEC-approved laboratory using the following methods:

- TCL VOCs by USEPA Method 8260C;
- TCL SVOCs by USEPA Method 8270D;
- TAL Metals by USEPA Method 6020B;
- Herbicides by USEPA Method 8151A;
- Pesticides by USEPA Method 8081B;
- PCBs by USEPA Method 8082A; and
- Formaldehyde by USEPA Method 8315A.

5.2.3 Reporting of Results

The laboratory will report analytical results in Analytical Services Protocol (ASP) Category B deliverable packages. An electronic data deliverable (EDD) will also be provided by the laboratory.

All end-point sample data generated for the RA will be logged in a database and organized to facilitate data review and evaluation. The NYSDEC has implemented an Environmental

Information Management System (EIMS). The EIMS uses the database software application EQuISTM from EarthSoft® Inc. A complete data package will be submitted with supporting tables, which highlight such data as sample location coordinates and proper electronic data deliverable groupings.

The electronic dataset will include the data flags provided in accordance with USEPA Laboratory Data Validation Functional Guidelines for Evaluating Organic Analysis and Inorganic Analyses, as well as additional comments of the data review for ASP/CLP analyses. The data flags include such items as: 1) concentration below required detection limit, 2) estimated concentration due to poor recovery below required detection limit, 3) estimated concentration due to poor spike recovery, and 4) concentration of chemical also found in laboratory blank.

5.2.4 Quality Assurance and Quality Control (QA/QC)

Quality control (QC) samples serve as checks on both the sampling and measurements systems and assist in determining the overall data quality with regard to representation, accuracy, and precision. Field duplicates and matrix spike samples are analyzed to assess the quality of the data resulting from the field sampling. Field duplicate samples are individual portions of the same field sample. These samples can be used to estimate the overall precision of the data collection activity. Sampling error can be estimated by the comparison of field sample result and duplicated sample result. During end-point sampling, one field duplicate sample will be collected for each 20 samples collected. Matrix spikes and matrix spike duplicates are used to evaluate analytical accuracy and precision, respectively. Matrix spikes/matrix spike duplicates (MS/MSDs) will be analyzed by the laboratory at a frequency of one per preparation batch. The frequency of QC sampling is detailed in Table 1 of the CQAP, which is included as **Appendix F**.

5.2.5 DUSR

A Data Usability Summary Report (DUSR) will be prepared to evaluate the end-point samples by a party independent from the laboratory performing the analysis in accordance with Appendix 2B of DER-10.

5.2.6 Reporting of End-Point Data in FER

Chemical labs used for all end-point sample results and contingency sampling will be NYSDOH ELAP certified.

End point sampling will be performed in accordance with DER-10 sample frequency requirements. Bottom samples will be collected at a rate of one for every 900 sf and sidewall

samples will be collected every 30-linear feet. The FER will provide a tabular and map summary of all end-point sample results and exceedances of SCOs.

5.3 Estimated Material Removal Quantities

The estimated quantity of soil/fill to be removed from the Site is 17,000 CY. No material is proposed to be reused.

5.4 Soil/Materials Management Plan

The following sections provide the SMMP to be implemented during the RA.

5.4.1 Soil Screening Methods

Visual, olfactory and PID soil screening and assessment will be performed by a qualified environmental professional or experienced field geologist under the direction of the Remedial Engineer during all remedial and development excavations into known or potentially contaminated material. Soil screening will be performed regardless of when the invasive work is done and will include all excavation and invasive work performed during the remedy and during development phase, such as excavations for foundations and utility work, prior to issuance of the Certificate of Completion.

All primary contaminant sources (including but not limited to tanks and hotspots) identified during Site Characterization, RI, and RA will be surveyed by a surveyor licensed to practice in the State of New York. This information will be provided on maps in the FER.

Screening will be performed by qualified environmental professionals.

5.4.2 Stockpile Methods

Excavated soils will be stockpiled for a period of time less than 24-hours and will be loaded directly from this stockpiled material directly into trucks. In the instance where soil is to be stockpiled for a period longer than 24-hours, the methods detailed in this section are to be followed and maintained.

Stockpiles will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by NYSDEC. Stockpiled soil will be kept covered appropriately anchored tarps, unless it is actively being added to in volume or being utilized for truck loading. Stockpiles will be routinely inspected, and damaged tarp covers will be promptly replaced. Soil stockpiles will be continuously encircled with hay bales. Hay bales will also be used as needed near catch basins, surface waters, and other discharge points.

Water will be available on-Site in suitable supply and pressure for use in dust control and is described further in Section 5.4.9.

5.4.3 Materials Excavation and Load-Out

The Remedial Engineer or a qualified environmental professional under his/her supervision will oversee all invasive work and the excavation and load-out of all excavated material. Temporarily stockpiled soils will be loaded directly into trucks. When the stockpiled soils have been exhausted, the trucks will be live-loaded directly from the excavation footprint.

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

Loaded vehicles leaving the Site will be appropriately tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and New York State Department of Transportation (NYSDOT) requirements (and all other applicable transportation requirements). Lined vehicles should not be required, due to all excavated material originating from above the water table. If saturated soil is encountered during excavation, loaded vehicles leaving the Site will be appropriately lined to lower the potential of impacted groundwater discharge during transport.

Vehicles leaving the Site will not be overloaded. The Remedial Engineer's representative will make reasonable efforts to ensure that all material is secured beneath the truck bed cover.

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

The Remedial Engineer's representative will be responsible for ensuring that all egress points for truck and equipment transport from the Site will be clean of dirt and other materials derived from the Site during Site remediation and development. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to Site - derived materials.

The Volunteer and associated parties preparing the remedial documents submitted to the State, and parties performing this work, are completely responsible for the safe performance of all invasive work, the structural integrity of excavations, and for structures that may be affected by excavations (such as building foundations and bridge footings).

The Remedial Engineer will ensure that Site development activities will not interfere with, or otherwise impair or compromise, remedial activities proposed in this RAWP.

Each hotspot and structure to be remediated (USTs, subsurface vaults and associated piping, transformers, etc.) will be removed and end-point remedial performance sampling completed before excavations related to Site development commence proximal to the hotspot or structure.

Development-related grading cuts and fills will not interfere with, or otherwise impair or compromise, the performance of remediation required by this plan.

Mechanical processing of historical fill and contaminated soil on-Site is prohibited.

5.4.4 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.

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, unless directed by the Site supervisor, Remedial Engineer or a qualified environmental professional under his/her supervision.

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.

All trucks will be washed or dry brushed prior to leaving the Site. Truck wash waters will be collected and disposed of off-Site in an appropriate manner.

5.4.5 Materials Disposal Off-Site

Waste acceptance letters for soil disposal have been obtained from Clean Earth for disposal at their facilities located in Pennsylvania, and are included in **Appendix H**. Disposal location established at a later date, if any, will be reported to the NYSDEC Project Manager.

The total quantity of material expected to be disposed off-Site is approximately 17,000 CY, which has been identified as contaminated material with RRSCOs exceedances or SCDHS formaldehyde Action Limit exceedances.

All soil/fill/solid waste excavated and removed from the Site will be treated as contaminated and regulated material and will be disposed in accordance with all local, State (including 6NYCRR Part 360) and Federal regulations. Unregulated off-Site management of materials from this Site is prohibited without formal NYSDEC approval.

The following documentation will be obtained and reported by the Remedial Engineer for each disposal location used in this project to fully demonstrate and document that the disposal of material derived from the Site conforms with all applicable laws: (1) a letter from the Remedial Engineer or BCP Volunteer to the receiving facility describing the material to be disposed and requesting formal written acceptance of the material. This letter will state that material to be disposed is contaminated material generated at an environmental remediation-Site in New York State. The letter will provide the project identity and the name and phone number of the Remedial Engineer. The letter will include as an attachment a summary of all chemical data for the material being transported (including Site Characterization data); and (2) a letter from all receiving facilities stating it is in receipt of the correspondence (above) and is approved to accept the material. These documents will be included in the FER.

Non-hazardous and contaminated soils taken off-Site will be handled, at minimum, as a Municipal Solid Waste per 6NYCRR Part 360-1.2. Historical fill and contaminated soils from the Site are prohibited from being disposed at Part 360-16 Registration Facilities (also known as Soil Recycling Facilities).

Soils that are contaminated but non-hazardous and are being removed from the Site are considered by the Division of Materials Management (DMM) in NYSDEC to be C&D materials with contamination not typical of virgin soils. These soils may be sent to a permitted Part 360 landfill. They may be sent to a permitted C&D processing facility without permit modifications only upon prior notification of NYSDEC Region 2 DMM. This material is prohibited from being sent or redirected to a Part 360-16 Registration Facility. In this case, as dictated by DMM, special procedures will include, at a minimum, a letter to the C&D facility that provides a detailed explanation that the material is derived from a DER remediation Site, that the soil material is contaminated and that it must not be redirected to on-Site or off-Site Soil Recycling Facilities. The letter will provide the project identity and the name and phone number of the Remedial Engineer. The letter will include as an attachment a summary of all chemical data for the material being transported.

The FER will include an accounting of the destination of all material removed from the Site during this RA, including excavated soil, contaminated soil, historic fill, solid waste, and hazardous waste, non-regulated material, and fluids. Documentation associated with disposal of all material must also include records and approvals for receipt of the material. This information will also be presented in a tabular form in the FER.

Bill of Lading system or equivalent will be used for off-Site movement of non-hazardous wastes and contaminated soils. This information will be reported in the FER.

Appropriately licensed haulers will be used for material removed from this Site and will be in full compliance with all applicable local, State, and Federal regulations.

Waste characterization will be performed for off-Site disposal in a manner suitable to the receiving facility and in conformance with applicable permits. Sampling and analytical methods, sampling frequency, analytical results, and QA/QC will be reported in the FER. All data available for soil/material to be disposed at a given facility must be submitted to the disposal facility with suitable explanation prior to shipment and receipt.

5.4.6 Fluids Management

Remedial activities will not encounter groundwater due to the limits of the excavation, so it is assumed no dewatering of the excavation will be required.

Construction wastewater will be generated from personnel/equipment decontamination and run-off/run-on in bermed soil stockpile and/or excavation areas. Construction wastewater will be collected and stored on-Site in leak-tight drums, vacuum trucks, or temporary storage tanks. Containerized wastewater will be sampled and submitted for analysis for disposal/discharge characterization. Based on the laboratory analytical results, the construction wastewater will be disposed off-Site at a permitted disposal/recycling facility or discharged to the public sewer system, upon issuance of a permit. The remedial contractor will acquire any required permits.

All liquids to be removed from the Site will be handled, transported, and disposed in accordance with applicable local, State, and Federal regulations.

5.4.7 Demarcation

After the completion of soil removal and any other invasive remedial activities and prior to backfilling, a land survey will be performed by a New York State licensed surveyor. The survey will define the top elevation of residual contaminated soils. A physical demarcation layer, consisting of orange snow fencing material or equivalent material will be placed on this surface to provide a visual reference. This demarcation layer will constitute the top of the 'Residuals Management Zone', the zone that requires adherence to special conditions for disturbance of contaminated residual soils defined in the SMP. The survey will measure the grade covered by the demarcation layer before the placement of cover soils, pavement and sub-soils, structures, or other materials. This survey and the demarcation layer placed on this grade surface will constitute the physical and written record of the upper surface of the 'Residuals Management Zone' in the SMP. A map showing the survey results will be included in the FER and the SMP.

5.4.8 Contingency Plan

If underground tanks or other previously unidentified contaminant sources are found during on-Site remedial excavation or development related construction, sampling will be performed on product, sediment and surrounding soils, etc. Chemical analytical work will be for full scan parameters (TAL metals; TCL volatiles and semi-volatiles, TCL pesticides and PCBs). These analyses will not be limited to STARS parameters where tanks are identified without prior approval by NYSDEC. Analyses will not be otherwise limited without NYSDEC approval.

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. These findings will also be included in daily and periodic electronic media reports.

5.4.9 Odor and Dust Control

Dust will be controlled by spraying water mist over the work area if perimeters action levels established in the CAMP are exceeded. The water mist will be generated by connecting a misting device to a hose, which will be connected to any potable water source. The degree to which these measures will be used will depend on particulate levels in ambient air at the Site perimeter as determined through implementation of the CAMP. Gravel will be used on roadways to provide a clean and dust-free road surface, and on-Site roads will be limited in total area to minimize the area required for water spraying.

A foam unit will be used, if necessary, to suppress vapors and odors that are generated during the excavations. Foam will be applied, if warranted, to stockpiled soil and excavation sidewalls in an effort to maintain work zone and perimeter air monitoring criteria established in the HASP and CAMP. Tarps will also be employed to suppress vapor and odors from stockpiled soil in the staging area, if necessary.

The FER will include the following certification by the Remedial Engineer: "I certify that all invasive work during the remediation and all invasive development work were conducted in accordance with dust and odor suppression methodology defined in the Remedial Action Work Plan."

6. Residual Contamination to Remain On-Site

The selected remedial alternative is designed to reduce the concentration of Site contaminants through excavation of soils/historic fill above RRSCOs and SCDHS Action Limits for formaldehyde. While this soil will be removed during the RA, soil and groundwater above the RRSCOs and AWQS, respectively is expected to remain on-Site below 15 ft. bgs at the northern drywell location. . If an on-Site groundwater contaminant source is identified during completion of the RA it shall be managed as described in Section 9.0.

Since residual contaminated soil will potentially exist beneath the Site after the remedy is complete, ECs and ICs are required to protect human health and the environment. These ECs and ICs are described hereafter. Long-term management of EC/ICs and of residual contamination will be executed under a Site specific SMP that will be developed and included in the FER.

ECs will be implemented to protect public health and the environment by appropriately managing residual contamination. The Controlled Property (the Site) will have one primary EC system. This is:

1. A site cover system consisting of concrete building slabs, pavement or asphalt (greater than 6-inches).

The FER will report residual contamination on the Site in tabular and map form. This will include presentation of exceedances of restricted residential SCOs. The FER will also report groundwater contamination remaining on-site with a discussion of whether it's attributed to on-site and/or off-site sources.

7. Engineering Controls: Composite Cover System

7.1 Composite Cover System

The cover will consist either of the structures such as buildings, pavement, or sidewalks comprising the Site development.

The proposed new building includes one 3-story building with below grade basement. A below-slab vapor barrier is proposed to be installed as a protection course for below grade soil vapor protection/applications. Technical information on the vapor barrier is provided in **Appendix I**. Details on the post-redevelopment cap will be addressed in the SMP.

A site plan detailing the specific layout of the building foundation and site cover components will be provided in the FER. A Soil Management Plan will be included in the SMP and will outline the procedures to be followed in the event that the composite cover system and underlying residual contamination are disturbed after the RA is complete. Maintenance of this composite cover system will be described in the SMP in the FER.

8. Criteria for Completion of Remediation/ Termination of Remedial Systems

8.1 Composite Cover System

The Track 4 cleanup requires installation of the composite 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 perpetuity.

9. Institutional Controls

After the remedy is complete, the Site will have residual contamination remaining in place at depths shallower than 15 ft bgs. ECs for the residual contamination have been incorporated into the remedy to render the overall Site remedy protective of public health and the environment. Two elements have been designed to ensure continual and proper management of residual contamination in perpetuity: an Environmental Easement and a SMP.

All as-built drawings, diagrams, calculation, and manufacturer documentation for treatment systems will be presented in the FER. A Site-specific Environmental Easement will be recorded with Suffolk County to provide an enforceable means of ensuring the continual and proper management of residual contamination and protection of public health and the environment in perpetuity or until released in writing by NYSDEC. It requires that the grantor of the Environmental Easement and the grantor's successors and assigns adhere to all ECs/ICs placed on this Site by this NYSDEC-approved remedy. ICs provide restrictions on-Site usage and mandate operation, maintenance, monitoring, and reporting measures for all ECs and ICs. The SMP describes appropriate methods and procedures to ensure compliance with all ECs and ICs that are required by the Environmental Easement. Once the SMP has been approved by the NYSDEC, compliance with the SMP is required by the grantor of the Environmental Easement and grantor's successors and assigns.

9.1 Environmental Easement

An Environmental Easement, as defined in Article 71 Title 36 of the Environmental Conservation Law, is required when residual contamination is left on-Site after the Remedial Action is complete. As part of this remedy, an Environmental Easement approved by NYSDEC will be filed and recorded with the Suffolk County Office of the City Register. The Environmental Easement will be submitted as part of the FER.

The Environmental Easement renders the Site a Controlled Property. The Environmental Easement must be recorded with the Suffolk County and the Town of Huntington before the Certificate of Completion can be issued by NYSDEC. A series of ICs are required under this remedy to implement, maintain, and monitor these EC systems, prevent future exposure to residual contamination by controlling disturbances of the subsurface soil and restricting the use of the Site to restricted residential use only. These ICs are requirements or restrictions placed on the Site that are listed in, and required by, the Environmental Easement. ICs can, generally, be subdivided between controls that support ECs, and those that place general restrictions on-Site usage or other requirements. ICs in both of these groups are closely integrated with the SMP, which provides all of the methods and procedures to be followed to comply with this remedy.

The ICs that support ECs are:

- Compliance with the Environmental Easement by the Grantee and the Grantee's successors and adherence of all elements of the SMP is required;
- All ECs must be operated and maintained as specified in this SMP;
- Sampling and analysis of all appropriate media (e.g., groundwater, indoor air, soil vapor) will be required by the SMP, as necessary.
- The need for vapor mitigation will be evaluated during redevelopment and addressed in the SMP.
- Groundwater monitoring will be performed to assess the performance and effectiveness of the overall remedy. If groundwater treatment is necessary, the treatment method will be determined during design and the first round of treatment performed during the remedial action phase. Should additional treatment rounds be necessary, they will be performed, operated, and maintained as required by the SMP.
- All ECs on the Controlled Property must be inspected and certified at a frequency and in a manner defined in the SMP;
- Groundwater, soil vapor, and other environmental or public health monitoring must be performed as defined in the SMP;
- Data and information pertinent to Site Management for the Controlled Property must be reported at the frequency and in a manner defined in the SMP;
- On-Site environmental monitoring devices, including but not limited to, groundwater monitor wells and soil vapor probes, must be protected and replaced as necessary to ensure proper functioning in the manner specified in the SMP; and
- ECs may not be discontinued without an amendment or extinguishment of the Environmental Easement.

Adherence to these ICs for the Site is mandated by the Environmental Easement and will be implemented under the SMP (discussed in the next section). The Controlled Property (Site) will also have a series of ICs in the form of Site restrictions and requirements. The Site restrictions that apply to the Controlled Property are:

- Vegetable gardens and farming on the Controlled Property are prohibited;

- Use of groundwater underlying the Controlled Property is prohibited without treatment rendering it safe for intended purpose;

- All future activities on the Controlled Property that will disturb residual contaminated material are prohibited unless they are conducted in accordance with the soil management provisions in the SMP;

- The Controlled Property may be used for restricted residential use only, provided the long-term Engineering and Institutional Controls included in the SMP are employed;

- The Controlled Property may not be used for a higher level of use, such as unrestricted or residential use without an amendment or extinguishment of this Environmental Easement; and

- Grantor agrees to submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. NYSDEC retains the right to access such Controlled Property at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow. This statement must be certified by an expert that the NYSDEC finds acceptable.

9.2 Site Management Plan

Site Management is the last phase of remediation and begins with the approval of the FER and issuance of the Certificate of Completion for the RA. The SMP is submitted as part of the FER but will be written in a manner that allows its removal and use as a complete and independent document. Site Management continues in perpetuity or until released in writing by NYSDEC. The property owner is responsible to ensure that all Site Management responsibilities defined in the Environmental Easement and the SMP are performed.

The SMP is intended to provide a detailed description of the procedures required to manage residual contamination left in place at the Site following completion of the RA in accordance with the BCA with the NYSDEC. This includes: (1) development, implementation, and management of all Engineering and Institutional Controls; (2) development and implementation of monitoring systems and a Monitoring Plan; (3) development of a plan to operate and maintain any treatment, collection, containment, or recovery systems (including, where appropriate, preparation of an O&M Manual); (4) submittal of Site Management

Reports, performance of inspections and certification of results, and demonstration of proper communication of Site information to NYSDEC; and (5) defining criteria for termination of treatment system operation.

To address these needs, this SMP will include four plans: (1) an Engineering and Institutional Control Plan for implementation and management of EC/ICs; (2) a Monitoring Plan for implementation of Site Monitoring; (3) an O&M Plan for implementation of remedial collection, containment, treatment, and recovery systems, if necessary; and (4) a Site Management Reporting Plan for submittal of data, information, recommendations, and certifications to NYSDEC. The SMP will be prepared in accordance with the requirements in NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation and the guidelines provided by NYSDEC.

Site management activities, reporting, and EC/IC certification will be scheduled on a certification period basis. The certification period will be annually. The SMP will be based on a calendar year and will be due for submission to NYSDEC by March 1 of the year following the reporting period.

The SMP in the FER will include a monitoring plan for groundwater at the Site and the down-gradient Site perimeter to evaluate if a source of groundwater impacts is found on-Site during completion of the RA.

No exclusions for handling of residual contaminated soils will be provided in the SMP. All handling of residual contaminated material will be subject to provisions contained in the SMP.

10. Final Engineering Report

A FER will be submitted to NYSDEC following implementation of the RA defined in this RAWP. The FER provides the documentation that the remedial work required under this RAWP has been completed and has been performed in compliance with this plan. The FER will provide a comprehensive account of the locations and characteristics of all material removed from the Site including the surveyed map(s) of all sources. The FER will include as-built drawings for all constructed elements, calculation and manufacturer documentation for treatment systems, certifications, manifests, bills of lading as well as the complete SMP (formerly the O&M Plan). The FER will provide a description of the changes in the RA from the elements provided in the RAWP and associated design documents. The FER will provide a tabular summary of all end-point sampling results and all material characterization results and other sampling and chemical analysis performed as part of the RA. The FER will provide test results demonstrating that all mitigation and remedial systems are functioning properly. The FER will be prepared in conformance with DER-10.

The FER will include written and photographic documentation of all remedial work performed under this remedy.

The FER will provide a thorough summary of all residual contamination left on the Site that exceeds the RRSCOs defined in 6NYCRR Part 375.6 and/or the SCDHS Action Limits for formaldehyde-impacted soils. An explanation for why the material was not removed as part of the RA will be included. A table and data summary figure that shows residual contamination in excess of the RRSCOs will be included, and a map that shows residual contamination location and depths in excess of the RRSCOs will be included in the FER.

The FER will include an accounting of the destination of all impacted material removed from the Site, including, but not limited to, excavated contaminated soil, historic fill, solid waste, hazardous waste, non-regulated material, and fluids. Documentation associated with disposal of all material must also include records and approvals for receipt of the material. It will provide an accounting of the origin and chemical quality of all material imported onto the Site.

Before approval of a FER and issuance of a Certificate of Completion, all project reports must be submitted in digital form on electronic media (PDF).

10.1 Certifications

The following certification will appear in front of the Executive Summary of the FER. The certification will be signed by the Remedial Engineer, Gary A. Rozmus, who is a

Professional Engineer registered in New York State. This certification will be appropriately signed and stamped. The certification will include the following statements:

I, Gary A. Rozmus, am currently a registered professional engineer licensed by the State of New York. I had primary direct responsibility for implementation of the remedial program for the 71 New Street Site (New York State Department of Environmental Conservation [NYSDEC] Brownfield Cleanup Agreement [BCA] Site No. C152248-09-17).

I certify that the Site description presented in this FER is identical to the Site descriptions presented in the Environmental Easement, the Site Management Plan (SMP), and the BCA for 71 New Street and related amendments.

I certify that the Remedial Action Work Plan (RAWP) dated July 2019, approved by the NYSDEC, was implemented and that all requirements in that document has been substantively complied with.

I certify that the remedial activities were observed by qualified environmental professionals under my supervision and that the remediation requirements set forth in the RAWP and any other relevant provisions of ECL 27-1419 have been achieved.

I certify that all use restrictions, Institutional Controls, Engineering Controls, and all operation and maintenance requirements applicable to the Site are contained in an Environmental Easement created and recorded pursuant ECL 71-3605 and that all affected local governments, as defined in ECL 71-3603, have been notified that such easement has been recorded. A SMP has been submitted by the Volunteer for the continual and proper operation, maintenance, and monitoring of all Engineering Controls employed at the Site, including the proper maintenance of all remaining monitoring wells, and that such plan has been approved by the NYSDEC.

I certify that the export of all contaminated soil, fill, water or other material from the property was performed in accordance with the RAWP, and were taken to facilities licensed to accept this material in full compliance with all Federal, State, and local laws.

I certify that all import of soils from off-Site, including source approval and sampling, has been performed in a manner that is consistent with the methodology defined in the RAWP.

I certify that all invasive work during the remediation and all invasive development work were conducted in accordance with dust and odor suppression methodology and soil screening methodology defined in the RAWP.

I certify that all information and statements in this certification are true. I understand that a false statement made herein is punishable as Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

It is a violation of Article 130 of New York State Education Law for any person to alter this document in any way without the express written verification of adoption by any New York State licensed engineer in accordance with Section 7209(2), Article 130, New York State Education Law.

11. Schedule

At time of submittal of this RAWP, RA activities have begun with the demolition of the single structure o-n-Site. No other RA-related activities have occurred. Below is a schedule for major remedial construction tasks:

Schedule Milestone	Duration (weeks)	Cumulative Duration (weeks)
NYSDEC Approval of RAWP and Release of Decision Document	7	7
Contractor Procurement and Permitting Congruent with NYSDEC RAWP Approval	4	11
Site Mobilization and Site Control Activities Congruent with NYSDEC RAWP Approval	1	12
Soil Excavation Activities Congruent with NYSDEC RAWP Approval	6	18
Contractor Demobilization	1	19
Preparation and Submission of Draft FER and SMP	8	27

Tables

Table 1. 71 New Street Remedial Investigation
Soil Analytical Results - Northern Suspected Drywells
71 New Street Huntington LLC
Huntington, New York

				Location Name	SB-6	SB-6	SB-6	SB-6	SB-6	SB-6	SB-7	SB-7
				Sample Name	SB-6 (0-5)	SB-6 (5-10)	SB-6 (10-15)	SB-6 (15-20)	SB-6 (20-23)	SB-6 (25-30)	SB-7 (0-5)	SB-7 (5-10)
				Start Depth	0	5	10	15	20	25	0	5
				End Depth	5	10	15	20	23	30	5	10
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Date	6/25/2018	6/25/2018	6/25/2018	6/25/2018	6/25/2018	7/3/2018	6/25/2018	6/25/2018
				Parent Sample								
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**								
BTEX	µg/kg											
Benzene		71-43-2	60	2900	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 U	0.64 U
Toluene		108-88-3	700	100000	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 U	0.64 U
Ethylbenzene		100-41-4	1000	30000	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 UJ	0.64 U
o-Xylene		95-47-6	260	100000	**0.19 J**	**0.16 J**	**0.13 J**	**0.13 J**	**0.12 J**	0.92 U	0.64 UJ	**0.089 J**
m/p-Xylene		179601-23-1	260	100000	**0.34 J**	**0.5 J**	**0.47 J**	**0.4 J**	**0.39 J**	0.92 U	0.64 UJ	**0.26 J**
Total Xylene		1330-20-7	260	100000	**0.52 J**	**0.65 J**	**0.6 J**	**0.53 J**	**0.51 J**	1.8 U	1.3 UJ	**0.35 J**
Total BTEX (ND=0)		TBTEX_ND0	NE	NE	**0.53**	**0.66**	**0.6**	**0.53**	**0.51**	ND	ND	**0.349**
Other VOCs	µg/kg											
Acetone		67-64-1	50	100000	**28**	**86**	**92**	**53**	**59**	**37**	**7.3**	**66**
Bromochloromethane		74-97-5	NE	NE	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 U	0.64 U
Bromodichloromethane		75-27-4	NE	NE	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 UJ	0.64 U
Bromoform		75-25-2	NE	NE	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 U	0.64 U
Bromomethane		74-83-9	NE	NE	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 U	0.64 U
Carbon disulfide		75-15-0	NE	NE	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 U	0.64 U
Carbon tetrachloride		56-23-5	760	1400	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 U	0.64 U
Chlorobenzene		108-90-7	1100	100000	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 UJ	0.64 U
Chloroethane		75-00-3	NE	NE	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 U	0.64 U
Chloroform (Trichloromethane)		67-66-3	370	10000	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 U	0.64 U
Chloromethane		74-87-3	NE	NE	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 U	0.64 U
Cyclohexane		110-82-7	NE	NE	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 UJ	0.64 UJ
1,2-Dibromo-3-chloropropane		96-12-8	NE	NE	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 U	0.64 U
Dibromochloromethane		124-48-1	NE	NE	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 U	0.64 U
1,2-Dibromoethane (EDB)		106-93-4	NE	NE	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 U	0.64 U
1,2-Dichlorobenzene (o-DCB)		95-50-1	1100	100000	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 UJ	0.64 U
1,3-Dichlorobenzene (m-DCB)		541-73-1	2400	17000	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 UJ	0.64 U
1,4-Dichlorobenzene (p-DCB)		106-46-7	1800	9800	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 UJ	0.64 U
Dichlorodifluoromethane (Freon 12)		75-71-8	NE	NE	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 U	0.64 U
1,1-Dichloroethane		75-34-3	270	19000	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 U	0.64 U
1,2-Dichloroethane		107-06-2	20	2300	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 U	0.64 U
1,1-Dichloroethene		75-35-4	330	100000	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 U	0.64 U
cis-1,2-Dichloroethene		156-59-2	250	59000	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 UJ	0.64 U
trans-1,2-Dichloroethene		156-60-5	190	100000	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 U	0.64 U
1,2-Dichloropropane		78-87-5	NE	NE	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 U	0.64 U
cis-1,3-Dichloropropene		10061-01-5	NE	NE	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 U	0.64 U
trans-1,3-Dichloropropene		10061-02-6	NE	NE	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 U	0.64 U
1,4-Dioxane		123-91-1	100	9800	16 U	23 U	21 U	22 U	17 U	18 U	13 U	13 U
2-Hexanone		591-78-6	NE	NE	4.1 U	5.8 U	5.3 U	5.6 U	4.2 U	4.6 U	3.2 U	3.2 U
Isopropylbenzene		98-82-8	NE	NE	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 UJ	0.64 U
Methyl acetate		79-20-9	NE	NE	4.1 U	5.8 U	5.3 U	5.6 U	4.2 U	4.6 U	3.2 U	3.2 U
Methyl ethyl ketone (2-Butanone)		78-93-3	120	100000	**1.2 J**	**4.2 J**	**4.4 J**	**2.6 J**	**2.7 J**	**2.4 J**	3.2 U	**3.3**
Methyl tert-butyl ether (MTBE)		1634-04-4	930	62000	**0.13 J**	**0.21 J**	**0.19 J**	1.1 U	**0.12 J**	0.92 U	0.64 U	**0.12 J**
4-Methyl-2-pentanone (MIBK)		108-10-1	NE	NE	4.1 U	5.8 U	5.3 U	5.6 U	4.2 U	4.6 U	3.2 U	3.2 U
Methylcyclohexane		108-87-2	NE	NE	**0.17 J**	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 UJ	0.64 U
Methylene chloride		75-09-2	50	51000	0.82 U	1.6 U	1.3 U	1.2 U	1.3 U	**3.2**	0.64 U	1.1 U

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Soil Analytical Results - Northern Suspected Drywells
71 New Street Huntington LLC
Huntington, New York

				Location Name	SB-6	SB-6	SB-6	SB-6	SB-6	SB-6	SB-7	SB-7
				Sample Name	SB-6 (0-5)	SB-6 (5-10)	SB-6 (10-15)	SB-6 (15-20)	SB-6 (20-23)	SB-6 (25-30)	SB-7 (0-5)	SB-7 (5-10)
				Start Depth	0	5	10	15	20	25	0	5
				End Depth	5	10	15	20	23	30	5	10
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Date	6/25/2018	6/25/2018	6/25/2018	6/25/2018	6/25/2018	7/3/2018	6/25/2018	6/25/2018
				Parent Sample								
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**								
Styrene		100-42-5	NE	NE	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 UJ	0.64 U
1,1,2,2-Tetrachloroethane		79-34-5	NE	NE	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 U	0.64 U
Tetrachloroethene (PCE)		127-18-4	1300	5500	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 UJ	0.64 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)		76-13-1	NE	NE	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 UJ	0.64 UJ
1,2,3-Trichlorobenzene		87-61-6	NE	NE	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 UJ	0.64 U
1,2,4-Trichlorobenzene		120-82-1	NE	NE	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 UJ	0.64 U
1,1,1-Trichloroethane (TCA)		71-55-6	680	100000	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 U	0.64 U
1,1,2-Trichloroethane		79-00-5	NE	NE	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 U	0.64 U
Trichloroethene (TCE)		79-01-6	470	10000	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 UJ	0.64 U
Trichlorofluoromethane (Freon 11)		75-69-4	NE	NE	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 U	0.64 U
Vinyl chloride		75-01-4	20	210	0.82 U	1.2 U	1.1 U	1.1 U	0.85 U	0.92 U	0.64 U	0.64 U
NYSDEC PAH17	µg/kg											
Acenaphthene		83-32-9	20000	100000	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U
Acenaphthylene		208-96-8	100000	100000	**22 J**	340 U	340 U	350 U	340 U		360 UJ	340 U
Anthracene		120-12-7	100000	100000	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U
Benzo(a)anthracene		56-55-3	1000	1000	39 U	34 U	34 U	35 U	34 U		36 UJ	34 U
Benzo(b)fluoranthene		205-99-2	1000	1000	**170**	34 U	34 U	35 U	34 U		**31 J**	34 U
Benzo(k)fluoranthene		207-08-9	800	1000	**56**	34 U	34 U	35 U	34 U		36 UJ	34 U
Benzo(g,h,i)perylene		191-24-2	100000	100000	**110 J**	340 U	340 U	350 U	340 U		**25 J**	340 U
Benzo(a)pyrene		50-32-8	1000	1000	**98**	34 U	**9.9 J**	35 U	34 U		**24 J**	34 U
Chrysene		218-01-9	1000	1000	**99 J**	340 U	**9.6 J**	350 U	340 U		360 UJ	340 U
Dibenz(a,h)anthracene		53-70-3	330	330	**22 J**	34 U	34 U	35 U	34 U		36 UJ	34 U
Fluoranthene		206-44-0	100000	100000	**120 J**	340 U	**18 J**	350 U	340 U		**18 J**	340 U
Fluorene		86-73-7	30000	100000	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U
Indeno(1,2,3-cd)pyrene		193-39-5	500	500	**110**	34 U	34 U	35 U	34 U		**24 J**	34 U
2-Methylnaphthalene		91-57-6	NE	NE	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U
Naphthalene		91-20-3	12000	100000	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U
Phenanthrene		85-01-8	100000	100000	**16 J**	340 U	340 U	350 U	340 U		360 UJ	340 U
Pyrene		129-00-0	100000	100000	**110 J**	340 U	340 U	350 U	340 U		**20 J**	340 U
Total PAH (17) (ND=0)		TPAH17_ND0	NE	NE	**933**	ND	**37.5**	ND	ND		**142**	ND
NYSDEC PAH17 Other SVOCs	µg/kg											
Acetophenone		98-86-2	NE	NE	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U
Atrazine		1912-24-9	NE	NE	160 U	140 U	140 U	140 U	140 U		150 UJ	140 U
Benzaldehyde		100-52-7	NE	NE	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U
Biphenyl (1,1-Biphenyl)		92-52-4	NE	NE	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U
Bis(2-chloroethoxy)methane		111-91-1	NE	NE	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U
Bis(2-chloroethyl)ether		111-44-4	NE	NE	39 U	34 U	34 U	35 U	34 U		36 UJ	34 U
2,2-oxybis(1-Chloropropane)		108-60-1	NE	NE	390 U	340 U	340 U	350 U	340 U		360 U	340 U
Bis(2-ethylhexyl)phthalate		117-81-7	NE	NE	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U
4-Bromophenyl phenyl ether		101-55-3	NE	NE	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U
Butyl benzyl phthalate		85-68-7	NE	NE	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U
Caprolactam		105-60-2	NE	NE	390 U	340 U	340 U	350 U	340 U		360 U	340 U
Carbazole		86-74-8	NE	NE	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U
4-Chloro-3-methylphenol		59-50-7	NE	NE	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U

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Soil Analytical Results - Northern Suspected Drywells
71 New Street Huntington LLC
Huntington, New York

				Location Name	SB-6	SB-6	SB-6	SB-6	SB-6	SB-6	SB-7	SB-7
				Sample Name	SB-6 (0-5)	SB-6 (5-10)	SB-6 (10-15)	SB-6 (15-20)	SB-6 (20-23)	SB-6 (25-30)	SB-7 (0-5)	SB-7 (5-10)
				Start Depth	0	5	10	15	20	25	0	5
				End Depth	5	10	15	20	23	30	5	10
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Date	6/25/2018	6/25/2018	6/25/2018	6/25/2018	6/25/2018	7/3/2018	6/25/2018	6/25/2018
				Parent Sample								
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**								
4-Chloroaniline		106-47-8	NE	NE	390 U	340 U	340 U	350 U	340 U		360 U	340 U
2-Chloronaphthalene		91-58-7	NE	NE	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U
2-Chlorophenol		95-57-8	NE	NE	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U
4-Chlorophenyl phenyl ether		7005-72-3	NE	NE	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U
Dibenzofuran		132-64-9	7000	14000	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U
3,3-Dichlorobenzidine		91-94-1	NE	NE	160 U	140 U	140 U	140 U	140 U		150 U	140 U
2,4-Dichlorophenol		120-83-2	NE	NE	160 U	140 U	140 U	140 U	140 U		150 UJ	140 U
Diethyl phthalate		84-66-2	NE	NE	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U
Dimethyl phthalate		131-11-3	NE	NE	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U
2,4-Dimethylphenol		105-67-9	NE	NE	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U
Di-n-butyl phthalate		84-74-2	NE	NE	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U
4,6-Dinitro-2-methylphenol		534-52-1	NE	NE	320 U	270 U	270 U	280 U	280 U		290 UJ	270 U
2,4-Dinitrophenol		51-28-5	NE	NE	320 U	270 U	270 U	280 U	280 U		290 UJ	270 U
2,4-Dinitrotoluene		121-14-2	NE	NE	79 U	69 U	68 U	71 U	70 U		74 UJ	68 U
2,6-Dinitrotoluene		606-20-2	NE	NE	79 U	69 U	68 U	71 U	70 U		74 UJ	68 U
Di-n-octyl phthalate		117-84-0	NE	NE	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U
Hexachlorobenzene		118-74-1	330	330	39 U	34 U	34 U	35 U	34 U		36 UJ	34 U
1,3-Hexachlorobutadiene (C-46)		87-68-3	NE	NE	79 U	69 U	68 U	71 U	70 U		74 UJ	68 U
Hexachlorocyclopentadiene		77-47-4	NE	NE	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U
Hexachloroethane		67-72-1	NE	NE	39 U	34 U	34 U	35 U	34 U		36 UJ	34 U
Isophorone		78-59-1	NE	NE	160 U	140 U	140 U	140 U	140 U		150 UJ	140 U
2-Methylnaphthalene		91-57-6	NE	NE	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U
2-Methylphenol (o-Cresol)		95-48-7	330	100000	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U
4-Methylphenol (p-Cresol)		106-44-5	330	34000	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U
2-Nitroaniline		88-74-4	NE	NE	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U
3-Nitroaniline		99-09-2	NE	NE	390 U	340 U	340 U	350 U	340 U		360 U	340 U
4-Nitroaniline		100-01-6	NE	NE	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U
Nitrobenzene		98-95-3	NE	NE	39 U	34 U	34 U	35 U	34 U		36 UJ	34 U
2-Nitrophenol		88-75-5	NE	NE	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U
4-Nitrophenol		100-02-7	NE	NE	790 U	690 U	680 U	710 U	700 U		740 UJ	680 U
N-Nitrosodiphenylamine (NDFA)		86-30-6	NE	NE	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U
N-Nitrosodi-n-propylamine (NDPA)		621-64-7	NE	NE	39 U	34 U	34 U	35 U	34 U		36 UJ	34 U
Pentachlorophenol		87-86-5	800	2400	320 U	270 U	270 U	280 U	280 U		290 UJ	270 U
Phenol		108-95-2	330	100000	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U
1,2,4,5-Tetrachlorobenzene		95-94-3	NE	NE	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U
2,3,4,6-Tetrachlorophenol		58-90-2	NE	NE	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U
2,4,5-Trichlorophenol		95-95-4	NE	NE	390 U	340 U	340 U	350 U	340 U		360 UJ	340 U
2,4,6-Trichlorophenol		88-06-2	NE	NE	160 U	140 U	140 U	140 U	140 U		150 UJ	140 U
PCB Aroclors	µg/kg											
Aroclor 1016		12674-11-2	NE	NE	79 U	69 U	68 U	71 U	70 U	86 U	74 U	68 U
Aroclor 1221		11104-28-2	NE	NE	79 U	69 U	68 U	71 U	70 U	86 U	74 U	68 U
Aroclor 1232		11141-16-5	NE	NE	79 U	69 U	68 U	71 U	70 U	86 U	74 U	68 U
Aroclor 1242		53469-21-9	NE	NE	79 U	69 U	68 U	71 U	70 U	86 U	74 U	68 U
Aroclor 1248		12672-29-6	NE	NE	79 U	69 U	68 U	71 U	70 U	86 U	74 U	68 U
Aroclor 1254		11097-69-1	NE	NE	79 U	69 U	68 U	71 U	70 U	86 U	74 U	68 U

Table 1. 71 New Street Remedial Investigation
Soil Analytical Results - Northern Suspected Drywells
71 New Street Huntington LLC
Huntington, New York

				Location Name	SB-6	SB-6	SB-6	SB-6	SB-6	SB-6	SB-7	SB-7
				Sample Name	SB-6 (0-5)	SB-6 (5-10)	SB-6 (10-15)	SB-6 (15-20)	SB-6 (20-23)	SB-6 (25-30)	SB-7 (0-5)	SB-7 (5-10)
				Start Depth	0	5	10	15	20	25	0	5
				End Depth	5	10	15	20	23	30	5	10
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Date	6/25/2018	6/25/2018	6/25/2018	6/25/2018	6/25/2018	7/3/2018	6/25/2018	6/25/2018
				Parent Sample								
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**								
Aroclor 1260		11096-82-5	NE	NE	**200**	69 U	**140**	71 U	**220**	86 U	74 U	68 U
Aroclor 1262		37324-23-5	NE	NE	79 U	69 U	68 U	71 U	70 U	86 U	74 U	68 U
Aroclor 1268		11100-14-4	NE	NE	79 U	69 U	68 U	71 U	70 U	86 U	74 U	68 U
Total PCBs (Lab calculated)		1336-36-3	100	1000	**200**	69 U	**140**	71 U	**220**	86 U	74 U	68 U
Pesticides	µg/kg											
Aldrin		309-00-2	5	19	7.9 U	6.9 U	6.8 U	7.1 U	7 U		7.4 U	6.8 U
alpha-BHC (Hexachlorocyclohexane)		319-84-6	20	97	2.4 U	2.1 U	2 U	2.1 U	2.1 U		2.2 U	2 U
beta-BHC (beta-Hexachlorocyclohexane)		319-85-7	36	72	2.4 U	2.1 U	2 U	2.1 U	2.1 U		2.2 UJ	2 U
gamma-BHC (gamma-Hexachlorocyclohexane) (Lindane)		58-89-9	100	280	2.4 U	2.1 U	2 U	2.1 U	2.1 U		2.2 U	2 U
delta-BHC (delta-Hexachlorocyclohexane)		319-86-8	40	100000	2.4 U	2.1 U	2 U	2.1 U	2.1 U		2.2 R	2 U
Chlordane (Technical)		12789-03-6	NE	NE	79 U	69 U	68 U	71 U	70 U		74 U	68 U
2,4-D (2,4-Dichlorophenoxyacetic acid)		94-75-7	NE	NE	39 U	34 U	34 U	35 U	35 U		37 U	34 U
4,4'-DDT (p,p'-DDT)		50-29-3	3.3	1700	7.9 U	6.9 U	6.8 U	7.1 U	7 U		**2.2 J**	6.8 U
4,4'-DDE (p,p'-DDE)		72-55-9	3.3	1800	7.9 U	6.9 U	6.8 U	7.1 U	7 U		**2.8 J**	6.8 U
4,4-DDD (p,p-DDD)		72-54-8	3.3	2600	7.9 U	6.9 U	6.8 U	7.1 U	7 U		7.4 U	6.8 U
Dieldrin		60-57-1	5	39	2.4 U	2.1 U	2 U	2.1 U	2.1 U		2.2 UJ	2 U
alpha-Endosulfan (I)		959-98-8	2400	4800	7.9 U	6.9 U	6.8 U	7.1 U	7 U		7.4 U	6.8 U
beta-Endosulfan (II)		33213-65-9	2400	4800	7.9 U	6.9 U	6.8 U	7.1 U	7 U		7.4 R	6.8 U
Endosulfan sulfate		1031-07-8	2400	4800	7.9 U	6.9 U	6.8 U	7.1 U	7 U		7.4 R	6.8 U
Endrin		72-20-8	14	2200	7.9 U	6.9 U	6.8 U	7.1 U	7 U		7.4 U	6.8 U
Endrin aldehyde		7421-93-4	NE	NE	7.9 U	6.9 U	6.8 U	7.1 U	7 U		7.4 R	6.8 U
Endrin ketone		53494-70-5	NE	NE	7.9 U	6.9 U	6.8 U	7.1 U	7 U		7.4 R	6.8 U
Heptachlor		76-44-8	42	420	7.9 U	6.9 U	6.8 U	7.1 U	7 U		7.4 U	6.8 U
Heptachlor epoxide		1024-57-3	NE	NE	7.9 U	6.9 U	6.8 U	7.1 U	7 U		7.4 U	6.8 U
Methoxychlor		72-43-5	NE	NE	7.9 U	6.9 U	6.8 U	7.1 U	7 U		7.4 UJ	6.8 U
2,4,5-TP (Silvex)		93-72-1	3800	58000	39 U	34 U	34 U	35 U	35 U		37 U	34 U
Toxaphene		8001-35-2	NE	NE	79 U	69 U	68 U	71 U	70 U		74 U	68 U
Herbicides	µg/kg											
2,4-D (2,4-Dichlorophenoxyacetic acid)		94-75-7	NE	NE	39 U	34 U	34 U	35 U	35 U		37 U	34 U
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)		93-76-5	NE	NE	39 U	34 U	34 U	35 U	35 U		37 U	34 U
2,4,5-TP (Silvex)		93-72-1	3800	58000	39 U	34 U	34 U	35 U	35 U		37 U	34 U
Total Metals	mg/kg											
Aluminum		7429-90-5	NE	NE	**5350 J**	**2550 J**	**1900 J**	**1710 J**	**9060 J**		**8710 J**	**3670 J**
Antimony		7440-36-0	NE	NE	0.93 UJ	0.82 UJ	0.75 UJ	0.87 UJ	0.75 UJ		0.86 UJ	0.77 UJ
Arsenic		7440-38-2	13	16	**5.4**	**2.4**	**1.2**	**0.87**	**2.5**		**4.7**	**3.2**
Barium		7440-39-3	350	350	**36.4**	**8.6**	**11.5**	**6.8**	**76.2**		**50.1**	**10.5**
Beryllium		7440-41-7	7.2	14	**0.26 J**	**0.15 J**	**0.13 J**	0.35 U	**0.45**		**0.35**	**0.16 J**
Cadmium		7440-43-9	2.5	2.5	**0.46 J**	0.82 U	0.75 U	0.87 U	0.75 U		0.86 U	0.77 U
Calcium		7440-70-2	NE	NE	**12800 J**	**79.3 J**	**185 J**	**187 J**	**419 J**		**4090 J**	**1430 J**
Chromium		7440-47-3	NE	NE	**8.5 J**	**5.5 J**	**16.9 J**	**3.8 J**	**18.9 J**		**18.9 J**	**8 J**
Cobalt		7440-48-4	NE	NE	**3.4 J**	**2.7 J**	**1.9 J**	**1.3 J**	**5.7 J**		**5.5 J**	**1.7 J**
Copper		7440-50-8	50	270	**14.2**	**4.7**	**4.2**	**3**	**10.2**		**8.7**	**4**
Iron		7439-89-6	NE	NE	**8670**	**9840**	**5680**	**3740**	**13200**		**12700**	**8380**
Lead		7439-92-1	63	400	**81.9**	**1.8**	**1.6**	**1.2**	**4.1**		**56.4**	**2**

Table 1. 71 New Street Remedial Investigation
Soil Analytical Results - Northern Suspected Drywells
71 New Street Huntington LLC
Huntington, New York

				Location Name	**SB-6**	**SB-6**	**SB-6**	**SB-6**	**SB-6**	**SB-6**	**SB-7**	**SB-7**
				Sample Name	**SB-6 (0-5)**	**SB-6 (5-10)**	**SB-6 (10-15)**	**SB-6 (15-20)**	**SB-6 (20-23)**	**SB-6 (25-30)**	**SB-7 (0-5)**	**SB-7 (5-10)**
				Start Depth	**0**	**5**	**10**	**15**	**20**	**25**	**0**	**5**
				End Depth	**5**	**10**	**15**	**20**	**23**	**30**	**5**	**10**
				Depth Unit	**ft**	**ft**	**ft**	**ft**	**ft**	**ft**	**ft**	**ft**
				Sample Date	**6/25/2018**	**6/25/2018**	**6/25/2018**	**6/25/2018**	**6/25/2018**	**7/3/2018**	**6/25/2018**	**6/25/2018**
				Parent Sample								
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**								
Magnesium		7439-95-4	NE	NE	**8060 J**	**634 J**	**460 J**	**449 J**	**2770 J**		**3120 J**	**637 J**
Manganese		7439-96-5	1600	2000	**137 J**	**251 J**	**104 J**	**81.4 J**	**416 J**		**167**	**118 J**
Mercury		7439-97-6	0.18	0.81	**0.11**	0.016 U	0.016 U	0.017 U	0.016 U		**0.027**	0.016 U
Nickel		7440-02-0	30	140	**9.9**	**4.6**	**4.2**	**2.3**	**10.7**		**8.1**	**3.5**
Potassium		7440-09-7	NE	NE	**495**	**272 J**	**329 J**	**225 J**	**1590**		**403 J**	**567**
Selenium		7782-49-2	3.9	36	4.6 U	4.1 U	3.7 U	4.3 U	3.8 U		**0.47 J**	3.8 U
Silver		7440-22-4	2	36	0.93 U	0.82 U	0.75 U	0.87 U	0.75 U		0.86 U	0.77 U
Sodium		7440-23-5	NE	NE	**130**	81.8 U	**34.2 J**	86.8 U	**133**		**141**	**93.2**
Thallium		7440-28-0	NE	NE	0.37 U	0.33 U	0.3 U	0.35 U	**0.14 J**		0.35 U	0.31 U
Vanadium		7440-62-2	NE	NE	**27**	**7.4**	**4.7**	**4**	**16.3**		**18.1**	**6.2**
Zinc		7440-66-6	109	2200	**70.9**	**11.7**	**9.3**	**6.1 J**	**28.4**		**34.7**	**9.6**
Other	mg/kg											
Formaldehyde		50-00-0	NE	NE	1.18 U	1.02 U	**2.03 J**	1.05 U	1.03 U		1.08 U	**2.11 J**

Table 1. 71 New Street Remedial Investigation
Soil Analytical Results - Northern Suspected Drywells
71 New Street Huntington LLC
Huntington, New York

				Location Name	SB-7	SB-7	SB-7	SB-7	SB-8	SB-8	SB-8	SB-8
				Sample Name	SB-7 (10-15)	SB-7 (15-20)	SB-7 (20-21.5)	SB-7 (25-30)	SB-8 (0-5)	SB-8 (5-10)	SB-8 (10-15)	SB-8 (15-20)
				Start Depth	10	15	20	25	0	5	10	15
				End Depth	15	20	21.5	30	5	10	15	20
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Date	6/25/2018	6/25/2018	6/25/2018	7/3/2018	6/25/2018	6/25/2018	6/25/2018	6/25/2018
				Parent Sample								
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**								
BTEX	µg/kg											
Benzene		71-43-2	60	2900	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
Toluene		108-88-3	700	100000	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
Ethylbenzene		100-41-4	1000	30000	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
o-Xylene		95-47-6	260	100000	0.64 U	**0.094 J**	0.93 U		1.6 U	**0.12 J**	**0.096 J**	**0.14 J**
m/p-Xylene		179601-23-1	260	100000	**0.17 J**	**0.26 J**	**0.24 J**		**0.34 J**	**0.39 J**	**0.29 J**	**0.45 J**
Total Xylene		1330-20-7	260	100000	**0.17 J**	**0.35 J**	**0.24 J**		3.2 U	**0.51 J**	**0.38 J**	**0.59 J**
Total BTEX (ND=0)		TBTEX_ND0	NE	NE	**0.17**	**0.354**	**0.24**		**0.34**	**0.51**	**0.386**	**0.59**
Other VOCs	µg/kg											
Acetone		67-64-1	50	100000	**24**	**50**	**44**		**61**	**56**	**31**	**83**
Bromochloromethane		74-97-5	NE	NE	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
Bromodichloromethane		75-27-4	NE	NE	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
Bromoform		75-25-2	NE	NE	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
Bromomethane		74-83-9	NE	NE	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
Carbon disulfide		75-15-0	NE	NE	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
Carbon tetrachloride		56-23-5	760	1400	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
Chlorobenzene		108-90-7	1100	100000	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
Chloroethane		75-00-3	NE	NE	0.64 U	0.96 U	0.93 U		1.6 UJ	1.2 U	0.99 U	1.1 U
Chloroform (Trichloromethane)		67-66-3	370	10000	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
Chloromethane		74-87-3	NE	NE	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
Cyclohexane		110-82-7	NE	NE	0.64 UJ	0.96 UJ	0.93 UJ		1.6 U	1.2 UJ	0.99 UJ	1.1 UJ
1,2-Dibromo-3-chloropropane		96-12-8	NE	NE	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
Dibromochloromethane		124-48-1	NE	NE	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
1,2-Dibromoethane (EDB)		106-93-4	NE	NE	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
1,2-Dichlorobenzene (o-DCB)		95-50-1	1100	100000	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
1,3-Dichlorobenzene (m-DCB)		541-73-1	2400	17000	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
1,4-Dichlorobenzene (p-DCB)		106-46-7	1800	9800	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
Dichlorodifluoromethane (Freon 12)		75-71-8	NE	NE	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
1,1-Dichloroethane		75-34-3	270	19000	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
1,2-Dichloroethane		107-06-2	20	2300	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
1,1-Dichloroethene		75-35-4	330	100000	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
cis-1,2-Dichloroethene		156-59-2	250	59000	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
trans-1,2-Dichloroethene		156-60-5	190	100000	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
1,2-Dichloropropane		78-87-5	NE	NE	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
cis-1,3-Dichloropropene		10061-01-5	NE	NE	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
trans-1,3-Dichloropropene		10061-02-6	NE	NE	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
1,4-Dioxane		123-91-1	100	9800	13 U	19 U	19 U		32 UJ	23 U	20 U	23 U
2-Hexanone		591-78-6	NE	NE	3.2 U	4.8 U	4.6 U		8.1 U	5.8 U	5 U	5.7 U
Isopropylbenzene		98-82-8	NE	NE	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
Methyl acetate		79-20-9	NE	NE	3.2 U	4.8 U	4.6 U		8.1 U	5.8 U	5 U	5.7 U
Methyl ethyl ketone (2-Butanone)		78-93-3	120	100000	**1.3 J**	**2.5 J**	**2.1 J**		8.1 U	**2.4 J**	**1.4 J**	**3.8 J**
Methyl tert-butyl ether (MTBE)		1634-04-4	930	62000	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
4-Methyl-2-pentanone (MIBK)		108-10-1	NE	NE	3.2 U	4.8 U	4.6 U		8.1 U	5.8 U	5 U	5.7 U
Methylcyclohexane		108-87-2	NE	NE	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
Methylene chloride		75-09-2	50	51000	0.76 U	0.96 U	0.93 U		2.8 U	1.5 U	0.99 U	1.3 U

Table 1. 71 New Street Remedial Investigation
Soil Analytical Results - Northern Suspected Drywells
71 New Street Huntington LLC
Huntington, New York

					Location Name	SB-7	SB-7	SB-7	SB-7	SB-8	SB-8	SB-8	SB-8
					Sample Name	SB-7 (10-15)	SB-7 (15-20)	SB-7 (20-21.5)	SB-7 (25-30)	SB-8 (0-5)	SB-8 (5-10)	SB-8 (10-15)	SB-8 (15-20)
					Start Depth	10	15	20	25	0	5	10	15
					End Depth	15	20	21.5	30	5	10	15	20
					Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft
					Sample Date	6/25/2018	6/25/2018	6/25/2018	7/3/2018	6/25/2018	6/25/2018	6/25/2018	6/25/2018
					Parent Sample								
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**									
Styrene		100-42-5	NE	NE	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
1,1,2,2-Tetrachloroethane		79-34-5	NE	NE	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
Tetrachloroethene (PCE)		127-18-4	1300	5500	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)		76-13-1	NE	NE	0.64 UJ	0.96 UJ	0.93 UJ		1.6 U	1.2 UJ	0.99 UJ	1.1 UJ
1,2,3-Trichlorobenzene		87-61-6	NE	NE	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
1,2,4-Trichlorobenzene		120-82-1	NE	NE	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
1,1,1-Trichloroethane (TCA)		71-55-6	680	100000	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
1,1,2-Trichloroethane		79-00-5	NE	NE	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
Trichloroethene (TCE)		79-01-6	470	10000	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
Trichlorofluoromethane (Freon 11)		75-69-4	NE	NE	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
Vinyl chloride		75-01-4	20	210	0.64 U	0.96 U	0.93 U		1.6 U	1.2 U	0.99 U	1.1 U
NYSDEC PAH17	µg/kg											
Acenaphthene		83-32-9	20000	100000	350 U	350 U	360 U		380 U	360 U	340 U	330 U
Acenaphthylene		208-96-8	100000	100000	350 U	350 U	360 U		380 U	360 U	340 U	330 U
Anthracene		120-12-7	100000	100000	350 U	350 U	360 U		**52 J**	360 U	340 U	330 U
Benzo(a)anthracene		56-55-3	1000	1000	35 U	35 U	36 U		**350**	36 U	34 U	33 U
Benzo(b)fluoranthene		205-99-2	1000	1000	35 U	35 U	36 U		**600**	36 U	34 U	33 U
Benzo(k)fluoranthene		207-08-9	800	1000	35 U	35 U	36 U		**220**	36 U	34 U	33 U
Benzo(g,h,i)perylene		191-24-2	100000	100000	350 U	350 U	360 U		**280 J**	360 U	340 U	330 U
Benzo(a)pyrene		50-32-8	1000	1000	35 U	35 U	36 U		**390**	36 U	34 U	33 U
Chrysene		218-01-9	1000	1000	350 U	350 U	360 U		**440**	360 U	340 U	330 U
Dibenz(a,h)anthracene		53-70-3	330	330	35 U	35 U	36 U		**67**	36 U	34 U	33 U
Fluoranthene		206-44-0	100000	100000	350 U	350 U	360 U		**870**	360 U	340 U	330 U
Fluorene		86-73-7	30000	100000	350 U	350 U	360 U		380 U	360 U	340 U	330 U
Indeno(1,2,3-cd)pyrene		193-39-5	500	500	35 U	35 U	36 U		**330**	36 U	34 U	33 U
2-Methylnaphthalene		91-57-6	NE	NE	350 U	350 U	360 U		380 U	360 U	340 U	330 U
Naphthalene		91-20-3	12000	100000	350 U	350 U	360 U		380 U	360 U	340 U	330 U
Phenanthrene		85-01-8	100000	100000	350 U	350 U	360 U		**350 J**	360 U	340 U	330 U
Pyrene		129-00-0	100000	100000	350 U	350 U	360 U		**680**	360 U	340 U	330 U
Total PAH (17) (ND=0)		TPAH17_ND0	NE	NE	ND	ND	ND		**4629**	ND	ND	ND
NYSDEC PAH17 Other SVOCs	µg/kg											
Acetophenone		98-86-2	NE	NE	350 U	350 U	360 U		380 U	360 U	340 U	330 U
Atrazine		1912-24-9	NE	NE	140 U	140 U	140 U		150 U	150 U	140 U	130 U
Benzaldehyde		100-52-7	NE	NE	350 U	350 U	360 U		380 U	360 U	340 U	330 U
Biphenyl (1,1-Biphenyl)		92-52-4	NE	NE	350 U	350 U	360 U		380 U	360 U	340 U	330 U
Bis(2-chloroethoxy)methane		111-91-1	NE	NE	350 U	350 U	360 U		380 U	360 U	340 U	330 U
Bis(2-chloroethyl)ether		111-44-4	NE	NE	35 U	35 U	36 U		38 U	36 U	34 U	33 U
2,2-oxybis(1-Chloropropane)		108-60-1	NE	NE	350 U	350 U	360 U		380 U	360 U	340 U	330 U
Bis(2-ethylhexyl)phthalate		117-81-7	NE	NE	350 U	350 U	360 U		380 U	360 U	340 U	330 U
4-Bromophenyl phenyl ether		101-55-3	NE	NE	350 U	350 U	360 U		380 U	360 U	340 U	330 U
Butyl benzyl phthalate		85-68-7	NE	NE	350 U	350 U	360 U		380 U	360 U	340 U	330 U
Caprolactam		105-60-2	NE	NE	350 U	350 U	360 U		380 U	360 U	340 U	330 U
Carbazole		86-74-8	NE	NE	350 U	350 U	360 U		**37 J**	360 U	340 U	330 U
4-Chloro-3-methylphenol		59-50-7	NE	NE	350 U	350 U	360 U		380 U	360 U	340 U	330 U

Table 1. 71 New Street Remedial Investigation
Soil Analytical Results - Northern Suspected Drywells
71 New Street Huntington LLC
Huntington, New York

				Location Name	SB-7	SB-7	SB-7	SB-7	SB-8	SB-8	SB-8	SB-8
				Sample Name	SB-7 (10-15)	SB-7 (15-20)	SB-7 (20-21.5)	SB-7 (25-30)	SB-8 (0-5)	SB-8 (5-10)	SB-8 (10-15)	SB-8 (15-20)
				Start Depth	10	15	20	25	0	5	10	15
				End Depth	15	20	21.5	30	5	10	15	20
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Date	6/25/2018	6/25/2018	6/25/2018	7/3/2018	6/25/2018	6/25/2018	6/25/2018	6/25/2018
				Parent Sample								
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**								
4-Chloroaniline		106-47-8	NE	NE	350 U	350 U	360 U		380 U	360 U	340 U	330 U
2-Chloronaphthalene		91-58-7	NE	NE	350 U	350 U	360 U		380 U	360 U	340 U	330 U
2-Chlorophenol		95-57-8	NE	NE	350 U	350 U	360 U		380 U	360 U	340 U	330 U
4-Chlorophenyl phenyl ether		7005-72-3	NE	NE	350 U	350 U	360 U		380 U	360 U	340 U	330 U
Dibenzofuran		132-64-9	7000	14000	350 U	350 U	360 U		380 U	360 U	340 U	330 U
3,3-Dichlorobenzidine		91-94-1	NE	NE	140 U	140 U	140 U		150 U	150 U	140 U	130 U
2,4-Dichlorophenol		120-83-2	NE	NE	140 U	140 U	140 U		150 U	150 U	140 U	130 U
Diethyl phthalate		84-66-2	NE	NE	350 U	350 U	360 U		380 U	360 U	340 U	330 U
Dimethyl phthalate		131-11-3	NE	NE	350 U	350 U	360 U		380 U	360 U	340 U	330 U
2,4-Dimethylphenol		105-67-9	NE	NE	350 U	350 U	360 U		380 U	360 U	340 U	330 U
Di-n-butyl phthalate		84-74-2	NE	NE	350 U	350 U	360 U		380 U	360 U	340 U	330 U
4,6-Dinitro-2-methylphenol		534-52-1	NE	NE	290 U	280 U	290 U		300 U	290 U	280 U	270 U
2,4-Dinitrophenol		51-28-5	NE	NE	290 U	280 U	290 U		300 U	290 U	280 U	270 U
2,4-Dinitrotoluene		121-14-2	NE	NE	72 U	71 U	73 U		76 U	74 U	69 U	68 U
2,6-Dinitrotoluene		606-20-2	NE	NE	72 U	71 U	73 U		76 U	74 U	69 U	68 U
Di-n-octyl phthalate		117-84-0	NE	NE	350 U	350 U	360 U		380 U	360 U	340 U	330 U
Hexachlorobenzene		118-74-1	330	330	35 U	35 U	36 U		38 U	36 U	34 U	33 U
1,3-Hexachlorobutadiene (C-46)		87-68-3	NE	NE	72 U	71 U	73 U		76 U	74 U	69 U	68 U
Hexachlorocyclopentadiene		77-47-4	NE	NE	350 U	350 U	360 U		380 U	360 U	340 U	330 U
Hexachloroethane		67-72-1	NE	NE	35 U	35 U	36 U		38 U	36 U	34 U	33 U
Isophorone		78-59-1	NE	NE	140 U	140 U	140 U		150 U	150 U	140 U	130 U
2-Methylnaphthalene		91-57-6	NE	NE	350 U	350 U	360 U		380 U	360 U	340 U	330 U
2-Methylphenol (o-Cresol)		95-48-7	330	100000	350 U	350 U	360 U		380 U	360 U	340 U	330 U
4-Methylphenol (p-Cresol)		106-44-5	330	34000	350 U	350 U	360 U		380 U	360 U	340 U	330 U
2-Nitroaniline		88-74-4	NE	NE	350 U	350 U	360 U		380 U	360 U	340 U	330 U
3-Nitroaniline		99-09-2	NE	NE	350 U	350 U	360 U		380 U	360 U	340 U	330 U
4-Nitroaniline		100-01-6	NE	NE	350 U	350 U	360 U		380 U	360 U	340 U	330 U
Nitrobenzene		98-95-3	NE	NE	35 U	35 U	36 U		38 U	36 U	34 U	33 U
2-Nitrophenol		88-75-5	NE	NE	350 U	350 U	360 U		380 U	360 U	340 U	330 U
4-Nitrophenol		100-02-7	NE	NE	720 U	710 U	730 U		760 U	740 U	690 U	680 U
N-Nitrosodiphenylamine (NDFA)		86-30-6	NE	NE	350 U	350 U	360 U		380 U	360 U	340 U	330 U
N-Nitrosodi-n-propylamine (NDPA)		621-64-7	NE	NE	35 U	35 U	36 U		38 U	36 U	34 U	33 U
Pentachlorophenol		87-86-5	800	2400	290 U	280 U	290 U		300 U	290 U	280 U	270 U
Phenol		108-95-2	330	100000	350 U	350 U	360 U		380 U	360 U	340 U	330 U
1,2,4,5-Tetrachlorobenzene		95-94-3	NE	NE	350 U	350 U	360 U		380 U	360 U	340 U	330 U
2,3,4,6-Tetrachlorophenol		58-90-2	NE	NE	350 U	350 U	360 U		380 U	360 U	340 U	330 U
2,4,5-Trichlorophenol		95-95-4	NE	NE	350 U	350 U	360 U		380 U	360 U	340 U	330 U
2,4,6-Trichlorophenol		88-06-2	NE	NE	140 U	140 U	140 U		150 U	150 U	140 U	130 U
PCB Aroclors	µg/kg											
Aroclor 1016		12674-11-2	NE	NE	72 U	71 U	73 U	83 U	76 U	74 U	69 U	68 U
Aroclor 1221		11104-28-2	NE	NE	72 U	71 U	73 U	83 U	76 U	74 U	69 U	68 U
Aroclor 1232		11141-16-5	NE	NE	72 U	71 U	73 U	83 U	76 U	74 U	69 U	68 U
Aroclor 1242		53469-21-9	NE	NE	72 U	71 U	73 U	83 U	76 U	74 U	69 U	68 U
Aroclor 1248		12672-29-6	NE	NE	72 U	71 U	73 U	83 U	76 U	74 U	69 U	68 U
Aroclor 1254		11097-69-1	NE	NE	72 U	71 U	73 U	83 U	76 U	74 U	69 U	68 U

Table 1. 71 New Street Remedial Investigation
Soil Analytical Results - Northern Suspected Drywells
71 New Street Huntington LLC
Huntington, New York

				Location Name	SB-7	SB-7	SB-7	SB-7	SB-8	SB-8	SB-8	SB-8
				Sample Name	SB-7 (10-15)	SB-7 (15-20)	SB-7 (20-21.5)	SB-7 (25-30)	SB-8 (0-5)	SB-8 (5-10)	SB-8 (10-15)	SB-8 (15-20)
				Start Depth	10	15	20	25	0	5	10	15
				End Depth	15	20	21.5	30	5	10	15	20
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Date	6/25/2018	6/25/2018	6/25/2018	7/3/2018	6/25/2018	6/25/2018	6/25/2018	6/25/2018
				Parent Sample								
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**								
Aroclor 1260		11096-82-5	NE	NE	72 U	71 U	**240**	83 U	76 U	74 U	**200**	68 U
Aroclor 1262		37324-23-5	NE	NE	72 U	71 U	73 U	83 U	76 U	74 U	69 U	68 U
Aroclor 1268		11100-14-4	NE	NE	72 U	71 U	73 U	83 U	76 U	74 U	69 U	68 U
Total PCBs (Lab calculated)		1336-36-3	100	1000	72 U	71 U	**240**	83 U	76 U	74 U	**200**	68 U
Pesticides	µg/kg											
Aldrin		309-00-2	5	19	7.2 U	7.1 U	7.3 U		7.6 U	7.4 U	6.9 U	6.8 U
alpha-BHC (Hexachlorocyclohexane)		319-84-6	20	97	2.1 U	2.1 U	2.2 U		2.3 U	2.2 U	2.1 U	2 U
beta-BHC (beta-Hexachlorocyclohexane)		319-85-7	36	72	2.1 U	2.1 U	2.2 U		2.3 U	2.2 U	2.1 U	2 U
gamma-BHC (gamma-Hexachlorocyclohexane) (Lindane)		58-89-9	100	280	2.1 U	2.1 U	2.2 U		2.3 U	2.2 U	2.1 U	2 U
delta-BHC (delta-Hexachlorocyclohexane)		319-86-8	40	100000	2.1 U	2.1 U	2.2 U		2.3 U	2.2 U	2.1 U	2 U
Chlordane (Technical)		12789-03-6	NE	NE	72 U	71 U	73 U		**400 J**	74 U	69 U	68 U
2,4-D (2,4-Dichlorophenoxyacetic acid)		94-75-7	NE	NE	36 U	35 U	36 U		38 U	37 U	35 U	34 U
4,4'-DDT (p,p'-DDT)		50-29-3	3.3	1700	7.2 U	7.1 U	7.3 U		**16**	7.4 U	6.9 U	6.8 U
4,4'-DDE (p,p'-DDE)		72-55-9	3.3	1800	7.2 U	7.1 U	7.3 U		**17 J**	7.4 U	6.9 U	6.8 U
4,4-DDD (p,p-DDD)		72-54-8	3.3	2600	7.2 U	7.1 U	7.3 U		7.6 U	7.4 U	6.9 U	6.8 U
Dieldrin		60-57-1	5	39	2.1 U	2.1 U	2.2 U		2.3 U	2.2 U	2.1 U	2 U
alpha-Endosulfan (I)		959-98-8	2400	4800	7.2 U	7.1 U	7.3 U		**15 J**	7.4 U	6.9 U	6.8 U
beta-Endosulfan (II)		33213-65-9	2400	4800	7.2 U	7.1 U	7.3 U		7.6 U	7.4 U	6.9 U	6.8 U
Endosulfan sulfate		1031-07-8	2400	4800	7.2 U	7.1 U	7.3 U		7.6 U	7.4 U	6.9 U	6.8 U
Endrin		72-20-8	14	2200	7.2 U	7.1 U	7.3 U		7.6 U	7.4 U	6.9 U	6.8 U
Endrin aldehyde		7421-93-4	NE	NE	7.2 U	7.1 U	7.3 U		7.6 U	7.4 U	6.9 U	6.8 U
Endrin ketone		53494-70-5	NE	NE	7.2 U	7.1 U	7.3 U		7.6 U	7.4 U	6.9 U	6.8 U
Heptachlor		76-44-8	42	420	7.2 U	7.1 U	7.3 U		7.6 U	7.4 U	6.9 U	6.8 U
Heptachlor epoxide		1024-57-3	NE	NE	7.2 U	7.1 U	7.3 U		**36**	7.4 U	6.9 U	6.8 U
Methoxychlor		72-43-5	NE	NE	7.2 U	7.1 U	7.3 U		7.6 U	7.4 U	6.9 U	6.8 U
2,4,5-TP (Silvex)		93-72-1	3800	58000	36 U	35 U	36 UJ		38 UJ	37 UJ	35 UJ	34 UJ
Toxaphene		8001-35-2	NE	NE	72 U	71 U	73 U		76 U	74 U	69 U	68 U
Herbicides	µg/kg											
2,4-D (2,4-Dichlorophenoxyacetic acid)		94-75-7	NE	NE	36 U	35 U	36 U		38 U	37 U	35 U	34 U
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)		93-76-5	NE	NE	36 U	35 U	36 U		38 U	37 U	35 U	34 U
2,4,5-TP (Silvex)		93-72-1	3800	58000	36 U	35 U	36 UJ		38 UJ	37 UJ	35 UJ	34 UJ
Total Metals	mg/kg											
Aluminum		7429-90-5	NE	NE	**2420 J**	**1660 J**	**3110 J**		**14600 J**	**2030 J**	**2140 J**	**897 J**
Antimony		7440-36-0	NE	NE	0.96 UJ	0.96 UJ	1.1 UJ		1 UJ	1 UJ	0.92 UJ	1 UJ
Arsenic		7440-38-2	13	16	**1.5**	**1.3**	**1.4**		**12.9**	**1.2**	**0.92**	**0.74 J**
Barium		7440-39-3	350	350	**13.6**	**9.6**	**22.7**		**66.9**	**5.9**	**8**	**7.7**
Beryllium		7440-41-7	7.2	14	**0.18 J**	**0.17 J**	**0.24 J**		**0.5**	0.41 U	0.37 U	0.4 U
Cadmium		7440-43-9	2.5	2.5	0.96 U	0.96 U	1.1 U		1 U	1 U	0.92 U	1 U
Calcium		7440-70-2	NE	NE	**337 J**	**252 J**	**202 J**		**2310 J**	**297 J**	**402 J**	**153**
Chromium		7440-47-3	NE	NE	**5 J**	**3.4 J**	**8.4 J**		**16.9 J**	**3.7 J**	**7.9 J**	**2**
Cobalt		7440-48-4	NE	NE	**1.9 J**	**1.9 J**	**2.4 J**		**4.4 J**	**0.88 J**	**0.9 J**	**0.83 J**
Copper		7440-50-8	50	270	**3.6**	**3.7**	**8.6**		**13.4**	**3**	**4.9**	**1.7 J**
Iron		7439-89-6	NE	NE	**4260**	**4330**	**6700**		**14800**	**4160**	**5630**	**3790**
Lead		7439-92-1	63	400	**1.6**	**1.4**	**2.1**		**139**	**3.2**	**3.1**	**0.8**

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Soil Analytical Results - Northern Suspected Drywells
71 New Street Huntington LLC
Huntington, New York

				Location Name	SB-7	SB-7	SB-7	SB-7	SB-8	SB-8	SB-8	SB-8
				Sample Name	SB-7 (10-15)	SB-7 (15-20)	SB-7 (20-21.5)	SB-7 (25-30)	SB-8 (0-5)	SB-8 (5-10)	SB-8 (10-15)	SB-8 (15-20)
				Start Depth	10	15	20	25	0	5	10	15
				End Depth	15	20	21.5	30	5	10	15	20
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Date	6/25/2018	6/25/2018	6/25/2018	7/3/2018	6/25/2018	6/25/2018	6/25/2018	6/25/2018
				Parent Sample								
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**								
Magnesium		7439-95-4	NE	NE	**641 J**	**453 J**	**796 J**		**1720 J**	**479 J**	**509 J**	**247**
Manganese		7439-96-5	1600	2000	**109 J**	**113 J**	**212 J**		**212 J**	**39.1 J**	**36.1 J**	**86.9 J**
Mercury		7439-97-6	0.18	0.81	0.017 U	0.018 U	0.017 U		**0.19**	**0.13**	**0.17**	0.017 U
Nickel		7440-02-0	30	140	**2.9**	**2.4**	**3.9**		**8.7**	**2.2**	**2.6**	**1.2 J**
Potassium		7440-09-7	NE	NE	**356 J**	**245 J**	**491 J**		**517 J**	**253 J**	**297 J**	**141 J**
Selenium		7782-49-2	3.9	36	4.8 U	4.8 U	5.3 U		**0.75 J**	5.1 U	4.6 U	5 U
Silver		7440-22-4	2	36	0.96 U	0.96 U	1.1 U		1 U	1 U	0.92 U	1 U
Sodium		7440-23-5	NE	NE	95.9 U	96 U	**47.3 J**		**47.6 J**	103 U	91.9 U	100 U
Thallium		7440-28-0	NE	NE	0.38 U	0.38 U	0.42 U		**0.14 J**	0.41 U	0.37 U	0.4 U
Vanadium		7440-62-2	NE	NE	**5.7**	**4.5**	**7.6**		**22.8**	**4.9**	**5.9**	**2.7**
Zinc		7440-66-6	109	2200	**8.2**	**6.2 J**	**14.6**		**50.8**	**9.6**	**11.5**	**4.9 J**
Other	mg/kg											
Formaldehyde		50-00-0	NE	NE	1.08 U	1.05 U	1.07 U		1.15 U	1.09 U	**1.29 J**	1.02 U

Table 1. 71 New Street Remedial Investigation
Soil Analytical Results - Northern Suspected Drywells
71 New Street Huntington LLC
Huntington, New York

				Location Name	SB-8	SB-8	SB-9	SB-9	SB-9	SB-9	SB-9
				Sample Name	SB-8 (20-22.5)	SB-8 (25-30)	SB-9 (0-5)	SB-9 (5-10)	SB-9 (10-15)	SB-9 (15-20)	SB-XX-06252018
				Start Depth	20	25	0	5	10	15	15
				End Depth	22.5	30	5	10	15	20	20
				Depth Unit	ft	ft	ft	ft	ft	ft	ft
				Sample Date	6/25/2018	7/3/2018	6/25/2018	6/25/2018	6/25/2018	6/25/2018	6/25/2018
				Parent Sample							SB-9 (15-20)
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**							
BTEX	µg/kg										
Benzene		71-43-2	60	2900	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U
Toluene		108-88-3	700	100000	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U
Ethylbenzene		100-41-4	1000	30000	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U
o-Xylene		95-47-6	260	100000	**0.12 J**	0.92 U	0.88 U	**0.11 J**	**0.091 J**	1.1 U	**0.33 J**
m/p-Xylene		179601-23-1	260	100000	**0.38 J**	0.92 U	**0.19 J**	**0.35 J**	**0.29 J**	**0.34 J**	**0.95 J**
Total Xylene		1330-20-7	260	100000	**0.5 J**	1.8 U	1.8 U	**0.46 J**	**0.39 J**	**0.34 J**	**1.3 J**
Total BTEX (ND=0)		TBTEX_ND0	NE	NE	**0.5**	ND	**0.19**	**0.46**	**0.381**	**0.34**	**1.28**
Other VOCs	µg/kg										
Acetone		67-64-1	50	100000	**78**	**55**	**42**	**58**	**37**	**65 J**	**160 J**
Bromochloromethane		74-97-5	NE	NE	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U
Bromodichloromethane		75-27-4	NE	NE	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U
Bromoform		75-25-2	NE	NE	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U
Bromomethane		74-83-9	NE	NE	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U
Carbon disulfide		75-15-0	NE	NE	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U
Carbon tetrachloride		56-23-5	760	1400	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U
Chlorobenzene		108-90-7	1100	100000	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U
Chloroethane		75-00-3	NE	NE	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U
Chloroform (Trichloromethane)		67-66-3	370	10000	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U
Chloromethane		74-87-3	NE	NE	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U
Cyclohexane		110-82-7	NE	NE	1 UJ	0.92 U	0.88 UJ	1 UJ	0.52 UJ	1.1 UJ	1.9 UJ
1,2-Dibromo-3-chloropropane		96-12-8	NE	NE	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U
Dibromochloromethane		124-48-1	NE	NE	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U
1,2-Dibromoethane (EDB)		106-93-4	NE	NE	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U
1,2-Dichlorobenzene (o-DCB)		95-50-1	1100	100000	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U
1,3-Dichlorobenzene (m-DCB)		541-73-1	2400	17000	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U
1,4-Dichlorobenzene (p-DCB)		106-46-7	1800	9800	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U
Dichlorodifluoromethane (Freon 12)		75-71-8	NE	NE	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U
1,1-Dichloroethane		75-34-3	270	19000	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U
1,2-Dichloroethane		107-06-2	20	2300	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U
1,1-Dichloroethene		75-35-4	330	100000	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U
cis-1,2-Dichloroethene		156-59-2	250	59000	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U
trans-1,2-Dichloroethene		156-60-5	190	100000	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U
1,2-Dichloropropane		78-87-5	NE	NE	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U
cis-1,3-Dichloropropene		10061-01-5	NE	NE	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U
trans-1,3-Dichloropropene		10061-02-6	NE	NE	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U
1,4-Dioxane		123-91-1	100	9800	21 U	18 U	18 U	20 U	10 U	21 U	39 U
2-Hexanone		591-78-6	NE	NE	5.2 U	4.6 U	4.4 U	5.1 U	2.6 U	5.3 U	9.6 U
Isopropylbenzene		98-82-8	NE	NE	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U
Methyl acetate		79-20-9	NE	NE	**4.6 J**	4.6 U	4.4 U	**4.9 J**	**3.8**	**4.9 J**	**9.7**
Methyl ethyl ketone (2-Butanone)		78-93-3	120	100000	**4 J**	**3.1 J**	**1.3 J**	**3 J**	**2.1 J**	**3.2 J**	**7.8 J**
Methyl tert-butyl ether (MTBE)		1634-04-4	930	62000	**0.17 J**	**0.15 J**	**0.11 J**	**0.15 J**	**0.091 J**	**0.15 J**	**0.33 J**
4-Methyl-2-pentanone (MIBK)		108-10-1	NE	NE	5.2 U	4.6 U	4.4 U	5.1 U	2.6 U	5.3 U	9.6 U
Methylcyclohexane		108-87-2	NE	NE	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U
Methylene chloride		75-09-2	50	51000	**2.3 J**	0.92 U	0.88 U	1.4 U	1.1 U	1.5 U	3.7 U

Table 1. 71 New Street Remedial Investigation
Soil Analytical Results - Northern Suspected Drywells
71 New Street Huntington LLC
Huntington, New York

					Location Name	SB-8	SB-8	SB-9	SB-9	SB-9	SB-9	SB-9
					Sample Name	SB-8 (20-22.5)	SB-8 (25-30)	SB-9 (0-5)	SB-9 (5-10)	SB-9 (10-15)	SB-9 (15-20)	SB-XX-06252018
					Start Depth	20	25	0	5	10	15	15
					End Depth	22.5	30	5	10	15	20	20
					Depth Unit	ft	ft	ft	ft	ft	ft	ft
					Sample Date	6/25/2018	7/3/2018	6/25/2018	6/25/2018	6/25/2018	6/25/2018	6/25/2018
					Parent Sample							SB-9 (15-20)
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**								
Styrene		100-42-5	NE	NE	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U	
1,1,2,2-Tetrachloroethane		79-34-5	NE	NE	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U	
Tetrachloroethene (PCE)		127-18-4	1300	5500	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)		76-13-1	NE	NE	1 UJ	0.92 U	0.88 UJ	1 UJ	0.52 UJ	1.1 UJ	1.9 UJ	
1,2,3-Trichlorobenzene		87-61-6	NE	NE	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U	
1,2,4-Trichlorobenzene		120-82-1	NE	NE	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U	
1,1,1-Trichloroethane (TCA)		71-55-6	680	100000	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U	
1,1,2-Trichloroethane		79-00-5	NE	NE	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U	
Trichloroethene (TCE)		79-01-6	470	10000	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U	
Trichlorofluoromethane (Freon 11)		75-69-4	NE	NE	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U	
Vinyl chloride		75-01-4	20	210	1 U	0.92 U	0.88 U	1 U	0.52 U	1.1 U	1.9 U	
NYSDEC PAH17	µg/kg											
Acenaphthene		83-32-9	20000	100000	340 U		**43 J**	350 U	330 U	340 U	340 U	
Acenaphthylene		208-96-8	100000	100000	340 U		360 U	350 U	330 U	340 U	340 U	
Anthracene		120-12-7	100000	100000	340 U		**130 J**	350 U	330 U	340 U	340 U	
Benzo(a)anthracene		56-55-3	1000	1000	34 U		**240**	35 U	33 U	34 U	34 U	
Benzo(b)fluoranthene		205-99-2	1000	1000	34 U		**260**	35 U	33 U	34 U	34 U	
Benzo(k)fluoranthene		207-08-9	800	1000	34 U		**99**	35 U	33 U	34 U	34 U	
Benzo(g,h,i)perylene		191-24-2	100000	100000	340 U		**110 J**	350 U	330 U	340 U	340 U	
Benzo(a)pyrene		50-32-8	1000	1000	34 U		**200**	35 U	33 U	34 U	34 U	
Chrysene		218-01-9	1000	1000	340 U		**220 J**	350 U	330 U	340 U	340 U	
Dibenz(a,h)anthracene		53-70-3	330	330	34 U		**31 J**	35 U	33 U	34 U	34 U	
Fluoranthene		206-44-0	100000	100000	340 U		**530**	350 U	330 U	340 U	340 U	
Fluorene		86-73-7	30000	100000	340 U		**64 J**	350 U	330 U	340 U	340 U	
Indeno(1,2,3-cd)pyrene		193-39-5	500	500	34 U		**140**	35 U	33 U	34 U	34 U	
2-Methylnaphthalene		91-57-6	NE	NE	340 U		360 U	350 U	330 U	340 U	340 U	
Naphthalene		91-20-3	12000	100000	340 U		360 U	350 U	330 U	340 U	340 U	
Phenanthrene		85-01-8	100000	100000	340 U		**440**	350 U	330 U	340 U	340 U	
Pyrene		129-00-0	100000	100000	340 U		**450**	350 U	330 U	340 U	340 U	
Total PAH (17) (ND=0)		TPAH17_ND0	NE	NE	ND		**2957**	ND	ND	ND	ND	
NYSDEC PAH17 Other SVOCs	µg/kg											
Acetophenone		98-86-2	NE	NE	340 U		360 U	350 U	330 U	340 UJ	340 U	
Atrazine		1912-24-9	NE	NE	140 U		150 U	140 U	130 U	140 U	140 U	
Benzaldehyde		100-52-7	NE	NE	340 U		360 U	350 U	330 U	340 U	340 U	
Biphenyl (1,1-Biphenyl)		92-52-4	NE	NE	340 U		360 U	350 U	330 U	340 U	340 U	
Bis(2-chloroethoxy)methane		111-91-1	NE	NE	340 U		360 U	350 U	330 U	340 U	340 U	
Bis(2-chloroethyl)ether		111-44-4	NE	NE	34 U		36 U	35 U	33 U	34 U	34 U	
2,2-oxybis(1-Chloropropane)		108-60-1	NE	NE	340 U		360 U	350 U	330 U	340 U	340 U	
Bis(2-ethylhexyl)phthalate		117-81-7	NE	NE	340 U		360 U	350 U	330 U	340 U	340 U	
4-Bromophenyl phenyl ether		101-55-3	NE	NE	340 U		360 U	350 U	330 U	340 U	340 U	
Butyl benzyl phthalate		85-68-7	NE	NE	340 U		360 U	350 U	330 U	340 U	340 U	
Caprolactam		105-60-2	NE	NE	340 U		360 U	350 U	330 U	340 R	340 U	
Carbazole		86-74-8	NE	NE	340 U		**31 J**	350 U	330 U	340 U	340 U	
4-Chloro-3-methylphenol		59-50-7	NE	NE	340 U		360 U	350 U	330 U	340 R	340 U	

Table 1. 71 New Street Remedial Investigation
Soil Analytical Results - Northern Suspected Drywells
71 New Street Huntington LLC
Huntington, New York

				Location Name	SB-8	SB-8	SB-9	SB-9	SB-9	SB-9	SB-9
				Sample Name	SB-8 (20-22.5)	SB-8 (25-30)	SB-9 (0-5)	SB-9 (5-10)	SB-9 (10-15)	SB-9 (15-20)	SB-XX-06252018
				Start Depth	20	25	0	5	10	15	15
				End Depth	22.5	30	5	10	15	20	20
				Depth Unit	ft	ft	ft	ft	ft	ft	ft
				Sample Date	6/25/2018	7/3/2018	6/25/2018	6/25/2018	6/25/2018	6/25/2018	6/25/2018
				Parent Sample							SB-9 (15-20)
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**							
4-Chloroaniline		106-47-8	NE	NE	340 U		360 U	350 U	330 U	340 U	340 U
2-Chloronaphthalene		91-58-7	NE	NE	340 U		360 U	350 U	330 U	340 U	340 U
2-Chlorophenol		95-57-8	NE	NE	340 U		360 U	350 U	330 U	340 U	340 U
4-Chlorophenyl phenyl ether		7005-72-3	NE	NE	340 U		360 U	350 U	330 U	340 U	340 U
Dibenzofuran		132-64-9	7000	14000	340 U		**24 J**	350 U	330 U	340 U	340 U
3,3-Dichlorobenzidine		91-94-1	NE	NE	140 U		150 U	140 U	130 U	140 U	140 U
2,4-Dichlorophenol		120-83-2	NE	NE	140 U		150 U	140 U	130 U	140 U	140 U
Diethyl phthalate		84-66-2	NE	NE	340 U		360 U	350 U	330 U	340 U	340 U
Dimethyl phthalate		131-11-3	NE	NE	340 U		360 U	350 U	330 U	340 U	340 U
2,4-Dimethylphenol		105-67-9	NE	NE	340 U		360 U	350 U	330 U	340 U	340 U
Di-n-butyl phthalate		84-74-2	NE	NE	340 U		360 U	350 U	330 U	340 U	340 U
4,6-Dinitro-2-methylphenol		534-52-1	NE	NE	280 U		290 U	280 U	270 U	270 UJ	270 U
2,4-Dinitrophenol		51-28-5	NE	NE	280 U		290 U	280 U	270 U	270 UJ	270 U
2,4-Dinitrotoluene		121-14-2	NE	NE	69 U		74 U	70 U	68 U	69 U	69 U
2,6-Dinitrotoluene		606-20-2	NE	NE	69 U		74 U	70 U	68 U	69 U	69 U
Di-n-octyl phthalate		117-84-0	NE	NE	340 U		360 U	350 U	330 U	340 U	340 U
Hexachlorobenzene		118-74-1	330	330	34 U		36 U	35 U	33 U	34 U	34 U
1,3-Hexachlorobutadiene (C-46)		87-68-3	NE	NE	69 U		74 U	70 U	68 U	69 U	69 U
Hexachlorocyclopentadiene		77-47-4	NE	NE	340 U		360 U	350 U	330 U	340 U	340 U
Hexachloroethane		67-72-1	NE	NE	34 U		36 U	35 U	33 U	34 U	34 U
Isophorone		78-59-1	NE	NE	140 U		150 U	140 U	130 U	140 UJ	140 U
2-Methylnaphthalene		91-57-6	NE	NE	340 U		360 U	350 U	330 U	340 U	340 U
2-Methylphenol (o-Cresol)		95-48-7	330	100000	340 U		360 U	350 U	330 U	340 U	340 U
4-Methylphenol (p-Cresol)		106-44-5	330	34000	340 U		360 U	350 U	330 U	340 U	340 U
2-Nitroaniline		88-74-4	NE	NE	340 U		360 U	350 U	330 U	340 U	340 U
3-Nitroaniline		99-09-2	NE	NE	340 U		360 U	350 U	330 U	340 U	340 U
4-Nitroaniline		100-01-6	NE	NE	340 U		360 U	350 U	330 U	340 U	340 U
Nitrobenzene		98-95-3	NE	NE	34 U		36 U	35 U	33 U	34 UJ	34 U
2-Nitrophenol		88-75-5	NE	NE	340 U		360 U	350 U	330 U	340 U	340 U
4-Nitrophenol		100-02-7	NE	NE	690 U		740 U	700 U	680 U	690 U	690 U
N-Nitrosodiphenylamine (NDFA)		86-30-6	NE	NE	340 U		360 U	350 U	330 U	340 U	340 U
N-Nitrosodi-n-propylamine (NDPA)		621-64-7	NE	NE	34 U		36 U	35 U	33 U	34 U	34 U
Pentachlorophenol		87-86-5	800	2400	280 U		290 U	280 U	270 U	270 U	270 U
Phenol		108-95-2	330	100000	340 U		360 U	350 U	330 U	340 U	340 U
1,2,4,5-Tetrachlorobenzene		95-94-3	NE	NE	340 U		360 U	350 U	330 U	340 U	340 U
2,3,4,6-Tetrachlorophenol		58-90-2	NE	NE	340 U		360 U	350 U	330 U	340 U	340 U
2,4,5-Trichlorophenol		95-95-4	NE	NE	340 U		360 U	350 U	330 U	340 U	340 U
2,4,6-Trichlorophenol		88-06-2	NE	NE	140 U		150 U	140 U	130 U	140 U	140 U
PCB Aroclors	µg/kg										
Aroclor 1016		12674-11-2	NE	NE	69 U		74 U	70 U	68 U	69 U	69 U
Aroclor 1221		11104-28-2	NE	NE	69 U		74 U	70 U	68 U	69 U	69 U
Aroclor 1232		11141-16-5	NE	NE	69 U		74 U	70 U	68 U	69 U	69 U
Aroclor 1242		53469-21-9	NE	NE	69 U		74 U	70 U	68 U	69 U	69 U
Aroclor 1248		12672-29-6	NE	NE	69 U		74 U	70 U	68 U	69 U	69 U
Aroclor 1254		11097-69-1	NE	NE	69 U		74 U	70 U	68 U	69 U	69 U

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Soil Analytical Results - Northern Suspected Drywells
71 New Street Huntington LLC
Huntington, New York

					Location Name	SB-8	SB-8	SB-9	SB-9	SB-9	SB-9	SB-9
					Sample Name	SB-8 (20-22.5)	SB-8 (25-30)	SB-9 (0-5)	SB-9 (5-10)	SB-9 (10-15)	SB-9 (15-20)	SB-XX-06252018
					Start Depth	20	25	0	5	10	15	15
					End Depth	22.5	30	5	10	15	20	20
					Depth Unit	ft	ft	ft	ft	ft	ft	ft
					Sample Date	6/25/2018	7/3/2018	6/25/2018	6/25/2018	6/25/2018	6/25/2018	6/25/2018
					Parent Sample							SB-9 (15-20)
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**								
Aroclor 1260		11096-82-5	NE	NE	**51 J**		74 U	**770**	**320**	69 U	69 U
Aroclor 1262		37324-23-5	NE	NE	69 U		74 U	70 U	68 U	69 U	69 U
Aroclor 1268		11100-14-4	NE	NE	69 U		74 U	70 U	68 U	69 U	69 U
Total PCBs (Lab calculated)		1336-36-3	100	1000	**51 J**		74 U	**770**	**320**	69 U	69 U
Pesticides	µg/kg										
Aldrin		309-00-2	5	19	7 U		7.4 U	7 U	6.8 U	6.9 U	6.9 U
alpha-BHC (Hexachlorocyclohexane)		319-84-6	20	97	2.1 U		2.2 U	2.1 U	2 U	2.1 U	2.1 U
beta-BHC (beta-Hexachlorocyclohexane)		319-85-7	36	72	2.1 U		2.2 U	2.1 U	2 U	2.1 U	2.1 U
gamma-BHC (gamma-Hexachlorocyclohexane) (Lindane)		58-89-9	100	280	2.1 U		2.2 U	2.1 U	2 U	2.1 U	2.1 U
delta-BHC (delta-Hexachlorocyclohexane)		319-86-8	40	100000	2.1 U		2.2 U	2.1 U	2 U	2.1 U	2.1 U
Chlordane (Technical)		12789-03-6	NE	NE	70 U		**68 J**	70 U	68 U	69 U	69 U
2,4-D (2,4-Dichlorophenoxyacetic acid)		94-75-7	NE	NE	35 U		37 U	35 U	34 U	34 U	34 U
4,4'-DDT (p,p'-DDT)		50-29-3	3.3	1700	7 U		**4.7 J**	7 U	6.8 U	6.9 U	6.9 U
4,4'-DDE (p,p'-DDE)		72-55-9	3.3	1800	7 U		**4.3 J**	7 U	6.8 U	6.9 U	6.9 U
4,4-DDD (p,p-DDD)		72-54-8	3.3	2600	7 U		7.4 U	7 U	6.8 U	6.9 U	6.9 U
Dieldrin		60-57-1	5	39	2.1 U		2.2 U	2.1 U	2 U	2.1 U	2.1 U
alpha-Endosulfan (I)		959-98-8	2400	4800	7 U		7.4 U	7 U	6.8 U	6.9 U	6.9 U
beta-Endosulfan (II)		33213-65-9	2400	4800	7 U		7.4 U	7 U	6.8 U	6.9 U	6.9 U
Endosulfan sulfate		1031-07-8	2400	4800	7 U		7.4 U	7 U	6.8 U	6.9 U	6.9 U
Endrin		72-20-8	14	2200	7 U		7.4 U	7 U	6.8 U	6.9 U	6.9 U
Endrin aldehyde		7421-93-4	NE	NE	7 U		7.4 U	7 U	6.8 U	6.9 U	6.9 U
Endrin ketone		53494-70-5	NE	NE	7 U		7.4 U	7 U	6.8 U	6.9 U	6.9 U
Heptachlor		76-44-8	42	420	7 U		7.4 U	7 U	6.8 U	6.9 U	6.9 U
Heptachlor epoxide		1024-57-3	NE	NE	7 U		**5.4 J**	7 U	6.8 U	6.9 U	6.9 U
Methoxychlor		72-43-5	NE	NE	7 U		7.4 U	7 U	6.8 U	6.9 U	6.9 U
2,4,5-TP (Silvex)		93-72-1	3800	58000	35 UJ		37 U	35 U	34 U	34 U	34 U
Toxaphene		8001-35-2	NE	NE	70 U		74 U	70 U	68 U	69 U	69 UJ
Herbicides	µg/kg										
2,4-D (2,4-Dichlorophenoxyacetic acid)		94-75-7	NE	NE	35 U		37 U	35 U	34 U	34 U	34 U
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)		93-76-5	NE	NE	35 U		37 U	35 U	34 U	34 U	34 U
2,4,5-TP (Silvex)		93-72-1	3800	58000	35 UJ		37 U	35 U	34 U	34 U	34 U
Total Metals	mg/kg										
Aluminum		7429-90-5	NE	NE	**4920 J**		**5420 J**	**1730 J**	**963 J**	**1240 J**	**3690 J**
Antimony		7440-36-0	NE	NE	0.98 UJ		1 UJ	0.95 UJ	0.91 UJ	1 UJ	0.96 UJ
Arsenic		7440-38-2	13	16	**1.8**		**2.2**	**0.84 J**	**0.91**	**0.68 J**	**1.7**
Barium		7440-39-3	350	350	**32.3**		**21**	**7.6**	**3.7**	**6.5 J**	**18.6 J**
Beryllium		7440-41-7	7.2	14	**0.29 J**		**0.23 J**	0.38 U	0.36 U	0.4 U	**0.28 J**
Cadmium		7440-43-9	2.5	2.5	0.98 U		1 U	0.95 U	0.91 U	1 U	0.96 U
Calcium		7440-70-2	NE	NE	**224 J**		**2360 J**	**291 J**	**170 J**	**130 J**	**578 J**
Chromium		7440-47-3	NE	NE	**6.9 J**		**11.3 J**	**4 J**	**2.6 J**	**2.4 J**	**5.9 J**
Cobalt		7440-48-4	NE	NE	**2.9 J**		**4.5 J**	**0.57 J**	1.8 UJ	**0.96 J**	**3 J**
Copper		7440-50-8	50	270	**5.8**		**7**	**4.3**	**2**	**1.9 J**	**4.4**
Iron		7439-89-6	NE	NE	**7410**		**12200**	**3680**	**3420**	**2740 J**	**6220 J**
Lead		7439-92-1	63	400	**2.7**		**17.2**	**7**	**1.1**	**1 J**	**2.3 J**

Table 1. 71 New Street Remedial Investigation
Soil Analytical Results - Northern Suspected Drywells
71 New Street Huntington LLC
Huntington, New York

				Location Name	SB-8	SB-8	SB-9	SB-9	SB-9	SB-9	SB-9
				Sample Name	SB-8 (20-22.5)	SB-8 (25-30)	SB-9 (0-5)	SB-9 (5-10)	SB-9 (10-15)	SB-9 (15-20)	SB-XX-06252018
				Start Depth	20	25	0	5	10	15	15
				End Depth	22.5	30	5	10	15	20	20
				Depth Unit	ft	ft	ft	ft	ft	ft	ft
				Sample Date	6/25/2018	7/3/2018	6/25/2018	6/25/2018	6/25/2018	6/25/2018	6/25/2018
				Parent Sample							SB-9 (15-20)
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**							
Magnesium		7439-95-4	NE	NE	**1220 J**		**1410 J**	**351 J**	**301 J**	**303 J**	**971 J**
Manganese		7439-96-5	1600	2000	**149 J**		**132 J**	**16.5 J**	**46.6 J**	**64.3 J**	**160 J**
Mercury		7439-97-6	0.18	0.81	0.017 U		**0.029**	**0.77**	**0.07**	0.016 U	0.017 U
Nickel		7440-02-0	30	140	**4.9**		**8.7**	**1.6 J**	**1.4 J**	**1.7 J**	**5**
Potassium		7440-09-7	NE	NE	**689**		**331 J**	**158 J**	**166 J**	**182 J**	**559 J**
Selenium		7782-49-2	3.9	36	4.9 U		5 U	4.7 U	4.5 U	5 U	4.8 U
Silver		7440-22-4	2	36	0.98 U		**1.2**	0.95 U	0.91 U	1 U	0.96 U
Sodium		7440-23-5	NE	NE	**43.7 J**		**61.4 J**	94.8 U	90.8 U	100 U	96 U
Thallium		7440-28-0	NE	NE	0.39 U		0.4 U	0.38 U	0.36 U	0.4 U	0.38 U
Vanadium		7440-62-2	NE	NE	**9**		**14.4**	**3.7**	**2.8**	**2.8 J**	**7.9 J**
Zinc		7440-66-6	109	2200	**13.8**		**17.9**	**11.1**	**4.9 J**	**5.2 J**	**13.4**
Other	mg/kg										
Formaldehyde		50-00-0	NE	NE	**2.4 J**	**1.66 J**	1.1 U	**1.31 J**	**1.15 J**	**1.39 J**	1.02 U

Table 1. 71 New Street Remedial Investigation
Soil Analytical Results - Northern Suspected Drywells
71 New Street Huntington LLC
Huntington, New York

				Location Name	**SB-9**	**SB-9**
				Sample Name	**SB-9 (20-23)**	**SB-9 (25-30)**
				Start Depth	**20**	**25**
				End Depth	**23**	**30**
				Depth Unit	**ft**	**ft**
				Sample Date	**6/25/2018**	**7/3/2018**
				Parent Sample		
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**		
BTEX	µg/kg					
Benzene		71-43-2	60	2900	0.81 U	1 U
Toluene		108-88-3	700	100000	0.81 U	1 U
Ethylbenzene		100-41-4	1000	30000	0.81 U	1 U
o-Xylene		95-47-6	260	100000	**0.096 J**	1 U
m/p-Xylene		179601-23-1	260	100000	**0.3 J**	1 U
Total Xylene		1330-20-7	260	100000	**0.4 J**	2 U
Total BTEX (ND=0)		TBTEX_ND0	NE	NE	**0.396**	ND
Other VOCs	µg/kg					
Acetone		67-64-1	50	100000	**70**	**51**
Bromochloromethane		74-97-5	NE	NE	0.81 U	1 U
Bromodichloromethane		75-27-4	NE	NE	0.81 U	1 U
Bromoform		75-25-2	NE	NE	0.81 U	1 U
Bromomethane		74-83-9	NE	NE	0.81 U	1 U
Carbon disulfide		75-15-0	NE	NE	0.81 U	1 U
Carbon tetrachloride		56-23-5	760	1400	0.81 U	1 U
Chlorobenzene		108-90-7	1100	100000	0.81 U	1 U
Chloroethane		75-00-3	NE	NE	0.81 U	1 U
Chloroform (Trichloromethane)		67-66-3	370	10000	0.81 U	1 U
Chloromethane		74-87-3	NE	NE	0.81 U	1 U
Cyclohexane		110-82-7	NE	NE	0.81 UJ	1 U
1,2-Dibromo-3-chloropropane		96-12-8	NE	NE	0.81 U	1 U
Dibromochloromethane		124-48-1	NE	NE	0.81 U	1 U
1,2-Dibromoethane (EDB)		106-93-4	NE	NE	0.81 U	1 U
1,2-Dichlorobenzene (o-DCB)		95-50-1	1100	100000	0.81 U	1 U
1,3-Dichlorobenzene (m-DCB)		541-73-1	2400	17000	0.81 U	1 U
1,4-Dichlorobenzene (p-DCB)		106-46-7	1800	9800	0.81 U	1 U
Dichlorodifluoromethane (Freon 12)		75-71-8	NE	NE	0.81 U	1 U
1,1-Dichloroethane		75-34-3	270	19000	0.81 U	1 U
1,2-Dichloroethane		107-06-2	20	2300	0.81 U	1 U
1,1-Dichloroethene		75-35-4	330	100000	0.81 U	1 U
cis-1,2-Dichloroethene		156-59-2	250	59000	0.81 U	1 U
trans-1,2-Dichloroethene		156-60-5	190	100000	0.81 U	1 U
1,2-Dichloropropane		78-87-5	NE	NE	0.81 U	1 U
cis-1,3-Dichloropropene		10061-01-5	NE	NE	0.81 U	1 U
trans-1,3-Dichloropropene		10061-02-6	NE	NE	0.81 U	1 U
1,4-Dioxane		123-91-1	100	9800	16 U	20 U
2-Hexanone		591-78-6	NE	NE	4.1 U	5 U
Isopropylbenzene		98-82-8	NE	NE	0.81 U	1 U
Methyl acetate		79-20-9	NE	NE	**3.7 J**	5 U
Methyl ethyl ketone (2-Butanone)		78-93-3	120	100000	**3.2 J**	**1.9 J**
Methyl tert-butyl ether (MTBE)		1634-04-4	930	62000	**0.16 J**	**0.18 J**
4-Methyl-2-pentanone (MIBK)		108-10-1	NE	NE	4.1 U	5 U
Methylcyclohexane		108-87-2	NE	NE	0.81 U	1 U
Methylene chloride		75-09-2	50	51000	0.86 U	1.2 U

Table 1. 71 New Street Remedial Investigation
Soil Analytical Results - Northern Suspected Drywells
71 New Street Huntington LLC
Huntington, New York

				Location Name	**SB-9**	**SB-9**
				Sample Name	**SB-9 (20-23)**	**SB-9 (25-30)**
				Start Depth	**20**	**25**
				End Depth	**23**	**30**
				Depth Unit	**ft**	**ft**
				Sample Date	**6/25/2018**	**7/3/2018**
				Parent Sample		
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**		
Styrene		100-42-5	NE	NE	0.81 U	1 U
1,1,2,2-Tetrachloroethane		79-34-5	NE	NE	0.81 U	1 U
Tetrachloroethene (PCE)		127-18-4	1300	5500	0.81 U	1 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)		76-13-1	NE	NE	0.81 UJ	1 U
1,2,3-Trichlorobenzene		87-61-6	NE	NE	0.81 U	1 U
1,2,4-Trichlorobenzene		120-82-1	NE	NE	0.81 U	1 U
1,1,1-Trichloroethane (TCA)		71-55-6	680	100000	0.81 U	1 U
1,1,2-Trichloroethane		79-00-5	NE	NE	0.81 U	1 U
Trichloroethene (TCE)		79-01-6	470	10000	0.81 U	1 U
Trichlorofluoromethane (Freon 11)		75-69-4	NE	NE	0.81 U	1 U
Vinyl chloride		75-01-4	20	210	0.81 U	1 U
NYSDEC PAH17	µg/kg					
Acenaphthene		83-32-9	20000	100000	360 U	
Acenaphthylene		208-96-8	100000	100000	360 U	
Anthracene		120-12-7	100000	100000	360 U	
Benzo(a)anthracene		56-55-3	1000	1000	36 U	
Benzo(b)fluoranthene		205-99-2	1000	1000	36 U	
Benzo(k)fluoranthene		207-08-9	800	1000	36 U	
Benzo(g,h,i)perylene		191-24-2	100000	100000	360 U	
Benzo(a)pyrene		50-32-8	1000	1000	36 U	
Chrysene		218-01-9	1000	1000	360 U	
Dibenz(a,h)anthracene		53-70-3	330	330	36 U	
Fluoranthene		206-44-0	100000	100000	360 U	
Fluorene		86-73-7	30000	100000	360 U	
Indeno(1,2,3-cd)pyrene		193-39-5	500	500	36 U	
2-Methylnaphthalene		91-57-6	NE	NE	360 U	
Naphthalene		91-20-3	12000	100000	360 U	
Phenanthrene		85-01-8	100000	100000	360 U	
Pyrene		129-00-0	100000	100000	360 U	
Total PAH (17) (ND=0)		TPAH17_ND0	NE	NE	ND	
NYSDEC PAH17 Other SVOCs	µg/kg					
Acetophenone		98-86-2	NE	NE	360 U	
Atrazine		1912-24-9	NE	NE	150 U	
Benzaldehyde		100-52-7	NE	NE	360 U	
Biphenyl (1,1-Biphenyl)		92-52-4	NE	NE	360 U	
Bis(2-chloroethoxy)methane		111-91-1	NE	NE	360 U	
Bis(2-chloroethyl)ether		111-44-4	NE	NE	36 U	
2,2-oxybis(1-Chloropropane)		108-60-1	NE	NE	360 U	
Bis(2-ethylhexyl)phthalate		117-81-7	NE	NE	360 U	
4-Bromophenyl phenyl ether		101-55-3	NE	NE	360 U	
Butyl benzyl phthalate		85-68-7	NE	NE	360 U	
Caprolactam		105-60-2	NE	NE	360 U	
Carbazole		86-74-8	NE	NE	360 U	
4-Chloro-3-methylphenol		59-50-7	NE	NE	360 U	

Table 1. 71 New Street Remedial Investigation
Soil Analytical Results - Northern Suspected Drywells
71 New Street Huntington LLC
Huntington, New York

				Location Name	**SB-9**	**SB-9**
				Sample Name	**SB-9 (20-23)**	**SB-9 (25-30)**
				Start Depth	**20**	**25**
				End Depth	**23**	**30**
				Depth Unit	**ft**	**ft**
				Sample Date	**6/25/2018**	**7/3/2018**
				Parent Sample		
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**		
4-Chloroaniline		106-47-8	NE	NE	360 U	
2-Chloronaphthalene		91-58-7	NE	NE	360 U	
2-Chlorophenol		95-57-8	NE	NE	360 U	
4-Chlorophenyl phenyl ether		7005-72-3	NE	NE	360 U	
Dibenzofuran		132-64-9	7000	14000	360 U	
3,3-Dichlorobenzidine		91-94-1	NE	NE	150 U	
2,4-Dichlorophenol		120-83-2	NE	NE	150 U	
Diethyl phthalate		84-66-2	NE	NE	360 U	
Dimethyl phthalate		131-11-3	NE	NE	360 U	
2,4-Dimethylphenol		105-67-9	NE	NE	360 U	
Di-n-butyl phthalate		84-74-2	NE	NE	360 U	
4,6-Dinitro-2-methylphenol		534-52-1	NE	NE	290 U	
2,4-Dinitrophenol		51-28-5	NE	NE	290 U	
2,4-Dinitrotoluene		121-14-2	NE	NE	73 U	
2,6-Dinitrotoluene		606-20-2	NE	NE	73 U	
Di-n-octyl phthalate		117-84-0	NE	NE	360 U	
Hexachlorobenzene		118-74-1	330	330	36 U	
1,3-Hexachlorobutadiene (C-46)		87-68-3	NE	NE	73 U	
Hexachlorocyclopentadiene		77-47-4	NE	NE	360 U	
Hexachloroethane		67-72-1	NE	NE	36 U	
Isophorone		78-59-1	NE	NE	150 U	
2-Methylnaphthalene		91-57-6	NE	NE	360 U	
2-Methylphenol (o-Cresol)		95-48-7	330	100000	360 U	
4-Methylphenol (p-Cresol)		106-44-5	330	34000	360 U	
2-Nitroaniline		88-74-4	NE	NE	360 U	
3-Nitroaniline		99-09-2	NE	NE	360 U	
4-Nitroaniline		100-01-6	NE	NE	360 U	
Nitrobenzene		98-95-3	NE	NE	36 U	
2-Nitrophenol		88-75-5	NE	NE	360 U	
4-Nitrophenol		100-02-7	NE	NE	730 U	
N-Nitrosodiphenylamine (NDFA)		86-30-6	NE	NE	360 U	
N-Nitrosodi-n-propylamine (NDPA)		621-64-7	NE	NE	36 U	
Pentachlorophenol		87-86-5	800	2400	290 U	
Phenol		108-95-2	330	100000	360 U	
1,2,4,5-Tetrachlorobenzene		95-94-3	NE	NE	360 U	
2,3,4,6-Tetrachlorophenol		58-90-2	NE	NE	360 U	
2,4,5-Trichlorophenol		95-95-4	NE	NE	360 U	
2,4,6-Trichlorophenol		88-06-2	NE	NE	150 U	
PCB Aroclors	µg/kg					
Aroclor 1016		12674-11-2	NE	NE	73 U	87 U
Aroclor 1221		11104-28-2	NE	NE	73 U	87 U
Aroclor 1232		11141-16-5	NE	NE	73 U	87 U
Aroclor 1242		53469-21-9	NE	NE	73 U	87 U
Aroclor 1248		12672-29-6	NE	NE	73 U	87 U
Aroclor 1254		11097-69-1	NE	NE	73 U	87 U

Table 1. 71 New Street Remedial Investigation
Soil Analytical Results - Northern Suspected Drywells
71 New Street Huntington LLC
Huntington, New York

				Location Name	**SB-9**	**SB-9**
				Sample Name	**SB-9 (20-23)**	**SB-9 (25-30)**
				Start Depth	**20**	**25**
				End Depth	**23**	**30**
				Depth Unit	**ft**	**ft**
				Sample Date	**6/25/2018**	**7/3/2018**
				Parent Sample		
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**		
Aroclor 1260		11096-82-5	NE	NE	**650**	87 U
Aroclor 1262		37324-23-5	NE	NE	73 U	87 U
Aroclor 1268		11100-14-4	NE	NE	73 U	87 U
Total PCBs (Lab calculated)		1336-36-3	100	1000	**650**	87 U
Pesticides	µg/kg					
Aldrin		309-00-2	5	19	7.3 U	
alpha-BHC (Hexachlorocyclohexane)		319-84-6	20	97	2.2 U	
beta-BHC (beta-Hexachlorocyclohexane)		319-85-7	36	72	2.2 U	
gamma-BHC (gamma-Hexachlorocyclohexane) (Lindane)		58-89-9	100	280	2.2 U	
delta-BHC (delta-Hexachlorocyclohexane)		319-86-8	40	100000	2.2 U	
Chlordane (Technical)		12789-03-6	NE	NE	73 U	
2,4-D (2,4-Dichlorophenoxyacetic acid)		94-75-7	NE	NE	36 U	
4,4'-DDT (p,p'-DDT)		50-29-3	3.3	1700	7.3 U	
4,4'-DDE (p,p'-DDE)		72-55-9	3.3	1800	7.3 U	
4,4-DDD (p,p-DDD)		72-54-8	3.3	2600	7.3 U	
Dieldrin		60-57-1	5	39	2.2 U	
alpha-Endosulfan (I)		959-98-8	2400	4800	7.3 U	
beta-Endosulfan (II)		33213-65-9	2400	4800	7.3 U	
Endosulfan sulfate		1031-07-8	2400	4800	7.3 U	
Endrin		72-20-8	14	2200	7.3 U	
Endrin aldehyde		7421-93-4	NE	NE	7.3 U	
Endrin ketone		53494-70-5	NE	NE	7.3 U	
Heptachlor		76-44-8	42	420	7.3 U	
Heptachlor epoxide		1024-57-3	NE	NE	7.3 U	
Methoxychlor		72-43-5	NE	NE	7.3 U	
2,4,5-TP (Silvex)		93-72-1	3800	58000	36 U	
Toxaphene		8001-35-2	NE	NE	73 U	
Herbicides	µg/kg					
2,4-D (2,4-Dichlorophenoxyacetic acid)		94-75-7	NE	NE	36 U	
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)		93-76-5	NE	NE	36 U	
2,4,5-TP (Silvex)		93-72-1	3800	58000	36 U	
Total Metals	mg/kg					
Aluminum		7429-90-5	NE	NE	**2930 J**	
Antimony		7440-36-0	NE	NE	1 UJ	
Arsenic		7440-38-2	13	16	**1.2**	
Barium		7440-39-3	350	350	**18.3**	
Beryllium		7440-41-7	7.2	14	**0.18 J**	
Cadmium		7440-43-9	2.5	2.5	1 U	
Calcium		7440-70-2	NE	NE	**259 J**	
Chromium		7440-47-3	NE	NE	**4.6 J**	
Cobalt		7440-48-4	NE	NE	**2.1 J**	
Copper		7440-50-8	50	270	**3.7**	
Iron		7439-89-6	NE	NE	**5950**	
Lead		7439-92-1	63	400	**1.9**	

Table 1. 71 New Street Remedial Investigation
Soil Analytical Results - Northern Suspected Drywells
71 New Street Huntington LLC
Huntington, New York

				Location Name	**SB-9**	**SB-9**
				Sample Name	**SB-9 (20-23)**	**SB-9 (25-30)**
				Start Depth	**20**	**25**
				End Depth	**23**	**30**
				Depth Unit	**ft**	**ft**
				Sample Date	**6/25/2018**	**7/3/2018**
				Parent Sample		
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**		
Magnesium		7439-95-4	NE	NE	**732 J**	
Manganese		7439-96-5	1600	2000	**155 J**	
Mercury		7439-97-6	0.18	0.81	0.019 U	
Nickel		7440-02-0	30	140	**3.3**	
Potassium		7440-09-7	NE	NE	**437 J**	
Selenium		7782-49-2	3.9	36	5.2 U	
Silver		7440-22-4	2	36	1 U	
Sodium		7440-23-5	NE	NE	**42.5 J**	
Thallium		7440-28-0	NE	NE	0.41 U	
Vanadium		7440-62-2	NE	NE	**6.5**	
Zinc		7440-66-6	109	2200	**9.5**	
Other	mg/kg					
Formaldehyde		50-00-0	NE	NE	**1.33 J**	**1.81 J**

Table 1. 71 New Street Remedial Investigation
Soil Analytical Results - Northern Suspected Drywells
71 New Street Huntington LLC
Huntington, New York

Notes:

mg/kg = milligrams/kilogram or parts per million (ppm)
µg/kg = micrograms per kilogram

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes
PAH = Polycyclic Aromatic Hydrocarbon
PCB = Polychlorinated Biphenyl
SVOC = Semi-Volatile Organic Compound
VOC = Volatile Organic Compound

Total BTEX and Total PAHs are calculated using detects only.
Total PAH16 is calculated using the EPA16 list of analytes: Acenaphthene, Acenaphthylene, Anthracene, Benz[a]anthracene, Benzo[a]pyrene, Benzo[b]fluoranthene, Benzo[g,h,i]perylene, Benzo[k]fluoranthene, Chrysene, Dibenz[a,h]anthracene, Fluoranthene, Fluorene, Indeno[1,2,3-cd]pyrene, Naphthalene, Phenanthrene, and Pyrene

Total PAH17 is calculated using the EPA16 list of analytes plus 2-Methylnaphthalene

6 NYCRR = New York State Register and Official Compilation of Codes, Rules and Regulations of the State of New York

Comparison of detected results are performed against one or more of the following NYCRR, Chapter IV, Part 375-6 Soil Cleanup Objectives (SCO)s: Unrestricted Use, Residential, Restricted-Residential, Commercial, Industrial, Protection of Ecological Resources, or Protection of Groundwater

CAS No. = Chemical Abstracts Service Number
ND = Not Detected
NE = Not Established
NYSDEC = New York State Department of Environmental Conservation

Bolding indicates a detected result concentration
Shading and bolding indicates that the detected concentration is above the NYSDOH guidance it was compared to
Gray shading and bolding indicates that the detected result value exceeds the Unrestricted SCO
Yellow shading and bolding indicates that the detected result value exceeds the Residential SCO

Validation Qualifiers:

J = The result is an estimated value.
R = The result is rejected.
U = The result was not detected above the reporting limit.
UJ = The results was not detected at or above the reporting limit shown and the reporting limit is estimated.

Table 2. 71 New Street Remedial Investigation
Soil Analytical Results - Southern Suspected Subsurface Vault
71 New Street Huntington LLC
Huntington, New York

					Location Name	SB-10	SB-10	SB-10	SB-10	SB-10	SB-10	SB-11	SB-11	SB-11	SB-11
					Sample Name	SB-10 (0-5)	SB-10 (5-10)	SB-10 (10-15)	SB-10 (15-20)	SB-10 (20-22.5)	SB-10 (25-30)	SB-11 (0-5)	SB-11 (5-10)	SB-11 (10-15)	SB-XX-06262018
					Start Depth	0	5	10	15	20	25	0	5	10	10
					End Depth	5	10	15	20	22.5	30	5	10	15	15
					Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
					Sample Date	6/26/2018	6/26/2018	6/26/2018	6/26/2018	6/26/2018	7/12/2018	6/26/2018	6/26/2018	6/26/2018	6/26/2018
					Parent Sample										SB-11 (10-15)
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**											
BTEX	µg/kg														
Benzene		71-43-2	60	2900	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
Toluene		108-88-3	700	100000	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
Ethylbenzene		100-41-4	1000	30000	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
o-Xylene		95-47-6	260	100000	0.99 U	**0.22 J**	**0.11 J**	**0.19 J**	**0.11 J**	1.1 U	1 U	**0.079 J**	**0.21 J**	**0.29 J**
m/p-Xylene		179601-23-1	260	100000	0.99 U	**0.69 J**	**0.33 J**	**0.53 J**	**0.32 J**	**0.22 J**	**0.19 J**	**0.27 J**	**0.7 J**	**0.96 J**
Total Xylene		1330-20-7	260	100000	2 U	**0.91 J**	**0.44 J**	**0.72 J**	**0.43 J**	2.3 U	2 U	**0.35 J**	**0.91 J**	**1.2 J**
Total BTEX (ND=0)		TBTEX_ND0	NE	NE	ND	**0.91**	**0.44**	**0.72**	**0.43**	**0.22**	**0.19**	**0.349**	**0.91**	**1.25**
Other VOCs	µg/kg													
Acetone		67-64-1	50	100000	**7.7**	**130**	**30**	**65**	**55**	**110**	5 U	**25**	**61**	**75**
Bromochloromethane		74-97-5	NE	NE	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
Bromodichloromethane		75-27-4	NE	NE	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
Bromoform		75-25-2	NE	NE	0.99 UJ	1.1 UJ	0.59 UJ	0.87 UJ	0.53 UJ	1.1 U	1 UJ	0.51 UJ	1 UJ	1.3 UJ
Bromomethane		74-83-9	NE	NE	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
Carbon disulfide		75-15-0	NE	NE	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
Carbon tetrachloride		56-23-5	760	1400	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
Chlorobenzene		108-90-7	1100	100000	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
Chloroethane		75-00-3	NE	NE	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
Chloroform (Trichloromethane)		67-66-3	370	10000	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
Chloromethane		74-87-3	NE	NE	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
Cyclohexane		110-82-7	NE	NE	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
1,2-Dibromo-3-chloropropane		96-12-8	NE	NE	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 UJ	1 U	0.51 U	1 U	1.3 UJ
Dibromochloromethane		124-48-1	NE	NE	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 UJ
1,2-Dibromoethane (EDB)		106-93-4	NE	NE	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
1,2-Dichlorobenzene (o-DCB)		95-50-1	1100	100000	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
1,3-Dichlorobenzene (m-DCB)		541-73-1	2400	17000	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
1,4-Dichlorobenzene (p-DCB)		106-46-7	1800	9800	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
Dichlorodifluoromethane (Freon 12)		75-71-8	NE	NE	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
1,1-Dichloroethane		75-34-3	270	19000	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
1,2-Dichloroethane		107-06-2	20	2300	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
1,1-Dichloroethene		75-35-4	330	100000	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
cis-1,2-Dichloroethene		156-59-2	250	59000	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
trans-1,2-Dichloroethene		156-60-5	190	100000	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
1,2-Dichloropropane		78-87-5	NE	NE	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
cis-1,3-Dichloropropene		10061-01-5	NE	NE	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
trans-1,3-Dichloropropene		10061-02-6	NE	NE	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
1,4-Dioxane		123-91-1	100	9800	20 U	22 U	12 U	17 U	11 U	23 U	20 U	10 U	20 U	26 U
2-Hexanone		591-78-6	NE	NE	4.9 U	5.6 U	3 U	4.4 U	2.6 U	5.7 U	5 U	2.5 U	5.1 U	6.6 U
Isopropylbenzene		98-82-8	NE	NE	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
Methyl acetate		79-20-9	NE	NE	4.9 U	**12**	**3.7**	**7.5**	**4.3**	5.7 U	5 U	2.5 U	5.1 U	**7.3**
Methyl ethyl ketone (2-Butanone)		78-93-3	120	100000	4.9 U	5.6 U	3 U	**3.2 J**	**2.5 J**	**4.7 J**	5 U	2.5 U	5.1 U	**3.3 J**
Methyl tert-butyl ether (MTBE)		1634-04-4	930	62000	0.99 U	**0.4 J**	**0.14 J**	**0.23 J**	**0.17 J**	**0.16 J**	**0.16 J**	**0.1 J**	**0.24 J**	**0.28 J**
4-Methyl-2-pentanone (MIBK)		108-10-1	NE	NE	4.9 U	5.6 U	3 U	4.4 U	2.6 U	5.7 U	5 U	2.5 U	5.1 U	6.6 U
Methylcyclohexane		108-87-2	NE	NE	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U

Table 2. 71 New Street Remedial Investigation
Soil Analytical Results - Southern Suspected Subsurface Vault
71 New Street Huntington LLC
Huntington, New York

					Location Name	SB-10	SB-10	SB-10	SB-10	SB-10	SB-10	SB-11	SB-11	SB-11	SB-11
					Sample Name	SB-10 (0-5)	SB-10 (5-10)	SB-10 (10-15)	SB-10 (15-20)	SB-10 (20-22.5)	SB-10 (25-30)	SB-11 (0-5)	SB-11 (5-10)	SB-11 (10-15)	SB-XX-06262018
					Start Depth	0	5	10	15	20	25	0	5	10	10
					End Depth	5	10	15	20	22.5	30	5	10	15	15
					Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
					Sample Date	6/26/2018	6/26/2018	6/26/2018	6/26/2018	6/26/2018	7/12/2018	6/26/2018	6/26/2018	6/26/2018	6/26/2018
					Parent Sample										SB-11 (10-15)
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**											
Methylene chloride		75-09-2	50	51000	1.1 U	1.1 U	0.59 U	0.87 U	0.76 U	**1.1**	1 U	0.51 U	1 U	1.3 U
Styrene		100-42-5	NE	NE	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
1,1,2,2-Tetrachloroethane		79-34-5	NE	NE	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
Tetrachloroethene (PCE)		127-18-4	1300	5500	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)		76-13-1	NE	NE	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
1,2,3-Trichlorobenzene		87-61-6	NE	NE	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
1,2,4-Trichlorobenzene		120-82-1	NE	NE	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
1,1,1-Trichloroethane (TCA)		71-55-6	680	100000	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
1,1,2-Trichloroethane		79-00-5	NE	NE	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
Trichloroethene (TCE)		79-01-6	470	10000	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
Trichlorofluoromethane (Freon 11)		75-69-4	NE	NE	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
Vinyl chloride		75-01-4	20	210	0.99 U	1.1 U	0.59 U	0.87 U	0.53 U	1.1 U	1 U	0.51 U	1 U	1.3 U
NYSDEC PAH17	µg/kg													
Acenaphthene		83-32-9	20000	100000	360 U	330 U	340 U	330 U	350 U	460 U	360 U	340 U	350 U	340 U
Acenaphthylene		208-96-8	100000	100000	360 U	330 U	340 U	330 U	350 U	460 U	360 U	340 U	350 U	340 U
Anthracene		120-12-7	100000	100000	**9.2 J**	**10 J**	340 U	330 U	350 U	460 U	**6.8 J**	340 U	350 U	340 U
Benzo(a)anthracene		56-55-3	1000	1000	**63**	**61**	34 U	33 U	35 U	46 U	**44**	34 U	35 U	34 U
Benzo(b)fluoranthene		205-99-2	1000	1000	**92**	**82**	34 U	33 U	35 U	46 U	**60**	34 U	35 U	34 U
Benzo(k)fluoranthene		207-08-9	800	1000	**40**	**36**	34 U	33 U	35 U	46 U	**31 J**	34 U	35 U	34 U
Benzo(g,h,i)perylene		191-24-2	100000	100000	**47 J**	**38 J**	340 U	330 U	350 U	460 U	**25 J**	340 U	350 U	340 U
Benzo(a)pyrene		50-32-8	1000	1000	**63**	**54**	34 U	**11 J**	35 U	46 U	**38**	34 U	35 U	34 U
Chrysene		218-01-9	1000	1000	**72 J**	**66 J**	340 U	**9.8 J**	350 U	460 U	**47 J**	340 U	350 U	340 U
Dibenz(a,h)anthracene		53-70-3	330	330	**16 J**	33 U	34 U	33 U	35 U	46 U	36 U	34 U	35 U	34 U
Fluoranthene		206-44-0	100000	100000	**120 J**	**110 J**	340 U	**20 J**	**9.7 J**	460 U	**80 J**	**9.2 J**	350 U	340 U
Fluorene		86-73-7	30000	100000	360 U	330 U	340 U	330 U	350 U	460 U	360 U	340 U	350 U	340 U
Indeno(1,2,3-cd)pyrene		193-39-5	500	500	**49 J**	**41 J**	34 UJ	33 U	35 UJ	46 U	**28 J**	34 UJ	35 UJ	34 U
2-Methylnaphthalene		91-57-6	NE	NE	360 U	330 U	340 U	330 U	350 U	460 U	360 U	340 U	350 U	340 U
Naphthalene		91-20-3	12000	100000	360 U	330 U	340 U	330 U	350 U	460 U	360 U	340 U	350 U	340 U
Phenanthrene		85-01-8	100000	100000	**59 J**	**74 J**	340 U	**16 J**	350 U	460 U	**50 J**	340 U	350 U	340 U
Pyrene		129-00-0	100000	100000	**120 J**	**120 J**	340 U	**19 J**	**10 J**	460 U	**83 J**	**10 J**	350 U	340 U
Total PAH (17) (ND=0)		TPAH17_ND0	NE	NE	**750.2**	**692**	ND	**75.8**	**19.7**	ND	**492.8**	**19.2**	ND	ND
NYSDEC PAH17 Other SVOCs	µg/kg													
Acetophenone		98-86-2	NE	NE	360 U	330 U	340 U	330 U	350 U	460 U	360 U	340 U	350 U	340 U
Atrazine		1912-24-9	NE	NE	150 U	130 U	140 U	130 U	140 U	190 U	150 U	140 U	140 U	140 U
Benzaldehyde		100-52-7	NE	NE	360 U	330 U	340 U	330 U	350 U	460 U	360 U	340 U	350 U	340 U
Biphenyl (1,1-Biphenyl)		92-52-4	NE	NE	360 U	330 U	340 U	330 U	350 U	460 U	360 U	340 U	350 U	340 U
Bis(2-chloroethoxy)methane		111-91-1	NE	NE	360 U	330 U	340 U	330 U	350 U	460 U	360 U	340 U	350 U	340 U
Bis(2-chloroethyl)ether		111-44-4	NE	NE	36 U	33 U	34 U	33 U	35 U	46 U	36 U	34 U	35 U	34 U
2,2-oxybis(1-Chloropropane)		108-60-1	NE	NE	360 U	330 U	340 U	330 U	350 U	460 U	360 U	340 U	350 U	340 U
Bis(2-ethylhexyl)phthalate		117-81-7	NE	NE	360 U	330 U	340 U	330 U	350 U	460 U	360 U	340 U	350 U	340 U
4-Bromophenyl phenyl ether		101-55-3	NE	NE	360 U	330 U	340 U	330 U	350 U	460 U	360 U	340 U	350 U	340 U
Butyl benzyl phthalate		85-68-7	NE	NE	360 UJ	330 UJ	340 UJ	330 U	350 UJ	460 U	360 UJ	340 UJ	350 UJ	340 U
Caprolactam		105-60-2	NE	NE	360 U	330 U	340 U	330 U	350 U	460 U	360 U	340 U	350 U	340 U
Carbazole		86-74-8	NE	NE	**9.9 J**	330 U	340 U	330 U	350 U	460 U	360 U	340 U	350 U	340 U

Table 2. 71 New Street Remedial Investigation
Soil Analytical Results - Southern Suspected Subsurface Vault
71 New Street Huntington LLC
Huntington, New York

					Location Name	SB-10	SB-10	SB-10	SB-10	SB-10	SB-10	SB-11	SB-11	SB-11	SB-11
					Sample Name	SB-10 (0-5)	SB-10 (5-10)	SB-10 (10-15)	SB-10 (15-20)	SB-10 (20-22.5)	SB-10 (25-30)	SB-11 (0-5)	SB-11 (5-10)	SB-11 (10-15)	SB-XX-06262018
					Start Depth	0	5	10	15	20	25	0	5	10	10
					End Depth	5	10	15	20	22.5	30	5	10	15	15
					Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
					Sample Date	6/26/2018	6/26/2018	6/26/2018	6/26/2018	6/26/2018	7/12/2018	6/26/2018	6/26/2018	6/26/2018	6/26/2018
					Parent Sample										SB-11 (10-15)
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**											
4-Chloro-3-methylphenol		59-50-7	NE	NE		360 U	330 U	340 U	330 U	350 U	460 U	360 U	340 U	350 U	340 U
4-Chloroaniline		106-47-8	NE	NE		360 U	330 U	340 U	330 U	350 U	460 U	360 U	340 U	350 U	340 U
2-Chloronaphthalene		91-58-7	NE	NE		360 U	330 U	340 U	330 U	350 U	460 U	360 U	340 U	350 U	340 U
2-Chlorophenol		95-57-8	NE	NE		360 U	330 U	340 U	330 U	350 U	460 U	360 U	340 U	350 U	340 U
4-Chlorophenyl phenyl ether		7005-72-3	NE	NE		360 U	330 U	340 U	330 U	350 U	460 U	360 U	340 U	350 U	340 U
Dibenzofuran		132-64-9	7000	14000		360 U	330 U	340 U	330 U	350 U	460 U	360 U	340 U	350 U	340 U
3,3-Dichlorobenzidine		91-94-1	NE	NE		150 U	130 U	140 U	130 U	140 U	190 U	150 U	140 U	140 U	140 U
2,4-Dichlorophenol		120-83-2	NE	NE		150 U	130 U	140 U	130 U	140 U	190 U	150 U	140 U	140 U	140 U
Diethyl phthalate		84-66-2	NE	NE		360 U	330 U	340 U	330 U	350 U	460 U	360 U	340 U	350 U	340 U
Dimethyl phthalate		131-11-3	NE	NE		360 U	330 U	340 U	330 U	350 U	460 U	360 U	340 U	350 U	340 U
2,4-Dimethylphenol		105-67-9	NE	NE		360 U	330 U	340 U	330 U	350 U	460 U	360 U	340 U	350 U	340 U
Di-n-butyl phthalate		84-74-2	NE	NE		360 U	330 U	340 U	330 U	350 U	460 U	360 U	340 U	350 U	340 U
4,6-Dinitro-2-methylphenol		534-52-1	NE	NE		290 UJ	270 UJ	280 UJ	270 UJ	280 UJ	370 UJ	290 UJ	270 UJ	280 UJ	280 U
2,4-Dinitrophenol		51-28-5	NE	NE		290 UJ	270 UJ	280 UJ	270 UJ	280 UJ	370 UJ	290 UJ	270 UJ	280 UJ	280 UJ
2,4-Dinitrotoluene		121-14-2	NE	NE		74 U	68 U	69 U	68 U	70 U	93 UJ	74 U	69 U	71 U	70 U
2,6-Dinitrotoluene		606-20-2	NE	NE		74 U	68 U	69 U	68 U	70 U	93 UJ	74 U	69 U	71 U	70 U
Di-n-octyl phthalate		117-84-0	NE	NE		360 UJ	330 UJ	340 UJ	330 U	350 UJ	460 U	360 UJ	340 UJ	350 UJ	340 U
Hexachlorobenzene		118-74-1	330	330		36 U	33 U	34 U	33 U	35 U	46 U	36 U	34 U	35 U	34 U
1,3-Hexachlorobutadiene (C-46)		87-68-3	NE	NE		74 U	68 U	69 U	68 U	70 U	93 U	74 U	69 U	71 U	70 U
Hexachlorocyclopentadiene		77-47-4	NE	NE		360 UJ	330 UJ	340 UJ	330 UJ	350 UJ	460 U	360 UJ	340 UJ	350 UJ	340 U
Hexachloroethane		67-72-1	NE	NE		36 U	33 U	34 U	33 U	35 U	46 U	36 U	34 U	35 U	34 U
Isophorone		78-59-1	NE	NE		150 U	130 U	140 U	130 U	140 U	190 U	150 U	140 U	140 U	140 U
2-Methylnaphthalene		91-57-6	NE	NE		360 U	330 U	340 U	330 U	350 U	460 U	360 U	340 U	350 U	340 U
2-Methylphenol (o-Cresol)		95-48-7	330	100000		360 U	330 U	340 U	330 U	350 U	460 U	360 U	340 U	350 U	340 U
4-Methylphenol (p-Cresol)		106-44-5	330	34000		360 U	330 U	340 U	330 U	350 U	460 U	360 U	340 U	350 U	340 U
2-Nitroaniline		88-74-4	NE	NE		360 U	330 U	340 U	330 U	350 U	460 UJ	360 U	340 U	350 U	340 U
3-Nitroaniline		99-09-2	NE	NE		360 U	330 U	340 U	330 U	350 U	460 U	360 U	340 U	350 U	340 U
4-Nitroaniline		100-01-6	NE	NE		360 U	330 U	340 U	330 U	350 U	460 UJ	360 U	340 U	350 U	340 U
Nitrobenzene		98-95-3	NE	NE		36 U	33 U	34 U	33 U	35 U	46 U	36 U	34 U	35 U	34 U
2-Nitrophenol		88-75-5	NE	NE		360 U	330 U	340 U	330 U	350 U	460 UJ	360 U	340 U	350 U	340 U
4-Nitrophenol		100-02-7	NE	NE		740 UJ	680 UJ	690 UJ	680 U	700 UJ	930 U	740 UJ	690 UJ	710 UJ	700 U
N-Nitrosodiphenylamine (NDFA)		86-30-6	NE	NE		360 U	330 U	340 U	330 U	350 U	460 U	360 U	340 U	350 U	340 U
N-Nitrosodi-n-propylamine (NDPA)		621-64-7	NE	NE		36 U	33 U	34 U	33 U	35 U	46 U	36 U	34 U	35 U	34 U
Pentachlorophenol		87-86-5	800	2400		290 UJ	270 UJ	280 UJ	270 U	280 UJ	370 U	290 UJ	270 UJ	280 UJ	280 U
Phenol		108-95-2	330	100000		360 U	330 U	340 U	330 U	350 U	460 U	360 U	340 U	350 U	340 U
1,2,4,5-Tetrachlorobenzene		95-94-3	NE	NE		360 U	330 U	340 U	330 U	350 U	460 U	360 U	340 U	350 U	340 U
2,3,4,6-Tetrachlorophenol		58-90-2	NE	NE		360 U	330 U	340 U	330 U	350 U	460 U	360 U	340 U	350 U	340 U
2,4,5-Trichlorophenol		95-95-4	NE	NE		360 U	330 U	340 U	330 U	350 U	460 U	360 U	340 U	350 U	340 U
2,4,6-Trichlorophenol		88-06-2	NE	NE		150 U	130 U	140 U	130 U	140 U	190 U	150 U	140 U	140 U	140 U
PCB Aroclors	µg/kg														
Aroclor 1016		12674-11-2	NE	NE		74 U	68 U	69 U	68 U	70 U	94 U	74 U	69 U	71 U	70 U
Aroclor 1221		11104-28-2	NE	NE		74 U	68 U	69 U	68 U	70 U	94 U	74 U	69 U	71 U	70 U
Aroclor 1232		11141-16-5	NE	NE		74 U	68 U	69 U	68 U	70 U	94 U	74 U	69 U	71 U	70 U
Aroclor 1242		53469-21-9	NE	NE		74 U	68 U	69 U	68 U	70 U	94 U	74 U	69 U	71 U	70 U
Aroclor 1248		12672-29-6	NE	NE		74 U	68 U	69 U	68 U	70 U	94 U	74 U	69 U	71 U	70 U

Table 2. 71 New Street Remedial Investigation
Soil Analytical Results - Southern Suspected Subsurface Vault
71 New Street Huntington LLC
Huntington, New York

				Location Name	SB-10	SB-10	SB-10	SB-10	SB-10	SB-10	SB-11	SB-11	SB-11	SB-11
				Sample Name	SB-10 (0-5)	SB-10 (5-10)	SB-10 (10-15)	SB-10 (15-20)	SB-10 (20-22.5)	SB-10 (25-30)	SB-11 (0-5)	SB-11 (5-10)	SB-11 (10-15)	SB-XX-06262018
				Start Depth	0	5	10	15	20	25	0	5	10	10
				End Depth	5	10	15	20	22.5	30	5	10	15	15
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Date	6/26/2018	6/26/2018	6/26/2018	6/26/2018	6/26/2018	7/12/2018	6/26/2018	6/26/2018	6/26/2018	6/26/2018
				Parent Sample										SB-11 (10-15)
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**										
Aroclor 1254		11097-69-1	NE	NE	74 U	68 U	69 U	68 U	70 U	94 U	74 U	69 U	71 U	70 U
Aroclor 1260		11096-82-5	NE	NE	74 U	68 U	69 U	68 U	70 U	94 U	74 U	69 U	71 U	70 U
Aroclor 1262		37324-23-5	NE	NE	74 U	68 U	69 U	68 U	70 U	94 U	74 U	69 U	71 U	70 U
Aroclor 1268		11100-14-4	NE	NE	74 U	68 U	69 U	68 U	70 U	94 U	74 U	69 U	71 U	70 U
Total PCBs (Lab calculated)		1336-36-3	100	1000	74 U	68 U	69 U	68 U	70 U	94 U	74 U	69 U	71 U	70 U
Pesticides	µg/kg													
Aldrin		309-00-2	5	19	7.4 U	6.8 U	6.9 U	6.8 U	7 U	9.4 U	7.4 U	6.9 U	7.1 U	7 U
alpha-BHC (Hexachlorocyclohexane)		319-84-6	20	97	2.2 U	2 U	2.1 U	2 U	2.1 U	2.8 U	2.2 U	2.1 U	2.1 U	2.1 U
beta-BHC (beta-Hexachlorocyclohexane)		319-85-7	36	72	2.2 U	2 U	2.1 U	2 U	2.1 U	2.8 U	2.2 U	2.1 U	2.1 U	2.1 U
gamma-BHC (gamma-Hexachlorocyclohexane) (Lindane)		58-89-9	100	280	2.2 U	2 U	2.1 U	2 U	2.1 U	2.8 U	2.2 U	2.1 U	2.1 U	2.1 U
delta-BHC (delta-Hexachlorocyclohexane)		319-86-8	40	100000	2.2 U	2 U	2.1 U	2 U	2.1 U	2.8 U	2.2 U	2.1 U	2.1 U	2.1 U
Chlordane (Technical)		12789-03-6	NE	NE	74 U	68 U	69 U	68 U	70 U	94 U	74 U	69 U	71 U	70 U
2,4-D (2,4-Dichlorophenoxyacetic acid)		94-75-7	NE	NE	37 U	34 U	34 U	34 U	35 U	47 U	37 U	34 U	35 U	35 U
4,4'-DDT (p,p'-DDT)		50-29-3	3.3	1700	7.4 U	6.8 U	6.9 U	6.8 U	7 U	9.4 U	7.4 U	6.9 U	7.1 U	7 U
4,4'-DDE (p,p'-DDE)		72-55-9	3.3	1800	7.4 U	6.8 U	6.9 U	6.8 U	7 U	9.4 U	7.4 U	6.9 U	7.1 U	7 U
4,4-DDD (p,p-DDD)		72-54-8	3.3	2600	7.4 U	6.8 U	6.9 U	6.8 U	7 U	9.4 U	7.4 U	6.9 U	7.1 U	7 U
Dieldrin		60-57-1	5	39	2.2 U	2 U	2.1 U	2 U	2.1 U	2.8 U	2.2 U	2.1 U	2.1 U	2.1 U
alpha-Endosulfan (I)		959-98-8	2400	4800	7.4 U	6.8 U	6.9 U	6.8 U	7 U	9.4 U	7.4 U	6.9 U	7.1 U	7 U
beta-Endosulfan (II)		33213-65-9	2400	4800	7.4 U	6.8 U	6.9 U	6.8 U	7 U	9.4 U	7.4 U	6.9 U	7.1 U	7 U
Endosulfan sulfate		1031-07-8	2400	4800	7.4 U	6.8 U	6.9 U	6.8 U	7 U	9.4 U	7.4 U	6.9 U	7.1 U	7 U
Endrin		72-20-8	14	2200	7.4 U	6.8 U	6.9 U	6.8 U	7 U	9.4 U	7.4 U	6.9 U	7.1 U	7 U
Endrin aldehyde		7421-93-4	NE	NE	7.4 U	6.8 U	6.9 U	6.8 U	7 U	9.4 U	7.4 U	6.9 U	7.1 U	7 U
Endrin ketone		53494-70-5	NE	NE	7.4 U	6.8 U	6.9 U	6.8 U	7 U	9.4 U	7.4 U	6.9 U	7.1 U	7 U
Heptachlor		76-44-8	42	420	7.4 U	6.8 U	6.9 U	6.8 U	7 U	9.4 U	7.4 U	6.9 U	7.1 U	7 U
Heptachlor epoxide		1024-57-3	NE	NE	**5.2 J**	**3.9 J**	6.9 U	6.8 U	7 U	9.4 U	7.4 U	6.9 U	7.1 U	7 U
Methoxychlor		72-43-5	NE	NE	7.4 U	6.8 U	6.9 U	6.8 U	7 U	9.4 U	7.4 U	6.9 U	7.1 U	7 U
2,4,5-TP (Silvex)		93-72-1	3800	58000	37 U	34 U	34 U	34 U	35 U	47 U	37 U	34 U	35 U	35 U
Toxaphene		8001-35-2	NE	NE	74 UJ	68 UJ	69 UJ	68 UJ	70 UJ	94 U	74 UJ	69 UJ	71 UJ	70 UJ
Herbicides	µg/kg													
2,4-D (2,4-Dichlorophenoxyacetic a		94-75-7	NE	NE	37 U	34 U	34 U	34 U	35 U	47 U	37 U	34 U	35 U	35 U
2,4,5-T (2,4,5-Trichlorophenoxyace		93-76-5	NE	NE	37 U	34 U	34 U	34 U	35 U	47 U	37 U	34 U	35 U	35 U
2,4,5-TP (Silvex)		93-72-1	3800	58000	37 U	34 U	34 U	34 U	35 U	47 U	37 U	34 U	35 U	35 U
Total Metals	mg/kg													
Aluminum		7429-90-5	NE	NE	**8790 J**	**3520 J**	**1650 J**	**1690 J**	**3020 J**	**13600**	**10900 J**	**2020 J**	**2060 J**	**2110 J**
Antimony		7440-36-0	NE	NE	0.86 UJ	0.8 UJ	0.81 UJ	0.8 UJ	0.79 UJ	1.1 UJ	0.88 UJ	0.79 UJ	0.79 UJ	0.82 UJ
Arsenic		7440-38-2	13	16	**3.9**	**5.4**	**0.72 J**	**1.2**	**1.1**	**4.1**	**3.9**	**1.2**	**1.8**	**1.3**
Barium		7440-39-3	350	350	**54.7**	**17.9**	**5.5**	**12.3**	**18.7**	**100**	**49.8**	**8.9**	**10.6**	**13.1**
Beryllium		7440-41-7	7.2	14	**0.37**	**0.2 J**	**0.15 J**	**0.13 J**	**0.18 J**	**0.86 J**	**0.45**	**0.13 J**	**0.17 J**	**0.2 J**
Cadmium		7440-43-9	2.5	2.5	0.86 U	0.8 U	0.81 U	0.8 U	0.79 U	1.1 U	0.88 U	0.79 U	0.79 U	0.82 U

Table 2. 71 New Street Remedial Investigation
Soil Analytical Results - Southern Suspected Subsurface Vault
71 New Street Huntington LLC
Huntington, New York

					Location Name	SB-10	SB-10	SB-10	SB-10	SB-10	SB-10	SB-11	SB-11	SB-11	SB-11
					Sample Name	SB-10 (0-5)	SB-10 (5-10)	SB-10 (10-15)	SB-10 (15-20)	SB-10 (20-22.5)	SB-10 (25-30)	SB-11 (0-5)	SB-11 (5-10)	SB-11 (10-15)	SB-XX-06262018
					Start Depth	0	5	10	15	20	25	0	5	10	10
					End Depth	5	10	15	20	22.5	30	5	10	15	15
					Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
					Sample Date	6/26/2018	6/26/2018	6/26/2018	6/26/2018	6/26/2018	7/12/2018	6/26/2018	6/26/2018	6/26/2018	6/26/2018
					Parent Sample										SB-11 (10-15)
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**											
Calcium		7440-70-2	NE	NE		**36900 J**	**36000 J**	**142 J**	**425 J**	**183 J**	**1480**	**483 J**	**884 J**	**228 J**	**579 J**
Chromium		7440-47-3	NE	NE		**19.1 J**	**21.9 J**	**2.1 J**	**9.9 J**	**6.2 J**	**24.1**	**12 J**	**7.4 J**	**5.5 J**	**4.7 J**
Cobalt		7440-48-4	NE	NE		**4.7 J**	**2.8 J**	**1 J**	**1.9 J**	**2 J**	**10.7**	**4.6 J**	**1.5 J**	**1.8 J**	**3.7 J**
Copper		7440-50-8	50	270		**12.7**	**7.8**	**2**	**3.8**	**3.9**	**17.2 J**	**7.9**	**3.4**	**4.6**	**3.9**
Iron		7439-89-6	NE	NE		**13300**	**12500**	**3100**	**5840**	**5350**	**22800**	**14400**	**6960**	**6940**	**5610**
Lead		7439-92-1	63	400		**158**	**36**	**0.89**	**2**	**1.7**	**8.3 J**	**92**	**2.3**	**2**	**2.1**
Magnesium		7439-95-4	NE	NE		**7070 J**	**13500 J**	**441 J**	**538 J**	**947 J**	**5020**	**1550 J**	**877 J**	**490 J**	**698 J**
Manganese		7439-96-5	1600	2000		**213 J**	**174 J**	**65.3 J**	**126 J**	**139 J**	**526**	**212 J**	**161 J**	**163 J**	**150 J**
Mercury		7439-97-6	0.18	0.81		**0.19**	**0.032**	0.018 U	0.016 U	0.017 U	0.023 UJ	**0.15**	0.017 U	0.017 U	0.018 U
Nickel		7440-02-0	30	140		**8.8**	**6.4**	**2**	**3.5**	**3.8**	**19.5**	**7.7**	**2.8**	**3.5**	**3.5**
Potassium		7440-09-7	NE	NE		**697 J**	**304 J**	**116 J**	**229 J**	**455 J**	**2680**	**306 J**	**390 J**	**231 J**	**268 J**
Selenium		7782-49-2	3.9	36		**0.45 J**	4 U	4 U	4 U	4 U	5.7 U	**0.54 J**	3.9 U	3.9 U	4.1 U
Silver		7440-22-4	2	36		0.86 U	0.8 U	0.81 U	0.8 U	0.79 U	1.1 U	0.88 U	0.79 U	0.79 U	0.82 U
Sodium		7440-23-5	NE	NE		85.9 U	79.7 U	80.9 U	79.6 U	79.3 U	**96.1 J**	87.9 U	79 U	78.9 U	81.5 U
Thallium		7440-28-0	NE	NE		0.34 U	0.32 U	0.32 U	0.32 U	0.32 U	**0.25 J**	0.35 U	0.32 U	0.32 U	0.33 U
Vanadium		7440-62-2	NE	NE		**17.6**	**9.9**	**2.9**	**5**	**6.3**	**32.7 J**	**19.3**	**3.9**	**6.2**	**5.6**
Zinc		7440-66-6	109	2200		**81.6**	**28.7**	**8.6**	**12.1**	**12.9**	**49**	**69.8**	**15.3**	**9.2**	**9.9**
Other	mg/kg														
Formaldehyde		50-00-0	NE	NE		**1.15 J**	**1.49 J**	1.04 U	**1.17 J**	1.04 U	1.39 U	**1.3 J**	1.02 U	1.04 U	1.02 U

Table 2. 71 New Street Remedial Investigation
Soil Analytical Results - Southern Suspected Subsurface Vault
71 New Street Huntington LLC
Huntington, New York

				Location Name	SB-11	SB-11	SB-11	SB-12	SB-12	SB-12	SB-12	SB-12	SB-12	SB-12
				Sample Name	SB-11 (15-20)	SB-11 (20-22.5)	SB-11 (25-30)	SB-12 (0-5)	SB-12 (5-10)	SB-12 (10-15)	SB-12 (15-20)	SB-12 (20-22.5)	SB-12 (25-30)	SB-XX-07122018
				Start Depth	15	20	25	0	5	10	15	20	25	0
				End Depth	20	22.5	30	5	10	15	20	22.5	30	0
				Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
				Sample Date	6/26/2018	6/26/2018	7/12/2018	6/26/2018	6/26/2018	6/26/2018	6/26/2018	6/26/2018	7/12/2018	7/12/2018
				Parent Sample										SB-12(25-30)
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**										
BTEX	µg/kg													
Benzene		71-43-2	60	2900	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
Toluene		108-88-3	700	100000	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
Ethylbenzene		100-41-4	1000	30000	0.84 U	0.92 U	0.98 U	0.83 U	**0.12 J**	1 U	0.96 U	0.91 U	0.92 U	1.4 U
o-Xylene		95-47-6	260	100000	**0.19 J**	**0.21 J**	0.98 U	**0.15 J**	**0.11 J**	**0.13 J**	**0.22 J**	**0.16 J**	0.92 U	1.4 U
m/p-Xylene		179601-23-1	260	100000	**0.49 J**	**0.66 J**	0.98 U	**0.47 J**	**0.37 J**	**0.41 J**	**0.67 J**	**0.39 J**	0.92 U	1.4 U
Total Xylene		1330-20-7	260	100000	**0.68 J**	**0.87 J**	2 U	**0.62 J**	**0.48 J**	**0.54 J**	**0.89 J**	**0.55 J**	1.8 U	2.8 U
Total BTEX (ND=0)		TBTEX_ND0	NE	NE	**0.68**	**0.87**	ND	**0.62**	**0.6**	**0.54**	**0.89**	**0.55**	ND	ND
Other VOCs	µg/kg													
Acetone		67-64-1	50	100000	**84**	**48**	**63**	**62**	**29**	**26**	**37**	**73**	**42**	**57**
Bromochloromethane		74-97-5	NE	NE	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
Bromodichloromethane		75-27-4	NE	NE	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
Bromoform		75-25-2	NE	NE	0.84 UJ	0.92 UJ	0.98 U	0.83 UJ	0.58 UJ	1 UJ	0.96 UJ	0.91 UJ	0.92 U	1.4 U
Bromomethane		74-83-9	NE	NE	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
Carbon disulfide		75-15-0	NE	NE	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
Carbon tetrachloride		56-23-5	760	1400	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
Chlorobenzene		108-90-7	1100	100000	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
Chloroethane		75-00-3	NE	NE	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
Chloroform (Trichloromethane)		67-66-3	370	10000	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
Chloromethane		74-87-3	NE	NE	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
Cyclohexane		110-82-7	NE	NE	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
1,2-Dibromo-3-chloropropane		96-12-8	NE	NE	0.84 UJ	0.92 U	0.98 UJ	0.83 U	0.58 U	1 U	0.96 UJ	0.91 UJ	0.92 UJ	1.4 UJ
Dibromochloromethane		124-48-1	NE	NE	0.84 UJ	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 UJ	0.91 UJ	0.92 U	1.4 U
1,2-Dibromoethane (EDB)		106-93-4	NE	NE	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
1,2-Dichlorobenzene (o-DCB)		95-50-1	1100	100000	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
1,3-Dichlorobenzene (m-DCB)		541-73-1	2400	17000	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
1,4-Dichlorobenzene (p-DCB)		106-46-7	1800	9800	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
Dichlorodifluoromethane (Freon 12)		75-71-8	NE	NE	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
1,1-Dichloroethane		75-34-3	270	19000	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
1,2-Dichloroethane		107-06-2	20	2300	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
1,1-Dichloroethene		75-35-4	330	100000	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
cis-1,2-Dichloroethene		156-59-2	250	59000	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
trans-1,2-Dichloroethene		156-60-5	190	100000	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
1,2-Dichloropropane		78-87-5	NE	NE	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
cis-1,3-Dichloropropene		10061-01-5	NE	NE	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
trans-1,3-Dichloropropene		10061-02-6	NE	NE	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
1,4-Dioxane		123-91-1	100	9800	17 U	18 U	20 U	17 U	12 U	20 U	19 U	18 U	18 U	28 U
2-Hexanone		591-78-6	NE	NE	4.2 U	4.6 U	4.9 U	4.1 U	2.9 U	5.1 U	4.8 U	4.5 U	4.6 U	7 U
Isopropylbenzene		98-82-8	NE	NE	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
Methyl acetate		79-20-9	NE	NE	**5.5**	**5.4**	4.9 U	**5.5**	2.9 U	5.1 U	4.8 U	4.5 U	4.6 U	7 U
Methyl ethyl ketone (2-Butanone)		78-93-3	120	100000	**4.6**	4.6 U	**2.9 J**	**2.7 J**	2.9 U	5.1 U	**2.8 J**	**4.6**	**2.7 J**	**2.9 J**
Methyl tert-butyl ether (MTBE)		1634-04-4	930	62000	**0.26 J**	**0.16 J**	0.98 U	**0.19 J**	0.58 U	1 U	0.96 U	**0.19 J**	0.92 U	1.4 U
4-Methyl-2-pentanone (MIBK)		108-10-1	NE	NE	4.2 U	4.6 U	4.9 U	4.1 U	2.9 U	5.1 U	4.8 U	4.5 U	4.6 U	7 U
Methylcyclohexane		108-87-2	NE	NE	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U

Table 2. 71 New Street Remedial Investigation
Soil Analytical Results - Southern Suspected Subsurface Vault
71 New Street Huntington LLC
Huntington, New York

					Location Name	SB-11	SB-11	SB-11	SB-12	SB-12	SB-12	SB-12	SB-12	SB-12	SB-12
					Sample Name	SB-11 (15-20)	SB-11 (20-22.5)	SB-11 (25-30)	SB-12 (0-5)	SB-12 (5-10)	SB-12 (10-15)	SB-12 (15-20)	SB-12 (20-22.5)	SB-12 (25-30)	SB-XX-07122018
					Start Depth	15	20	25	0	5	10	15	20	25	0
					End Depth	20	22.5	30	5	10	15	20	22.5	30	0
					Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
					Sample Date	6/26/2018	6/26/2018	7/12/2018	6/26/2018	6/26/2018	6/26/2018	6/26/2018	6/26/2018	7/12/2018	7/12/2018
					Parent Sample										SB-12(25-30)
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**											
Methylene chloride		75-09-2	50	51000	0.84 U	0.93 U	**0.63 J**	0.83 U	0.58 U	1 U	0.96 U	1.5 U	**2.4**	**2.4**
Styrene		100-42-5	NE	NE	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
1,1,2,2-Tetrachloroethane		79-34-5	NE	NE	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
Tetrachloroethene (PCE)		127-18-4	1300	5500	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)		76-13-1	NE	NE	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
1,2,3-Trichlorobenzene		87-61-6	NE	NE	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
1,2,4-Trichlorobenzene		120-82-1	NE	NE	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
1,1,1-Trichloroethane (TCA)		71-55-6	680	100000	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
1,1,2-Trichloroethane		79-00-5	NE	NE	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
Trichloroethene (TCE)		79-01-6	470	10000	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
Trichlorofluoromethane (Freon 11)		75-69-4	NE	NE	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
Vinyl chloride		75-01-4	20	210	0.84 U	0.92 U	0.98 U	0.83 U	0.58 U	1 U	0.96 U	0.91 U	0.92 U	1.4 U
NYSDEC PAH17	µg/kg													
Acenaphthene		83-32-9	20000	100000	330 U	340 U	430 U	340 U	340 U	340 U	330 U	350 U	390 U	390 U
Acenaphthylene		208-96-8	100000	100000	330 U	340 U	430 U	340 U	340 U	340 U	330 U	350 U	390 U	390 U
Anthracene		120-12-7	100000	100000	330 U	340 U	430 U	**10 J**	340 U	340 U	330 U	350 U	390 U	390 U
Benzo(a)anthracene		56-55-3	1000	1000	33 U	34 U	43 U	**69**	34 U	34 U	33 U	35 U	39 U	39 U
Benzo(b)fluoranthene		205-99-2	1000	1000	33 U	34 U	43 UJ	**89**	34 U	34 U	33 U	35 U	39 U	39 U
Benzo(k)fluoranthene		207-08-9	800	1000	33 U	34 U	43 U	**51**	34 U	34 U	33 U	35 U	39 U	39 U
Benzo(g,h,i)perylene		191-24-2	100000	100000	330 U	340 U	430 U	**46 J**	340 U	340 U	330 U	350 U	390 U	390 U
Benzo(a)pyrene		50-32-8	1000	1000	33 U	**9.7 J**	43 U	**69**	34 U	34 U	33 U	35 U	39 U	39 U
Chrysene		218-01-9	1000	1000	330 U	**7.9 J**	430 U	**79 J**	340 U	340 U	330 U	350 U	390 U	390 U
Dibenz(a,h)anthracene		53-70-3	330	330	33 U	34 U	43 U	34 U	34 U	34 U	33 U	35 U	39 U	39 U
Fluoranthene		206-44-0	100000	100000	330 U	340 U	430 U	**140 J**	340 U	340 U	330 U	350 U	390 U	390 U
Fluorene		86-73-7	30000	100000	330 U	340 U	430 U	340 U	340 U	340 U	330 U	350 U	390 U	390 U
Indeno(1,2,3-cd)pyrene		193-39-5	500	500	33 UJ	34 UJ	43 U	**51 J**	34 UJ	34 U	33 UJ	35 UJ	39 U	39 U
2-Methylnaphthalene		91-57-6	NE	NE	330 U	340 U	430 U	340 U	340 U	340 U	330 U	350 U	390 U	390 U
Naphthalene		91-20-3	12000	100000	330 U	340 UJ	430 U	340 U	340 U	340 U	330 U	350 U	390 U	390 U
Phenanthrene		85-01-8	100000	100000	330 U	340 U	430 U	**68 J**	340 U	340 U	330 U	350 U	390 U	390 U
Pyrene		129-00-0	100000	100000	330 U	340 U	430 U	**140 J**	340 U	340 U	330 U	350 U	390 U	390 U
Total PAH (17) (ND=0)		TPAH17_ND0	NE	NE	ND	**17.6**	ND	**812**	ND	ND	ND	ND	ND	ND
NYSDEC PAH17 Other SVOCs	µg/kg													
Acetophenone		98-86-2	NE	NE	330 U	340 U	430 U	340 U	340 U	340 U	330 U	350 U	390 U	390 U
Atrazine		1912-24-9	NE	NE	130 U	140 U	170 U	140 U	140 U	140 U	130 U	140 U	160 U	160 U
Benzaldehyde		100-52-7	NE	NE	330 U	340 U	430 U	340 U	340 U	340 U	330 U	350 U	390 U	390 U
Biphenyl (1,1-Biphenyl)		92-52-4	NE	NE	330 U	340 U	430 U	340 U	340 U	340 U	330 U	350 U	390 U	390 U
Bis(2-chloroethoxy)methane		111-91-1	NE	NE	330 U	340 U	430 U	340 U	340 U	340 U	330 U	350 U	390 U	390 U
Bis(2-chloroethyl)ether		111-44-4	NE	NE	33 U	34 UJ	43 U	34 U	34 U	34 U	33 U	35 U	39 U	39 U
2,2-oxybis(1-Chloropropane)		108-60-1	NE	NE	330 U	340 U	430 U	340 U	340 U	340 U	330 U	350 U	390 U	390 U
Bis(2-ethylhexyl)phthalate		117-81-7	NE	NE	330 U	340 U	430 U	340 U	340 U	340 U	330 U	350 U	390 U	390 U
4-Bromophenyl phenyl ether		101-55-3	NE	NE	330 U	340 U	430 U	340 U	340 U	340 U	330 U	350 U	390 U	390 U
Butyl benzyl phthalate		85-68-7	NE	NE	330 UJ	340 UJ	430 U	340 UJ	340 UJ	340 U	330 UJ	350 UJ	390 U	390 U
Caprolactam		105-60-2	NE	NE	330 U	340 U	430 U	340 U	340 U	340 U	330 U	350 U	390 U	390 U
Carbazole		86-74-8	NE	NE	330 U	340 U	430 U	**11 J**	340 U	340 U	330 U	350 U	390 U	390 U

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Soil Analytical Results - Southern Suspected Subsurface Vault
71 New Street Huntington LLC
Huntington, New York

					Location Name	SB-11	SB-11	SB-11	SB-12	SB-12	SB-12	SB-12	SB-12	SB-12	SB-12
					Sample Name	SB-11 (15-20)	SB-11 (20-22.5)	SB-11 (25-30)	SB-12 (0-5)	SB-12 (5-10)	SB-12 (10-15)	SB-12 (15-20)	SB-12 (20-22.5)	SB-12 (25-30)	SB-XX-07122018
					Start Depth	15	20	25	0	5	10	15	20	25	0
					End Depth	20	22.5	30	5	10	15	20	22.5	30	0
					Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
					Sample Date	6/26/2018	6/26/2018	7/12/2018	6/26/2018	6/26/2018	6/26/2018	6/26/2018	6/26/2018	7/12/2018	7/12/2018
					Parent Sample										SB-12(25-30)
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**											
4-Chloro-3-methylphenol		59-50-7	NE	NE		330 U	340 U	430 U	340 U	340 U	340 U	330 U	350 U	390 U	390 U
4-Chloroaniline		106-47-8	NE	NE		330 U	340 U	430 U	340 U	340 U	340 U	330 U	350 U	390 U	390 U
2-Chloronaphthalene		91-58-7	NE	NE		330 U	340 U	430 U	340 U	340 U	340 U	330 U	350 U	390 U	390 U
2-Chlorophenol		95-57-8	NE	NE		330 U	340 U	430 U	340 U	340 U	340 U	330 U	350 U	390 U	390 U
4-Chlorophenyl phenyl ether		7005-72-3	NE	NE		330 U	340 U	430 U	340 U	340 U	340 U	330 U	350 U	390 U	390 U
Dibenzofuran		132-64-9	7000	14000		330 U	340 U	430 U	340 U	340 U	340 U	330 U	350 U	390 U	390 U
3,3-Dichlorobenzidine		91-94-1	NE	NE		130 U	140 U	170 U	140 U	140 U	140 U	130 U	140 U	160 U	160 U
2,4-Dichlorophenol		120-83-2	NE	NE		130 U	140 U	170 U	140 U	140 U	140 U	130 U	140 U	160 U	160 U
Diethyl phthalate		84-66-2	NE	NE		330 U	340 U	430 U	340 U	340 U	340 U	330 U	350 U	390 U	390 U
Dimethyl phthalate		131-11-3	NE	NE		330 U	340 U	430 U	340 U	340 U	340 U	330 U	350 U	390 U	390 U
2,4-Dimethylphenol		105-67-9	NE	NE		330 U	340 U	430 U	340 U	340 U	340 U	330 U	350 U	390 U	390 U
Di-n-butyl phthalate		84-74-2	NE	NE		330 U	340 U	430 U	340 U	340 U	340 U	330 U	350 U	390 U	390 U
4,6-Dinitro-2-methylphenol		534-52-1	NE	NE		270 UJ	270 UJ	340 U	270 UJ	270 UJ	280 UJ	270 UJ	280 UJ	310 UJ	320 U
2,4-Dinitrophenol		51-28-5	NE	NE		270 UJ	270 UJ	340 UJ	270 UJ	270 UJ	280 UJ	270 UJ	280 UJ	310 UJ	320 U
2,4-Dinitrotoluene		121-14-2	NE	NE		67 U	69 U	86 UJ	68 U	69 U	70 U	68 U	70 U	79 UJ	80 U
2,6-Dinitrotoluene		606-20-2	NE	NE		67 U	69 U	86 U	68 U	69 U	70 U	68 U	70 U	79 UJ	80 U
Di-n-octyl phthalate		117-84-0	NE	NE		330 UJ	340 UJ	430 UJ	340 UJ	340 UJ	340 U	330 UJ	350 UJ	390 U	390 UJ
Hexachlorobenzene		118-74-1	330	330		33 U	34 U	43 U	34 U	34 U	34 U	33 U	35 U	39 U	39 U
1,3-Hexachlorobutadiene (C-46)		87-68-3	NE	NE		67 U	69 UJ	86 U	68 U	69 U	70 U	68 U	70 U	79 U	80 U
Hexachlorocyclopentadiene		77-47-4	NE	NE		330 UJ	340 UJ	430 U	340 UJ	340 UJ	340 UJ	330 UJ	350 UJ	390 U	390 UJ
Hexachloroethane		67-72-1	NE	NE		33 U	34 UJ	43 U	34 U	34 U	34 U	33 U	35 U	39 U	39 U
Isophorone		78-59-1	NE	NE		130 U	140 U	170 U	140 U	140 U	140 U	130 U	140 U	160 U	160 U
2-Methylnaphthalene		91-57-6	NE	NE		330 U	340 U	430 U	340 U	340 U	340 U	330 U	350 U	390 U	390 U
2-Methylphenol (o-Cresol)		95-48-7	330	100000		330 U	340 U	430 U	340 U	340 U	340 U	330 U	350 U	390 U	390 U
4-Methylphenol (p-Cresol)		106-44-5	330	34000		330 U	340 U	430 U	340 U	340 U	340 U	330 U	350 U	390 U	390 U
2-Nitroaniline		88-74-4	NE	NE		330 U	340 U	430 U	340 U	340 U	340 U	330 U	350 U	390 UJ	390 U
3-Nitroaniline		99-09-2	NE	NE		330 U	340 U	430 U	340 U	340 U	340 U	330 U	350 U	390 U	390 U
4-Nitroaniline		100-01-6	NE	NE		330 U	340 U	430 U	340 U	340 U	340 U	330 U	350 U	390 UJ	390 U
Nitrobenzene		98-95-3	NE	NE		33 U	34 UJ	43 U	34 U	34 U	34 U	33 U	35 U	39 U	39 U
2-Nitrophenol		88-75-5	NE	NE		330 U	340 U	430 U	340 U	340 U	340 U	330 U	350 U	390 UJ	390 U
4-Nitrophenol		100-02-7	NE	NE		670 UJ	690 UJ	860 U	680 UJ	690 UJ	700 U	680 UJ	700 UJ	790 U	800 U
N-Nitrosodiphenylamine (NDFA)		86-30-6	NE	NE		330 U	340 U	430 U	340 U	340 U	340 U	330 U	350 U	390 U	390 U
N-Nitrosodi-n-propylamine (NDPA)		621-64-7	NE	NE		33 U	34 U	43 U	34 U	34 U	34 U	33 U	35 U	39 U	39 U
Pentachlorophenol		87-86-5	800	2400		270 UJ	270 UJ	340 U	270 UJ	270 UJ	280 U	270 UJ	280 UJ	310 U	320 U
Phenol		108-95-2	330	100000		330 U	340 U	430 U	340 U	340 U	340 U	330 U	350 U	390 U	390 U
1,2,4,5-Tetrachlorobenzene		95-94-3	NE	NE		330 U	340 U	430 U	340 U	340 U	340 U	330 U	350 U	390 U	390 U
2,3,4,6-Tetrachlorophenol		58-90-2	NE	NE		330 U	340 U	430 U	340 U	340 U	340 U	330 U	350 U	390 U	390 U
2,4,5-Trichlorophenol		95-95-4	NE	NE		330 U	340 U	430 U	340 U	340 U	340 U	330 U	350 U	390 U	390 U
2,4,6-Trichlorophenol		88-06-2	NE	NE		130 U	140 U	170 U	140 U	140 U	140 U	130 U	140 U	160 U	160 U
PCB Aroclors	µg/kg														
Aroclor 1016		12674-11-2	NE	NE		67 U	69 U	86 U	68 U	69 U	70 U	68 U	70 U	79 U	80 U
Aroclor 1221		11104-28-2	NE	NE		67 U	69 U	86 U	68 U	69 U	70 U	68 U	70 U	79 U	80 U
Aroclor 1232		11141-16-5	NE	NE		67 U	69 U	86 U	68 U	69 U	70 U	68 U	70 U	79 U	80 U
Aroclor 1242		53469-21-9	NE	NE		67 U	69 U	86 U	68 U	69 U	70 U	68 U	70 U	**72 J**	80 U
Aroclor 1248		12672-29-6	NE	NE		67 U	69 U	86 U	68 U	69 U	70 U	68 U	70 U	79 U	80 U

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Soil Analytical Results - Southern Suspected Subsurface Vault
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Huntington, New York

					Location Name	SB-11	SB-11	SB-11	SB-12	SB-12	SB-12	SB-12	SB-12	SB-12	SB-12
					Sample Name	SB-11 (15-20)	SB-11 (20-22.5)	SB-11 (25-30)	SB-12 (0-5)	SB-12 (5-10)	SB-12 (10-15)	SB-12 (15-20)	SB-12 (20-22.5)	SB-12 (25-30)	SB-XX-07122018
					Start Depth	15	20	25	0	5	10	15	20	25	0
					End Depth	20	22.5	30	5	10	15	20	22.5	30	0
					Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
					Sample Date	6/26/2018	6/26/2018	7/12/2018	6/26/2018	6/26/2018	6/26/2018	6/26/2018	6/26/2018	7/12/2018	7/12/2018
					Parent Sample										SB-12(25-30)
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**											
Aroclor 1254		11097-69-1	NE	NE	67 U	69 U	86 U	68 U	69 U	70 U	68 U	70 U	79 U	80 U
Aroclor 1260		11096-82-5	NE	NE	67 U	69 U	86 U	68 U	69 U	70 U	68 U	70 U	79 U	80 U
Aroclor 1262		37324-23-5	NE	NE	67 U	69 U	86 U	68 U	69 U	70 U	68 U	70 U	79 U	80 U
Aroclor 1268		11100-14-4	NE	NE	67 U	69 U	86 U	68 U	69 U	70 U	68 U	70 U	79 U	80 U
Total PCBs (Lab calculated)		1336-36-3	100	1000	67 U	69 U	86 U	68 U	69 U	70 U	68 U	70 U	**72 J**	80 U
Pesticides	µg/kg													
Aldrin		309-00-2	5	19	6.7 U	6.9 U	8.6 U	6.8 U	6.9 U	7 U		7 U	7.9 U	8 U
alpha-BHC (Hexachlorocyclohexane)		319-84-6	20	97	2 U	2 U	2.6 U	2 U	2.1 U	2.1 U		2.1 U	2.4 U	2.4 U
beta-BHC (beta-Hexachlorocyclohexane)		319-85-7	36	72	2 U	2 U	2.6 U	2 U	2.1 U	2.1 U		2.1 U	2.4 U	2.4 U
gamma-BHC (gamma-Hexachlorocyclohexane) (Lindane)		58-89-9	100	280	2 U	2 U	2.6 U	2 U	2.1 U	2.1 U		2.1 U	2.4 U	2.4 U
delta-BHC (delta-Hexachlorocyclohexane)		319-86-8	40	100000	2 U	2 U	2.6 U	2 U	2.1 U	2.1 U		2.1 U	**4.2**	2.4 U
Chlordane (Technical)		12789-03-6	NE	NE	67 U	69 U	86 U	68 U	69 U	70 U		70 U	79 U	80 U
2,4-D (2,4-Dichlorophenoxyacetic acid)		94-75-7	NE	NE	34 U	34 U	43 U	34 U	34 U	35 U	34 U	35 U	39 U	40 UJ
4,4'-DDT (p,p'-DDT)		50-29-3	3.3	1700	6.7 U	6.9 U	8.6 U	**5.9 J**	6.9 U	7 U		7 U	7.9 U	8 U
4,4'-DDE (p,p'-DDE)		72-55-9	3.3	1800	6.7 U	6.9 U	8.6 U	**4.2 J**	6.9 U	7 U		7 U	7.9 U	8 U
4,4-DDD (p,p-DDD)		72-54-8	3.3	2600	6.7 U	6.9 U	8.6 U	6.8 U	6.9 U	7 U		7 U	7.9 U	8 U
Dieldrin		60-57-1	5	39	2 U	2 U	2.6 U	2 U	2.1 U	2.1 U		2.1 U	2.4 U	2.4 U
alpha-Endosulfan (I)		959-98-8	2400	4800	6.7 U	6.9 U	8.6 U	6.8 U	6.9 U	7 U		7 U	7.9 U	8 U
beta-Endosulfan (II)		33213-65-9	2400	4800	6.7 U	6.9 U	8.6 U	6.8 U	6.9 U	7 U		7 U	7.9 U	8 U
Endosulfan sulfate		1031-07-8	2400	4800	6.7 U	6.9 U	8.6 U	6.8 U	6.9 U	7 U		7 U	7.9 U	8 U
Endrin		72-20-8	14	2200	6.7 U	6.9 U	8.6 U	6.8 U	6.9 U	7 U		7 U	7.9 U	8 U
Endrin aldehyde		7421-93-4	NE	NE	6.7 U	6.9 U	8.6 U	6.8 U	6.9 U	7 U		7 U	7.9 U	8 U
Endrin ketone		53494-70-5	NE	NE	6.7 U	6.9 U	8.6 U	6.8 U	6.9 U	7 U		7 U	7.9 U	8 U
Heptachlor		76-44-8	42	420	6.7 U	6.9 U	8.6 U	6.8 U	6.9 U	7 U		7 U	7.9 U	8 U
Heptachlor epoxide		1024-57-3	NE	NE	6.7 U	6.9 U	8.6 U	6.8 U	6.9 U	7 U		7 U	7.9 U	8 U
Methoxychlor		72-43-5	NE	NE	6.7 U	6.9 U	8.6 U	6.8 U	6.9 U	7 U		7 U	7.9 U	8 U
2,4,5-TP (Silvex)		93-72-1	3800	58000	34 U	34 U	43 UJ	34 U	34 U	35 U	34 U	35 U	39 U	40 UJ
Toxaphene		8001-35-2	NE	NE	67 UJ	69 UJ	86 U	68 U	69 UJ	70 UJ		70 UJ	79 U	80 U
Herbicides	µg/kg													
2,4-D (2,4-Dichlorophenoxyacetic a		94-75-7	NE	NE	34 U	34 U	43 U	34 U	34 U	35 U	34 U	35 U	39 U	40 UJ
2,4,5-T (2,4,5-Trichlorophenoxyace		93-76-5	NE	NE	34 U	34 U	43 U	34 U	34 U	35 U	34 U	35 U	39 U	40 U
2,4,5-TP (Silvex)		93-72-1	3800	58000	34 U	34 U	43 UJ	34 U	34 U	35 U	34 U	35 U	39 U	40 UJ
Total Metals	mg/kg													
Aluminum		7429-90-5	NE	NE	**1390 J**	**1690 J**	**5610**	**8350 J**	**3590 J**	**1560 J**		**1570 J**	**4410 J**	**7840 J**
Antimony		7440-36-0	NE	NE	0.81 UJ	0.78 UJ	1 UJ	0.8 UJ	0.8 UJ	0.85 UJ		0.78 UJ	0.88 UJ	1 UJ
Arsenic		7440-38-2	13	16	**1.1**	**0.78**	**3**	**3.2**	**5.5**	**1**		**1.1**	**2**	**2.6**
Barium		7440-39-3	350	350	**7.8**	**12.4**	**32.2**	**42.2**	**11.7**	**9.1**		**9.9**	**29.3 J**	**53.9 J**
Beryllium		7440-41-7	7.2	14	**0.16 J**	**0.14 J**	0.41 U	**0.26 J**	**0.26 J**	**0.14 J**		**0.13 J**	0.35 U	**0.46**
Cadmium		7440-43-9	2.5	2.5	0.81 U	0.78 U	1 U	0.8 U	0.8 U	0.85 U		0.78 U	0.88 U	1 U

Table 2. 71 New Street Remedial Investigation
Soil Analytical Results - Southern Suspected Subsurface Vault
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					Location Name	SB-11	SB-11	SB-11	SB-12	SB-12	SB-12	SB-12	SB-12	SB-12	SB-12
					Sample Name	SB-11 (15-20)	SB-11 (20-22.5)	SB-11 (25-30)	SB-12 (0-5)	SB-12 (5-10)	SB-12 (10-15)	SB-12 (15-20)	SB-12 (20-22.5)	SB-12 (25-30)	SB-XX-07122018
					Start Depth	15	20	25	0	5	10	15	20	25	0
					End Depth	20	22.5	30	5	10	15	20	22.5	30	0
					Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
					Sample Date	6/26/2018	6/26/2018	7/12/2018	6/26/2018	6/26/2018	6/26/2018	6/26/2018	6/26/2018	7/12/2018	7/12/2018
					Parent Sample										SB-12(25-30)
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**											
Calcium		7440-70-2	NE	NE		**112 J**	**97.7 J**	**1130**	**1050 J**	**189 J**	**186 J**		**115 J**	**555**	**915 J**
Chromium		7440-47-3	NE	NE		**2.3 J**	**2.3 J**	**10.9**	**13.4 J**	**10.4 J**	**7.7 J**		**5.3 J**	**9.2**	**12.8 J**
Cobalt		7440-48-4	NE	NE		**1.1 J**	**1.7 J**	**5.6**	**3.8 J**	**3.1 J**	**1.5 J**		**1.5 J**	**3.9**	**5.7 J**
Copper		7440-50-8	50	270		**1.8**	**3.3**	**8.6 J**	**14.4**	**6.5**	**3.5**		**3.1**	**6.6 J**	**9.2 J**
Iron		7439-89-6	NE	NE		**4020**	**4030**	**13000**	**11900**	**15200**	**5770**		**6020**	**9800**	**12700 J**
Lead		7439-92-1	63	400		**1**	**1.1**	**4 J**	**106**	**2.4**	**4.1**		**1.1**	**3.1 J**	**4.7 J**
Magnesium		7439-95-4	NE	NE		**415 J**	**539 J**	**1750**	**1750 J**	**1430 J**	**393 J**		**600 J**	**1370 J**	**2340 J**
Manganese		7439-96-5	1600	2000		**93.8 J**	**204 J**	**355**	**169 J**	**281 J**	**126 J**		**230 J**	**323**	**374 J**
Mercury		7439-97-6	0.18	0.81		0.017 U	0.017 U	0.02 UJ	**0.11**	0.016 U	0.018 U		0.017 U	0.019 UJ	0.02 UJ
Nickel		7440-02-0	30	140		**1.7**	**3.3**	**8.8**	**7.1**	**4.6**	**2.2**		**2.9**	**6.6**	**10.1 J**
Potassium		7440-09-7	NE	NE		**261 J**	**136 J**	**803**	**554 J**	**283 J**	**158 J**		**141 J**	**670 J**	**1380 J**
Selenium		7782-49-2	3.9	36		4.1 U	3.9 U	5.1 U	**0.42 J**	4 U	4.2 U		3.9 U	4.4 U	5.2 U
Silver		7440-22-4	2	36		0.81 U	0.78 U	1 U	0.8 U	0.8 U	0.85 U		0.78 U	0.88 U	1 U
Sodium		7440-23-5	NE	NE		81.3 U	78.2 U	**53.3 J**	79.7 U	79.8 U	84.9 U		78.5 U	**39.1 J**	**39.9 J**
Thallium		7440-28-0	NE	NE		0.33 U	0.31 U	0.41 U	0.32 U	0.32 U	0.34 U		0.31 U	0.35 U	**0.13 J**
Vanadium		7440-62-2	NE	NE		**2.9**	**2.8**	**18.9 J**	**16.4**	**11.8**	**4.1**		**4.3**	**12.1 J**	**17.3 J**
Zinc		7440-66-6	109	2200		**6.1 J**	**12.9**	**21.3**	**69.9**	**24.6**	**12**		**7.1**	**16.6**	**25.3 J**
Other	mg/kg														
Formaldehyde		50-00-0	NE	NE		1 U	1.04 U	1.27 U	**1.66 J**	**12.8**	1.03 U	**2.94**	**1.28 J**	1.16 U	1.18 U

Table 2. 71 New Street Remedial Investigation
Soil Analytical Results - Southern Suspected Subsurface Vault
71 New Street Huntington LLC
Huntington, New York

				Location Name	SB-12	SB-13	SB-13	SB-13	SB-13	SB-13	SB-13
				Sample Name	SB-12 (30-31.5)	SB-13 (0-5)	SB-13 (5-10)	SB-13 (10-15)	SB-13 (15-20)	SB-13 (20-25)	SB-13 (25-30)
				Start Depth	30	0	5	10	15	20	25
				End Depth	31.5	5	10	15	20	25	30
				Depth Unit	ft	ft	ft	ft	ft	ft	ft
				Sample Date	7/12/2018	7/12/2018	7/12/2018	7/12/2018	7/12/2018	7/12/2018	7/12/2018
				Parent Sample							
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**							
BTEX	µg/kg										
Benzene		71-43-2	60	2900	1.1 U	1.3 U	1 U	0.86 U	0.9 U	0.91 U	0.83 U
Toluene		108-88-3	700	100000	1.1 U	1.3 U	1 U	0.86 U	0.9 U	0.91 U	0.83 U
Ethylbenzene		100-41-4	1000	30000	1.1 U	1.3 UJ	1 U	0.86 U	0.9 U	0.91 U	0.83 U
o-Xylene		95-47-6	260	100000	1.1 U	1.3 UJ	1 U	0.86 U	0.9 U	0.91 U	0.83 U
m/p-Xylene		179601-23-1	260	100000	1.1 U	1.3 UJ	1 U	0.86 U	0.9 U	0.91 U	0.83 U
Total Xylene		1330-20-7	260	100000	2.3 U	2.7 UJ	2 U	1.7 U	1.8 U	1.8 U	1.7 U
Total BTEX (ND=0)		TBTEX_ND0	NE	NE	ND	ND	ND	ND	ND	ND	ND
Other VOCs	µg/kg										
Acetone		67-64-1	50	100000	**86**	**30 J**	**47**	**59**	**43**	**58**	**39**
Bromochloromethane		74-97-5	NE	NE	1.1 U	1.3 UJ	1 U	0.86 U	0.9 U	0.91 U	0.83 U
Bromodichloromethane		75-27-4	NE	NE	1.1 U	1.3 UJ	1 U	0.86 U	0.9 U	0.91 U	0.83 U
Bromoform		75-25-2	NE	NE	1.1 U	1.3 U	1 U	0.86 U	0.9 U	0.91 U	0.83 U
Bromomethane		74-83-9	NE	NE	1.1 U	1.3 U	1 U	0.86 U	0.9 U	0.91 U	0.83 U
Carbon disulfide		75-15-0	NE	NE	1.1 U	1.3 U	1 U	0.86 U	0.9 U	0.91 U	0.83 U
Carbon tetrachloride		56-23-5	760	1400	1.1 U	1.3 U	1 U	0.86 U	0.9 U	0.91 U	0.83 U
Chlorobenzene		108-90-7	1100	100000	1.1 U	1.3 UJ	1 U	0.86 U	0.9 U	0.91 U	0.83 U
Chloroethane		75-00-3	NE	NE	1.1 U	1.3 U	1 U	0.86 U	0.9 U	0.91 U	0.83 U
Chloroform (Trichloromethane)		67-66-3	370	10000	1.1 U	1.3 UJ	1 U	0.86 U	0.9 U	0.91 U	0.83 U
Chloromethane		74-87-3	NE	NE	1.1 U	1.3 U	1 U	0.86 U	0.9 U	0.91 U	0.83 U
Cyclohexane		110-82-7	NE	NE	1.1 U	1.3 U	1 U	0.86 U	0.9 U	0.91 U	0.83 U
1,2-Dibromo-3-chloropropane		96-12-8	NE	NE	1.1 UJ	1.3 UJ	1 UJ	0.86 UJ	0.9 UJ	0.91 UJ	0.83 U
Dibromochloromethane		124-48-1	NE	NE	1.1 U	1.3 U	1 U	0.86 U	0.9 U	0.91 U	0.83 U
1,2-Dibromoethane (EDB)		106-93-4	NE	NE	1.1 U	1.3 UJ	1 U	0.86 U	0.9 U	0.91 U	0.83 U
1,2-Dichlorobenzene (o-DCB)		95-50-1	1100	100000	1.1 U	1.3 UJ	1 U	0.86 U	0.9 U	0.91 U	0.83 U
1,3-Dichlorobenzene (m-DCB)		541-73-1	2400	17000	1.1 U	1.3 UJ	1 U	0.86 U	0.9 U	0.91 U	0.83 U
1,4-Dichlorobenzene (p-DCB)		106-46-7	1800	9800	1.1 U	1.3 UJ	1 U	0.86 U	0.9 U	0.91 U	0.83 U
Dichlorodifluoromethane (Freon 12)		75-71-8	NE	NE	1.1 U	1.3 U	1 U	0.86 U	0.9 U	0.91 U	0.83 U
1,1-Dichloroethane		75-34-3	270	19000	1.1 U	1.3 U	1 U	0.86 U	0.9 U	0.91 U	0.83 U
1,2-Dichloroethane		107-06-2	20	2300	1.1 U	1.3 U	1 U	0.86 U	0.9 U	0.91 U	0.83 U
1,1-Dichloroethene		75-35-4	330	100000	1.1 U	1.3 U	1 U	0.86 U	0.9 U	0.91 U	0.83 U
cis-1,2-Dichloroethene		156-59-2	250	59000	1.1 U	1.3 UJ	1 U	0.86 U	0.9 U	0.91 U	0.83 U
trans-1,2-Dichloroethene		156-60-5	190	100000	1.1 U	1.3 U	1 U	0.86 U	0.9 U	0.91 U	0.83 U
1,2-Dichloropropane		78-87-5	NE	NE	1.1 U	1.3 UJ	1 U	0.86 U	0.9 U	0.91 U	0.83 U
cis-1,3-Dichloropropene		10061-01-5	NE	NE	1.1 U	1.3 U	1 U	0.86 U	0.9 U	0.91 U	0.83 U
trans-1,3-Dichloropropene		10061-02-6	NE	NE	1.1 U	1.3 U	1 U	0.86 U	0.9 U	0.91 U	0.83 U
1,4-Dioxane		123-91-1	100	9800	23 U	27 U	20 U	17 U	18 U	18 U	17 U
2-Hexanone		591-78-6	NE	NE	5.7 U	6.7 UJ	5 U	4.3 U	4.5 U	4.5 U	4.1 U
Isopropylbenzene		98-82-8	NE	NE	1.1 U	1.3 UJ	1 U	0.86 U	0.9 U	0.91 U	0.83 U
Methyl acetate		79-20-9	NE	NE	5.7 U	6.7 U	5 U	4.3 U	4.5 U	4.5 U	4.1 U
Methyl ethyl ketone (2-Butanone)		78-93-3	120	100000	**5.1 J**	6.7 U	5 U	**2.3 J**	**2.8 J**	**3.5 J**	4.1 U
Methyl tert-butyl ether (MTBE)		1634-04-4	930	62000	**0.16 J**	1.3 UJ	1 U	**0.11 J**	0.9 U	0.91 U	0.83 U
4-Methyl-2-pentanone (MIBK)		108-10-1	NE	NE	5.7 U	6.7 U	5 U	4.3 U	4.5 U	4.5 U	4.1 U
Methylcyclohexane		108-87-2	NE	NE	1.1 U	1.3 U	1 U	0.86 U	0.9 U	0.91 U	0.83 U

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71 New Street Huntington LLC
Huntington, New York

				Location Name	SB-12	SB-13	SB-13	SB-13	SB-13	SB-13	SB-13
				Sample Name	SB-12 (30-31.5)	SB-13 (0-5)	SB-13 (5-10)	SB-13 (10-15)	SB-13 (15-20)	SB-13 (20-25)	SB-13 (25-30)
				Start Depth	30	0	5	10	15	20	25
				End Depth	31.5	5	10	15	20	25	30
				Depth Unit	ft	ft	ft	ft	ft	ft	ft
				Sample Date	7/12/2018	7/12/2018	7/12/2018	7/12/2018	7/12/2018	7/12/2018	7/12/2018
				Parent Sample							
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**							
Methylene chloride		75-09-2	50	51000	**1.7**	**2.1 J**	**1.4**	**2**	**1.1**	**2.1**	**0.68 J**
Styrene		100-42-5	NE	NE	1.1 U	1.3 UJ	1 U	0.86 U	0.9 U	0.91 U	0.83 U
1,1,2,2-Tetrachloroethane		79-34-5	NE	NE	1.1 U	1.3 UJ	1 U	0.86 U	0.9 U	0.91 U	0.83 U
Tetrachloroethene (PCE)		127-18-4	1300	5500	1.1 U	1.3 U	1 U	0.86 U	0.9 U	0.91 U	0.83 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)		76-13-1	NE	NE	1.1 U	1.3 U	1 U	0.86 U	0.9 U	0.91 U	0.83 U
1,2,3-Trichlorobenzene		87-61-6	NE	NE	1.1 U	1.3 UJ	1 U	0.86 U	0.9 U	0.91 U	0.83 U
1,2,4-Trichlorobenzene		120-82-1	NE	NE	1.1 U	1.3 UJ	1 U	0.86 U	0.9 U	0.91 U	0.83 U
1,1,1-Trichloroethane (TCA)		71-55-6	680	100000	1.1 U	1.3 U	1 U	0.86 U	0.9 U	0.91 U	0.83 U
1,1,2-Trichloroethane		79-00-5	NE	NE	1.1 U	1.3 UJ	1 U	0.86 U	0.9 U	0.91 U	0.83 U
Trichloroethene (TCE)		79-01-6	470	10000	1.1 U	1.3 UJ	1 U	0.86 U	0.9 U	0.91 U	0.83 U
Trichlorofluoromethane (Freon 11)		75-69-4	NE	NE	1.1 U	1.3 U	1 U	0.86 U	0.9 U	0.91 U	0.83 U
Vinyl chloride		75-01-4	20	210	1.1 U	1.3 U	1 U	0.86 U	0.9 U	0.91 U	0.83 U
NYSDEC PAH17	µg/kg										
Acenaphthene		83-32-9	20000	100000	440 U	340 U	340 U	340 U	330 U	350 U	350 U
Acenaphthylene		208-96-8	100000	100000	440 U	340 U	340 U	340 U	330 U	350 U	350 U
Anthracene		120-12-7	100000	100000	440 U	340 U	340 U	340 U	330 U	350 U	350 U
Benzo(a)anthracene		56-55-3	1000	1000	44 U	**71**	34 U	34 U	33 U	35 U	35 U
Benzo(b)fluoranthene		205-99-2	1000	1000	44 U	**110**	34 U	34 U	33 U	35 U	35 U
Benzo(k)fluoranthene		207-08-9	800	1000	44 U	**49**	34 U	34 U	33 U	35 U	35 U
Benzo(g,h,i)perylene		191-24-2	100000	100000	440 U	**50 J**	340 U	340 U	330 U	350 U	350 U
Benzo(a)pyrene		50-32-8	1000	1000	44 U	**68**	34 U	34 U	33 U	35 U	35 U
Chrysene		218-01-9	1000	1000	440 U	**90 J**	340 U	340 U	330 U	350 U	350 U
Dibenz(a,h)anthracene		53-70-3	330	330	44 U	34 U	34 U	34 U	33 U	35 U	35 U
Fluoranthene		206-44-0	100000	100000	440 U	**150 J**	340 U	340 U	330 U	350 U	350 U
Fluorene		86-73-7	30000	100000	440 U	340 U	340 U	340 U	330 U	350 U	350 U
Indeno(1,2,3-cd)pyrene		193-39-5	500	500	44 U	**59**	34 U	34 U	33 U	35 U	35 U
2-Methylnaphthalene		91-57-6	NE	NE	440 U	340 U	340 U	340 U	330 U	350 U	350 U
Naphthalene		91-20-3	12000	100000	440 U	340 U	340 U	340 U	330 U	350 U	350 U
Phenanthrene		85-01-8	100000	100000	440 U	**75 J**	340 U	340 U	330 U	350 U	350 U
Pyrene		129-00-0	100000	100000	440 U	**130 J**	340 U	340 U	330 U	350 U	350 U
Total PAH (17) (ND=0)		TPAH17_ND0	NE	NE	ND	**852**	ND	ND	ND	ND	ND
NYSDEC PAH17 Other SVOCs	µg/kg										
Acetophenone		98-86-2	NE	NE	440 U	340 U	340 U	340 U	330 U	350 U	350 U
Atrazine		1912-24-9	NE	NE	180 U	140 U	140 U	140 U	130 U	140 U	140 U
Benzaldehyde		100-52-7	NE	NE	440 U	340 U	340 U	340 U	330 U	350 U	350 U
Biphenyl (1,1-Biphenyl)		92-52-4	NE	NE	440 U	340 U	340 U	340 U	330 U	350 U	350 U
Bis(2-chloroethoxy)methane		111-91-1	NE	NE	440 U	340 U	340 U	340 U	330 U	350 U	350 U
Bis(2-chloroethyl)ether		111-44-4	NE	NE	44 U	34 U	34 U	34 U	33 U	35 U	35 U
2,2-oxybis(1-Chloropropane)		108-60-1	NE	NE	440 U	340 U	340 U	340 U	330 U	350 U	350 U
Bis(2-ethylhexyl)phthalate		117-81-7	NE	NE	440 U	340 U	340 U	340 U	330 U	350 U	350 UJ
4-Bromophenyl phenyl ether		101-55-3	NE	NE	440 U	340 U	340 U	340 U	330 U	350 U	350 U
Butyl benzyl phthalate		85-68-7	NE	NE	440 U	340 U	340 U	340 U	330 U	350 U	350 U
Caprolactam		105-60-2	NE	NE	440 U	340 U	340 U	340 U	330 U	350 U	350 U
Carbazole		86-74-8	NE	NE	440 U	340 U	340 U	340 U	330 U	350 U	350 U

Table 2. 71 New Street Remedial Investigation
Soil Analytical Results - Southern Suspected Subsurface Vault
71 New Street Huntington LLC
Huntington, New York

				Location Name	SB-12	SB-13	SB-13	SB-13	SB-13	SB-13	SB-13
				Sample Name	SB-12 (30-31.5)	SB-13 (0-5)	SB-13 (5-10)	SB-13 (10-15)	SB-13 (15-20)	SB-13 (20-25)	SB-13 (25-30)
				Start Depth	30	0	5	10	15	20	25
				End Depth	31.5	5	10	15	20	25	30
				Depth Unit	ft	ft	ft	ft	ft	ft	ft
				Sample Date	7/12/2018	7/12/2018	7/12/2018	7/12/2018	7/12/2018	7/12/2018	7/12/2018
				Parent Sample							
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**							
4-Chloro-3-methylphenol		59-50-7	NE	NE	440 U	340 U	340 U	340 U	330 U	350 U	350 U
4-Chloroaniline		106-47-8	NE	NE	440 U	340 U	340 U	340 U	330 U	350 U	350 U
2-Chloronaphthalene		91-58-7	NE	NE	440 U	340 U	340 U	340 U	330 U	350 U	350 U
2-Chlorophenol		95-57-8	NE	NE	440 U	340 U	340 U	340 U	330 U	350 U	350 U
4-Chlorophenyl phenyl ether		7005-72-3	NE	NE	440 U	340 U	340 U	340 U	330 U	350 U	350 U
Dibenzofuran		132-64-9	7000	14000	440 U	340 U	340 U	340 U	330 U	350 U	350 U
3,3-Dichlorobenzidine		91-94-1	NE	NE	180 U	140 U	140 U	140 U	130 U	140 U	140 U
2,4-Dichlorophenol		120-83-2	NE	NE	180 U	140 U	140 U	140 U	130 U	140 U	140 U
Diethyl phthalate		84-66-2	NE	NE	440 U	340 U	340 U	340 U	330 U	350 U	350 U
Dimethyl phthalate		131-11-3	NE	NE	440 U	340 U	340 U	340 U	330 U	350 U	350 U
2,4-Dimethylphenol		105-67-9	NE	NE	440 U	340 U	340 U	340 U	330 U	350 U	350 U
Di-n-butyl phthalate		84-74-2	NE	NE	440 U	340 U	340 U	340 U	330 U	350 U	350 U
4,6-Dinitro-2-methylphenol		534-52-1	NE	NE	350 UJ	270 U	270 U	270 U	270 U	280 U	280 U
2,4-Dinitrophenol		51-28-5	NE	NE	350 UJ	270 U	270 U	270 U	270 U	280 U	280 U
2,4-Dinitrotoluene		121-14-2	NE	NE	89 UJ	69 U	69 U	69 U	68 U	72 U	72 U
2,6-Dinitrotoluene		606-20-2	NE	NE	89 UJ	69 U	69 U	69 U	68 U	72 U	72 U
Di-n-octyl phthalate		117-84-0	NE	NE	440 U	340 UJ	340 UJ	340 UJ	330 UJ	350 UJ	350 UJ
Hexachlorobenzene		118-74-1	330	330	44 U	34 U	34 U	34 U	33 U	35 U	35 U
1,3-Hexachlorobutadiene (C-46)		87-68-3	NE	NE	89 U	69 U	69 U	69 U	68 U	72 U	72 U
Hexachlorocyclopentadiene		77-47-4	NE	NE	440 U	340 UJ	340 UJ	340 UJ	330 UJ	350 UJ	350 UJ
Hexachloroethane		67-72-1	NE	NE	44 U	34 U	34 U	34 U	33 U	35 U	35 U
Isophorone		78-59-1	NE	NE	180 U	140 U	140 U	140 U	130 U	140 U	140 U
2-Methylnaphthalene		91-57-6	NE	NE	440 U	340 U	340 U	340 U	330 U	350 U	350 U
2-Methylphenol (o-Cresol)		95-48-7	330	100000	440 U	340 U	340 U	340 U	330 U	350 U	350 U
4-Methylphenol (p-Cresol)		106-44-5	330	34000	440 U	340 U	340 U	340 U	330 U	350 U	350 U
2-Nitroaniline		88-74-4	NE	NE	440 UJ	340 U	340 U	340 U	330 U	350 U	350 U
3-Nitroaniline		99-09-2	NE	NE	440 U	340 U	340 U	340 U	330 U	350 U	350 U
4-Nitroaniline		100-01-6	NE	NE	440 UJ	340 U	340 U	340 U	330 U	350 U	350 U
Nitrobenzene		98-95-3	NE	NE	44 U	34 U	34 U	34 U	33 U	35 U	35 U
2-Nitrophenol		88-75-5	NE	NE	440 UJ	340 U	340 U	340 U	330 U	350 U	350 U
4-Nitrophenol		100-02-7	NE	NE	890 U	690 U	690 U	690 U	680 U	720 U	720 U
N-Nitrosodiphenylamine (NDFA)		86-30-6	NE	NE	440 U	340 U	340 U	340 U	330 U	350 U	350 U
N-Nitrosodi-n-propylamine (NDPA)		621-64-7	NE	NE	44 U	34 U	34 U	34 U	33 U	35 U	35 U
Pentachlorophenol		87-86-5	800	2400	350 U	270 U	270 U	270 U	270 U	280 U	280 U
Phenol		108-95-2	330	100000	440 U	340 U	340 U	340 U	330 U	350 U	350 U
1,2,4,5-Tetrachlorobenzene		95-94-3	NE	NE	440 U	340 U	340 U	340 U	330 U	350 U	350 U
2,3,4,6-Tetrachlorophenol		58-90-2	NE	NE	440 U	340 U	340 U	340 U	330 U	350 U	350 U
2,4,5-Trichlorophenol		95-95-4	NE	NE	440 U	340 U	340 U	340 U	330 U	350 U	350 U
2,4,6-Trichlorophenol		88-06-2	NE	NE	180 U	140 U	140 U	140 U	130 U	140 U	140 U
PCB Aroclors	µg/kg										
Aroclor 1016		12674-11-2	NE	NE	89 U	69 U	69 U	69 U	68 U	72 U	72 U
Aroclor 1221		11104-28-2	NE	NE	89 U	69 U	69 U	69 U	68 U	72 U	72 U
Aroclor 1232		11141-16-5	NE	NE	89 U	69 U	69 U	69 U	68 U	72 U	72 U
Aroclor 1242		53469-21-9	NE	NE	89 U	69 U	69 U	69 U	68 U	72 U	72 U
Aroclor 1248		12672-29-6	NE	NE	89 U	69 U	69 U	69 U	68 U	72 U	72 U

Table 2. 71 New Street Remedial Investigation
Soil Analytical Results - Southern Suspected Subsurface Vault
71 New Street Huntington LLC
Huntington, New York

				Location Name	SB-12	SB-13	SB-13	SB-13	SB-13	SB-13	SB-13
				Sample Name	SB-12 (30-31.5)	SB-13 (0-5)	SB-13 (5-10)	SB-13 (10-15)	SB-13 (15-20)	SB-13 (20-25)	SB-13 (25-30)
				Start Depth	30	0	5	10	15	20	25
				End Depth	31.5	5	10	15	20	25	30
				Depth Unit	ft	ft	ft	ft	ft	ft	ft
				Sample Date	7/12/2018	7/12/2018	7/12/2018	7/12/2018	7/12/2018	7/12/2018	7/12/2018
				Parent Sample							
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**							
Aroclor 1254		11097-69-1	NE	NE	89 U	69 U	69 U	69 U	68 U	72 U	72 U
Aroclor 1260		11096-82-5	NE	NE	89 U	69 U	69 U	69 U	68 U	72 U	72 U
Aroclor 1262		37324-23-5	NE	NE	89 U	69 U	69 U	69 U	68 U	72 U	72 U
Aroclor 1268		11100-14-4	NE	NE	89 U	69 U	69 U	69 U	68 U	72 U	72 U
Total PCBs (Lab calculated)		1336-36-3	100	1000	89 U	69 U	69 U	69 U	68 U	72 U	72 U
Pesticides	µg/kg										
Aldrin		309-00-2	5	19	8.9 U	6.9 U	6.9 UJ	6.9 U	6.8 U	7.2 U	7.2 U
alpha-BHC (Hexachlorocyclohexane)		319-84-6	20	97	2.7 U	2.1 U	2 UJ	2.1 U	2 U	2.1 U	2.1 U
beta-BHC (beta-Hexachlorocyclohexane)		319-85-7	36	72	2.7 U	2.1 UJ	2 UJ	2.1 U	2 U	2.1 U	2.1 U
gamma-BHC (gamma-Hexachlorocyclohexane) (Lindane)		58-89-9	100	280	2.7 U	2.1 U	2 UJ	2.1 U	2 U	2.1 U	2.1 U
delta-BHC (delta-Hexachlorocyclohexane)		319-86-8	40	100000	2.7 U	2.1 UJ	2 UJ	2.1 U	2 U	2.1 U	2.1 U
Chlordane (Technical)		12789-03-6	NE	NE	89 U	69 U	69 UJ	69 U	68 U	72 U	72 U
2,4-D (2,4-Dichlorophenoxyacetic acid)		94-75-7	NE	NE	44 U	34 U	34 U	34 U	34 U	36 U	36 UJ
4,4'-DDT (p,p'-DDT)		50-29-3	3.3	1700	8.9 U	**10**	6.9 UJ	6.9 U	6.8 U	7.2 U	7.2 U
4,4'-DDE (p,p'-DDE)		72-55-9	3.3	1800	8.9 U	6.9 U	6.9 UJ	6.9 U	6.8 U	7.2 U	7.2 U
4,4-DDD (p,p-DDD)		72-54-8	3.3	2600	8.9 U	6.9 U	6.9 UJ	6.9 U	6.8 U	7.2 U	7.2 U
Dieldrin		60-57-1	5	39	2.7 U	**2.2**	2 UJ	2.1 U	2 U	2.1 U	2.1 U
alpha-Endosulfan (I)		959-98-8	2400	4800	8.9 U	6.9 U	6.9 UJ	6.9 U	6.8 U	7.2 U	7.2 U
beta-Endosulfan (II)		33213-65-9	2400	4800	8.9 U	6.9 UJ	6.9 UJ	6.9 U	6.8 U	7.2 U	7.2 U
Endosulfan sulfate		1031-07-8	2400	4800	8.9 U	6.9 R	6.9 UJ	6.9 U	6.8 U	7.2 U	7.2 U
Endrin		72-20-8	14	2200	8.9 U	6.9 U	6.9 UJ	6.9 U	6.8 U	7.2 U	7.2 U
Endrin aldehyde		7421-93-4	NE	NE	8.9 U	6.9 R	6.9 UJ	6.9 U	6.8 U	7.2 U	7.2 U
Endrin ketone		53494-70-5	NE	NE	8.9 U	6.9 UJ	6.9 UJ	6.9 U	6.8 U	7.2 U	7.2 U
Heptachlor		76-44-8	42	420	8.9 U	6.9 U	6.9 UJ	6.9 U	6.8 U	7.2 U	7.2 U
Heptachlor epoxide		1024-57-3	NE	NE	8.9 U	6.9 U	6.9 UJ	6.9 U	6.8 U	7.2 U	7.2 U
Methoxychlor		72-43-5	NE	NE	8.9 U	6.9 UJ	6.9 UJ	6.9 U	6.8 U	7.2 U	7.2 U
2,4,5-TP (Silvex)		93-72-1	3800	58000	44 U	34 U	34 U	34 U	34 U	36 U	36 UJ
Toxaphene		8001-35-2	NE	NE	89 U	69 U	69 UJ	69 U	68 U	72 U	72 U
Herbicides	µg/kg										
2,4-D (2,4-Dichlorophenoxyacetic a		94-75-7	NE	NE	44 U	34 U	34 U	34 U	34 U	36 U	36 UJ
2,4,5-T (2,4,5-Trichlorophenoxyace		93-76-5	NE	NE	44 U	34 U	34 U	34 U	34 U	36 U	36 UJ
2,4,5-TP (Silvex)		93-72-1	3800	58000	44 U	34 U	34 U	34 U	34 U	36 U	36 UJ
Total Metals	mg/kg										
Aluminum		7429-90-5	NE	NE	**3860**	**15400**	**1780 J**	**1300 J**	**1060 J**	**1020 J**	**4560**
Antimony		7440-36-0	NE	NE	1 UJ	0.91 UJ	0.91 UJ	0.93 UJ	0.89 UJ	1 UJ	1.1 UJ
Arsenic		7440-38-2	13	16	**2.3**	**12.8**	**1.2**	**1.2**	**1**	**1.1**	**1.8**
Barium		7440-39-3	350	350	**24.9**	**77.5**	**9.4**	**8**	**7.6**	**6.8**	**32.3**
Beryllium		7440-41-7	7.2	14	0.4 U	**0.65 J**	0.36 U	0.37 U	0.35 U	0.4 U	**0.29 J**
Cadmium		7440-43-9	2.5	2.5	1 U	**0.52 J**	0.91 U	0.93 U	0.89 U	1 U	1.1 U

Table 2. 71 New Street Remedial Investigation
Soil Analytical Results - Southern Suspected Subsurface Vault
71 New Street Huntington LLC
Huntington, New York

				Location Name	SB-12	SB-13	SB-13	SB-13	SB-13	SB-13	SB-13
				Sample Name	SB-12 (30-31.5)	SB-13 (0-5)	SB-13 (5-10)	SB-13 (10-15)	SB-13 (15-20)	SB-13 (20-25)	SB-13 (25-30)
				Start Depth	30	0	5	10	15	20	25
				End Depth	31.5	5	10	15	20	25	30
				Depth Unit	ft	ft	ft	ft	ft	ft	ft
				Sample Date	7/12/2018	7/12/2018	7/12/2018	7/12/2018	7/12/2018	7/12/2018	7/12/2018
				Parent Sample							
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**							
Calcium		7440-70-2	NE	NE	**818**	**2070**	**132 J**	**167 J**	**114 J**	**82.7 J**	**703**
Chromium		7440-47-3	NE	NE	**7.5**	**19.1**	**5.9 J**	**2.7 J**	**3.3 J**	**1.9 J**	**9.5**
Cobalt		7440-48-4	NE	NE	**3.8**	**6.3**	**1.3 J**	**1.3 J**	**0.91 J**	**1.9 J**	**3.2**
Copper		7440-50-8	50	270	**6.4 J**	**33.6 J**	**2.9 J**	**2.7 J**	**2.4 J**	**5.5 J**	**5.4 J**
Iron		7439-89-6	NE	NE	**9990**	**18800**	**4350 J**	**5380 J**	**4360 J**	**4590 J**	**7810**
Lead		7439-92-1	63	400	**3.1 J**	**570 J**	**1.4 J**	**1.3 J**	**1 J**	**1.2 J**	**3.3 J**
Magnesium		7439-95-4	NE	NE	**1060**	**2530**	**441 J**	**336 J**	**294 J**	**225 J**	**1290**
Manganese		7439-96-5	1600	2000	**273**	**255**	**94.1 J**	**123 J**	**89.2 J**	**183 J**	**226**
Mercury		7439-97-6	0.18	0.81	0.022 UJ	**0.15 J**	0.017 UJ	0.018 UJ	0.017 UJ	0.017 UJ	0.017 UJ
Nickel		7440-02-0	30	140	**6.1**	**11.9**	**2.5 J**	**1.9 J**	**1.7 J**	**3.6 J**	**5.6**
Potassium		7440-09-7	NE	NE	**492**	**444**	**294 J**	**151 J**	**132 J**	**124 J**	**751**
Selenium		7782-49-2	3.9	36	5 U	**0.77 J**	4.5 U	4.7 U	4.4 U	5.1 U	5.3 U
Silver		7440-22-4	2	36	1 U	0.91 U	0.91 U	0.93 U	0.89 U	1 U	1.1 U
Sodium		7440-23-5	NE	NE	101 U	91 U	90.7 UJ	93.1 UJ	88.6 UJ	101 UJ	**41.8 J**
Thallium		7440-28-0	NE	NE	0.4 U	**0.12 J**	0.36 U	0.37 U	0.35 U	0.4 U	0.42 U
Vanadium		7440-62-2	NE	NE	**11.3 J**	**28.6 J**	**5.2 J**	**4 J**	**3.5 J**	**3 J**	**10.6 J**
Zinc		7440-66-6	109	2200	**15.5**	**183**	**11.7 J**	**10.8 J**	**4.9 J**	**8.2 J**	**13.9**
Other	mg/kg										
Formaldehyde		50-00-0	NE	NE	1.31 U	1.04 U	1.02 U	1.03 U	0.99 U	1.07 U	1.07 U

Table 2. 71 New Street Remedial Investigation
Soil Analytical Results - Southern Suspected Subsurface Vault
71 New Street Huntington LLC
Huntington, New York

Notes:
mg/kg = milligrams/kilogram or parts per million (ppm)
µg/kg = micrograms per kilogram

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes
PAH = Polycyclic Aromatic Hydrocarbon
PCB = Polychlorinated Biphenyl
SVOC = Semi-Volatile Organic Compound
VOC = Volatile Organic Compound

Total BTEX and Total PAHs are calculated using detects only.
Total PAH16 is calculated using the EPA16 list of analytes: Acenaphthene, Acenaphthylene, Anthracene, Benz[a]anthracene, Benzo[a]pyrene, Benzo[b]fluoranthene, Benzo[g,h,i]perylene, Benzo[k]fluoranthene, Chrysene, Dibenz[a,h]anthracene, Fluoranthene, Fluorene, Indeno[1,2,3-cd]pyrene, Naphthalene, Phenanthrene, and Pyrene
Total PAH17 is calculated using the EPA16 list of analytes plus 2-Methylnaphthalene

6 NYCRR = New York State Register and Official Compilation of Codes, Rules and Regulations of the State of New York
Comparison of detected results are performed against one or more of the following NYCRR, Chapter IV, Part 375-6 Soil Cleanup Objectives (SCO)s: Unrestricted Use, Residential, Restricted-Residential, Commercial, Industrial, Protection of Ecological Resources, or Protection of Groundwater

CAS No. = Chemical Abstracts Service Number
ND = Not Detected
NE = Not Established
NYSDEC = New York State Department of Environmental Conservation

Bolding indicates a detected result concentration
Shading and bolding indicates that the detected concentration is above the NYSDOH guidance it was compared to
Gray shading and bolding indicates that the detected result value exceeds the Unrestricted SCO
Yellow shading and bolding indicates that the detected result value exceeds the Residential SCO

Validation Qualifiers:
J = The result is an estimated value.
R = The result is rejected.
U = The result was not detected above the reporting limit.
UJ = The results was not detected at or above the reporting limit shown and the reporting limit is estimated.

Table 3. 71 New Street Remedial Investigation
Soil Analytical Results - Monitoring Well Locations
71 New Street Huntington LLC
Huntington, New York

				Location Name	**MW-1**	**MW-2**	**MW-3**	**MW-4**
				Sample Name	**MW-1 (45-47)**	**MW-2 (35-40)**	**MW-3 (20-23.5)**	**MW-4 (29-33)**
				Start Depth	**45**	**35**	**20**	**29**
				End Depth	**47**	**40**	**23.5**	**33**
				Depth Unit	**ft**	**ft**	**ft**	**ft**
				Sample Date	**6/27/2018**	**6/28/2018**	**6/29/2018**	**7/2/2018**
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**				
BTEX	µg/kg							
Benzene		71-43-2	60	2900	0.89 U	0.94 U	0.96 U	0.2 U
Toluene		108-88-3	700	100000	0.89 U	0.94 U	0.96 U	0.2 U
Ethylbenzene		100-41-4	1000	30000	0.89 U	0.94 UJ	0.96 U	0.2 U
o-Xylene		95-47-6	260	100000	**0.087 J**	**0.15 J**	**0.11 J**	0.2 U
m/p-Xylene		179601-23-1	260	100000	0.89 U	0.94 U	0.96 U	0.2 U
Total Xylene		1330-20-7	260	100000	**0.32 J**	**0.53 J**	**0.38 J**	0.4 U
Total BTEX (ND=0)		TBTEX_ND0	NE	NE	**0.087**	**0.15**	**0.11**	ND
Other VOCs	µg/kg							
Acetone		67-64-1	50	100000	**57**	**48**	**58 J**	**9.3**
Bromochloromethane		74-97-5	NE	NE	0.89 U	0.94 U	0.96 U	0.2 U
Bromodichloromethane		75-27-4	NE	NE	0.89 U	0.94 U	0.96 U	0.2 U
Bromoform		75-25-2	NE	NE	0.89 U	0.94 UJ	0.96 UJ	0.2 U
Bromomethane		74-83-9	NE	NE	0.89 U	0.94 UJ	0.96 U	0.2 U
Carbon disulfide		75-15-0	NE	NE	0.89 U	0.94 U	0.96 U	0.2 U
Carbon tetrachloride		56-23-5	760	1400	0.89 U	0.94 U	0.96 U	0.2 U
Chlorobenzene		108-90-7	1100	100000	0.89 U	0.94 U	0.96 U	0.2 U
Chloroethane		75-00-3	NE	NE	0.89 U	0.94 UJ	0.96 U	0.2 U
Chloroform (Trichloromethane)		67-66-3	370	10000	0.89 U	0.94 U	0.96 U	**0.078 J**
Chloromethane		74-87-3	NE	NE	0.89 U	0.94 U	0.96 U	0.2 U
Cyclohexane		110-82-7	NE	NE	0.89 U	0.94 U	0.96 U	0.2 UJ
1,2-Dibromo-3-chloropropane		96-12-8	NE	NE	0.89 U	0.94 UJ	0.96 UJ	0.2 U
Dibromochloromethane		124-48-1	NE	NE	0.89 U	0.94 UJ	0.96 U	0.2 U
1,2-Dibromoethane (EDB)		106-93-4	NE	NE	0.89 U	0.94 UJ	0.96 U	0.2 U
1,2-Dichlorobenzene (o-DCB)		95-50-1	1100	100000	0.89 U	0.94 UJ	0.96 U	0.2 U
1,3-Dichlorobenzene (m-DCB)		541-73-1	2400	17000	0.89 U	0.94 UJ	0.96 U	0.2 U
1,4-Dichlorobenzene (p-DCB)		106-46-7	1800	9800	0.89 U	0.94 UJ	0.96 U	0.2 U
Dichlorodifluoromethane (Freon 12)		75-71-8	NE	NE	0.89 U	0.94 U	0.96 U	0.2 U
1,1-Dichloroethane		75-34-3	270	19000	0.89 U	0.94 U	0.96 U	0.2 U
1,2-Dichloroethane		107-06-2	20	2300	0.89 U	0.94 U	0.96 U	0.2 U
1,1-Dichloroethene		75-35-4	330	100000	0.89 U	0.94 U	0.96 U	0.2 U
cis-1,2-Dichloroethene		156-59-2	250	59000	0.89 U	0.94 U	0.96 U	0.2 U
trans-1,2-Dichloroethene		156-60-5	190	100000	0.89 U	0.94 U	0.96 U	0.2 U
1,2-Dichloropropane		78-87-5	NE	NE	0.89 U	0.94 U	0.96 U	0.2 U
cis-1,3-Dichloropropene		10061-01-5	NE	NE	0.89 U	0.94 UJ	0.96 U	0.2 U
trans-1,3-Dichloropropene		10061-02-6	NE	NE	0.89 U	0.94 UJ	0.96 U	0.2 U
1,4-Dioxane		123-91-1	100	9800	18 U	19 U	19 U	4 U
2-Hexanone		591-78-6	NE	NE	4.4 U	4.7 U	4.8 U	1 U
Isopropylbenzene		98-82-8	NE	NE	0.89 U	0.94 UJ	0.96 U	0.2 U
Methyl acetate		79-20-9	NE	NE	4.4 U	4.7 U	4.8 UJ	1 U
Methyl ethyl ketone (2-Butanone)		78-93-3	120	100000	**2.7 J**	**2.6 J**	**3.6 J**	1 U
Methyl tert-butyl ether (MTBE)		1634-04-4	930	62000	0.89 U	**0.14 J**	0.96 UJ	0.2 U
4-Methyl-2-pentanone (MIBK)		108-10-1	NE	NE	4.4 U	4.7 U	4.8 U	1 U
Methylcyclohexane		108-87-2	NE	NE	0.89 U	0.94 U	0.96 U	0.2 U
Methylene chloride		75-09-2	50	51000	0.89 U	**7.8 J**	1.6 U	0.2 U
Styrene		100-42-5	NE	NE	0.89 U	0.94 UJ	0.96 U	0.2 U
1,1,2,2-Tetrachloroethane		79-34-5	NE	NE	0.89 U	0.94 UJ	0.96 U	0.2 U
Tetrachloroethene (PCE)		127-18-4	1300	5500	0.89 U	0.94 U	0.96 U	0.2 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)		76-13-1	NE	NE	0.89 UJ	0.94 UJ	0.96 U	0.2 UJ
1,2,3-Trichlorobenzene		87-61-6	NE	NE	0.89 U	0.94 UJ	0.96 U	0.2 U
1,2,4-Trichlorobenzene		120-82-1	NE	NE	0.89 U	0.94 UJ	0.96 U	0.2 U
1,1,1-Trichloroethane (TCA)		71-55-6	680	100000	0.89 U	0.94 U	0.96 U	0.2 U
1,1,2-Trichloroethane		79-00-5	NE	NE	0.89 U	0.94 U	0.96 U	0.2 U
Trichloroethene (TCE)		79-01-6	470	10000	0.89 U	0.94 U	0.96 U	0.2 U
Trichlorofluoromethane (Freon 11)		75-69-4	NE	NE	0.89 U	0.94 UJ	0.96 U	0.2 U
Vinyl chloride		75-01-4	20	210	0.89 U	0.94 UJ	0.96 U	0.2 U
NYSDEC PAH17	µg/kg							
Acenaphthene		83-32-9	20000	100000	420 U	370 UJ	350 U	410 U
Acenaphthylene		208-96-8	100000	100000	420 U	370 U	350 U	410 U
Anthracene		120-12-7	100000	100000	420 U	370 U	350 U	410 U
Benzo(a)anthracene		56-55-3	1000	1000	42 U	37 U	35 U	41 U
Benzo(b)fluoranthene		205-99-2	1000	1000	42 U	37 U	35 U	41 U
Benzo(k)fluoranthene		207-08-9	800	1000	42 U	37 U	35 U	41 U
Benzo(g,h,i)perylene		191-24-2	100000	100000	420 U	370 U	350 U	410 U
Benzo(a)pyrene		50-32-8	1000	1000	42 U	37 U	35 U	41 U
Chrysene		218-01-9	1000	1000	420 U	370 U	350 U	410 U
Dibenz(a,h)anthracene		53-70-3	330	330	42 U	37 U	35 U	41 U
Fluoranthene		206-44-0	100000	100000	420 U	370 U	350 U	410 U

Table 3. 71 New Street Remedial Investigation
Soil Analytical Results - Monitoring Well Locations
71 New Street Huntington LLC
Huntington, New York

				Location Name	**MW-1**	**MW-2**	**MW-3**	**MW-4**
				Sample Name	**MW-1 (45-47)**	**MW-2 (35-40)**	**MW-3 (20-23.5)**	**MW-4 (29-33)**
				Start Depth	**45**	**35**	**20**	**29**
				End Depth	**47**	**40**	**23.5**	**33**
				Depth Unit	**ft**	**ft**	**ft**	**ft**
				Sample Date	**6/27/2018**	**6/28/2018**	**6/29/2018**	**7/2/2018**
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**				
Fluorene		86-73-7	30000	100000	420 U	370 U	350 U	410 U
Indeno(1,2,3-cd)pyrene		193-39-5	500	500	42 U	37 UJ	35 U	41 U
2-Methylnaphthalene		91-57-6	NE	NE	420 U	370 U	350 U	410 U
Naphthalene		91-20-3	12000	100000	420 U	370 U	350 U	410 U
Phenanthrene		85-01-8	100000	100000	420 U	370 U	350 U	410 U
Pyrene		129-00-0	100000	100000	420 U	370 U	350 U	410 U
Total PAH (17) (ND=0)		TPAH17_ND0	NE	NE	ND	ND	ND	ND
NYSDEC PAH17 Other SVOCs	µg/kg							
Acetophenone		98-86-2	NE	NE	420 U	370 U	350 U	410 U
Atrazine		1912-24-9	NE	NE	170 U	150 U	140 U	160 U
Benzaldehyde		100-52-7	NE	NE	420 U	370 U	350 U	410 U
Biphenyl (1,1-Biphenyl)		92-52-4	NE	NE	420 U	370 U	350 U	410 U
Bis(2-chloroethoxy)methane		111-91-1	NE	NE	420 U	370 U	350 U	410 U
Bis(2-chloroethyl)ether		111-44-4	NE	NE	42 UJ	37 U	35 UJ	41 U
2,2-oxybis(1-Chloropropane)		108-60-1	NE	NE	420 U	370 U	350 U	410 U
Bis(2-ethylhexyl)phthalate		117-81-7	NE	NE	420 U	370 UJ	350 U	410 U
4-Bromophenyl phenyl ether		101-55-3	NE	NE	420 U	370 U	350 U	410 U
Butyl benzyl phthalate		85-68-7	NE	NE	420 U	370 UJ	350 U	410 U
Caprolactam		105-60-2	NE	NE	420 U	370 U	350 U	410 U
Carbazole		86-74-8	NE	NE	420 U	370 U	350 U	410 U
4-Chloro-3-methylphenol		59-50-7	NE	NE	420 U	370 U	350 U	410 U
4-Chloroaniline		106-47-8	NE	NE	420 U	370 U	350 U	410 U
2-Chloronaphthalene		91-58-7	NE	NE	420 U	370 U	350 U	410 U
2-Chlorophenol		95-57-8	NE	NE	420 U	370 U	350 U	410 U
4-Chlorophenyl phenyl ether		7005-72-3	NE	NE	420 U	370 U	350 U	410 U
Dibenzofuran		132-64-9	7000	14000	420 U	370 U	350 U	410 U
3,3-Dichlorobenzidine		91-94-1	NE	NE	170 U	150 U	140 U	160 U
2,4-Dichlorophenol		120-83-2	NE	NE	170 U	150 U	140 U	160 U
Diethyl phthalate		84-66-2	NE	NE	420 U	370 U	350 U	410 U
Dimethyl phthalate		131-11-3	NE	NE	420 U	370 U	350 U	410 U
2,4-Dimethylphenol		105-67-9	NE	NE	420 U	370 U	350 U	410 U
Di-n-butyl phthalate		84-74-2	NE	NE	420 U	370 U	350 U	410 U
4,6-Dinitro-2-methylphenol		534-52-1	NE	NE	340 U	300 U	280 U	330 U
2,4-Dinitrophenol		51-28-5	NE	NE	340 U	300 U	280 U	330 U
2,4-Dinitrotoluene		121-14-2	NE	NE	85 U	75 U	70 U	83 U
2,6-Dinitrotoluene		606-20-2	NE	NE	85 U	75 U	70 U	83 U
Di-n-octyl phthalate		117-84-0	NE	NE	420 U	370 UJ	350 U	410 U
Hexachlorobenzene		118-74-1	330	330	42 U	37 U	35 U	41 U
1,3-Hexachlorobutadiene (C-46)		87-68-3	NE	NE	85 U	75 UJ	70 U	83 U
Hexachlorocyclopentadiene		77-47-4	NE	NE	420 U	370 UJ	350 U	410 UJ
Hexachloroethane		67-72-1	NE	NE	42 U	37 U	35 U	41 U
Isophorone		78-59-1	NE	NE	170 U	150 U	140 U	160 U
2-Methylnaphthalene		91-57-6	NE	NE	420 U	370 U	350 U	410 U
2-Methylphenol (o-Cresol)		95-48-7	330	100000	420 U	370 U	350 U	410 U
4-Methylphenol (p-Cresol)		106-44-5	330	34000	420 U	370 U	350 U	410 U
2-Nitroaniline		88-74-4	NE	NE	420 U	370 U	350 U	410 U
3-Nitroaniline		99-09-2	NE	NE	420 U	370 U	350 U	410 U
4-Nitroaniline		100-01-6	NE	NE	420 UJ	370 U	350 U	410 UJ
Nitrobenzene		98-95-3	NE	NE	42 U	37 U	35 U	41 U
2-Nitrophenol		88-75-5	NE	NE	420 U	370 U	350 U	410 U
4-Nitrophenol		100-02-7	NE	NE	850 U	750 UJ	700 U	830 U
N-Nitrosodiphenylamine (NDFA)		86-30-6	NE	NE	420 U	370 U	350 U	410 U
N-Nitrosodi-n-propylamine (NDPA)		621-64-7	NE	NE	42 U	37 U	35 U	41 U
Pentachlorophenol		87-86-5	800	2400	340 U	300 UJ	280 U	330 U
Phenol		108-95-2	330	100000	420 U	370 U	350 U	410 U
1,2,4,5-Tetrachlorobenzene		95-94-3	NE	NE	420 U	370 U	350 U	410 U
2,3,4,6-Tetrachlorophenol		58-90-2	NE	NE	420 U	370 U	350 U	410 U
2,4,5-Trichlorophenol		95-95-4	NE	NE	420 U	370 U	350 U	410 U
2,4,6-Trichlorophenol		88-06-2	NE	NE	170 U	150 U	140 U	160 U
PCB Aroclors	µg/kg							
Aroclor 1016		12674-11-2	NE	NE	84 U	75 U	70 U	83 U
Aroclor 1221		11104-28-2	NE	NE	84 U	75 U	70 U	83 U
Aroclor 1232		11141-16-5	NE	NE	84 U	75 U	70 U	83 U
Aroclor 1242		53469-21-9	NE	NE	84 U	75 U	70 U	83 U
Aroclor 1248		12672-29-6	NE	NE	84 U	75 U	70 U	83 U
Aroclor 1254		11097-69-1	NE	NE	84 U	75 U	70 U	83 U
Aroclor 1260		11096-82-5	NE	NE	84 U	75 U	70 U	83 U
Aroclor 1262		37324-23-5	NE	NE	84 U	75 U	70 U	83 U

Table 3. 71 New Street Remedial Investigation
Soil Analytical Results - Monitoring Well Locations
71 New Street Huntington LLC
Huntington, New York

				Location Name	**MW-1**	**MW-2**	**MW-3**	**MW-4**
				Sample Name	**MW-1 (45-47)**	**MW-2 (35-40)**	**MW-3 (20-23.5)**	**MW-4 (29-33)**
				Start Depth	**45**	**35**	**20**	**29**
				End Depth	**47**	**40**	**23.5**	**33**
				Depth Unit	**ft**	**ft**	**ft**	**ft**
				Sample Date	**6/27/2018**	**6/28/2018**	**6/29/2018**	**7/2/2018**
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Residential SCO**				
Aroclor 1268		11100-14-4	NE	NE	84 U	75 U	70 U	83 U
Total PCBs (Lab calculated)		1336-36-3	100	1000	84 U	75 U	70 U	83 U
Pesticides	µg/kg							
Aldrin		309-00-2	5	19	8.5 U	7.5 U	7 U	8.3 U
alpha-BHC (Hexachlorocyclohexane)		319-84-6	20	97	2.5 U	2.2 U	2.1 U	2.5 U
beta-BHC (beta-Hexachlorocyclohexane)		319-85-7	36	72	2.5 U	2.2 U	2.1 U	2.5 U
gamma-BHC (gamma-Hexachlorocyclohexane) (Lindane)		58-89-9	100	280	2.5 U	2.2 U	2.1 U	2.5 U
delta-BHC (delta-Hexachlorocyclohexane)		319-86-8	40	100000	2.5 U	2.2 U	2.1 U	2.5 U
Chlordane (Technical)		12789-03-6	NE	NE	85 U	75 U	70 U	83 U
2,4-D (2,4-Dichlorophenoxyacetic acid)		94-75-7	NE	NE	42 U	37 U	35 U	41 U
4,4'-DDT (p,p'-DDT)		50-29-3	3.3	1700	8.5 U	7.5 U	7 U	8.3 U
4,4'-DDE (p,p'-DDE)		72-55-9	3.3	1800	8.5 U	7.5 U	7 U	8.3 U
4,4-DDD (p,p-DDD)		72-54-8	3.3	2600	8.5 U	7.5 U	7 U	8.3 U
Dieldrin		60-57-1	5	39	2.5 U	2.2 U	2.1 U	2.5 U
alpha-Endosulfan (I)		959-98-8	2400	4800	8.5 U	7.5 U	7 U	8.3 U
beta-Endosulfan (II)		33213-65-9	2400	4800	8.5 U	7.5 U	7 U	8.3 U
Endosulfan sulfate		1031-07-8	2400	4800	8.5 U	7.5 U	7 U	8.3 U
Endrin		72-20-8	14	2200	8.5 U	7.5 U	7 U	8.3 U
Endrin aldehyde		7421-93-4	NE	NE	8.5 U	7.5 U	7 U	8.3 U
Endrin ketone		53494-70-5	NE	NE	8.5 U	7.5 U	7 U	8.3 U
Heptachlor		76-44-8	42	420	8.5 U	7.5 U	7 U	8.3 U
Heptachlor epoxide		1024-57-3	NE	NE	8.5 U	7.5 U	7 U	8.3 U
Methoxychlor		72-43-5	NE	NE	8.5 U	7.5 U	7 U	8.3 U
2,4,5-TP (Silvex)		93-72-1	3800	58000	42 U	37 U	35 U	41 U
Toxaphene		8001-35-2	NE	NE	85 U	75 U	70 U	83 U
Herbicides	µg/kg							
2,4-D (2,4-Dichlorophenoxyacetic acid)		94-75-7	NE	NE	42 U	37 U	35 U	41 U
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)		93-76-5	NE	NE	42 U	37 U	35 U	41 U
2,4,5-TP (Silvex)		93-72-1	3800	58000	42 U	37 U	35 U	41 U
Total Metals	mg/kg							
Aluminum		7429-90-5	NE	NE	**3710 J**	**1800 J**	**1210 J**	**7410 J**
Antimony		7440-36-0	NE	NE	1.1 UJ	1.1 UJ	0.94 UJ	1.1 UJ
Arsenic		7440-38-2	13	16	**2.4**	**1.5**	**6.4**	**2.3**
Barium		7440-39-3	350	350	**22.5**	**13.2**	**8.3**	**56**
Beryllium		7440-41-7	7.2	14	**0.28 J**	0.42 U	**0.22 J**	**0.49**
Cadmium		7440-43-9	2.5	2.5	1.1 U	1.1 U	0.94 U	1.1 U
Calcium		7440-70-2	NE	NE	**716**	**305**	**142**	**1320**
Chromium		7440-47-3	NE	NE	**6.6**	**4.2**	**12.5**	**15.2**
Cobalt		7440-48-4	NE	NE	**3.5**	**1.8 J**	**1.3 J**	**5.9**
Copper		7440-50-8	50	270	**5**	**3.8**	**3.9**	**10.5**
Iron		7439-89-6	NE	NE	**8260**	**3940**	**7600**	**13500**
Lead		7439-92-1	63	400	**2.5 J**	**1.3 J**	**1.3 J**	**4.9 J**
Magnesium		7439-95-4	NE	NE	**963 J**	**612 J**	**288 J**	**3120 J**
Manganese		7439-96-5	1600	2000	**189 J**	**118 J**	**186 J**	**274 J**
Mercury		7439-97-6	0.18	0.81	0.02 U	0.017 U	0.017 U	0.021 U
Nickel		7440-02-0	30	140	**4.4**	**2.6**	**1.9**	**11.9**
Potassium		7440-09-7	NE	NE	**575**	**369**	**129 J**	**1740**
Selenium		7782-49-2	3.9	36	5.3 U	5.3 U	4.7 U	5.5 U
Silver		7440-22-4	2	36	1.1 U	1.1 U	0.94 U	1.1 U
Sodium		7440-23-5	NE	NE	**55.2 J**	**42.9 J**	**29.7 J**	**139**
Thallium		7440-28-0	NE	NE	0.42 U	0.42 U	0.38 U	**0.15 J**
Vanadium		7440-62-2	NE	NE	**9.6**	**5.7**	**6.5**	**18.9**
Zinc		7440-66-6	109	2200	**14.5**	**8.3 J**	**11.3**	**30.5**
Other								
Formaldehyde	mg/kg	50-00-0	NE	NE	1.24 U	**1.43 J**	**2.05**	**1.27 J**

Table 3. 71 New Street Remedial Investigation
Soil Analytical Results - Monitoring Well Locations
71 New Street Huntington LLC
Huntington, New York

Notes:

mg/kg = milligrams/kilogram or parts per million (ppm)
µg/kg = micrograms per kilogram

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes
PAH = Polycyclic Aromatic Hydrocarbon
PCB = Polychlorinated Biphenyl
SVOC = Semi-Volatile Organic Compound
VOC = Volatile Organic Compound

Total BTEX andTotal PAHs are calculated using detects only.
Total PAH16 is calculated using the EPA16 list of analytes: Acenaphthene, Acenaphthylene, Anthracene, Benz[a]anthracene, Benzo[a]pyrene, Benzo[b]fluoranthene, Benzo[g,h,i]perylene, Benzo[k]fluoranthene, Chrysene, Dibenz[a,h]anthracene, Fluoranthene, Fluorene, Indeno[1,2,3-cd]pyrene, Naphthalene, Phenanthrene, and Pyrene

Total PAH17 is calculated using the EPA16 list of analytes plus 2-Methylnaphthalene

6 NYCRR = New York State Register and Official Compilation of Codes, Rules and Regulations of the State of New York
Comparison of detected results are performed against one or more of the following NYCRR, Chapter IV, Part 375-6 Soil Cleanup Objectives (SCO)s: Unrestricted Use, Residential, Restricted-Residential, Commercial, Industrial, Protection of Ecological Resources, or Protection of Groundwater

CAS No. = Chemical Abstracts Service Number
ND = Not Detected
NE = Not Established
NYSDEC = New York State Department of Environmental Conservation

Bolding indicates a detected result concentration
Shading and bolding indicates that the detected concentration is above the NYSDOH guidance it was compared to
Gray shading and bolding indicates that the detected result value exceeds the Unrestricted SCO
Yellow shading and bolding indicates that the detected result value exceeds the Residential SCO

Validation Qualifiers:

J = The result is an estimated value.
U = The result was not detected above the reporting limit.
UJ = The results was not detected at or above the reporting limit shown and the reporting limit is estimated.

Table 4. 71 New Street Remedial Investigation
Groundwater Analytical Results
71 New Street Huntington LLC
Huntington, New York

			Location Name	**MW-1**	**MW-2**	**MW-2**	**MW-3**	**MW-4**
			Sample Name	**MW-1**	**MW-2**	**MW-XX-07162018**	**MW-3**	**MW-4**
			Sample Date	**7/16/2018**	**7/16/2018**	**7/16/2018**	**7/16/2018**	**7/16/2018**
			Parent Sample			**MW-2**		
Analyte	**Units**	**CAS No.**	**NYS AWQS**					
BTEX	µg/L							
Benzene		71-43-2	1	1 U	1 U	1 U	1 U	1 U
Toluene		108-88-3	5	1 U	1 U	1 U	1 U	1 U
Ethylbenzene		100-41-4	5	1 U	1 U	1 U	1 U	1 U
o-Xylene		95-47-6	5	1 U	1 U	1 U	1 U	1 U
m/p-Xylene		179601-23-1	5	1 U	1 U	1 U	1 U	1 U
Total Xylene		1330-20-7	5	2 U	2 U	2 U	2 U	2 U
Total BTEX (ND=0)		TBTEX_ND0	NE	ND	ND	ND	ND	ND
Other VOCs	µg/L							
Acetone		67-64-1	50*	5 U	5 U	6.2 U	5 U	5 U
Bromochloromethane		74-97-5	5	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
Bromodichloromethane		75-27-4	50*	1 U	1 U	1 U	1 U	1 U
Bromoform		75-25-2	50*	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
Bromomethane		74-83-9	5	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
Carbon disulfide		75-15-0	60*	1 U	1 U	1 U	1 U	1 U
Carbon tetrachloride		56-23-5	5	1 U	1 U	1 U	1 U	1 U
Chlorobenzene		108-90-7	5	1 U	1 U	1 U	1 U	1 U
Chloroethane		75-00-3	5	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
Chloroform (Trichloromethane)		67-66-3	7	**0.38 J**	1 U	1 U	1 U	**1.1**
Chloromethane		74-87-3	5	1 U	1 U	1 U	1 U	1 U
Cyclohexane		110-82-7	NE	1 U	1 U	1 U	1 U	1 U
1,2-Dibromo-3-chloropropane		96-12-8	0.04	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
Dibromochloromethane		124-48-1	50*	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane (EDB)		106-93-4	0.0006	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene (o-DCB)		95-50-1	3	1 U	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene (m-DCB)		541-73-1	3	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene (p-DCB)		106-46-7	3	1 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane (Freon 12)		75-71-8	5	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
1,1-Dichloroethane		75-34-3	5	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane		107-06-2	0.6	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene		75-35-4	5	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene		156-59-2	5	1 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene		156-60-5	5	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane		78-87-5	1	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene		10061-01-5	0.4	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene		10061-02-6	0.4	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane		123-91-1	NE	50 U	50 U	50 U	50 U	50 U
2-Hexanone		591-78-6	50*	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene		98-82-8	5	1 U	1 U	1 U	1 U	1 U
Methyl acetate		79-20-9	NE	5 U	5 U	5 U	5 U	5 U
Methyl ethyl ketone (2-Butanone)		78-93-3	50*	5 U	5 U	5 U	5 U	5 U
Methyl tert-butyl ether (MTBE)		1634-04-4	10*	1 U	1 U	1 U	1 U	1 U
4-Methyl-2-pentanone (MIBK)		108-10-1	NE	5 U	5 U	5 U	5 U	5 U
Methylcyclohexane		108-87-2	NE	1 U	1 U	1 U	1 U	1 U
Methylene chloride		75-09-2	5	1 U	1 U	1 U	1 U	1 U
Styrene		100-42-5	5	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane		79-34-5	5	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene (PCE)		127-18-4	5	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)		76-13-1	5	1 U	1 U	1 U	1 U	1 U
1,2,3-Trichlorobenzene		87-61-6	5	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene		120-82-1	5	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane (TCA)		71-55-6	5	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane		79-00-5	1	1 U	1 U	1 U	1 U	1 U
Trichloroethene (TCE)		79-01-6	5	1 U	1 U	1 U	1 U	1 U
Trichlorofluoromethane (Freon 11)		75-69-4	5	1 U	1 U	1 U	1 U	1 U
Vinyl chloride		75-01-4	2	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
NYSDEC PAH17	µg/L							
Acenaphthene		83-32-9	20*	10 U	10 U	10 U	10 U	10 U
Acenaphthylene		208-96-8	NE	10 U	10 U	10 U	10 U	10 U
Anthracene		120-12-7	50*	10 U	10 U	10 U	10 U	10 U
Benzo(a)anthracene		56-55-3	0.002*	1 U	1 U	1 U	1 U	1 U
Benzo(b)fluoranthene		205-99-2	0.002*	2 U	2 U	2 U	2 U	2 U
Benzo(k)fluoranthene		207-08-9	0.002*	1 U	1 U	1 U	1 U	1 U
Benzo(g,h,i)perylene		191-24-2	NE	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene		50-32-8	ND	1 U	1 U	1 U	1 U	1 U
Chrysene		218-01-9	0.002*	10 U	10 U	10 U	10 U	10 U
Dibenz(a,h)anthracene		53-70-3	NE	1 U	1 U	1 U	1 U	1 U
Fluoranthene		206-44-0	50*	10 U	10 U	10 U	10 U	10 U
Fluorene		86-73-7	50*	10 U	10 U	10 U	10 U	10 U

Table 4. 71 New Street Remedial Investigation
Groundwater Analytical Results
71 New Street Huntington LLC
Huntington, New York

			Location Name	MW-1	MW-2	MW-2	MW-3	MW-4
			Sample Name	MW-1	MW-2	MW-XX-07162018	MW-3	MW-4
			Sample Date	7/16/2018	7/16/2018	7/16/2018	7/16/2018	7/16/2018
			Parent Sample			MW-2		
Analyte	**Units**	**CAS No.**	**NYS AWQS**					
Indeno(1,2,3-cd)pyrene		193-39-5	0.002*	2 U	2 U	2 U	2 U	2 U
2-Methylnaphthalene		91-57-6	NE	10 U	10 U	10 U	10 U	10 U
Naphthalene		91-20-3	10*	10 U	10 U	10 U	10 U	10 U
Phenanthrene		85-01-8	50*	10 U	10 U	10 U	10 U	10 U
Pyrene		129-00-0	50*	10 U	10 U	10 U	10 U	10 U
Total PAH (17) (ND=0)		TPAH17_ND0	NE	ND	ND	ND	ND	ND
NYSDEC PAH17 Other SVOCs	µg/L							
Acetophenone		98-86-2	NE	10 U	10 U	10 U	10 U	10 U
Atrazine		1912-24-9	7.5	2 U	2 U	2 U	2 U	2 U
Benzaldehyde		100-52-7	NE	10 U	10 U	10 U	10 U	10 U
Biphenyl (1,1-Biphenyl)		92-52-4	5	10 U	10 U	10 U	10 U	10 U
Bis(2-chloroethoxy)methane		111-91-1	5	10 U	10 U	10 U	10 U	10 U
Bis(2-chloroethyl)ether		111-44-4	1	1 U	1 U	1 U	1 U	1 U
2,2-oxybis(1-Chloropropane)		108-60-1	5	10 U	10 U	10 U	10 U	10 U
Bis(2-ethylhexyl)phthalate		117-81-7	5	10 U	10 U	10 U	10 U	10 U
4-Bromophenyl phenyl ether		101-55-3	NE	10 U	10 U	10 U	10 U	10 U
Butyl benzyl phthalate		85-68-7	50*	10 U	10 U	10 U	10 U	10 U
Caprolactam		105-60-2	NE	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
Carbazole		86-74-8	NE	10 U	10 U	10 U	10 U	10 U
4-Chloro-3-methylphenol		59-50-7	NE	10 U	10 U	10 U	10 U	10 U
4-Chloroaniline		106-47-8	5	10 U	10 U	10 U	10 U	10 U
2-Chloronaphthalene		91-58-7	10*	10 U	10 U	10 U	10 U	10 U
2-Chlorophenol		95-57-8	NE	10 U	10 U	10 U	10 U	10 U
4-Chlorophenyl phenyl ether		7005-72-3	NE	10 U	10 U	10 U	10 U	10 U
Dibenzofuran		132-64-9	NE	10 U	10 U	10 U	10 U	10 U
3,3-Dichlorobenzidine		91-94-1	5	10 R	10 U	10 U	10 U	10 U
2,4-Dichlorophenol		120-83-2	5	10 U	10 U	10 U	10 U	10 U
Diethyl phthalate		84-66-2	50*	10 U	10 U	10 U	10 U	10 U
Dimethyl phthalate		131-11-3	50*	10 U	10 U	10 U	10 U	10 U
2,4-Dimethylphenol		105-67-9	50*	10 U	10 U	10 U	10 U	10 U
Di-n-butyl phthalate		84-74-2	50	10 U	10 U	10 U	10 U	10 U
4,6-Dinitro-2-methylphenol		534-52-1	NE	20 U	20 U	20 U	20 U	20 U
2,4-Dinitrophenol		51-28-5	10*	20 U	20 U	20 U	20 U	20 U
2,4-Dinitrotoluene		121-14-2	5	2 U	2 U	2 U	2 U	2 U
2,6-Dinitrotoluene		606-20-2	5	2 U	2 U	2 U	2 U	2 U
Di-n-octyl phthalate		117-84-0	50*	10 U	10 U	10 U	10 U	10 U
1,4-Dioxane		123-91-1	NE	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Hexachlorobenzene		118-74-1	0.04	1 U	1 U	1 U	1 U	1 U
1,3-Hexachlorobutadiene (C-46)		87-68-3	0.5	2 U	2 U	2 U	2 U	2 U
Hexachlorocyclopentadiene		77-47-4	5	10 U	10 U	10 U	10 U	10 U
Hexachloroethane		67-72-1	5	2 U	2 U	2 U	2 U	2 U
Isophorone		78-59-1	50*	10 U	10 U	10 U	10 U	10 U
2-Methylnaphthalene		91-57-6	NE	10 U	10 U	10 U	10 U	10 U
2-Methylphenol (o-Cresol)		95-48-7	1	10 U	10 U	10 U	10 U	10 U
4-Methylphenol (p-Cresol)		106-44-5	1	10 U	10 U	10 U	10 U	10 U
2-Nitroaniline		88-74-4	5	10 UJ	10 U	10 U	10 U	10 U
3-Nitroaniline		99-09-2	5	10 U	10 U	10 U	10 U	10 U
4-Nitroaniline		100-01-6	5	10 UJ	10 U	10 U	10 U	10 U
Nitrobenzene		98-95-3	0.4	1 U	1 U	1 U	1 U	1 U
2-Nitrophenol		88-75-5	NE	10 U	10 U	10 U	10 U	10 U
4-Nitrophenol		100-02-7	NE	20 U	20 U	20 U	20 U	20 U
N-Nitrosodiphenylamine (NDFA)		86-30-6	50*	10 U	10 U	10 U	10 U	10 U
N-Nitrosodi-n-propylamine (NDPA)		621-64-7	NE	1 U	1 U	1 U	1 U	1 U
Pentachlorophenol		87-86-5	1	20 U	20 U	20 U	20 U	20 U
Phenol		108-95-2	1	10 U	10 U	10 U	10 U	10 U
Total Phenols (Lab Calculated)	mg/L	PHENOLTotalLab	NE	0.05 U	0.05 U	0.05 U	0.05 U	**5.5**
1,2,4,5-Tetrachlorobenzene		95-94-3	5	10 U	10 U	10 U	10 U	10 U
2,3,4,6-Tetrachlorophenol		58-90-2	NE	10 U	10 U	10 U	10 U	10 U
2,4,5-Trichlorophenol		95-95-4	NE	10 U	10 U	10 U	10 U	10 U
2,4,6-Trichlorophenol		88-06-2	NE	10 U	10 U	10 U	10 U	10 U
PFAS	ng/L							
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOS		2991-50-6	NE	16.5 U	16.5 U	16.9 U	17.3 U	16.7 U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeF		2355-31-9	NE	16.5 U	16.5 U	16.9 U	17.3 U	16.7 U
Perfluorobutanesulfonic acid (PFBS)		375-73-5	NE	**6.26**	**4.66**	**5.84**	**6.5**	**5.53**
Perfluorobutanoic acid (PFBA)		375-22-4	NE	**11**	**9.01**	**8.91**	**7.78**	**6.07**
Perfluorodecane Sulfonic Acid (PFDS)		335-77-3	NE	1.65 U	1.65 U	1.69 U	1.73 U	1.67 U
Perfluorodecanoic acid (PFDA)		335-76-2	NE	1.65 U	1.65 U	1.69 U	**0.5 J**	**0.57 J**
Perfluorododecanoic acid (PFDoA)		307-55-1	NE	1.65 U	1.65 U	1.69 U	1.73 U	1.67 U
Perfluoroheptanesulfonic acid (PFHpS)		375-92-8	NE	1.65 U	**1.02 J**	1.69 U	1.73 U	1.67 U

Table 4. 71 New Street Remedial Investigation
Groundwater Analytical Results
71 New Street Huntington LLC
Huntington, New York

			Location Name	**MW-1**	**MW-2**	**MW-2**	**MW-3**	**MW-4**
			Sample Name	**MW-1**	**MW-2**	**MW-XX-07162018**	**MW-3**	**MW-4**
			Sample Date	**7/16/2018**	**7/16/2018**	**7/16/2018**	**7/16/2018**	**7/16/2018**
			Parent Sample			**MW-2**		
Analyte	**Units**	**CAS No.**	**NYS AWQS**					
Perfluoroheptanoic acid (PFHpA)		375-85-9	NE	**11.9**	**7.58**	**8.96**	**4.43**	**5.06**
Perfluorohexanoic acid (PFHxA)		307-24-4	NE	**14.5**	**8.98**	**11**	**4.73**	**6.13**
Perfluorooctanesulfonamide (FOSA)		754-91-6	NE	1.65 U	1.65 U	1.69 U	1.73 U	1.67 U
Perfluoropentanoic Acid (PFPeA)		2706-90-3	NE	**13.3**	**7.49**	**9.45**	**7.12**	**6.56**
Perfluorotetradecanoic acid (PFTA/PFTeDA)		376-06-7	NE	1.65 U	1.65 U	1.69 U	1.73 U	1.67 U
Perfluorotridecanoic acid (PFTriA/PFTrDA)		72629-94-8	NE	1.65 U	1.65 U	1.69 U	1.73 U	1.67 U
Perfluoroundecanoic acid (PFUnA)		2058-94-8	NE	1.65 U	1.65 U	1.69 U	1.73 U	1.67 U
Sodium 1H,1H,2H,2H-Perfluorodecane Sulfonate (8:2)		39108-34-4	NE	**0.53 J**	16.5 U	16.9 U	17.3 U	16.7 U
Sodium 1H,1H,2H,2H-Perfluorooctane Sulfonate (6:2)		27619-97-2	NE	**9.76 J**	**5.4 J**	**4.87 J**	**39.2 J**	**26.3 J**
Perfluorohexanesulfonic acid (PFHxS)		355-46-4	NE	**3.44**	**2.07 J**	**2.2 J**	1.73 U	**1.8 J**
Perfluorononanoic Acid (PFNA)		375-95-1	NE	**0.94 J**	**0.8 J**	**1.24 J**	**2.55**	**1.42 J**
Perfluorooctanesulfonic acid (PFOS)		1763-23-1	NE	**4.89**	**4.27**	**3.75**	**9.22**	**9.1**
Perfluorooctanoic Acid (PFOA)		335-67-1	NE	**18.8**	**13.4**	**13.8**	**11.2**	**10.2**
Total PFAS (ND = 0)		-	NE	**95.32**	**64.68**	**70.02**	**93.23**	**78.74**
Dissolved Metals	µg/L							
Aluminum		7429-90-5	NE	40 UJ	40 UJ	40 UJ	40 UJ	40 UJ
Antimony		7440-36-0	3	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ
Arsenic		7440-38-2	25	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ
Barium		7440-39-3	1000	**154 J**	**101 J**	**99.3 J**	**91.3 J**	**88.7 J**
Beryllium		7440-41-7	3*	0.8 UJ	0.8 UJ	0.8 UJ	0.8 UJ	0.8 UJ
Cadmium		7440-43-9	5	**0.63 J**	2 UJ	2 UJ	2 UJ	2 UJ
Calcium		7440-70-2	NE	**31400 J**	**30500 J**	**30100 J**	**40000 J**	**46600 J**
Chromium		7440-47-3	50	4 UJ	4 UJ	4 UJ	4 UJ	4 UJ
Cobalt		7440-48-4	NE	**5.9 J**	**6.9 J**	**6.9 J**	**3.1 J**	4 UJ
Copper		7440-50-8	200	4 UJ	4 UJ	4 UJ	4 UJ	4 UJ
Iron		7439-89-6	300	120 UJ	120 UJ	120 UJ	120 UJ	120 UJ
Lead		7439-92-1	25	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ
Magnesium		7439-95-4	35000*	**7630 J**	**8830 J**	**8670 J**	**15800 J**	**27700 J**
Manganese		7439-96-5	300	**2560 J**	**2480 J**	**2470 J**	**5250 J**	**363 J**
Mercury		7439-97-6	0.7	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ
Nickel		7440-02-0	100	**12.1 J**	**7.7 J**	**7.6 J**	**5.7 J**	4 UJ
Potassium		7440-09-7	NE	**4450 J**	**5040 J**	**4990 J**	**5430 J**	**5520 J**
Selenium		7782-49-2	10	10 UJ	**0.98 J**	**0.84 J**	10 UJ	**0.75 J**
Silver		7440-22-4	50	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ
Sodium		7440-23-5	20000	**56900 J**	**58800 J**	**57800 J**	**59500 J**	**63700 J**
Thallium		7440-28-0	0.5*	0.8 UJ	0.8 UJ	0.8 UJ	0.8 UJ	0.8 UJ
Vanadium		7440-62-2	NE	4 UJ	4 UJ	4 UJ	4 UJ	4 UJ
Zinc		7440-66-6	2000*	**8.3 J**	16 UJ	16 UJ	16 UJ	16 UJ
Other	µg/L							
Formaldehyde		50-00-0	8*	50 U	2500 U	2500 U	2500 U	50 U

Table 4. 71 New Street Remedial Investigation
Groundwater Analytical Results
71 New Street Huntington LLC
Huntington, New York

Notes:

mg/L = milligrams/liter
ng/L = nanogram per liter
µg/L = micrograms per liter or parts per billion (ppb)

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes
PAH = Polycyclic Aromatic Hydrocarbon
PFAS = Per- and polyfluoroalkyl substances
SVOC = Semi-Volatile Organic Compound
VOC = Volatile Organic Compound

Total BTEX and Total PAHs are calculated using detects only.
Total PAH16 is calculated using the EPA16 list of analytes: Acenaphthene, Acenaphthylene, Anthracene, Benz[a]anthracene, Benzo[a]pyrene, Benzo[b]fluoranthene, Benzo[g,h,i]perylene, Benzo[k]fluoranthene, Chrysene, Dibenz[a,h]anthracene, Fluoranthene, Fluorene, Indeno[1,2,3-cd]pyrene, Naphthalene, Phenanthrene, and Pyrene

Total PAH17 is calculated using the EPA16 list of analytes plus 2-Methylnaphthalene

NYS AWQS = New York State Ambient Water Quality Standards and Guidance Values for GA groundwater
* indicates the value is a guidance value and not a standard

CAS No. = Chemical Abstracts Service Number
ND = Not Detected
NE = Not Established
NYSDEC = New York State Department of Environmental Conservation

Bolding indicates a detected result concentration
Gray shading and bolding indicates that the detected result value exceeds the NYS AWQS

Validation Qualifiers:

J = The result is an estimated value.
R = The result is rejected.
U = The result was not detected above the reporting limit.
UJ = The results was not detected at or above the reporting limit shown and the reporting limit is estimated.

Table 5. 71 New Street Remedial Investigation
Air Analytical Results
71 New Street Huntington LLC
Huntington, New York

Analyte	Units	CAS No.	Sample Name / Sample Date / Parent Sample													
			IA-1 6/29/2018	IA-1 7/2/2018	IA-XX-07022018 7/2/2018 IA-1	IA-2 6/29/2018	IA-2 7/2/2018	OA-1 6/29/2018	OA-1 7/2/2018	SSSV-1 6/29/2018	SSSV-1 7/2/2018	SSSV-2 6/29/2018	SSSV-2 7/2/2018	SV-1 6/29/2018	SV-XX-06292018 6/29/2018 SV-1	SV-1 7/2/2018
BTEX	µg/m^3															
Benzene		71-43-2	**0.38 J**	NA	NA	**0.35 J**	NA	**0.51 J**	NA	**120**	NA	**87**	NA	**8.9 J**	**39 J**	NA
Toluene		108-88-3	**1.9**	NA	NA	**1.7**	NA	**2.7**	NA	**1600**	NA	**1100**	NA	**21 J**	**250 J**	NA
Ethylbenzene		100-41-4	**0.4 J**	NA	NA	**0.32 J**	NA	**0.5 J**	NA	**220**	NA	**94**	NA	**0.84 J**	**17 J**	NA
o-Xylene		95-47-6	**0.48 J**	NA	NA	**0.35 J**	NA	**0.61 J**	NA	**150**	NA	**53**	NA	**1.1 J**	**9.9 J**	NA
m/p-Xylene		179601-23-1	**1.2 J**	NA	NA	**0.87 J**	NA	**1.7 J**	NA	**730**	NA	**260**	NA	**2.3 J**	**49 J**	NA
Other VOCs	µg/m^3															
Acetone		67-64-1	**34**	NA	NA	**25**	NA	**8.2 J**	NA	240 U	NA	**100 J**	NA	**130 J**	**180 J**	NA
Allyl chloride (3-Chloropropene)		107-05-1	1.6 U	NA	NA	1.6 U	NA	1.6 U	NA	31 U	NA	21 U	NA	3.1 U	9.5 U	NA
Benzyl chloride		100-44-7	1 U	NA	NA	1 U	NA	1 U	NA	21 U	NA	14 U	NA	2.1 U	6.3 U	NA
Bromodichloromethane		75-27-4	1.3 U	NA	NA	1.3 U	NA	1.3 U	NA	27 U	NA	18 U	NA	2.7 U	8.1 U	NA
Bromoform		75-25-2	2.1 U	NA	NA	2.1 U	NA	2.1 U	NA	41 U	NA	27 U	NA	4.1 U	13 U	NA
Bromomethane		74-83-9	0.78 U	NA	NA	0.78 U	NA	0.78 U	NA	15 U	NA	10 U	NA	1.6 U	4.7 U	NA
1,3-Butadiene		106-99-0	0.44 U	NA	NA	0.44 U	NA	**0.16 J**	NA	8.8 U	NA	5.8 U	NA	**9.9**	**11**	NA
Butane		106-97-8	**1.5**	NA	NA	**1.1 J**	NA	**1.3**	NA	24 U	NA	**38**	NA	**42**	**55**	NA
t-Butyl alcohol (Tertiary Butyl Alcohol)		75-65-0	15 U	NA	NA	15 U	NA	15 U	NA	300 U	NA	200 U	NA	30 U	92 U	NA
n-Butylbenzene		104-51-8	1.1 U	NA	NA	1.1 U	NA	1.1 U	NA	22 U	NA	14 U	NA	2.2 U	6.7 U	NA
sec-Butylbenzene		135-98-8	1.1 U	NA	NA	1.1 U	NA	1.1 U	NA	22 U	NA	14 U	NA	2.2 U	6.7 U	NA
tert-Butylbenzene		98-06-6	1.1 U	NA	NA	1.1 U	NA	1.1 U	NA	22 U	NA	14 U	NA	2.2 U	6.7 U	NA
Carbon disulfide		75-15-0	1.6 U	NA	NA	**0.68 J**	NA	**1.2 J**	NA	**10 J**	NA	20 U	NA	**8.9**	**9.5**	NA
Carbon tetrachloride		56-23-5	**0.39**	NA	NA	**2.9**	NA	**0.41**	NA	4.4 U	NA	2.9 U	NA	**0.41 J**	1.3 U	NA
Chlorobenzene		108-90-7	0.92 U	NA	NA	0.92 U	NA	0.92 U	NA	18 U	NA	12 U	NA	1.8 U	5.6 U	NA
Chlorodifluoromethane		75-45-6	1.8 U	NA	NA	1.8 U	NA	**1.1 J**	NA	35 U	NA	23 U	NA	3.5 U	11 U	NA
Chloroethane		75-00-3	1.3 U	NA	NA	1.3 U	NA	1.3 U	NA	26 U	NA	17 U	NA	2.6 U	8 U	NA
Chloroform (Trichloromethane)		67-66-3	0.98 U	NA	NA	**0.4 J**	NA	0.98 U	NA	19 U	NA	13 U	NA	2 U	5.9 U	NA
Chloromethane		74-87-3	**1.4**	NA	NA	**2.6**	NA	**1.1**	NA	21 U	NA	14 U	NA	**1.1 J**	6.3 U	NA
2-Chlorotoluene (o-Chlorotoluene)		95-49-8	1 U	NA	NA	1 U	NA	1 U	NA	21 U	NA	14 U	NA	2.1 U	6.3 U	NA
Cryofluorane (Freon 114)		76-14-2	1.4 U	NA	NA	1.4 U	NA	1.4 U	NA	28 U	NA	18 U	NA	2.8 U	8.5 U	NA
Cyclohexane		110-82-7	0.69 U	NA	NA	0.69 U	NA	**0.25 J**	NA	**110**	NA	**55**	NA	**15 J**	**79 J**	NA
p-Cymene (4-Isopropyltoluene)		99-87-6	1.1 U	NA	NA	1.1 U	NA	1.1 U	NA	22 U	NA	14 U	NA	2.2 U	6.7 U	NA
Dibromochloromethane		124-48-1	1.7 U	NA	NA	1.7 U	NA	1.7 U	NA	34 U	NA	22 U	NA	3.4 U	10 U	NA
1,2-Dibromoethane (EDB)		106-93-4	1.5 U	NA	NA	1.5 U	NA	1.5 U	NA	31 U	NA	20 U	NA	3.1 U	9.3 U	NA
1,2-Dichlorobenzene (o-DCB)		95-50-1	1.2 U	NA	NA	1.2 U	NA	1.2 U	NA	24 U	NA	16 U	NA	2.4 U	7.3 U	NA
1,3-Dichlorobenzene (m-DCB)		541-73-1	1.2 U	NA	NA	1.2 U	NA	1.2 U	NA	24 U	NA	16 U	NA	**1.9 J**	7.3 U	NA
1,4-Dichlorobenzene (p-DCB)		106-46-7	1.2 U	NA	NA	1.2 U	NA	1.2 U	NA	24 U	NA	16 U	NA	2.4 U	7.3 U	NA
Dichlorodifluoromethane (Freon 12)		75-71-8	**2 J**	NA	NA	**2 J**	NA	**2.2 J**	NA	49 U	NA	32 U	NA	4.9 U	15 U	NA
1,1-Dichloroethane		75-34-3	0.81 U	NA	NA	0.81 U	NA	0.81 U	NA	16 U	NA	11 U	NA	1.6 U	4.9 U	NA
1,2-Dichloroethane		107-06-2	0.81 U	NA	NA	0.81 U	NA	0.81 U	NA	16 U	NA	11 U	NA	1.6 U	4.9 U	NA
1,1-Dichloroethene		75-35-4	0.14 U	NA	NA	0.14 U	NA	0.14 U	NA	2.8 U	NA	1.8 U	NA	0.28 U	0.84 U	NA
cis-1,2-Dichloroethene		156-59-2	0.14 U	NA	NA	0.14 U	NA	0.14 U	NA	2.8 U	NA	1.8 U	NA	**9.2**	0.84 U	NA
trans-1,2-Dichloroethene		156-60-5	0.79 U	NA	NA	0.79 U	NA	0.79 U	NA	16 U	NA	10 U	NA	1.6 U	4.8 U	NA
1,2-Dichloropropane		78-87-5	0.92 U	NA	NA	0.92 U	NA	0.92 U	NA	18 U	NA	12 U	NA	1.8 U	5.6 U	NA
cis-1,3-Dichloropropene		10061-01-5	0.91 U	NA	NA	0.91 U	NA	0.91 U	NA	18 U	NA	12 U	NA	1.8 U	5.5 U	NA
trans-1,3-Dichloropropene		10061-02-6	0.91 U	NA	NA	0.91 U	NA	0.91 U	NA	18 U	NA	12 U	NA	1.8 U	5.5 U	NA
1,4-Dioxane		123-91-1	18 U	NA	NA	18 U	NA	18 U	NA	360 U	NA	240 U	NA	36 U	110 U	NA
4-Ethyltoluene (p-Ethyltoluene)		622-96-8	**0.34 J**	NA	NA	0.98 U	NA	0.98 U	NA	**21**	NA	13 U	NA	**0.81 J**	6 U	NA
n-Heptane (C7)		142-82-5	**0.61 J**	NA	NA	0.82 U	NA	0.82 U	NA	**400**	NA	**300**	NA	**8 J**	**130 J**	NA
1,3-Hexachlorobutadiene (C-46)		87-68-3	2.1 U	NA	NA	2.1 U	NA	2.1 U	NA	42 U	NA	28 U	NA	4.3 U	13 U	NA
n-Hexane (C6)		110-54-3	0.7 U	NA	NA	0.7 U	NA	**0.67 J**	NA	**400**	NA	**300**	NA	**39 J**	**140 J**	NA
2-Hexanone		591-78-6	2 U	NA	NA	2 U	NA	2 U	NA	41 U	NA	27 U	NA	4.1 UJ	**13 J**	NA

Table 5. 71 New Street Remedial Investigation
Air Analytical Results
71 New Street Huntington LLC
Huntington, New York

Analyte	Units	CAS No.	Sample Name / Sample Date / Parent Sample	IA-1 6/29/2018	IA-1 7/2/2018	IA-XX-07022018 7/2/2018 IA-1	IA-2 6/29/2018	IA-2 7/2/2018	OA-1 6/29/2018	OA-1 7/2/2018	SSSV-1 6/29/2018	SSSV-1 7/2/2018	SSSV-2 6/29/2018	SSSV-2 7/2/2018	SV-1 6/29/2018	SV-XX-06292018 6/29/2018 SV-1	SV-1 7/2/2018
Isopropylbenzene		98-82-8		0.98 U	NA	NA	0.98 U	NA	0.98 U	NA	20 U	NA	13 U	NA	2 U	6 U	NA
Methyl ethyl ketone (2-Butanone)		78-93-3		**2.5**	NA	NA	**2**	NA	**0.96 J**	NA	29 U	NA	**17 J**	NA	**93 J**	**320 J**	NA
Methyl methacrylate		80-62-6		2 U	NA	NA	2 U	NA	2 U	NA	41 U	NA	27 U	NA	4.1 U	12 U	NA
Methyl tert-butyl ether (MTBE)		1634-04-4		0.72 U	NA	NA	0.72 U	NA	0.72 U	NA	14 U	NA	9.4 U	NA	1.4 U	4.4 U	NA
4-Methyl-2-pentanone (MIBK)		108-10-1		2 U	NA	NA	2 U	NA	2 U	NA	41 U	NA	27 U	NA	4.1 U	12 U	NA
Methylene chloride		75-09-2		1.7 U	NA	NA	**0.69 J**	NA	1.7 U	NA	35 U	NA	23 U	NA	**1.8 J**	11 U	NA
Naphthalene		91-20-3		2.6 U	NA	NA	2.6 U	NA	2.6 U	NA	52 U	NA	34 U	NA	5.2 U	16 U	NA
2-Propanol (Isopropyl Alcohol)		67-63-0		**29**	NA	NA	**27**	NA	12 U	NA	240 U	NA	160 U	NA	**14 J**	74 U	NA
n-Propylbenzene		103-65-1		0.98 U	NA	NA	0.98 U	NA	0.98 U	NA	**17 J**	NA	13 U	NA	2 U	6 U	NA
Styrene		100-42-5		**0.38 J**	NA	NA	0.85 U	NA	0.85 U	NA	17 U	NA	11 U	NA	1.7 U	5.2 U	NA
1,1,2,2-Tetrachloroethane		79-34-5		1.4 U	NA	NA	1.4 U	NA	1.4 U	NA	27 U	NA	18 U	NA	2.7 U	8.3 U	NA
Tetrachloroethene (PCE)		127-18-4		**0.23 J**	NA	NA	1.4 U	NA	1.4 U	NA	27 U	NA	18 U	NA	2.7 UJ	**50 J**	NA
Tetrahydrofuran		109-99-9		15 U	NA	NA	15 U	NA	15 U	NA	290 U	NA	190 U	NA	29 U	89 U	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)		76-13-1		**0.44 J**	NA	NA	**0.44 J**	NA	**0.44 J**	NA	31 U	NA	20 U	NA	3.1 U	9.3 U	NA
1,2,4-Trichlorobenzene		120-82-1		3.7 U	NA	NA	3.7 U	NA	3.7 U	NA	74 U	NA	49 U	NA	7.4 U	22 U	NA
1,1,1-Trichloroethane (TCA)		71-55-6		1.1 U	NA	NA	1.1 U	NA	1.1 U	NA	22 U	NA	14 U	NA	2.2 U	6.6 U	NA
1,1,2-Trichloroethane		79-00-5		1.1 U	NA	NA	1.1 U	NA	1.1 U	NA	22 U	NA	14 U	NA	2.2 U	6.6 U	NA
Trichloroethene (TCE)		79-01-6		0.19 U	NA	NA	0.19 U	NA	**29**	NA	3.7 U	NA	2.5 U	NA	**4.1 J**	1.1 UJ	NA
Trichlorofluoromethane (Freon 11)		75-69-4		**1.1**	NA	NA	**1.1**	NA	**1.1**	NA	22 U	NA	15 U	NA	**1.2 J**	6.8 U	NA
1,2,4-Trimethylbenzene		95-63-6		**2.2**	NA	NA	**1.3**	NA	**0.51 J**	NA	**22**	NA	13 U	NA	**2.2**	6 U	NA
1,3,5-Trimethylbenzene		108-67-8		**1.1**	NA	NA	**0.69 J**	NA	0.98 U	NA	**10 J**	NA	13 U	NA	**1 J**	6 U	NA
2,2,4-Trimethylpentane (iso-Octane)		540-84-1		**0.82 J**	NA	NA	**0.66 J**	NA	**3.7**	NA	**500**	NA	**170**	NA	**100 J**	**490 J**	NA
Vinyl bromide (Bromoethene)		593-60-2		0.87 U	NA	NA	0.87 U	NA	0.87 U	NA	17 U	NA	11 U	NA	1.7 U	5.3 U	NA
Vinyl chloride		75-01-4		0.09 U	NA	NA	0.09 U	NA	0.09 U	NA	1.8 U	NA	1.2 U	NA	0.18 U	0.54 U	NA
NYSDEC PAH17 Other SVOCs	mg/m^3																
Phenol		108-95-2		NA	**0.188**	NA	NA	**0.188**	NA	**0.188**	NA	**0.188**	NA	**0.188**	NA	NA	**0.186**
Other	mg/m^3																
Formaldehyde		50-00-0		NA	**0.049**	**0.049**	NA	**0.0423**	NA	**0.0256**	NA	NA	NA	NA	NA	NA	NA

Table 5. 71 New Street Remedial Investigation
Air Analytical Results
71 New Street Huntington LLC
Huntington, New York

Analyte	Units	CAS No.	Sample Name Sample Date Parent Sample SV-XX-07022018 7/2/2018 SV-1	SV-2 6/29/2018	SV-2 7/2/2018	SV-3 6/29/2018	SV-3 7/2/2018	SV-4 6/29/2018	SV-4 7/2/2018
BTEX	µg/m^3								
Benzene		71-43-2	NA	**52**	NA	**28 J**	NA	**46**	NA
Toluene		108-88-3	NA	**360**	NA	**150**	NA	**380**	NA
Ethylbenzene		100-41-4	NA	**28 J**	NA	40 U	NA	**30 J**	NA
o-Xylene		95-47-6	NA	66 U	NA	40 U	NA	**16 J**	NA
m/p-Xylene		179601-23-1	NA	**79 J**	NA	**18 J**	NA	**86 J**	NA
Other VOCs	µg/m^3								
Acetone		67-64-1	NA	**1600**	NA	**940**	NA	**770**	NA
Allyl chloride (3-Chloropropene)		107-05-1	NA	120 U	NA	72 U	NA	64 U	NA
Benzyl chloride		100-44-7	NA	79 U	NA	47 U	NA	42 U	NA
Bromodichloromethane		75-27-4	NA	100 U	NA	61 U	NA	54 U	NA
Bromoform		75-25-2	NA	160 U	NA	95 U	NA	84 U	NA
Bromomethane		74-83-9	NA	59 U	NA	36 U	NA	32 U	NA
1,3-Butadiene		106-99-0	NA	**21 J**	NA	**10 J**	NA	**9.5 J**	NA
Butane		106-97-8	NA	**150**	NA	**85**	NA	**64**	NA
t-Butyl alcohol (Tertiary Butyl Alcohol)		75-65-0	NA	1200 U	NA	690 U	NA	620 U	NA
n-Butylbenzene		104-51-8	NA	83 U	NA	50 U	NA	45 U	NA
sec-Butylbenzene		135-98-8	NA	83 U	NA	50 U	NA	45 U	NA
tert-Butylbenzene		98-06-6	NA	83 U	NA	50 U	NA	45 U	NA
Carbon disulfide		75-15-0	NA	120 U	NA	71 U	NA	63 U	NA
Carbon tetrachloride		56-23-5	NA	17 U	NA	10 U	NA	8.9 U	NA
Chlorobenzene		108-90-7	NA	70 U	NA	42 U	NA	37 U	NA
Chlorodifluoromethane		75-45-6	NA	130 U	NA	81 U	NA	72 U	NA
Chloroethane		75-00-3	NA	100 U	NA	60 U	NA	54 U	NA
Chloroform (Trichloromethane)		67-66-3	NA	74 U	NA	45 U	NA	40 U	NA
Chloromethane		74-87-3	NA	78 U	NA	47 U	NA	42 U	NA
2-Chlorotoluene (o-Chlorotoluene)		95-49-8	NA	79 U	NA	47 U	NA	42 U	NA
Cryofluorane (Freon 114)		76-14-2	NA	110 U	NA	64 U	NA	57 U	NA
Cyclohexane		110-82-7	NA	52 U	NA	**10 J**	NA	**11 J**	NA
p-Cymene (4-Isopropyltoluene)		99-87-6	NA	83 U	NA	50 U	NA	45 U	NA
Dibromochloromethane		124-48-1	NA	130 U	NA	78 U	NA	69 U	NA
1,2-Dibromoethane (EDB)		106-93-4	NA	120 U	NA	70 U	NA	62 U	NA
1,2-Dichlorobenzene (o-DCB)		95-50-1	NA	91 U	NA	55 U	NA	49 U	NA
1,3-Dichlorobenzene (m-DCB)		541-73-1	NA	91 U	NA	55 U	NA	49 U	NA
1,4-Dichlorobenzene (p-DCB)		106-46-7	NA	91 U	NA	55 U	NA	49 U	NA
Dichlorodifluoromethane (Freon 12)		75-71-8	NA	190 U	NA	110 U	NA	100 U	NA
1,1-Dichloroethane		75-34-3	NA	61 U	NA	37 U	NA	33 U	NA
1,2-Dichloroethane		107-06-2	NA	61 U	NA	37 U	NA	33 U	NA
1,1-Dichloroethene		75-35-4	NA	11 U	NA	6.4 U	NA	5.6 U	NA
cis-1,2-Dichloroethene		156-59-2	NA	11 U	NA	6.4 U	NA	5.6 U	NA
trans-1,2-Dichloroethene		156-60-5	NA	60 U	NA	36 U	NA	32 U	NA
1,2-Dichloropropane		78-87-5	NA	70 U	NA	42 U	NA	38 U	NA
cis-1,3-Dichloropropene		10061-01-5	NA	69 U	NA	42 U	NA	37 U	NA
trans-1,3-Dichloropropene		10061-02-6	NA	69 U	NA	42 U	NA	37 U	NA
1,4-Dioxane		123-91-1	NA	1400 U	NA	830 U	NA	730 U	NA
4-Ethyltoluene (p-Ethyltoluene)		622-96-8	NA	75 U	NA	45 U	NA	40 U	NA
n-Heptane (C7)		142-82-5	NA	**75**	NA	**36 J**	NA	**65**	NA
1,3-Hexachlorobutadiene (C-46)		87-68-3	NA	160 U	NA	98 U	NA	87 U	NA
n-Hexane (C6)		110-54-3	NA	**110**	NA	**68**	NA	**87**	NA
2-Hexanone		591-78-6	NA	160 U	NA	94 U	NA	**94**	NA

Table 5. 71 New Street Remedial Investigation
Air Analytical Results
71 New Street Huntington LLC
Huntington, New York

Analyte	Units	CAS No.	Sample Name Sample Date Parent Sample SV-XX-07022018 7/2/2018 SV-1	SV-2 6/29/2018	SV-2 7/2/2018	SV-3 6/29/2018	SV-3 7/2/2018	SV-4 6/29/2018	SV-4 7/2/2018
Isopropylbenzene		98-82-8	NA	75 U	NA	45 U	NA	40 U	NA
Methyl ethyl ketone (2-Butanone)		78-93-3	NA	**5200**	NA	**2900**	NA	**2800**	NA
Methyl methacrylate		80-62-6	NA	160 U	NA	94 U	NA	83 U	NA
Methyl tert-butyl ether (MTBE)		1634-04-4	NA	55 U	NA	33 U	NA	29 U	NA
4-Methyl-2-pentanone (MIBK)		108-10-1	NA	160 U	NA	94 U	NA	83 U	NA
Methylene chloride		75-09-2	NA	130 U	NA	80 U	NA	71 U	NA
Naphthalene		91-20-3	NA	200 U	NA	120 U	NA	110 U	NA
2-Propanol (Isopropyl Alcohol)		67-63-0	NA	930 U	NA	560 U	NA	500 U	NA
n-Propylbenzene		103-65-1	NA	75 U	NA	45 U	NA	40 U	NA
Styrene		100-42-5	NA	65 U	NA	39 U	NA	35 U	NA
1,1,2,2-Tetrachloroethane		79-34-5	NA	100 U	NA	63 U	NA	56 U	NA
Tetrachloroethene (PCE)		127-18-4	NA	100 U	NA	62 U	NA	55 U	NA
Tetrahydrofuran		109-99-9	NA	1100 U	NA	680 U	NA	600 U	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)		76-13-1	NA	120 U	NA	70 U	NA	62 U	NA
1,2,4-Trichlorobenzene		120-82-1	NA	280 U	NA	170 U	NA	150 U	NA
1,1,1-Trichloroethane (TCA)		71-55-6	NA	83 U	NA	50 U	NA	44 U	NA
1,1,2-Trichloroethane		79-00-5	NA	83 U	NA	50 U	NA	44 U	NA
Trichloroethene (TCE)		79-01-6	NA	14 U	NA	8.6 U	NA	7.6 U	NA
Trichlorofluoromethane (Freon 11)		75-69-4	NA	85 U	NA	51 U	NA	46 U	NA
1,2,4-Trimethylbenzene		95-63-6	NA	75 U	NA	45 U	NA	40 U	NA
1,3,5-Trimethylbenzene		108-67-8	NA	75 U	NA	45 U	NA	40 U	NA
2,2,4-Trimethylpentane (iso-Octane)		540-84-1	NA	**56 J**	NA	**34 J**	NA	**27 J**	NA
Vinyl bromide (Bromoethene)		593-60-2	NA	66 U	NA	40 U	NA	36 U	NA
Vinyl chloride		75-01-4	NA	6.8 U	NA	4.1 U	NA	3.6 U	NA
NYSDEC PAH17 Other SVOCs	mg/m^3								
Phenol		108-95-2	**0.186**	NA	**0.186**	NA	**0.187**	NA	**0.187**
Other	mg/m^3								
Formaldehyde		50-00-0	NA	NA	NA	NA	NA	NA	NA

Notes:

mg/m^3 = milligrams per cubic meter
$\mu g/m^3$ = micrograms per cubic meter

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes
SVOC = Semi-Volatile Organic Compound
VOC = Volatile Organic Compound

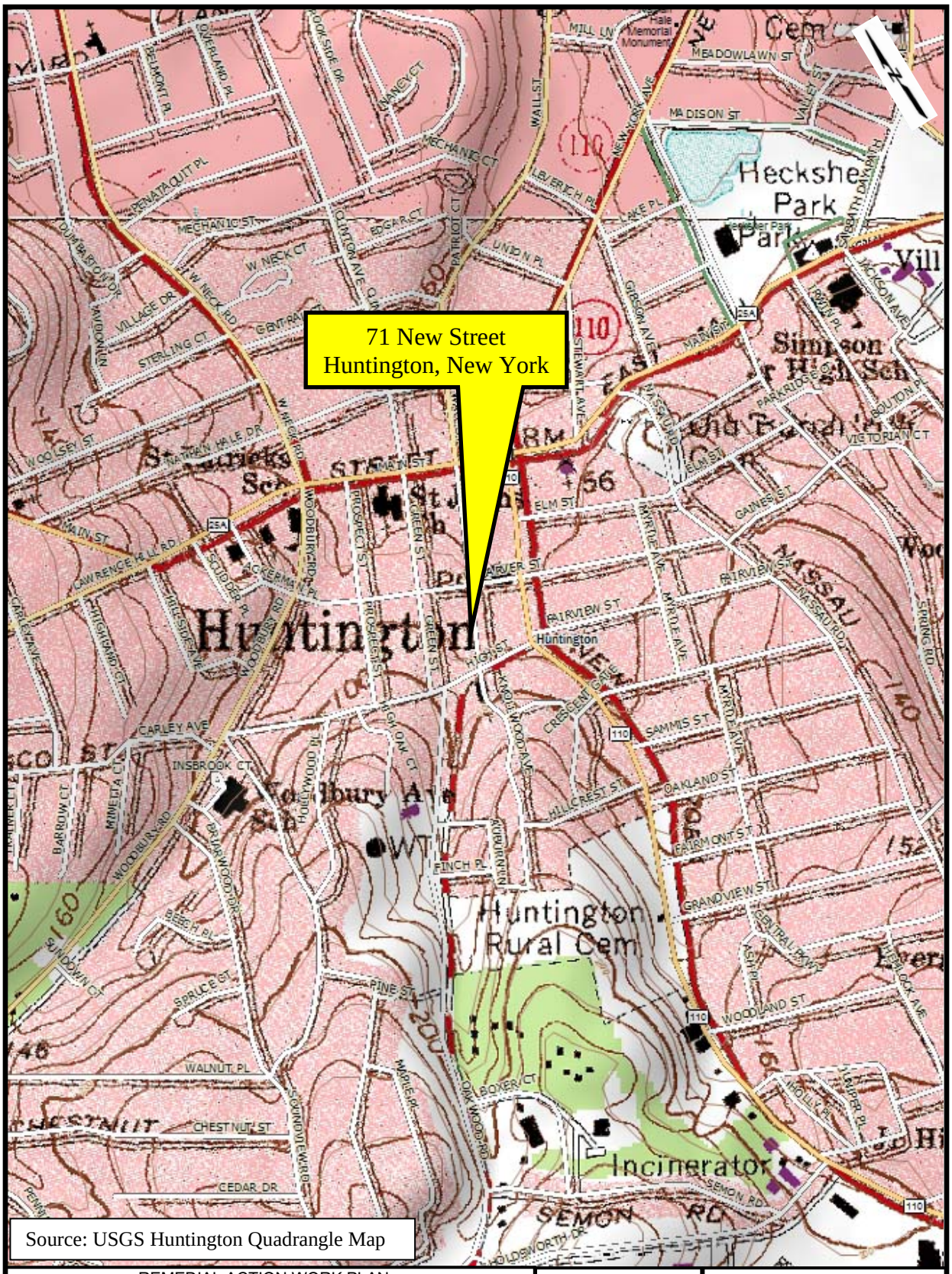
NA = Not Analyzed
CAS No. = Chemical Abstracts Service Number
MGP = Manufactured Gas Plant
NYSDEC = New York State Department of Environmental Conservation

Bolding indicates a detected result concentration

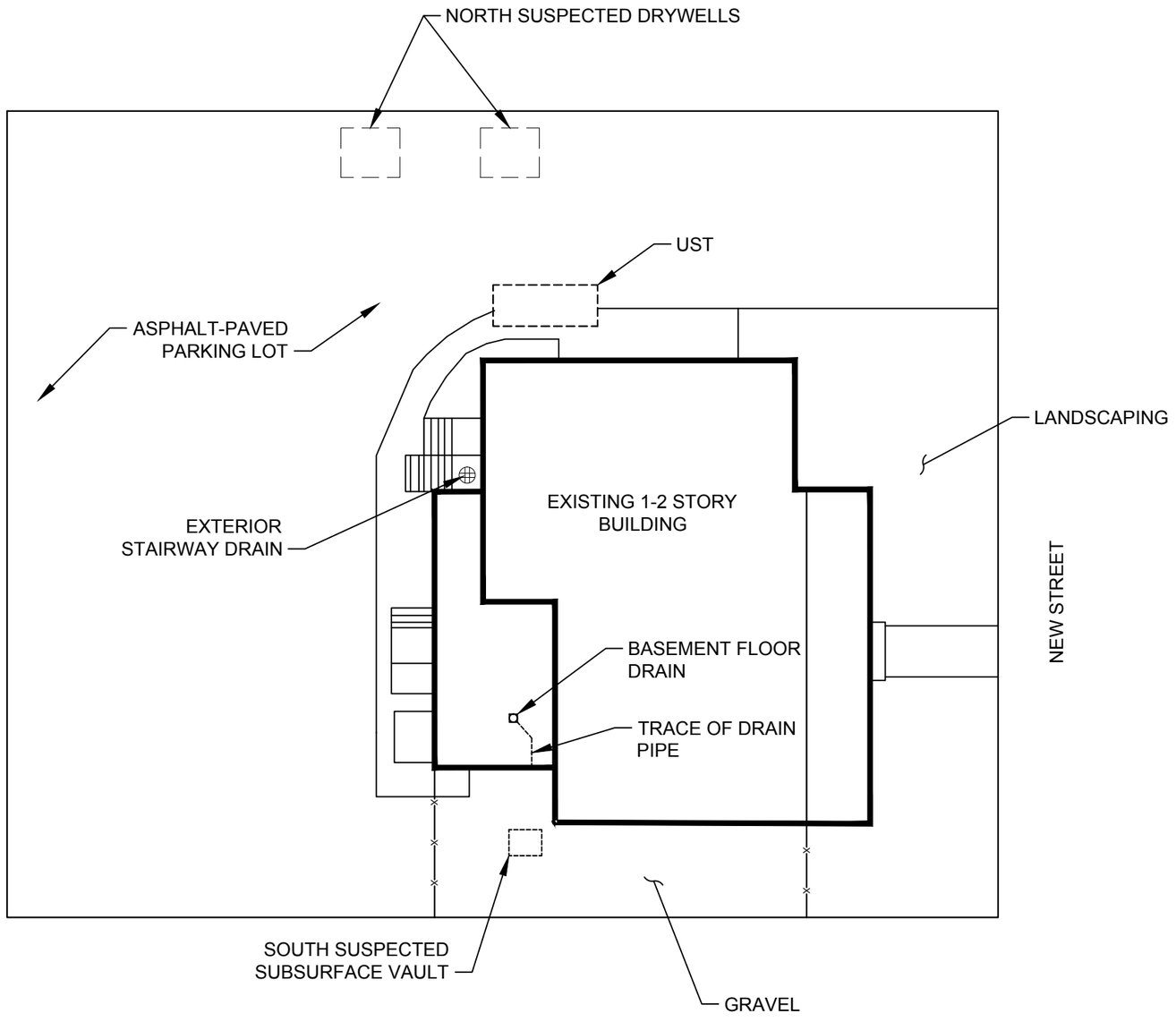
Validation Qualifiers:

J = The result is an estimated value.
U = The result was not detected above the reporting limit.
UJ = The results was not detected at or above the reporting limit shown and the reporting limit is estimated.

Figures



REMEDIAL ACTION WORK PLAN 71 NEW STREET HUNTINGTON, NEW YORK	GEI Consultants	**SITE LOCATION MAP**
71 NEW STREET HUNTINGTON LLC	Project 1700841	AUGUST 2019 Fig 1



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0 20 40

SCALE: 1" = 20'

SOURCE:

SURVEYED JUNE 7,1977 GUARANTEED TO
SECURITY TITLE AND GUARANTY CO.

REMEDIAL ACTION WORK PLAN 71 NEW STREET HUNTINGTON, NEW YORK	GEI Consultants	SITE PLAN
71 NEW STREET HUNTINGTON LLC	Project 1700841	AUGUST 2019 Fig. 2

\\hts1v-fs01\ I:\Tech\Environmental Projects\DeRosa\71 New Street\Phase II\CAD\1700841 - FIG 2.dwg - 10/2/2018

Soil Boring SB-6	NYSDEC Unrestricted Use SCO	NYSDEC Restricted-Residential Use SCO	SCDHS Article 12 Action Level	SB-6 (0-5)	SB-6 (5-10)	SB-6 (10-15)	SB-6 (15-20)	SB-6 (20-23)
VOCs						Result µg/Kg		
Acetone	50	100,000	NA	-	**86**	**92**	**53**	**59**
PCBs						Result µg/Kg		
Total PCBs (Lab calculated)	100	1,000	NA	**200**	-	**140**	-	**220**
Total Metals						Result mg/Kg		
Lead	63	400	NA	**81.9**	-	-	-	-
Other						Result mg/Kg		
Formaldehyde	NE	NE	1	-	-	**2.03 J**	-	-

Soil Boring SB-8	NYSDEC Unrestricted Use SCO	NYSDEC Restricted-Residential Use SCO	SCDHS Article 12 Action Level	SB-8 (0-5)	SB-8 (5-10)	SB-8 (10-15)	SB-8 (15-20)	SB-8 (20-22.5)	SB-8 (25-30)
VOCs						Result µg/Kg			
Acetone	50	100,000	NA	**61**	**56**	-	**83**	**78**	**55**
PCBs						Result µg/Kg			
Total PCBs (Lab calculated)	100	1,000	NA	-	-	**200**	-	-	-
Pesticides						Result µg/Kg			
4,4'-DDT (p,p'-DDT)	3.3	1,700	NA	**16**	-	-	-	-	-
4,4'-DDE (p,p'-DDE)	3.3	1,800	NA	**17 J**	-	-	-	-	-
Total Metals						Result mg/Kg			
Lead	63	400	NA	**139**	-	-	-	-	-
Mercury	0.18	0.81	NA	**0.19**	-	-	-	-	-
Other						Result mg/Kg			
Formaldehyde	NE	NE	1	-	-	**1.29 J**	-	**2.4 J**	**1.66 J**

Soil Boring SB-9	NYSDEC Unrestricted Use SCO	NYSDEC Restricted-Residential Use SCO	SCDHS Article 12 Action Level	SB-9 (0-5)	SB-9 (5-10)	SB-9 (10-15)	SB-9 (15-20)	SB-9 (15-20) Duplicate	SB-9 (20-23)	SB-9 (25-30)
VOCs						Result µg/Kg				
Acetone	50	100,000	NA	-	**58**	-	**65 J**	**160 J**	**70**	**51**
PCBs						Result µg/Kg				
Total PCBs (Lab calculated)	100	1,000	NA	-	**770**	**320**	-	-	**650**	-
Pesticides						Result µg/Kg				
4,4'-DDT (p,p'-DDT)	3.3	1,700	NA	**4.7 J**	-	-	-	-	-	-
4,4'-DDE (p,p'-DDE)	3.3	1,800	NA	**4.3 J**	-	-	-	-	-	-
Total Metals						Result mg/Kg				
Mercury	0.18	0.81	NA	-	**0.77**	-	-	-	-	-
Other						Result mg/Kg				
Formaldehyde	NE	NE	1	-	**1.31 J**	**1.15 J**	**1.39 J**	-	**1.33 J**	**1.81 J**

Soil Boring SB-7	NYSDEC Unrestricted Use SCO	NYSDEC Restricted-Residential Use SCO	SCDHS Article 12 Action Level	SB-7 (5-10)	SB-7 (20-21.5)
VOCs				Result µg/Kg	
Acetone	50	100,000	NA	**66**	**44**
PCBs				Result µg/Kg	
Total PCBs (Lab calculated)	100	1,000	NA	68 U	**240**
Other				Result mg/Kg	
Formaldehyde	NE	NE	1	**2.11 J**	1.07 U

Soil Boring MW-2	NYSDEC Unrestricted Use SCO	NYSDEC Restricted-Residential Use SCO	SCDHS Article 12 Action Level	MW-2 (35-40)
Other				Result mg/Kg
Formaldehyde	NE	NE	1	**1.43 J**

Soil Boring MW-4	NYSDEC Unrestricted Use SCO	NYSDEC Restricted-Residential Use SCO	SCDHS Article 12 Action Level	MW-4 (29-33)
Other				Result mg/Kg
Formaldehyde	NE	NE	1	**1.27 J**

Soil Boring SB-10	NYSDEC Unrestricted Use SCO	NYSDEC Restricted-Residential Use SCO	SCDHS Article 12 Action Level	SB-10 (0-5)	SB-10 (5-10)	SB-10 (15-20)	SB-10 (20-22.5)	SB-10 (25-30)
VOCs						Result µg/Kg		
Acetone	50	100,000	NA	-	**130**	**65**	**55**	**110**
Total Metals						Result mg/Kg		
Lead	63	400	NA	**158**	-	-	-	-
Mercury	0.18	0.81	NA	**0.19**	-	-	-	-
Other						Result mg/Kg		
Formaldehyde	NE	NE	1	**1.15 J**	**1.49 J**	**1.17 J**	-	-

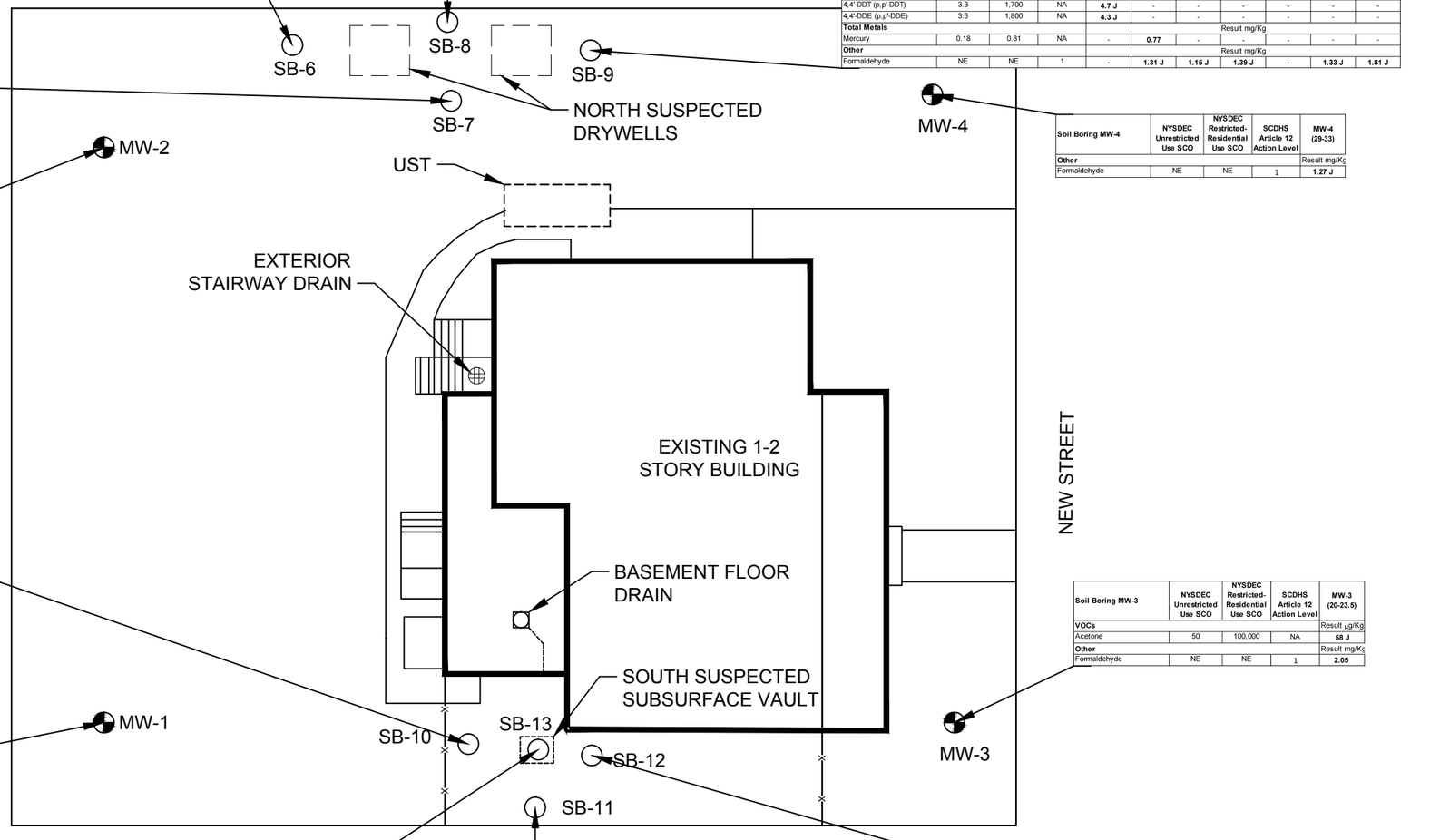
Soil Boring MW-3	NYSDEC Unrestricted Use SCO	NYSDEC Restricted-Residential Use SCO	SCDHS Article 12 Action Level	MW-3 (20-23.5)
VOCs				Result µg/Kg
Acetone	50	100,000	NA	**58 J**
Other				Result mg/Kg
Formaldehyde	NE	NE	1	**2.05**

Soil Boring MW-1	NYSDEC Unrestricted Use SCO	NYSDEC Restricted-Residential Use SCO	MW-1 (45-47)
VOCs			Result µg/Kg
Acetone	50	100,000	**57**

Soil Boring SB-13	NYSDEC Unrestricted Use SCO	NYSDEC Restricted-Residential Use SCO	SB-13 (0-5)	SB-13 (10-15)	SB-13 (20-25)
VOCs				Result µg/Kg	
Acetone	50	100,000	-	**59**	**58**
Pesticides				Result µg/Kg	
4,4'-DDT (p,p'-DDT)	3.3	1,700	**10**	-	-
Total Metals				Result mg/Kg	
Lead	63	400	**570 J**	-	-
Zinc	109	2,200	**183**	-	-

Soil Boring SB-11	NYSDEC Unrestricted Use SCO	NYSDEC Restricted-Residential Use SCO	SCDHS Article 12 Action Level	SB-11 (0-5)	SB-11 (10-15)	SB-11 (10-15) Duplicate	SB-11 (15-20)	SB-11 (25-30)
VOCs						Result µg/Kg		
Acetone	50	100,000	NA	-	**61**	**75**	**84**	**63**
Total Metals						Result mg/Kg		
Lead	63	400	NA	**92**	-	-	-	-
Other						Result mg/Kg		
Formaldehyde	NE	NE	1	**1.3 J**	-	-	-	-

Soil Boring SB-12	NYSDEC Unrestricted Use SCO	NYSDEC Restricted-Residential Use SCO	SCDHS Article 12 Action Level	SB-12 (0-5)	SB-12 (5-10)	SB-12 (15-20)	SB-12 (20-22.5)	SB-12 (25-30) Duplicate	SB-12 (30-31.5)
VOCs						Result µg/Kg			
Acetone	50	100,000	NA	**62**	-	-	**73**	**57**	**86**
Pesticides						Result µg/Kg			
4,4'-DDT (p,p'-DDT)	3.3	1,700	NA	**5.9 J**	-	-	-	-	-
4,4'-DDE (p,p'-DDE)	3.3	1,800	NA	**4.2 J**	-	-	-	-	-
Total Metals						Result mg/Kg			
Lead	63	400	NA	**106**	-	-	-	-	-
Other						Result mg/Kg			
Formaldehyde	NE	NE	1	-	**12.8**	**2.94**	**1.28 J**	-	-



NOTE:
NA NOT APPLICABLE
\- DOES NOT EXCEED REGULATORY CRITERIA
NE NOT ESTABLISHED

SOURCE:
SURVEYED JUNE 7,1977 GUARANTEED TO SECURITY TITLE AND GUARANTY CO.

0 200 400
SCALE: 1" = 200'

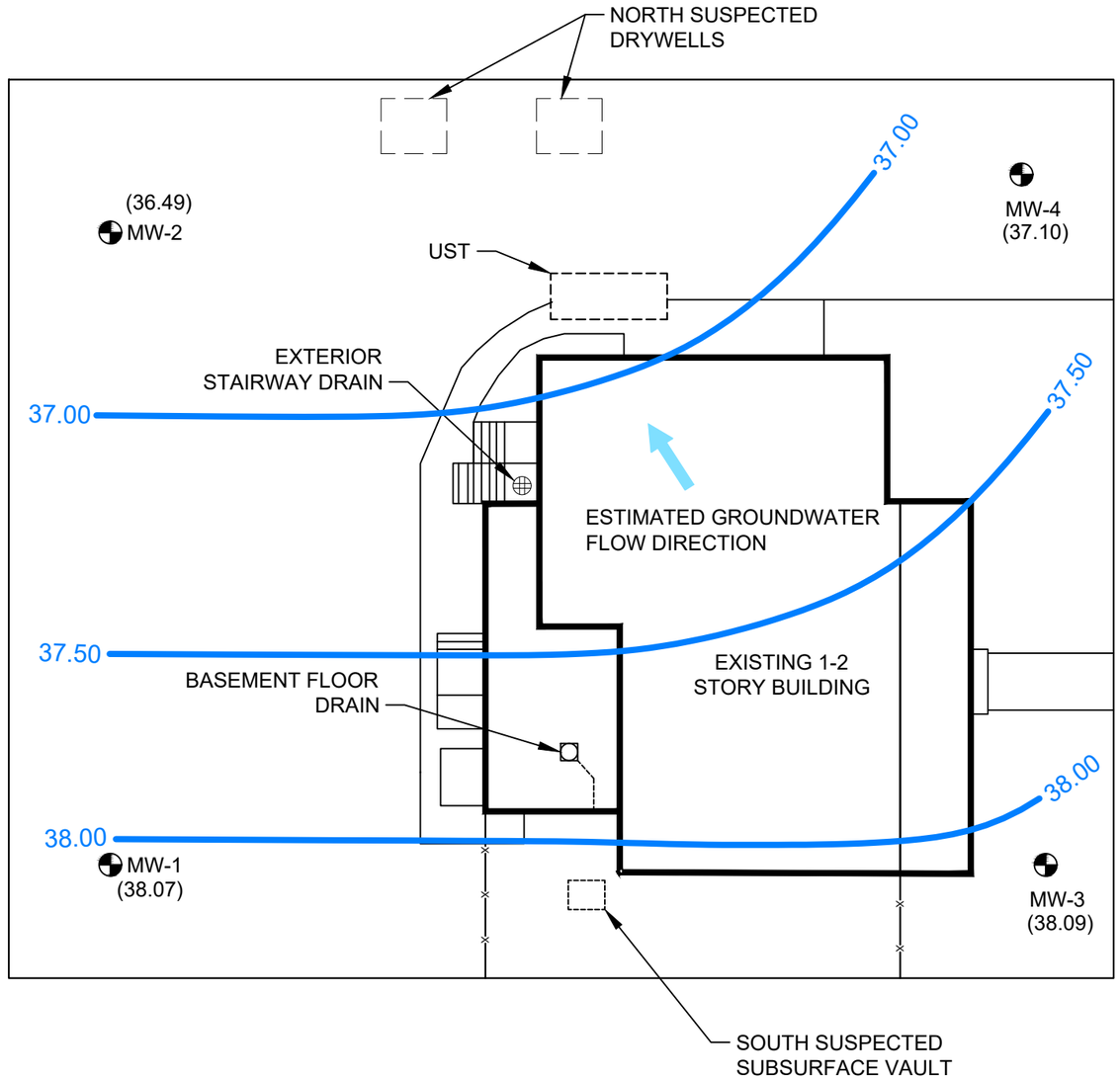
REMEDIAL ACTION WORK PLAN
71 NEW STREET
HUNTINGTON, NEW YORK

71 NEW STREET HUNTINGTON LLC

GEI Consultants
Project 1700841

SOIL EXCEEDANCES SUMMARY
AUGUST 2019 Fig. 3

\\hts1v-fs01\ I:\Tech\Environmental Projects\DeRosa\71 New Street\Phase II\CAD\1700841 - FIG 6.dwg - 10/5/2018



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LEGEND:

(38.07)	GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
38.00	GROUNDWATER CONTOUR
MW-1	MONITORING WELL

SOURCE:
SURVEYED JUNE 7,1977 GUARANTEED TO SECURITY TITLE AND GUARANTY CO.

0 200 400
SCALE: 1" = 200'

REMEDIAL ACTION WORK PLAN
71 NEW STREET
HUNTINGTON, NEW YORK

71 NEW STREET HUNTINGTON LLC

GEI Consultants

GROUNDWATER CONTOUR MAP

Project 1700841 | AUGUST 2019 | Fig. 4

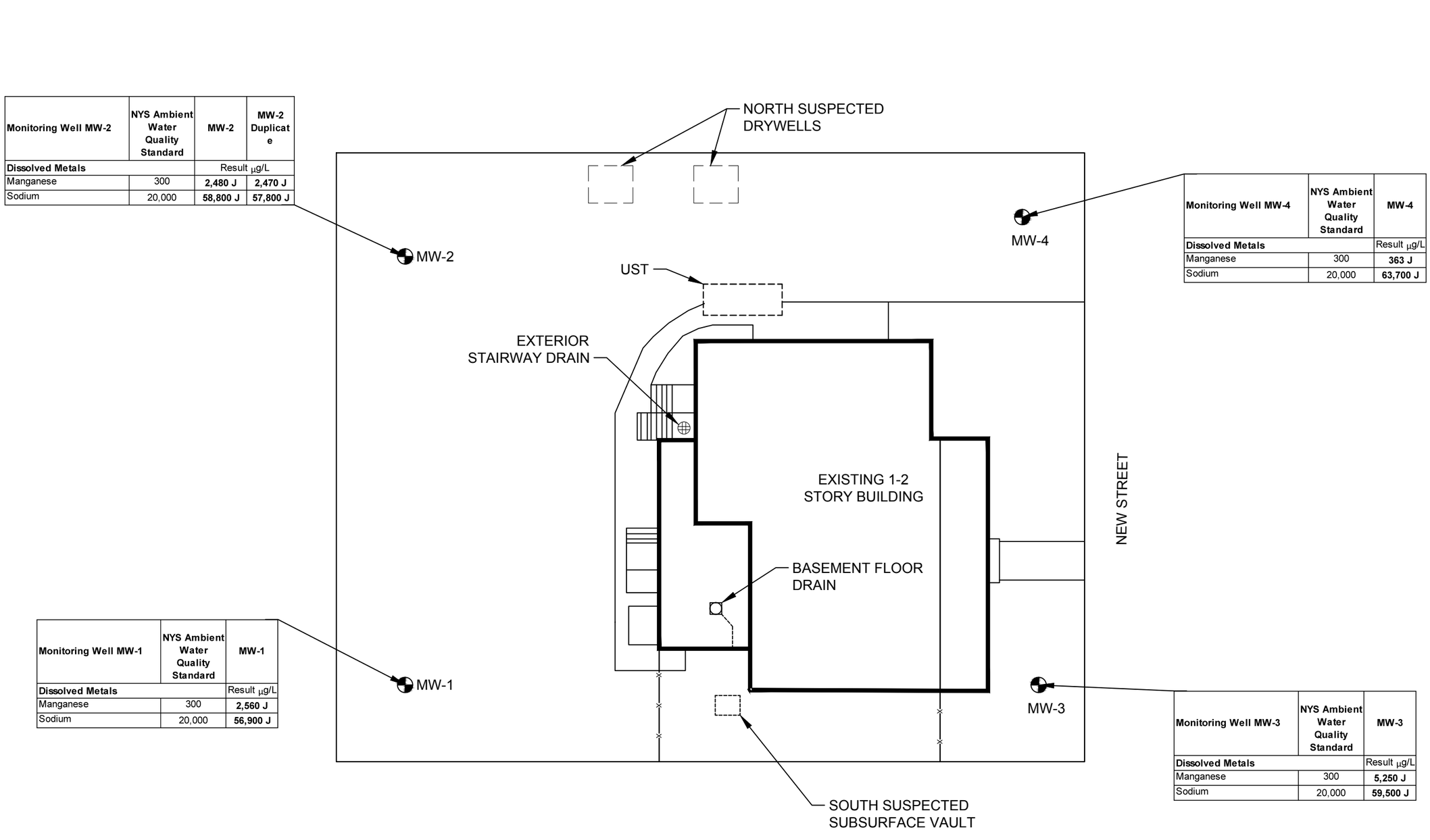
\\gdc1v-fs01\ \\gdc1v-fs01\Data\Tech\Environmental Projects\DeRosa\71 New Street\Phase II\CAD\1700841 - FIG 5.dwg - 11/16/2018

Monitoring Well MW-2	NYS Ambient Water Quality Standard	MW-2	MW-2 Duplicate
Dissolved Metals		Result µg/L	
Manganese	300	**2,480 J**	**2,470 J**
Sodium	20,000	**58,800 J**	**57,800 J**

Monitoring Well MW-4	NYS Ambient Water Quality Standard	MW-4
Dissolved Metals		Result µg/L
Manganese	300	**363 J**
Sodium	20,000	**63,700 J**

Monitoring Well MW-1	NYS Ambient Water Quality Standard	MW-1
Dissolved Metals		Result µg/L
Manganese	300	**2,560 J**
Sodium	20,000	**56,900 J**

Monitoring Well MW-3	NYS Ambient Water Quality Standard	MW-3
Dissolved Metals		Result µg/L
Manganese	300	**5,250 J**
Sodium	20,000	**59,500 J**



NOTE:
NA NOT APPLICABLE
U NOT DETECTED

SOURCE:
SURVEYED JUNE 7,1977 GUARANTEED TO SECURITY TITLE AND GUARANTY CO.

0 200 400
SCALE: 1" = 200'

REMEDIAL ACTION WORK PLAN
71 NEW STREET
HUNTINGTON, NEW YORK

71 NEW STREET HUNTINGTON LLC

GEI Consultants

GROUNDWATER EXCEEDANCES SUMMARY

Project 1700841 | AUGUST 2019 | Fig. 5

\\hts1v-fs01\ I:\Tech\Environmental Projects\DeRosa\71 New Street\Phase II\CAD\1700841 - FIG 7.dwg - 10/18/2018

Indoor Air Sample IA-1	IA-1	IA-1 Duplicate
VOCs	Result µg/m³	
Benzene	**0.38 J**	NA
Toluene	**1.9**	NA
Ethylbenzene	**0.4 J**	NA
o-Xylene	**0.48 J**	NA
m/p-Xylene	**1.2 J**	NA
Acetone	**34**	NA
Butane	**1.5**	NA
Carbon tetrachloride	**0.39**	NA
Chloromethane	**1.4**	NA
Dichlorodifluoromethane (Freon 12)	**2 J**	NA
4-Ethyltoluene (p-Ethyltoluene)	**0.34 J**	NA
n-Heptane (C7)	**0.61 J**	NA
Methyl ethyl ketone (2-Butanone)	**2.5**	NA
2-Propanol (Isopropyl Alcohol)	**29**	NA
Styrene	**0.38 J**	NA
Tetrachloroethene (PCE)	**0.23 J**	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	**0.44 J**	NA
Trichlorofluoromethane (Freon 11)	**1.1**	NA
1,2,4-Trimethylbenzene	**2.2**	NA
1,3,5-Trimethylbenzene	**1.1**	NA
2,2,4-Trimethylpentane (iso-Octane)	**0.82 J**	NA
SVOCs	Result mg/m³	
Phenol	**0.188**	NA
Other	Result mg/m³	
Formaldehyde	**0.049**	**0.049**

Sub-Slab Soil Vapor Sample SSSV-	SSSV-1
VOCs	Result µg/m³
Benzene	**120**
Toluene	**1600**
Ethylbenzene	**220**
o-Xylene	**150**
m/p-Xylene	**730**
Carbon disulfide	**10 J**
Cyclohexane	**110**
4-Ethyltoluene (p-Ethyltoluene)	**21**
n-Heptane (C7)	**400**
n-Hexane (C6)	**400**
n-Propylbenzene	**17 J**
1,2,4-Trimethylbenzene	**22**
1,3,5-Trimethylbenzene	**10 J**
2,2,4-Trimethylpentane (iso-Octane)	**500**
SVOCs	Result mg/m³
Phenol	**0.188**

Soil Vapor Sample SV-3	SV-3
VOCs	Result µg/m³
Benzene	**28 J**
Toluene	**150**
m/p-Xylene	**18 J**
Acetone	**940**
1,3-Butadiene	**10 J**
Butane	**85**
Cyclohexane	**10 J**
n-Heptane (C7)	**36 J**
n-Hexane (C6)	**68**
Methyl ethyl ketone (2-Butanone)	**2900**
2,2,4-Trimethylpentane (iso-Octane)	**34 J**
SVOCs	Result mg/m³
Phenol	**0.187**

Soil Vapor Sample SV-2	SV-2
VOCs	Result µg/m³
Benzene	**52**
Toluene	**360**
Ethylbenzene	**28 J**
m/p-Xylene	**79 J**
Acetone	**1600**
1,3-Butadiene	**21 J**
Butane	**150**
n-Heptane (C7)	**75**
n-Hexane (C6)	**110**
Methyl ethyl ketone (2-Butanone)	**5200**
2,2,4-Trimethylpentane (iso-Octane)	**56 J**
SVOCs	Result mg/m³
Phenol	**0.186**

Outdoor Air Sample OA-1	OA-1
SVOCs	Result mg/m³
Phenol	**0.188**
Other	Result mg/m³
Formaldehyde	**0.0256**

Outdoor Air Sample OA-1	OA-1
VOCs	Result µg/m³
Benzene	**0.51 J**
Toluene	**2.7**
Ethylbenzene	**0.5 J**
o-Xylene	**0.61 J**
m/p-Xylene	**1.7 J**
Acetone	**8.2 J**
1,3-Butadiene	**0.16 J**
Butane	**1.3**
Carbon disulfide	**1.2 J**
Carbon tetrachloride	**0.41**
Chlorodifluoromethane	**1.1 J**
Chloromethane	**1.1**
Cyclohexane	**0.25 J**
Dichlorodifluoromethane (Freon 12)	**2.2 J**
n-Hexane (C6)	**0.67 J**
Methyl ethyl ketone (2-Butanone)	**0.96 J**
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	**0.44 J**
Trichloroethene (TCE)	**29**
Trichlorofluoromethane (Freon 11)	**1.1**
1,2,4-Trimethylbenzene	**0.51 J**
2,2,4-Trimethylpentane (iso-Octane)	**3.7**

Soil Vapor Sample SV-1	SV-1	SV-1 Duplicate
VOCs	Result µg/m³	
Benzene	**8.9 J**	**39 J**
Toluene	**21 J**	**250 J**
Ethylbenzene	**0.84 J**	**17 J**
o-Xylene	**1.1 J**	**9.9 J**
m/p-Xylene	**2.3 J**	**49 J**
Acetone	**130 J**	**180 J**
1,3-Butadiene	**9.9**	**11**
Butane	**42**	**55**
Carbon disulfide	**8.9**	**9.5**
Carbon tetrachloride	**0.41 J**	1.3 U
Chloromethane	**1.1 J**	6.3 U
Cyclohexane	**15 J**	**79 J**
1,3-Dichlorobenzene (m-DCB)	**1.9 J**	7.3 U
cis-1,2-Dichloroethene	**9.2**	0.84 U
4-Ethyltoluene (p-Ethyltoluene)	**0.81 J**	6 U
n-Heptane (C7)	**8 J**	**130 J**
n-Hexane (C6)	**39 J**	**140 J**
2-Hexanone	4.1 UJ	**13 J**
Methyl ethyl ketone (2-Butanone)	**93 J**	**320 J**
Methylene chloride	**1.8 J**	11 U
2-Propanol (Isopropyl Alcohol)	**14 J**	74 U
Tetrachloroethene (PCE)	2.7 UJ	**50 J**
Trichloroethene (TCE)	**4.1 J**	1.1 UJ
Trichlorofluoromethane (Freon 11)	**1.2 J**	6.8 U
1,2,4-Trimethylbenzene	**2.2**	6 U
1,3,5-Trimethylbenzene	**1 J**	6 U
2,2,4-Trimethylpentane (iso-Octane)	**100 J**	**490 J**
SVOCs	Result mg/m³	
Phenol	**0.186**	**0.186**

Indoor Air Sample IA-2	IA-2
VOCs	Result µg/m³
Benzene	**0.35 J**
Toluene	**1.7**
Ethylbenzene	**0.32 J**
o-Xylene	**0.35 J**
m/p-Xylene	**0.87 J**
Acetone	**25**
Butane	**1.1 J**
Carbon disulfide	**0.68 J**
Carbon tetrachloride	**2.9**
Chloroform (Trichloromethane)	**0.4 J**
Chloromethane	**2.6**
Dichlorodifluoromethane (Freon 12)	**2 J**
Methyl ethyl ketone (2-Butanone)	**2**
Methylene chloride	**0.69 J**
2-Propanol (Isopropyl Alcohol)	**27**
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	**0.44 J**
Trichlorofluoromethane (Freon 11)	**1.1**
1,2,4-Trimethylbenzene	**1.3**
1,3,5-Trimethylbenzene	**0.69 J**
2,2,4-Trimethylpentane (iso-Octane)	**0.66 J**
SVOCs	Result mg/m³
Phenol	**0.188**
Other	Result mg/m³
Formaldehyde	**0.0423**

Sub-Slab Soil Vapor Sample SSSV-	SSSV-2
VOCs	Result µg/m³
Benzene	**87**
Toluene	**1100**
Ethylbenzene	**94**
o-Xylene	**53**
m/p-Xylene	**260**
Acetone	**100 J**
Butane	**38**
Cyclohexane	**55**
n-Heptane (C7)	**300**
n-Hexane (C6)	**300**
Methyl ethyl ketone (2-Butanone)	**17 J**
2,2,4-Trimethylpentane (iso-Octane)	**170**
SVOCs	Result mg/m³
Phenol	**0.188**

Soil Vapor Sample SV-4	SV-4
VOCs	Result µg/m³
Benzene	**46**
Toluene	**380**
Ethylbenzene	**30 J**
o-Xylene	**16 J**
m/p-Xylene	**86 J**
Acetone	**770**
1,3-Butadiene	**9.5 J**
Butane	**64**
Cyclohexane	**11 J**
n-Heptane (C7)	**65**
n-Hexane (C6)	**87**
2-Hexanone	**94**
Methyl ethyl ketone (2-Butanone)	**2800**
2,2,4-Trimethylpentane (iso-Octane)	**27 J**
SVOCs	Result mg/m³
Phenol	**0.187**

NORTH SUSPECTED DRYWELLS

UST

EXTERIOR STAIRWAY DRAIN

BASEMENT FLOOR DRAIN

SOUTH SUSPECTED SUBSURFACE VAULT

SV-1

SV-2

SV-3

SV-4

MW-4

IA-1

SSSV-1

SSSV-2

IA-2

OA-1 (VOC'S)

OA-1 (PHENOLS/ FORMALDEHYDE)

EXISTING 1-2 STORY BUILDING

NEW STREET

N

0 200 400

SCALE: 1" = 200'

NOTE:

NA NOT ANALYZED

U NOT DETECTED ABOVE REPORTING LIMIT

SOURCE:

SURVEYED JUNE 7,1977 GUARANTEED TO SECURITY TITLE AND GUARANTY CO.

REMEDIAL ACTION WORK PLAN
71 NEW STREET
HUNTINGTON, NEW YORK

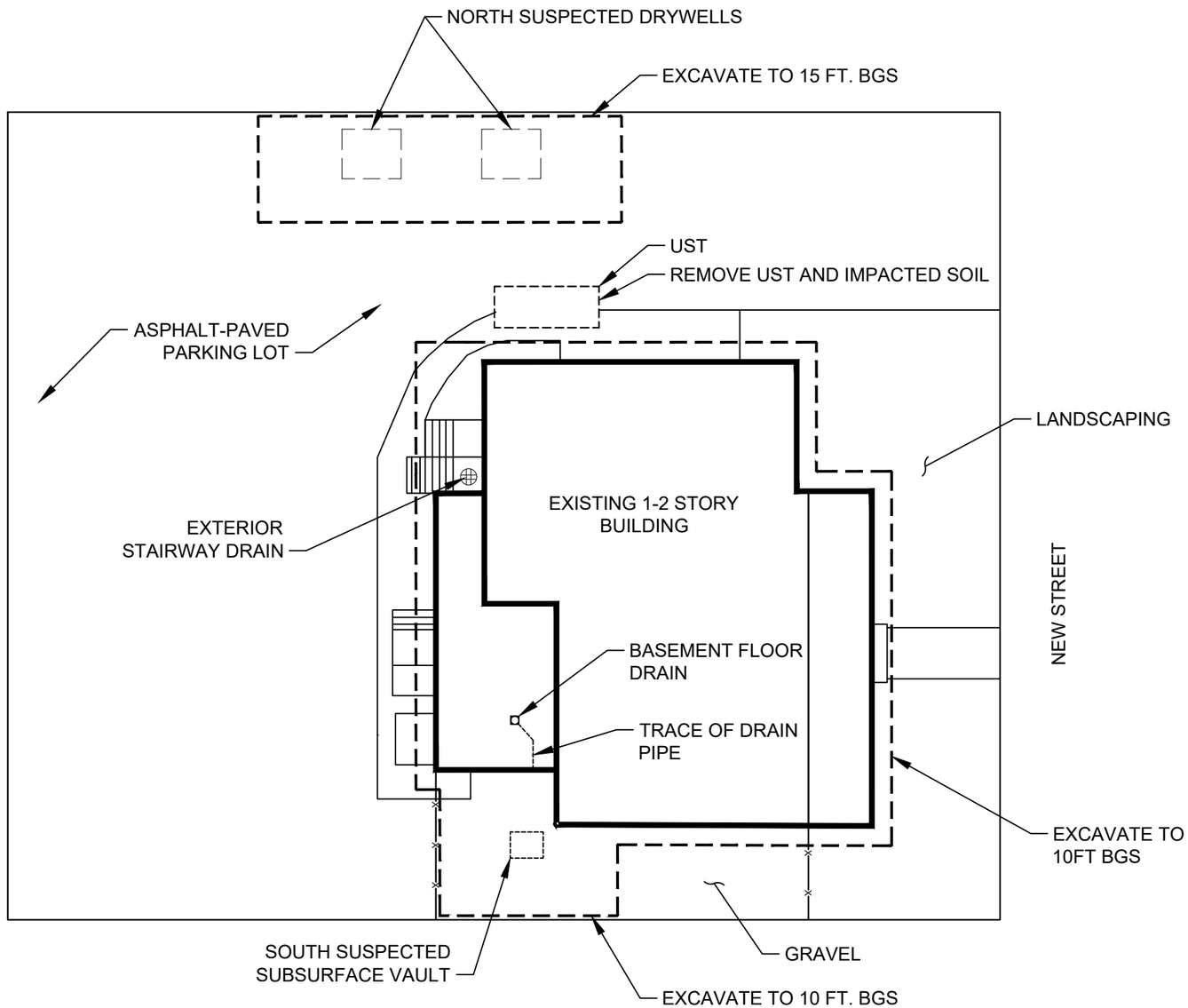
71 NEW STREET HUNTINGTON LLC

GEI Consultants

SOIL VAPOR AND OUTDOOR AIR DETECTION SUMMARY

Project 1700841 | AUGUST 2019 | Fig. 6

\\hts1v-fs01\ I:\Tech\Environmental Projects\DeRosa\71 New Street\Phase II\CAD\1700841 - FIG 8.dwg - 10/9/2018



N

0 20 40

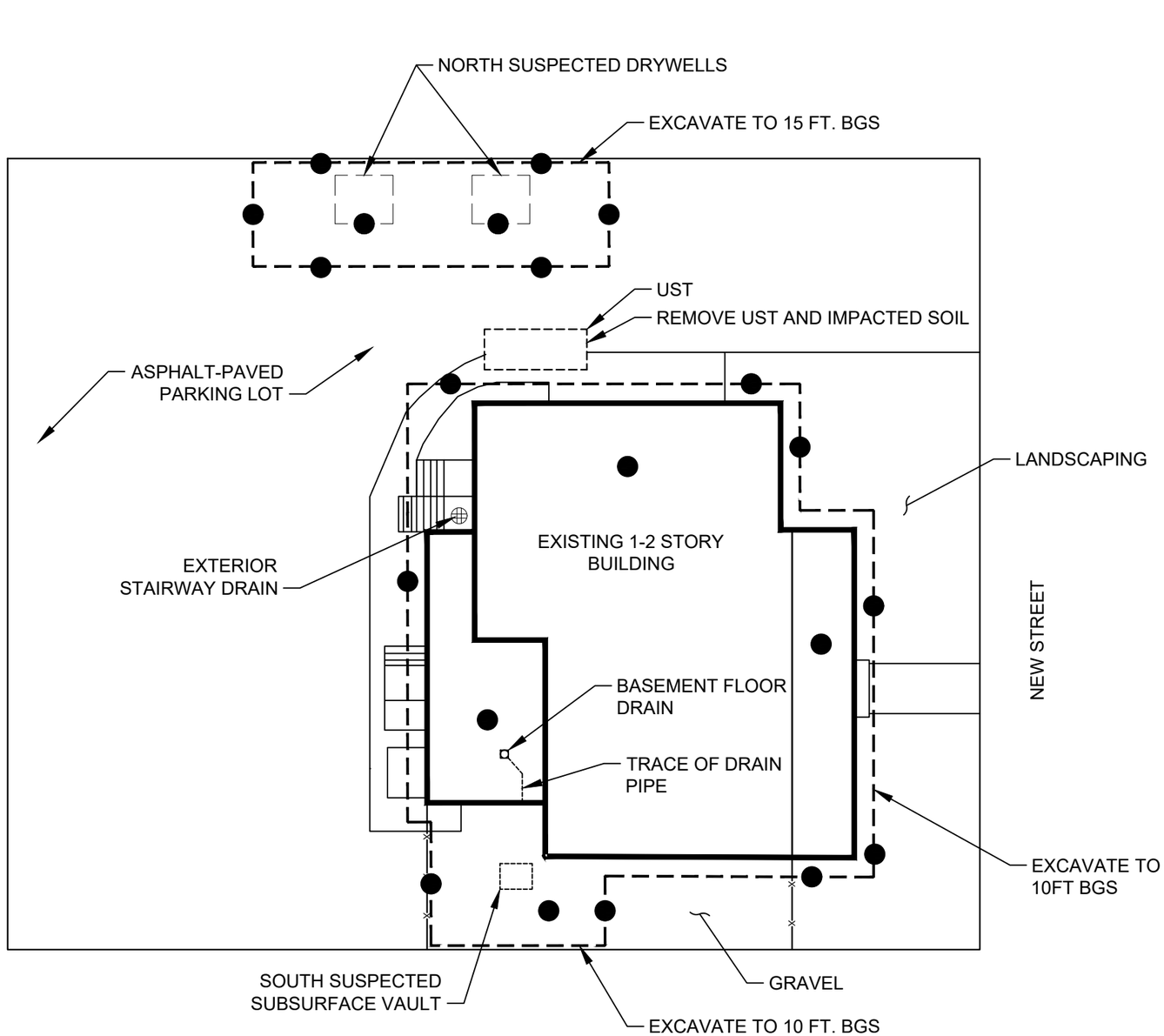
SCALE: 1" = 20'

SOURCE:

SURVEYED JUNE 7,1977 GUARANTEED TO SECURITY TITLE AND GUARANTY CO.

REMEDIAL ACTION WORK PLAN 71 NEW STREET HUNTINGTON, NEW YORK	GEI Consultants	PROPOSED REDEVELOPMENT EXCAVATION LIMITS
71 NEW STREET HUNTINGTON LLC	Project 1700841	AUGUST 2019 Fig. 7

\\hts1v-fs01\ I:\Tech\Environmental Projects\DeRosa\71 New Street\Phase II\CAD\1700841 - FIG 9.dwg - 11/2/2018



LEGEND

● END POINT SAMPLE LOCATION

SOURCE:

SURVEYED JUNE 7,1977 GUARANTEED TO SECURITY TITLE AND GUARANTY CO.

0 20 40

SCALE: 1" = 20'

REMEDIAL ACTION WORK PLAN 71 NEW STREET HUNTINGTON, NEW YORK	GEI Consultants	PROPOSED SOIL ENDPOINT SAMPLE LOCATION MAP
71 NEW STREET HUNTINGTON LLC	Project 1700841	JAUGUST 2019 Fig. 8

\\hts1v-fs01\ I:\Tech\Environmental Projects\DeRosa\71 New Street\Phase II\CAD\1700841 - FIG 10.dwg - 7/30/2019

Appendix A

Analytical Data Reports

The analytical data reports appendix is exceedingly large and has been removed to a separate file:
WorkPlan.BCP.C152248.2019-10-04.RAWP_AppendixA_Data_Reports.pdf

Appendix B

Soil Boring Logs and Monitoring Well Construction Logs

GEI Consultants, Inc. P.C.
455 Winding Brook Drive
Suite 201
Glastonbury, CT 06033
(860) 368-5300

CLIENT: 71 New Street Huntington, LLC
PROJECT: RI - 71 New Street
CITY/STATE: Huntington, New York
GEI PROJECT NUMBER: 1700841

BORING LOG
PAGE 1 of 2
MW-1

LOCATION: Southwest Corner of Site
NORTHING (FT): _____ **EASTING (FT):** _____
TOTAL DEPTH (FT): 50.0
DRILLED BY: LAWES / Scott/Kevin
DATUM VERT. / HORZ.: _____
LOGGED BY: G. Holmes and J. Kendrot
DATE START / END: 6/26/2018 - 6/27/2018
DRILLING DETAILS: Hollow Stem Auger/Macro Core / Geoprobe 7822 DT/Geoprobe 7800
WATER LEVEL DEPTHS (FT): _____
GENERAL NOTE: _____

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	0	S1	5/2.8	0.0				(0'- 0.3') ASPHALT AND BASE. (0.3'- 2.2') SILTY SAND WITH GRAVEL (SM); ~50% sand, fine, ~30% fines, non plastic, ~20% gravel, fine to coarse, angular-subrounded; max. gravel size 1.25", dry, brown, tight, FILL. (2.2'- 9') WIDELY GRADED SAND WITH GRAVEL (SW); ~60% sand, fine to coarse, ~40% gravel, fine to coarse, angular-subrounded; max. gravel size 2", dry, light brown, loose, red brick fragments, FILL.
	5	S2	5/4.2	0.0				
	10	S3	5/3.9	0.0				(9'- 16') NARROWLY GRADED SAND WITH GRAVEL (SP); ~80% sand, fine to medium, ~20% gravel, fine to coarse, subrounded-subangular; max. gravel size 1", dry, tan, loose.
	15	S4	5/3.8	0.0				(16'- 22.8') NARROWLY GRADED SAND (SP); ~90% sand, fine to medium, ~10% gravel, fine to coarse, subrounded-subangular; max. gravel size 1", dry, light brown, loose, wet at 22.5'.
	20	S5	5/4.4	0.0				(22.8'- 25') SANDY SILT (MLS); ~70% fines, non plastic to low plasticity, ~30% sand, fine; wet, brown, tight.

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (PPM)
JHS = JAR HEADSPACE PID READING (PPM)

NA = NOT APPLICABLE
NM = NOT MEASURED
Q_P = POCKET PENETROMETER
S_V = TORVANE PEAK

ppm = PARTS PER MILLION
IN. = INCHES
FT. = FEET

NLO = NAPHTHALENE LIKE ODOR
PLO = PETROLEUM LIKE ODOR
TLO = TAR LIKE ODOR
CLO = CHEMICAL LIKE ODOR
ALO = ASPHALT LIKE ODOR

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR

ENVIRONMENTAL BORING LOG RI BORING LOGS.GPJ GEI TEMPLATE 11-7-13.GDT 7/24/18

GEI Consultants

GEI Consultants, Inc. P.C.
455 Winding Brook Drive
Suite 201
Glastonbury, CT 06033
(860) 368-5300

CLIENT: 71 New Street Huntington, LLC
PROJECT: RI - 71 New Street
CITY/STATE: Huntington, New York
GEI PROJECT NUMBER: 1700841

BORING LOG

MW-1

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	25	S6	5/5	0.0				(25'- 32.6') CLAY WITH SAND (CL); ~80% fines, low plasticity, ~20% sand, fine; wet, brown, tight.
	30	S7	5/3.2	0.0				(32.6'- 35') NARROWLY GRADED SAND WITH GRAVEL (SP); ~80% sand, fine to medium, ~20% gravel, fine to coarse, subangular-subrounded; max. gravel size 1.5", dry, tan, loose.
	35	S8	5/2.6	0.0				(35'- 35.1') CLAY (CL); ~100% fines, low plasticity; brown. (35.1'- 36.5') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~20% gravel, fine; max. gravel size 0.5", dry, brown. (36.5'- 40') NARROWLY GRADED SAND (SP); ~100% sand, fine to medium; dry, light brown.
	40	S9	5/0.2	0.0				(40'- 45') CLAY (CL); ~100% fines, low plasticity; moist, grayish-brown, sleeved.
	45	S10	5/2.3	0.0			MW-1(45-47)	(45'- 46.2') WIDELY GRADED SAND WITH GRAVEL (SW); ~50% gravel, fine to coarse, ~50% sand, fine to coarse; max. gravel size 0.5", wet, brown. (46.2'- 48.3') NARROWLY GRADED SAND (SP); ~100% sand, fine; wet, brown. (48.3'- 49.3') CLAY (CL); ~100% fines, low plasticity; wet, brown, tight. (49.3'- 50') NARROWLY GRADED SAND (SP); ~100% sand, fine to medium; wet, brown.
	50							End of Boring at 50 feet.

NOTES:

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JHS = JAR HEADSPACE PID READING (PPM)

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NM = NOT MEASURED
Q_P = POCKET PENETROMETER
S_V = TORVANE PEAK

ppm = PARTS PER MILLION
IN. = INCHES
FT. = FEET

NLO = NAPHTHALENE LIKE ODOR
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GEI Consultants, Inc. P.C.
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(860) 368-5300

CLIENT: 71 New Street Huntington, LLC
PROJECT: RI - 71 New Street
CITY/STATE: Huntington, New York
GEI PROJECT NUMBER: 1700841

BORING LOG
PAGE 1 of 2
MW-2

LOCATION: Northwest Corner of Site
NORTHING (FT): _____ **EASTING (FT):** _____
TOTAL DEPTH (FT): 48.0
DRILLED BY: LAWES / Kevin
DATUM VERT. / HORZ.: _____
LOGGED BY: G. Holmes and J. Kendrot
DATE START / END: 6/27/2018 - 6/28/2018
DRILLING DETAILS: Hollow Stem Auger/Macro Core / Geoprobe 7800
WATER LEVEL DEPTHS (FT): _____
GENERAL NOTE: _____

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN/REC FT./FT.	PID (PPM)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	0	S1	5/2.2	0.0				(0'- 0.3') ASPHALT AND BASE. (0.3'- 1.2') WIDELY GRADED SAND WITH GRAVEL (SW); ~70% sand, fine to coarse, ~30% gravel, fine to coarse, subangular; max. gravel size 1.5", dry, FILL. (1.2'- 2.7') SILTY SAND WITH GRAVEL (SM); ~50% sand, fine to coarse, ~30% fines, non plastic, ~20% gravel, fine to coarse, subangular; max. gravel size 1", dry, brown, FILL. (2.7'- 8.4') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~20% gravel, fine to coarse, rounded-angular; max. gravel size 1", dry, light tan-brown, FILL.
	5	S2	5/3.6	0.0				
	10	S3	5/3	0.0				(8.4'- 9.3') CRUSHED ROCK. (9.3'- 10') WIDELY GRADED SAND WITH GRAVEL; ~80% sand, fine to coarse, ~20% gravel, fine to coarse, rounded-angular; max. gravel size 1", brown, FILL. (10'- 11.5') FILL; Crushed and whole red brick and concrete, FILL. (11.5'- 12.6') WIDELY GRADED SAND (SW); ~100% sand, fine to coarse; brown. (12.6'- 13.1') NARROWLY GRADED SAND (SP); ~100% sand, fine; light brown. (13.1'- 13.8') SILTY SAND (SM); ~80% sand, fine to medium, ~20% fines, non plastic; dry, brown. (13.8'- 15') NARROWLY GRADED SAND (SP); ~100% sand, fine; light brown. (15'- 15.7') CRUSHED ROCK. (15.7'- 16.2') WIDELY GRADED SAND WITH GRAVEL (SW); ~70% sand, fine to coarse, ~30% gravel, fine to coarse, rounded-subangular; max. gravel size 2.5", light brown. (16.2'- 20') NARROWLY GRADED SAND WITH GRAVEL (SP); ~80% sand, medium-coarse, ~20% gravel, fine, angular-rounded; max. gravel size 0.5", moist, brown.
	15	S4	5/3.4	0.0				
	20	S5	5/0					(20'- 25') NO RECOVERY. Gravel in shoe.

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ENVIRONMENTAL BORING LOG RI BORING LOGS.GPJ GEI TEMPLATE 11-7-13.GDT 7/24/18

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CLIENT: 71 New Street Huntington, LLC
PROJECT: RI - 71 New Street
CITY/STATE: Huntington, New York
GEI PROJECT NUMBER: 1700841

BORING LOG

MW-2

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	25	S6	5/4.2	0.0				(25'- 26.5') CLAYEY SAND WITH SILT (SC); ~70% sand, fine, ~30% fines; moist, brown. (26.5'- 28.2') SILTY CLAY WITH SAND (CL-ML); ~80% fines, ~20% sand; moist, brown. (28.2'- 30') SANDY SILT WITH CLAY (MLS); ~60% fines, ~40% sand; moist, brown.
	30	S7	5/4.8	0.0				(30'- 30.7') CLAY WITH SILT (CL-ML); ~100% fines; moist, brown. (30.7'- 31.8') CLAY AND SILT (CL-ML); ~100% fines; moist, brown. (31.8'- 33.4') CLAYEY SILT WITH SAND (ML); ~80% fines, ~20% sand, fine; brown. (33.4'- 34.6') SILT WITH SAND (ML); ~90% fines, ~10% sand, fine; brown-gray. (34.6'- 35.4') SANDY SILT (MLS); ~75% fines, ~25% sand, fine; brown.
	35	S8	5/2.2	0.0			MW-2(35-40)	(35.4'- 40') NARROWLY GRADED SAND WITH GRAVEL (SP); ~75% sand, fine to medium, ~20% gravel, fine to coarse, subangular-subrounded, ~5% fines, non plastic; max. gravel size 2", moist, brown, loose, wet at base.
	40	S9	5/2.8	0.0				(40'- 41.6') SANDY SILT (MLS); ~75% fines, non plastic to low plasticity, ~25% sand, fine; wet, brown, loose. (41.6'- 48') WIDELY GRADED SAND WITH GRAVEL (SW); ~70% sand, fine to coarse, ~30% gravel, fine to coarse, subangular-subrounded; max. gravel size 0.75", wet, brown, loose.
	45	S10	3/1.6	0.0				

End of Boring at 48 feet.

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CLIENT: 71 New Street Huntington, LLC
PROJECT: RI - 71 New Street
CITY/STATE: Huntington, New York
GEI PROJECT NUMBER: 1700841

BORING LOG
PAGE 1 of 2
MW-3

LOCATION: Southeast Corner of Site
NORTHING (FT): _____ **EASTING (FT):** _____
TOTAL DEPTH (FT): 50.0
DRILLED BY: LAWES / Kevin
DATUM VERT. / HORZ.: _____
LOGGED BY: G. Holmes
DATE START / END: 6/29/2018 - 6/29/2018
DRILLING DETAILS: Hollow Stem Auger/Macro Core / Geoprobe 7720 DT
WATER LEVEL DEPTHS (FT): _____
GENERAL NOTE: _____

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	0	S1	5/1.1	0.0				(0'- 0.7') TOPSOIL. (0.7'- 5.2') SILTY SAND (SM); ~50% sand, fine, ~40% fines, non plastic, ~10% gravel, fine, subrounded; max. gravel size 0.5", dry, brown, organics/roots, loose.
	5	S2	5/3.4	0.0				(5.2'- 10.8') WIDELY GRADED SAND WITH GRAVEL (SW); ~60% sand, fine to coarse, ~40% gravel, fine to coarse, angular-subrounded; max. gravel size 2", dry, light brown, loose.
	10	S3	5/3.3	0.0				(10.8'- 13.3') NARROWLY GRADED SAND (SP); ~90% sand, fine to medium, ~10% gravel, fine to coarse, subrounded-subangular; max. gravel size 1", dry, light brown, loose. (13.3'- 15') WIDELY GRADED SAND WITH GRAVEL (SW); ~75% sand, fine to coarse, ~25% gravel, fine to coarse, subangular-subrounded; max. gravel size 1", dry, tan, loose.
	15	S4	5/3.2	0.0				(15'- 19.3') NARROWLY GRADED SAND WITH GRAVEL (SP); ~80% sand, fine to medium, ~20% gravel, fine to coarse, subangular-subrounded; max. gravel size 2", dry, tan, loose.
	20	S5	5/2.8	0.0			MW-3(20-23.5)	(19.3'- 22.4') WIDELY GRADED SAND WITH GRAVEL (SW); ~75% sand, fine to coarse, ~25% gravel, fine to coarse, subangular-subrounded; max. gravel size 1.5", dry, tan, loose. (22.4'- 26.5') NARROWLY GRADED SAND WITH GRAVEL (SP); ~80% sand, medium to coarse, ~20% gravel, fine to coarse, subangular-subrounded; max. gravel size 1", light

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ENVIRONMENTAL BORING LOG RI BORING LOGS.GPJ GEI TEMPLATE 11-7-13.GDT 7/24/18

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CLIENT: 71 New Street Huntington, LLC
PROJECT: RI - 71 New Street
CITY/STATE: Huntington, New York
GEI PROJECT NUMBER: 1700841

BORING LOG
PAGE 2 of 2
MW-3

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	25	S6	5/2.3	0.0				brown, wet at 23.5'.
								(26.5'- 28.9') NARROWLY GRADED SAND WITH GRAVEL (SP); ~80% sand, medium to coarse, ~20% gravel, fine to coarse, subangular-subrounded; max. gravel size 1", wet, orange brown.
	30	S7	5/3.6	0.0				(28.9'- 30.8') SILTY SAND WITH GRAVEL (SM); ~50% sand, fine to coarse, ~30% fines, non plastic, ~20% gravel, fine to coarse, subangular-subrounded; max. gravel size 1", wet, light brown, loose. (30.8'- 34.4') SANDY CLAY (CL); ~70% fines, low plasticity, ~20% sand, fine, ~10% gravel, fine, subrounded; max. gravel size 0.5", moist, brown, tight.
	35	S8	5/5	0.0				(34.4'- 35.7') CLAYEY SAND WITH GRAVEL (SC); ~60% sand, fine to coarse, ~20% gravel, fine to coarse, subrounded, ~20% fines, low plasticity; max. gravel size 0.75", wet, brown. (35.7'- 45') CLAY (CL); ~100% fines, low plasticity; moist, grayish-brown, tight.
	40	S9	5/5	0.0				
	45	S10	5/3.6	0.0				(45'- 48.4') CLAY (CL); ~100% fines, low plasticity; very wet, grayish-brown, loose.
								(48.4'- 50') NARROWLY GRADED SAND WITH SILT (SP-SM); ~90% sand, fine to medium, ~10% fines, non plastic; wet.
	50							End of Boring at 50 feet.

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ENVIRONMENTAL BORING LOG RI BORING LOGS.GPJ GEI TEMPLATE 11-7-13.GDT 7/24/18

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CLIENT: 71 New Street Huntington, LLC
PROJECT: RI - 71 New Street
CITY/STATE: Huntington, New York
GEI PROJECT NUMBER: 1700841

BORING LOG
PAGE 1 of 3
MW-4

LOCATION: Northeast Corner of Site
NORTHING (FT): _____ **EASTING (FT):** _____
TOTAL DEPTH (FT): 61.0
DRILLED BY: LAWES / Carl
DATUM VERT. / HORZ.: _____
LOGGED BY: G. Holmes
DATE START / END: 7/2/2018 - 7/2/2018
DRILLING DETAILS: Hollow Stem Auger/2 inch ID Split Spoon / B-61 HDX Mobile Drill
WATER LEVEL DEPTHS (FT): _____
GENERAL NOTE: _____

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	VISUAL IMPACTS	SOIL / BEDROCK DESCRIPTION
	0						(0'- 0.3') ASPHALT AND BASE. (0.3'- 5') NARROWLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); ~60% sand, fine to medium, ~30% gravel, fine to coarse, angular-subrounded, ~10% fines, non plastic; max. gravel size 3", dry, brown, hand-cleared.
	5	S1	2/1	0.0			(5'- 7') SANDY GRAVEL (GW); ~60% gravel, fine to coarse, angular-subrounded, ~40% sand, fine to coarse; max. gravel size 2", dry, light brown, loose.
		S2	2/0.3	0.0			(9'- 11') WIDELY GRADED GRAVEL (GW); ~100% gravel, fine to coarse, subangular-subrounded; max. gravel size 2", dry, light brown, loose.
	10						
		S3	2/1.2	0.0			(14'- 16') NARROWLY GRADED SAND WITH GRAVEL (SP); ~80% sand, fine to medium, ~20% gravel, fine to coarse, subangular-subrounded; max. gravel size 0.75", dry, tan, loose.
	15						
		S4	2/0				(19'- 21') NO RECOVERY.
	20						

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ENVIRONMENTAL BORING LOG RI BORING LOGS.GPJ GEI TEMPLATE 11-7-13.GDT 7/24/18

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(860) 368-5300

CLIENT: 71 New Street Huntington, LLC
PROJECT: RI - 71 New Street
CITY/STATE: Huntington, New York
GEI PROJECT NUMBER: 1700841

BORING LOG

MW-4

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN/REC FT./FT.	PID (PPM)	STRATA	VISUAL IMPACTS	SOIL / BEDROCK DESCRIPTION
	25	S5	2/1.6	0.0			(24'- 25.1') WIDELY GRADED SAND WITH GRAVEL (SW); ~75% sand, fine to coarse, ~25% gravel, fine to coarse, subangular-subrounded; max. gravel size 1", wet, brown, loose. (25.1'- 26') SILTY SAND WITH GRAVEL (SM); ~50% sand, fine to medium, ~30% fines, non plastic, ~20% gravel, fine to coarse, subangular-subrounded; max. gravel size 1", wet, brown, tight.
	30	S6	2/1.4	0.0			(29'- 29.7') NARROWLY GRADED SAND WITH GRAVEL (SP); ~80% sand, fine to medium, ~20% gravel, fine to coarse, subrounded-subangular; max. gravel size 1", wet, brown, loose. (29.7'- 31') SANDY CLAY (CL); ~80% fines, low plasticity, ~20% sand, fine to medium; moist, light brown, tight.
		S7	2/0.5	0.0			(31'- 33') WIDELY GRADED SAND WITH GRAVEL (SW); ~75% sand, fine to coarse, ~25% gravel, fine to coarse, subrounded-subangular; max. gravel size 1", wet, brown, loose.
		S8	2/2	0.0			(33'- 35') CLAY WITH SAND (CL); ~90% fines, low plasticity, ~10% sand, fine; moist, light brown, tight.
	35	S9	2/2	0.0			(35'- 41') CLAY (CL); ~100% fines, low plasticity; moist, grayish-brown, tight.
		S10	2/2	0.0			
	40	S11	2/2	0.0			
	45	S12	2/2	0.0			(44'- 45.5') SANDY SILT (MLS); ~80% fines, non plastic to low plasticity, ~20% sand, fine; wet, brown, loose. (45.5'- 46') CLAY (CL); ~100% fines, low plasticity; moist, grayish-brown, tight.
	50	S13	2/2	0.0			(49'- 50.3') SILT (ML); ~100% fines, non plastic to low plasticity; wet, brown, loose. (50.3'- 51') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~10% gravel, fine, subrounded; max. gravel size 0.5", wet, brown, loose.

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CLIENT: 71 New Street Huntington, LLC
PROJECT: RI - 71 New Street
CITY/STATE: Huntington, New York
GEI PROJECT NUMBER: 1700841

BORING LOG

MW-4

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	VISUAL IMPACTS	SOIL / BEDROCK DESCRIPTION
	55	S14	2/0.8	0.0			(54'- 60.2') WIDELY GRADED SAND WITH GRAVEL (SW); ~70% sand, fine to coarse, ~30% gravel, fine to coarse, subangular-subrounded; max. gravel size 1.5", wet, brown, loose.
	60	S15	2/0.9	0.0			(60.2'- 61') SILTY SAND WITH GRAVEL (SM); ~60% sand, fine to medium, ~20% gravel, fine to coarse, subangular-subrounded, ~20% fines, non plastic; max. gravel size 0.75", wet, brown, tight.
							End of Boring at 61 feet.

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CLIENT: 71 New Street Huntington, LLC
PROJECT: RI - 71 New Street
CITY/STATE: Huntington, New York
GEI PROJECT NUMBER: 1700841

BORING LOG
PAGE 1 of 2
SB-10

LOCATION: West of Suspected Vault
NORTHING (FT): _____ **EASTING (FT):** _____
TOTAL DEPTH (FT): 35.0
DRILLED BY: LAWES / Scott/Kevin
DATUM VERT. / HORZ.: _____
LOGGED BY: G. Holmes
DATE START / END: 6/26/2018 - 7/12/2018
DRILLING DETAILS: Direct Push - Macro Core / Geoprobe 7822 DT/Geoprobe 7720 DT
WATER LEVEL DEPTHS (FT): _____
GENERAL NOTE: _____

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN/REC FT./FT.	PID (PPM)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	0	S1	5/2.8	0.0			SB-10(0-5)	(0'- 0.3') TOPSOIL. (0.3'- 2.7') SILTY SAND (SM); ~60% sand, fine, ~30% fines, non plastic, ~10% gravel, fine; dry, brown, loose, FILL. (2.7'- 10') SANDY GRAVEL (GW); ~60% gravel, fine to coarse, angular-subrounded, ~40% sand, fine to coarse; max. gravel size 2", dry, brown, tight, red brick fragments, FILL.
	5	S2	5/2.6	0.0			SB-10(5-10)	
	10	S3	5/2.9	0.0			SB-10(10-15)	(10'- 12.1') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~20% gravel, fine to coarse, subangular-subrounded; max. gravel size 1", dry, light brown, loose. (12.1'- 15') NARROWLY GRADED SAND (SP); ~90% sand, fine to medium, ~10% gravel, fine to coarse, subangular-subrounded; max. gravel size 0.75", dry, light brown, loose.
	15	S4	5/3.2	0.0			SB-10(15-20)	(15'- 23.4') WIDELY GRADED SAND WITH GRAVEL (SW); ~75% sand, fine to coarse, ~25% gravel, fine to coarse, subangular-subrounded; max. gravel size 1", dry, tan, loose, wet at 22.5'.
	20	S5	5/3.3	0.0			SB-10(20-22.5)	(23.4'- 25') NARROWLY GRADED SAND WITH GRAVEL

NOTES:

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JHS = JAR HEADSPACE PID READING (PPM)

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S_V = TORVANE PEAK

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IN. = INCHES
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ENVIRONMENTAL BORING LOG RI BORING LOGS.GPJ GEI TEMPLATE 11-7-13.GDT 7/24/18

GEI Consultants, Inc. P.C.
455 Winding Brook Drive
Suite 201
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(860) 368-5300

CLIENT: 71 New Street Huntington, LLC
PROJECT: RI - 71 New Street
CITY/STATE: Huntington, New York
GEI PROJECT NUMBER: 1700841

BORING LOG

SB-10

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	25	S6	5/3	0.0			SB-10(25-30)	(SP); ~75% sand, fine to medium, ~20% gravel, fine to coarse, subangular-subrounded, ~5% fines, non plastic; max. gravel size 0.75", wet, brown, loose. (25'- 26.9') SILTY SAND (SM); ~60% sand, fine to medium, ~30% fines, non plastic, ~10% gravel, fine, subrounded; max. gravel size 0.5", wet, light brown, tight. (26.9'- 30') SILTY SAND (SM); ~60% sand, fine to medium, ~40% fines, non plastic; wet, light brown, tight.
	30	S7	5/5	0.0				(30'- 35') CLAY (CL); ~100% fines, low plasticity; moist, grayish-brown, tight.
	35							End of Boring at 35 feet.

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CLIENT: 71 New Street Huntington, LLC
PROJECT: RI - 71 New Street
CITY/STATE: Huntington, New York
GEI PROJECT NUMBER: 1700841

BORING LOG
PAGE 1 of 2
SB-11

LOCATION: South of Suspected Vault
NORTHING (FT): _____ **EASTING (FT):** _____
TOTAL DEPTH (FT): 35.0
DRILLED BY: LAWES / Scott/Kevin
DATUM VERT. / HORZ.: _____
LOGGED BY: G. Holmes
DATE START / END: 6/26/2018 - 7/12/2018
DRILLING DETAILS: Direct Push - Macro Core / Geoprobe 7822 DT/Geoprobe 7720 DT
WATER LEVEL DEPTHS (FT): _____
GENERAL NOTE: _____

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN/REC FT./FT.	PID (PPM)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	0	S1	5/2.7	0.0			SB-11(0-5)	(0'- 0.5') TOPSOIL. (0.5'- 1.7') SILTY SAND WITH GRAVEL (SM); ~50% sand, fine, ~30% fines, non plastic, ~20% gravel, fine to coarse, subrounded-subangular; max. gravel size 1", dry, brown, loose, FILL. (1.7'- 8') SANDY GRAVEL (GW); ~70% gravel, fine to coarse, angular-subrounded, ~30% sand, fine to coarse; max. gravel size 2", dry, light brown, red brick fragments, loose, FILL.
	5	S2	5/3.6	0.0			SB-11(5-10)	(8'- 10') WIDELY GRADED SAND WITH GRAVEL (SW); ~75% sand, fine to coarse, ~25% gravel, fine to coarse, subrounded-subangular; max. gravel size 1", dry, tan, loose.
	10	S3	5/3.5	0.0			SB-11(10-15)	(10'- 15') NARROWLY GRADED SAND WITH GRAVEL (SP); ~80% sand, fine to medium, ~20% gravel, fine to coarse, subrounded-subangular; max. gravel size 0.75", dry, light brown, loose.
	15	S4	5/3.3	0.0			SB-11(15-20)	(15'- 25') WIDELY GRADED SAND WITH GRAVEL (SW); ~70% sand, fine to coarse, ~30% gravel, fine to coarse, subrounded-subangular; max. gravel size 1.5", dry, tan, loose, wet at 22.5'.
	20	S5	5/3.3	0.0			SB-11(20-22.5)	

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ENVIRONMENTAL BORING LOG RI BORING LOGS.GPJ GEI TEMPLATE 11-7-13.GDT 7/24/18

GEI Consultants

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CLIENT: 71 New Street Huntington, LLC
PROJECT: RI - 71 New Street
CITY/STATE: Huntington, New York
GEI PROJECT NUMBER: 1700841

BORING LOG

SB-11

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	25	S6	5/5	0.0			SB-11(25-30)	(25'- 26.1') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~20% gravel, fine to coarse, subangular-subrounded; max. gravel size 1", wet, brown, loose.
								(26.1'- 30') SILTY SAND (SM); ~60% sand, fine to medium, ~30% fines, non plastic, ~10% gravel, fine, subrounded; max. gravel size 0.5", wet, brown, tight.
	30	S7	5/5	0.0				(30'- 35') CLAY (CL); ~95% fines, low plasticity, ~5% sand, fine; moist, grayish-brown, tight.
	35							End of Boring at 35 feet.

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ENVIRONMENTAL BORING LOG RI BORING LOGS.GPJ GEI TEMPLATE 11-7-13.GDT 7/24/18

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CLIENT: 71 New Street Huntington, LLC
PROJECT: RI - 71 New Street
CITY/STATE: Huntington, New York
GEI PROJECT NUMBER: 1700841

BORING LOG
PAGE 1 of 2
SB-12

LOCATION: East of Suspected Vault
NORTHING (FT): _____ **EASTING (FT):** _____
TOTAL DEPTH (FT): 35.0
DRILLED BY: LAWES / Scott/Kevin
DATUM VERT. / HORZ.: _____
LOGGED BY: G. Holmes
DATE START / END: 6/26/2018 - 7/12/2018
DRILLING DETAILS: Direct Push - Macro Core / Geoprobe 7822 DT/Geoprobe 7720 DT
WATER LEVEL DEPTHS (FT): _____
GENERAL NOTE: _____

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	0	S1	5/2.3	0.0			SB-12(0-5)	(0'- 1.8') SILTY SAND (SM); ~50% sand, fine, ~40% fines, non plastic, ~10% gravel, fine; dry, brown, tight. (1.8'- 5') SANDY GRAVEL (GW); ~60% gravel, fine to coarse, angular-subrounded, ~40% sand, fine to coarse; max. gravel size 2", dry, light brown, loose.
	5	S2	5/2.9	0.0			SB-12(5-10)	(5'- 11.1') WIDELY GRADED SAND WITH GRAVEL (SW); ~75% sand, fine to coarse, ~25% gravel, fine to coarse, subangular-subrounded; max. gravel size 2", dry, tan, loose.
	10	S3	5/3.2	0.0			SB-12(10-15)	(11.1'- 15') NARROWLY GRADED SAND WITH GRAVEL (SP); ~75% sand, fine to medium, ~25% gravel, fine to coarse, subangular-subrounded; max. gravel size 2", dry, tan, loose.
	15	S4	5/2.8	0.0			SB-12(15-20)	(15'- 22.9') WIDELY GRADED SAND WITH GRAVEL (SW); ~70% sand, fine to coarse, ~30% gravel, fine to coarse, subrounded-subangular; max. gravel size 2", dry, tan, loose, wet at 22.2'.
	20	S5	5/2.4	0.0			SB-12(20-22.5)	(22.9'- 25') SILTY SAND (SM); ~60% sand, fine to medium, ~30% fines, non plastic, ~10% gravel, fine; wet, brown, tight.

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ENVIRONMENTAL BORING LOG RI BORING LOGS.GPJ GEI TEMPLATE 11-7-13.GDT 7/24/18

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CLIENT: 71 New Street Huntington, LLC
PROJECT: RI - 71 New Street
CITY/STATE: Huntington, New York
GEI PROJECT NUMBER: 1700841

BORING LOG

SB-12

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	25	S6	5/3.8	0.0				(25'- 26.6') SILTY SAND WITH GRAVEL (SM); ~50% sand, fine to medium, ~30% fines, non plastic, ~20% gravel, fine to coarse, subangular-subrounded; max. gravel size 1", wet, brown, tight.
							SB-12(25-30)	(26.6'- 28.2') WIDELY GRADED SAND WITH GRAVEL AND SILT (SW-SM); ~70% sand, fine to coarse, ~20% gravel, fine to coarse, subangular-subrounded, ~10% fines, non plastic; max. gravel size 1", wet, brown, loose.
	30	S7	5/5	0.0				(28.2'- 31.6') SILTY SAND (SM); ~50% sand, fine, ~45% fines, non plastic, ~5% gravel, fine, subrounded; max. gravel size 0.5", wet, brown, tight.
							SB-12(30-31.5)	(31.6'- 35') CLAY (CL); ~95% fines, low plasticity, ~5% sand, fine; moist, grayish-brown, tight.
	35							End of Boring at 35 feet.

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CLIENT: 71 New Street Huntington, LLC
PROJECT: RI - 71 New Street
CITY/STATE: Huntington, New York
GEI PROJECT NUMBER: 1700841

BORING LOG
PAGE 1 of 2
SB-13

LOCATION: Suspected Vault
NORTHING (FT): _____ **EASTING (FT):** _____
TOTAL DEPTH (FT): 35.0
DRILLED BY: LAWES / Scott/Kevin
DATUM VERT. / HORZ.: _____
LOGGED BY: G. Holmes
DATE START / END: 7/12/2018 - 7/12/2018
DRILLING DETAILS: Direct Push - Macro Core / Geoprobe 7720 DT
WATER LEVEL DEPTHS (FT): _____
GENERAL NOTE: _____

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	0						SB-13(0-5)	(0'- 5') SILTY SAND WITH GRAVEL (SM); ~50% sand, fine to medium, ~30% fines, non plastic, ~20% gravel, fine to coarse, angular-subrounded; max. gravel size 3", dry, light brown, loose, hand-cleared.
	5	S1	5/3.2	0.0			SB-13(5-10)	(5'- 10') WIDELY GRADED SAND WITH GRAVEL (SW); ~60% sand, fine to coarse, ~40% gravel, fine to coarse, angular-subangular; max. gravel size 2", dry, tan, loose.
	10	S2	5/3.4	0.0			SB-13(10-15)	(10'- 15') NARROWLY GRADED SAND WITH GRAVEL (SP); ~80% sand, fine to medium, ~20% gravel, fine to coarse, angular-subrounded; max. gravel size 2", dry, tan, loose.
	15	S3	5/2.8	0.0			SB-13(15-20)	(15'- 25') WIDELY GRADED SAND WITH GRAVEL (SW); ~75% sand, fine to coarse, ~25% gravel, fine to coarse, angular-subrounded; max. gravel size 1.5", dry, tan, loose, wet at 22.7'.
	20	S4	5/2.6	0.0			SB-13(20-25)	

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CLIENT: 71 New Street Huntington, LLC
PROJECT: RI - 71 New Street
CITY/STATE: Huntington, New York
GEI PROJECT NUMBER: 1700841

BORING LOG

SB-13

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	25	S5	5/4.1	0.0			SB-13(25-30)	(25'- 26.5') SILTY SAND (SM); ~60% sand, fine to medium, ~30% fines, non plastic, ~10% gravel, fine, subrounded; max. gravel size 0.5", wet, brown, tight. (26.5'- 28.3') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~20% gravel, fine to coarse, subrounded-subangular; max. gravel size 1", wet, brown, loose. (28.3'- 30') SILTY SAND (SM); ~60% sand, fine to medium, ~40% fines, non plastic; wet, light brown, tight.
	30	S6	5/5	0.0				(30'- 30.9') SANDY CLAY (CL); ~80% fines, low plasticity, ~20% sand, fine; moist, light brown, tight. (30.9'- 35') CLAY (CL); ~100% fines, low plasticity; moist, grayish-brown, tight.
	35							End of Boring at 35 feet.

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CLIENT: 71 New Street Huntington, LLC
PROJECT: RI - 71 New Street
CITY/STATE: Huntington, New York
GEI PROJECT NUMBER: 1700841

BORING LOG
PAGE 1 of 2
SB-6

LOCATION: West of North Suspected Drywells
NORTHING (FT): _____ **EASTING (FT):** _____
TOTAL DEPTH (FT): 35.0
DRILLED BY: LAWES / Scott/Kevin
DATUM VERT. / HORZ.: _____
LOGGED BY: G. Holmes
DATE START / END: 6/25/2018 - 7/3/2018
DRILLING DETAILS: Direct Push - Macro Core / Geoprobe 7800
WATER LEVEL DEPTHS (FT): _____
GENERAL NOTE: _____

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	0						SB-6(0-5)	(0'- 5') SILTY SAND WITH GRAVEL (SM); ~40% sand, fine to medium, ~30% gravel, fine to coarse, subrounded-subangular, ~30% fines, non plastic; max. gravel size 2.5", dry, brown, hand-cleared.
	5	S1	5/3.1	0.0			SB-6(5-10)	(5'- 10.9') WIDELY GRADED SAND WITH GRAVEL (SW); ~70% sand, fine to coarse, ~30% gravel, fine to coarse, subrounded-subangular; max. gravel size 2", dry, light brown, loose.
	10	S2	5/3.3	0.0			SB-6(10-15)	(10.9'- 20') NARROWLY GRADED SAND (SP); ~90% sand, fine to medium, ~10% gravel, fine to coarse, subrounded-subangular; max. gravel size 2", dry, brown, loose.
	15	S3	5/3.6	0.0			SB-6(15-20)	
	20	S4	5/2.7	0.0			SB-6(20-23)	(20'- 22.8') WIDELY GRADED SAND WITH GRAVEL (SW); ~75% sand, fine to coarse, ~25% gravel, fine to coarse, subrounded-subangular; max. gravel size 1", dry, tan, loose.
								(22.8'- 25') SILTY SAND WITH GRAVEL (SM); ~50% sand, fine to medium, ~30% fines, non plastic, ~20% gravel, fine

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ENVIRONMENTAL BORING LOG RI BORING LOGS.GPJ GEI TEMPLATE 11-7-13.GDT 7/24/18

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CLIENT: 71 New Street Huntington, LLC
PROJECT: RI - 71 New Street
CITY/STATE: Huntington, New York
GEI PROJECT NUMBER: 1700841

BORING LOG

SB-6

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
								to coarse, subrounded-subangular; max. gravel size 0.75", wet, brown, tight.
	25	S5	5/4.3	0.0				(25'- 27.5') SILTY SAND (SM); ~60% sand, fine, ~40% fines, non plastic; moist, light brown, tight.
							SB-6(25-30)	(27.5'- 30') SILT (ML); ~90% fines, non plastic to low plasticity, ~10% sand, fine; moist, light brown, tight.
	30	S6	5/5	0.0				(30'- 30.9') CLAY WITH SAND (CL); ~80% fines, low plasticity, ~20% sand, fine; moist, light brown, tight. (30.9'- 35') CLAY (CL); ~100% fines, low plasticity; moist, grayish-brown, tight.
	35							End of Boring at 35 feet.

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CLO = CHEMICAL LIKE ODOR
ALO = ASPHALT LIKE ODOR

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR

GEI Consultants, Inc. P.C.
455 Winding Brook Drive
Suite 201
Glastonbury, CT 06033
(860) 368-5300

CLIENT: 71 New Street Huntington, LLC
PROJECT: RI - 71 New Street
CITY/STATE: Huntington, New York
GEI PROJECT NUMBER: 1700841

BORING LOG
PAGE 1 of 2
SB-7

LOCATION: South of North Suspected Drywells
NORTHING (FT): _____ **EASTING (FT):** _____
TOTAL DEPTH (FT): 35.0
DRILLED BY: LAWES / Scott/Kevin
DATUM VERT. / HORZ.: _____
LOGGED BY: G. Holmes
DATE START / END: 6/25/2018 - 7/3/2018
DRILLING DETAILS: Direct Push - Macro Core / Geoprobe 7800
WATER LEVEL DEPTHS (FT): _____
GENERAL NOTE: _____

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	0						SB-7(0-5)	(0'- 5') SILTY SAND WITH GRAVEL (SM); ~50% sand, fine to medium, ~30% fines, non plastic, ~20% gravel, fine to coarse, angular-subrounded; max. gravel size 3", dry, brown, hand-cleared.
	5	S1	5/3.3	0.0			SB-7(5-10)	(5'- 10') WIDELY GRADED SAND WITH GRAVEL (SW); ~60% sand, fine to coarse, ~40% gravel, fine to coarse, angular-subrounded; max. gravel size 2", dry, tan, loose.
	10	S2	5/3.6	0.0			SB-7(10-15)	(10'- 13.7') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~20% gravel, fine to coarse, angular-subrounded; max. gravel size 1.25", dry, light brown, loose.
	15	S3	5/3	0.0			SB-7(15-20)	(13.7'- 22.1') NARROWLY GRADED SAND WITH GRAVEL (SP); ~75% sand, fine to medium, ~20% gravel, fine to coarse, subangular-subrounded, ~5% fines, non plastic; max. gravel size 1", dry, light brown, loose, wet at 21.5'.
	20	S4	5/2.9	0.0			SB-7(20-21.5)	
								(22.1'- 23.3') SANDY GRAVEL (GW); ~70% gravel, fine to coarse, rounded-subangular, ~30% sand, fine to coarse; max. gravel size 1", wet, light brown, loose.

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL
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JHS = JAR HEADSPACE PID READING (PPM)

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NM = NOT MEASURED
Q_P = POCKET PENETROMETER
S_V = TORVANE PEAK

ppm = PARTS PER MILLION
IN. = INCHES
FT. = FEET

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ENVIRONMENTAL BORING LOG RI BORING LOGS.GPJ GEI TEMPLATE 11-7-13.GDT 7/24/18

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(860) 368-5300

CLIENT: 71 New Street Huntington, LLC
PROJECT: RI - 71 New Street
CITY/STATE: Huntington, New York
GEI PROJECT NUMBER: 1700841

BORING LOG

SB-7

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	25	S5	5/3.1	0.0			SB-7(25-30)	(23.3'- 25') SILTY SAND WITH GRAVEL (SM); ~50% sand, fine to medium, ~30% fines, non plastic, ~20% gravel, fine to coarse, subangular-subrounded; max. gravel size 1", wet, brown, tight. (25'- 27.4') SILTY SAND (SM); ~70% sand, fine, ~30% fines, non plastic; wet, light brown, tight. (27.4'- 30') SANDY SILT (MLS); ~70% fines, non plastic to low plasticity, ~30% sand, fine to medium; moist, light brown, tight.
	30	S6	5/5	0.0				(30'- 31.1') CLAY WITH SAND (CL); ~80% fines, low plasticity, ~20% sand, fine; moist, light brown, tight. (31.1'- 35') CLAY (CL); ~100% fines, low plasticity; moist, grayish-brown, tight.
	35							End of Boring at 35 feet.

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ENVIRONMENTAL BORING LOG RI BORING LOGS.GPJ GEI TEMPLATE 11-7-13.GDT 7/24/18

GEI Consultants, Inc. P.C.
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CLIENT: 71 New Street Huntington, LLC
PROJECT: RI - 71 New Street
CITY/STATE: Huntington, New York
GEI PROJECT NUMBER: 1700841

BORING LOG
PAGE 1 of 2
SB-8

LOCATION: North of North Suspected Drywells
NORTHING (FT): _____ **EASTING (FT):** _____
TOTAL DEPTH (FT): 35.0
DRILLED BY: LAWES / Scott/Kevin
DATUM VERT. / HORZ.: _____
LOGGED BY: G. Holmes
DATE START / END: 6/25/2018 - 7/3/2018
DRILLING DETAILS: Direct Push - Macro Core / Geoprobe 7800
WATER LEVEL DEPTHS (FT): _____
GENERAL NOTE: _____

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN/REC FT./FT.	PID (PPM)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	0	S1	5/1.1	0.0			SB-8(0-5)	(0'- 5') SILTY SAND WITH GRAVEL (SM); ~60% sand, fine to coarse, ~20% gravel, fine to coarse, subangular-subrounded, ~20% fines, non plastic; max. gravel size 1.5", dry, brown, loose.
	5	S2	5/3.4	0.0			SB-8(5-10)	(5'- 13.3') WIDELY GRADED SAND WITH GRAVEL (SW); ~70% sand, fine to coarse, ~30% gravel, fine to coarse, angular-subrounded; max. gravel size 2", dry, brown, loose.
	10	S3	5/3.6	0.0			SB-8(10-15)	(13.3'- 15') WIDELY GRADED SAND WITH GRAVEL (SW); ~60% sand, fine to coarse, ~40% gravel, fine to coarse, subrounded-subangular; max. gravel size 1.25", dry, light brown, loose.
	15	S4	5/3.6	0.0			SB-8(15-20)	(15'- 23.4') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~20% gravel, fine to coarse, subangular-subrounded; max. gravel size 1", dry, light brown, loose, wet at 22.5'.
	20	S5	5/3	0.0			SB-8(20-22.5)	(23.4'- 25') SILTY SAND (SM); ~50% sand, fine to medium,

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ENVIRONMENTAL BORING LOG RI BORING LOGS.GPJ GEI TEMPLATE 11-7-13.GDT 7/24/18

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455 Winding Brook Drive
Suite 201
Glastonbury, CT 06033
(860) 368-5300

CLIENT: 71 New Street Huntington, LLC
PROJECT: RI - 71 New Street
CITY/STATE: Huntington, New York
GEI PROJECT NUMBER: 1700841

BORING LOG

SB-8

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	25	S6	5/4.1	0.0			SB-8(25-30)	~40% fines, non plastic, ~10% gravel, fine; wet, brown. (25'- 25.9') SILTY SAND (SM); ~60% sand, fine to medium, ~30% fines, non plastic, ~10% gravel, fine to coarse, subrounded; max. gravel size 0.75", wet, light brown, tight. (25.9'- 26.3') WIDELY GRADED SAND WITH GRAVEL (SW); ~75% sand, fine to coarse, ~25% gravel, fine to coarse, subangular-subrounded; max. gravel size 1", wet, brown, loose. (26.3'- 27.9') SILTY SAND (SM); ~70% sand, fine to medium, ~30% fines, non plastic; wet, light brown, tight. (27.9'- 30') SANDY SILT (MLS); ~60% fines, non plastic, ~40% sand, fine to medium; moist, light brown, tight. (30'- 30.7') CLAY WITH SAND (CL); ~80% fines, low plasticity, ~20% sand, fine; moist, grayish-brown, tight. (30.7'- 35') CLAY (CL); ~100% fines, low plasticity; moist, grayish-brown, tight.
	30	S7	5/5	0.0				
	35							End of Boring at 35 feet.

NOTES:

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CLIENT: 71 New Street Huntington, LLC
PROJECT: RI - 71 New Street
CITY/STATE: Huntington, New York
GEI PROJECT NUMBER: 1700841

BORING LOG
PAGE 1 of 2
SB-9

LOCATION: East of North Suspected Drywells
NORTHING (FT): _____ **EASTING (FT):** _____
TOTAL DEPTH (FT): 35.0
DRILLED BY: LAWES / Scott/Kevin
DATUM VERT. / HORZ.: _____
LOGGED BY: G. Holmes
DATE START / END: 6/25/2018 - 7/3/2018
DRILLING DETAILS: Direct Push - Macro Core / Geoprobe 7800
WATER LEVEL DEPTHS (FT): _____
GENERAL NOTE: _____

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	0						SB-9(0-5)	(0'- 5') NARROWLY GRADED SAND WITH GRAVEL (SP); ~80% sand, fine to medium, ~20% gravel, fine to coarse, subrounded-subangular; max. gravel size 2.5", dry, brown, red brick fragments, FILL.
	5	S1	5/3.2	0.0			SB-9(5-10)	(5'- 10') NARROWLY GRADED SAND WITH GRAVEL (SP); ~70% sand, fine to medium, ~30% gravel, fine to coarse, subrounded-subangular; max. gravel size 2", dry, brown, loose.
	10	S2	5/2.8	0.0			SB-9(10-15)	(10'- 18.9') WIDELY GRADED SAND WITH GRAVEL (SW); ~60% sand, fine to coarse, ~40% gravel, fine to coarse, subangular-subrounded; max. gravel size 2", dry, light brown, loose.
	15	S3	5/3.2	0.0			SB-9(15-20)	
	20	S4	5/3.1	0.0			SB-9(20-23)	(18.9'- 20') NARROWLY GRADED SAND WITH GRAVEL (SP); ~75% sand, fine to medium, ~20% gravel, fine to coarse, subrounded-subangular, ~5% fines, non plastic; max. gravel size 1.25", dry, brown, loose. (20'- 23.1') WIDELY GRADED SAND WITH GRAVEL (SW); ~75% sand, fine to coarse, ~25% gravel, fine to coarse, subrounded-subangular; max. gravel size 1", moist, brown, loose, wet at 23'. (23.1'- 25') SILTY SAND WITH GRAVEL (SM); ~50% sand,

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ENVIRONMENTAL BORING LOG RI BORING LOGS.GPJ GEI TEMPLATE 11-7-13.GDT 7/24/18

GEI Consultants, Inc. P.C.
455 Winding Brook Drive
Suite 201
Glastonbury, CT 06033
(860) 368-5300

CLIENT: 71 New Street Huntington, LLC
PROJECT: RI - 71 New Street
CITY/STATE: Huntington, New York
GEI PROJECT NUMBER: 1700841

BORING LOG

SB-9

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	25	S5	5/4.3	0.0			SB-9(25-30)	fine, ~30% fines, non plastic, ~20% gravel, fine to coarse, subrounded-subangular; max. gravel size 0.75", wet, brown, tight. (25'- 28.1') SILTY SAND (SM); ~60% sand, fine to medium, ~30% fines, non plastic, ~10% gravel, fine, subrounded; max. gravel size 0.5", wet, brown, tight. (28.1'- 30.3') SANDY SILT (MLS); ~70% fines, non plastic to low plasticity, ~30% sand, fine; wet, light brown, tight. (30.3'- 35') CLAY (CL); ~100% fines, low plasticity; moist, grayish-brown, tight.
	30	S6	5/4.4	0.0				
	35							End of Boring at 35 feet.

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GROUNDWATER OBSERVATION WELL REPORT

MW-1

Project	Remedial Investigation		
Location	71 New Street, Huntington, NY	**PG.**	**1 OF 1**
Client	71 New Street Huntington, LLC	Boring No.	MW-1
Contractor	LAWES	Driller	Scott/Kevin
Location	Southwest corner of Site
Inspected by	George Holmes/Jordanna Kendrot	Date Started	6/26/2018
Checked by	Ed Bradshaw	Date Completed	6/27/2018
Project No.	1700841

SURVEY N
DATUM E

GROUND ELEVATION

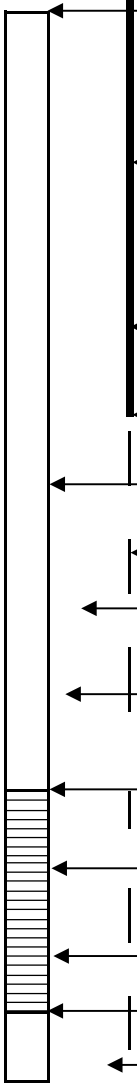
GENERAL SOIL CONDITIONS (Not to Scale)

Fill

Sand with Gravel

Sandy Silt and Clay with Sand

Sand with Gravel and Clay



LENGTH OF SURFACE CASING ABOVE GROUND SURFACE (FT)	0.0 (flush-mounted)
LENGTH OF RISER PIPE ABOVE GROUND SURFACE (FT)	0.0 (flush-mounted)
THICKNESS OF SURFACE SEAL BELOW GROUND SURFACE, IF ANY (FT)	1'
TYPE OF SURFACE SEAL (indicate any additional seals)	cement
ID OF SURFACE CASING (IN)	NA
TYPE OF SURFACE CASING	NA
DEPTH BOTTOM OF CASING (FT)	1'
RISER PIPE DIAMETER(IN)	2"
TYPE OF RISER PIPE	Sch 40 PVC
DIAMETER OF BOREHOLE (IN)	6"
TYPE OF BACKFILL AROUND RISER PIPE	cement/bentonite grout
DEPTH TOP OF SEAL, IF ANY (FT)	34'
TYPE OF SEAL	bentonite pellets
DEPTH BOTTOM OF SEAL (FT)	37'
DEPTH TOP OF PERVIOUS SECTION	40'
TYPE OF PERVIOUS SECTION	sch 40 PVC
DESCRIBE OPENINGS	0.010 slot
PERVIOUS SECTION DIAMETER (IN)	2"
TYPE OF BACKFILL AROUND PERVIOUS SECTION	# 1 Sand
DEPTH BOTTOM OF PERVIOUS SECTION (FT)	50'
DEPTH BOTTOM OF SAND COLUMN (FT)	50'
ELEV./DEPTH TOP OF SEAL, IF ANY (FT)	NA
TYPE OF SEAL	
ELEV./DEPTH BOTTOM OF SEAL (FT)	NA
TYPE OF BACKFILL BELOW PERVIOUS SECTION, IF ANY	NA

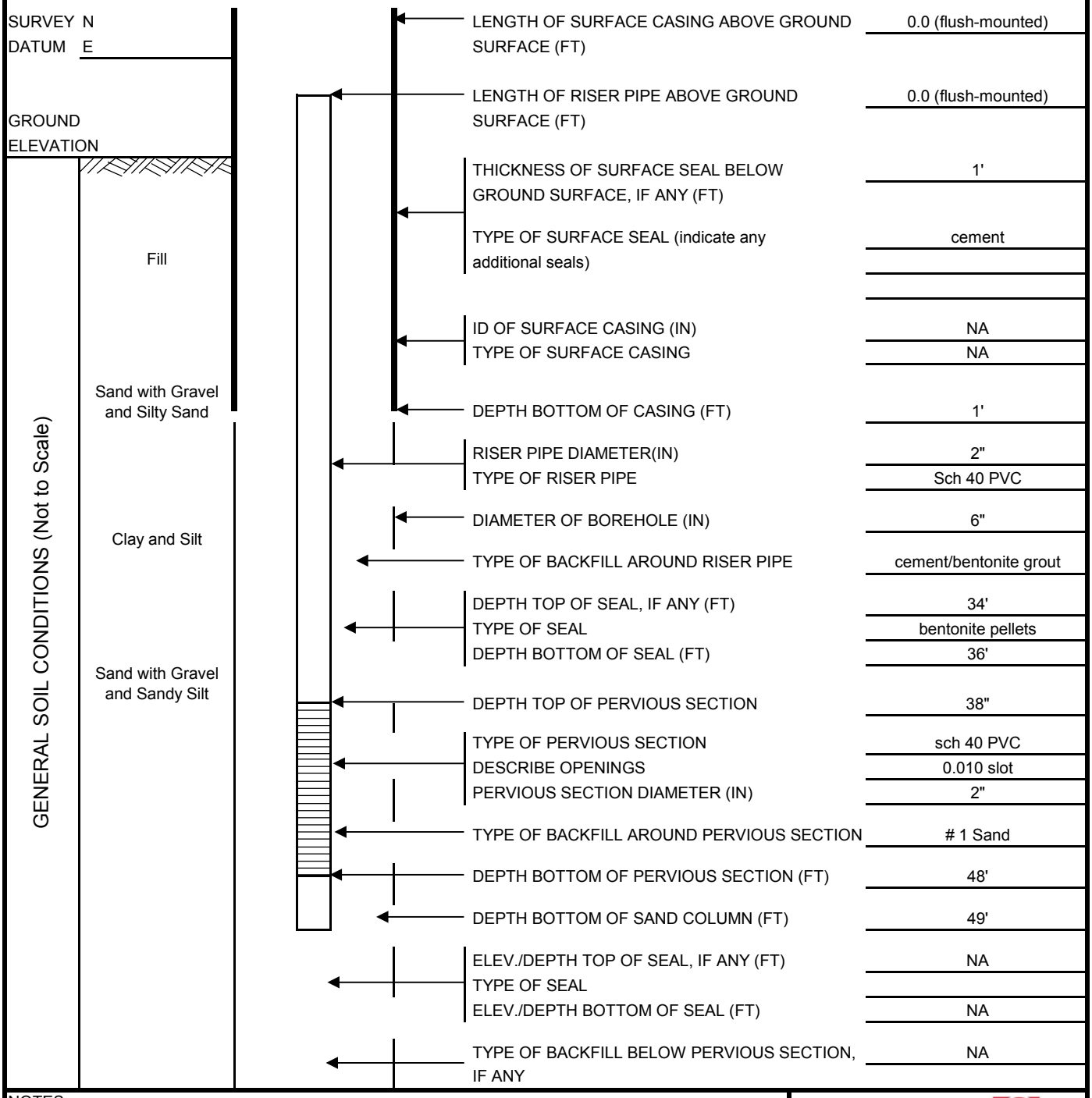
NOTES:

GEI Consultants

GROUNDWATER OBSERVATION WELL REPORT

MW-2

Project	Remedial Investigation		
Location	71 New Street, Huntington, NY	**PG.**	**1 OF 1**
Client	71 New Street Huntington, LLC	Boring No.	MW-2
Contractor	LAWES	Driller Kevin	Location: Northwest corner of Site
Inspected by	George Holmes/Jordanna Kendrot	Date Started 6/27/2018	
Checked by	Ed Bradshaw	Date Completed 6/28/2018	Project No. 1700841



LENGTH OF SURFACE CASING ABOVE GROUND SURFACE (FT)	0.0 (flush-mounted)
LENGTH OF RISER PIPE ABOVE GROUND SURFACE (FT)	0.0 (flush-mounted)
THICKNESS OF SURFACE SEAL BELOW GROUND SURFACE, IF ANY (FT)	1'
TYPE OF SURFACE SEAL (indicate any additional seals)	cement
ID OF SURFACE CASING (IN)	NA
TYPE OF SURFACE CASING	NA
DEPTH BOTTOM OF CASING (FT)	1'
RISER PIPE DIAMETER(IN)	2"
TYPE OF RISER PIPE	Sch 40 PVC
DIAMETER OF BOREHOLE (IN)	6"
TYPE OF BACKFILL AROUND RISER PIPE	cement/bentonite grout
DEPTH TOP OF SEAL, IF ANY (FT)	34'
TYPE OF SEAL	bentonite pellets
DEPTH BOTTOM OF SEAL (FT)	36'
DEPTH TOP OF PERVIOUS SECTION	38"
TYPE OF PERVIOUS SECTION	sch 40 PVC
DESCRIBE OPENINGS	0.010 slot
PERVIOUS SECTION DIAMETER (IN)	2"
TYPE OF BACKFILL AROUND PERVIOUS SECTION	# 1 Sand
DEPTH BOTTOM OF PERVIOUS SECTION (FT)	48'
DEPTH BOTTOM OF SAND COLUMN (FT)	49'
ELEV./DEPTH TOP OF SEAL, IF ANY (FT)	NA
TYPE OF SEAL	
ELEV./DEPTH BOTTOM OF SEAL (FT)	NA
TYPE OF BACKFILL BELOW PERVIOUS SECTION, IF ANY	NA

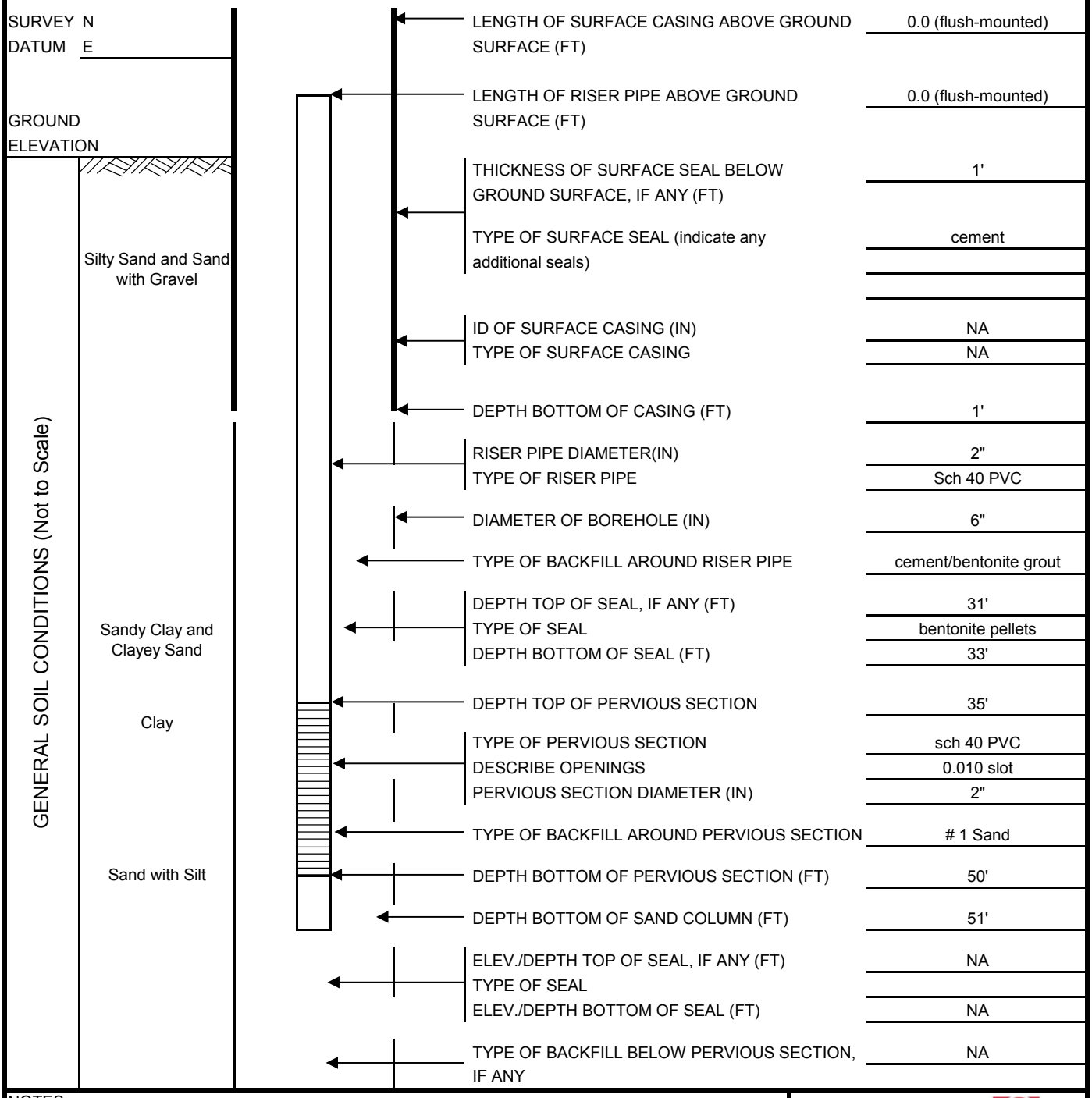
NOTES:

GEI Consultants

GROUNDWATER OBSERVATION WELL REPORT

MW-3

Project	Remedial Investigation		
Location	71 New Street, Huntington, NY	**PG.**	**1 OF 1**
Client	71 New Street Huntington, LLC	Boring No.	MW-3
Contractor	LAWES	Driller Kevin	Location: Southeast corner of Site
Inspected by	George Holmes	Date Started 6/29/2018	
Checked by	Ed Bradshaw	Date Completed 6/29/2018	Project No. 1700841



NOTES:

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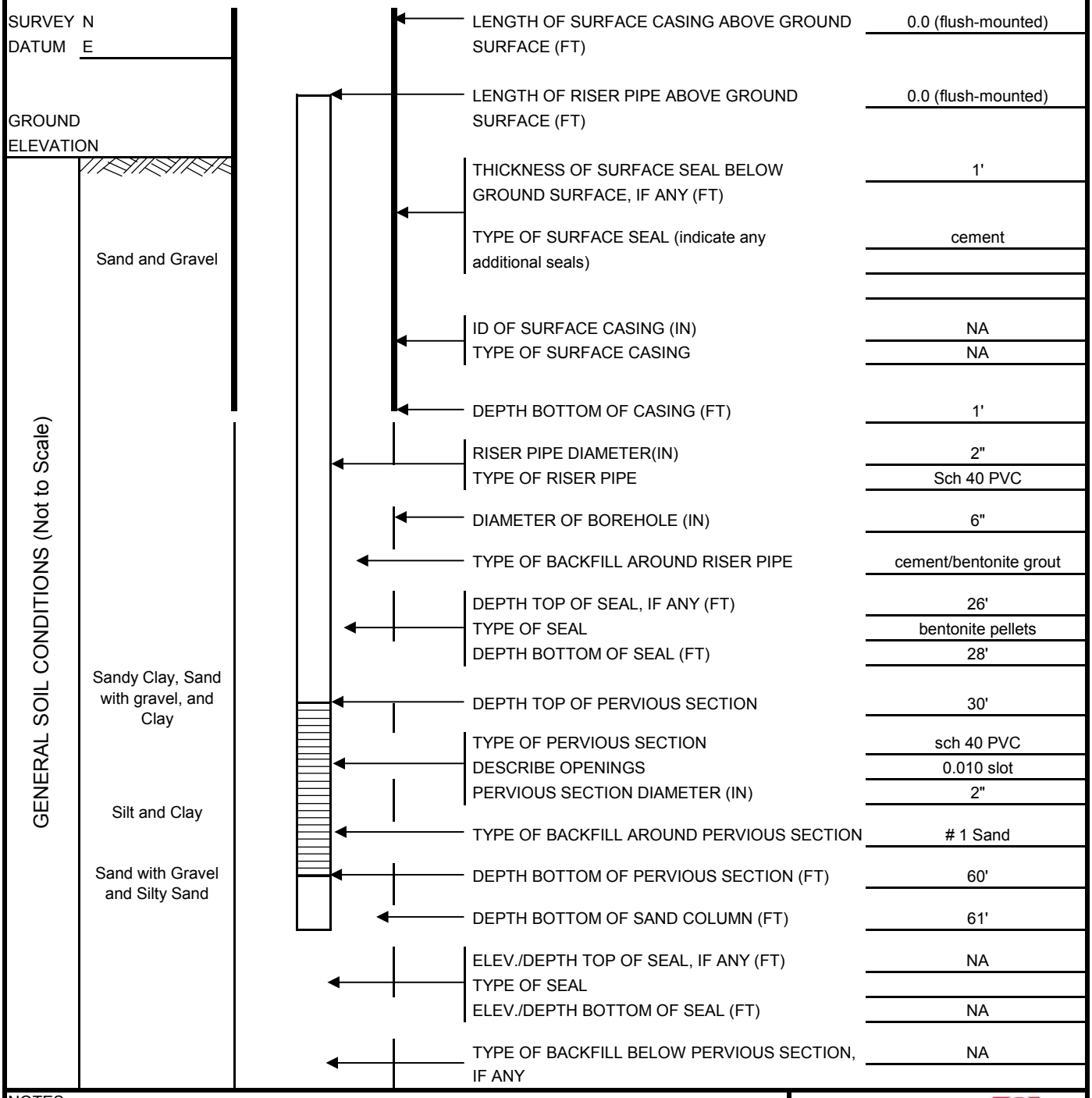
GROUNDWATER OBSERVATION WELL REPORT

MW-4

Project	Remedial Investigation		
Location	71 New Street, Huntington, NY	**PG.**	**1 OF 1**
Client	71 New Street Huntington, LLC	Boring No.	MW-4
Contractor	LAWES	Driller Carl	Location: Northeast corner of Site
Inspected by	George Holmes	Date Started 7/2/2018	
Checked by	Ed Bradshaw	Date Completed 7/2/2018	Project No. 1700841



NOTES:

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Appendix C

Citizen Participation Plan

NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

Brownfield Cleanup Program

Citizen Participation Plan
for
71 New Street Huntington, LLC

January 2018

C152248
71 New Street
Huntington
Suffolk, New York

Contents

* * * * *

Note: The information presented in this Citizen Participation Plan was current as of the date of its approval by the New York State Department of Environmental Conservation. Portions of this Citizen Participation Plan may be revised during the site's investigation and cleanup process.

Applicant: **71 New Street Huntington, LLC**
Site Name: **71 New Street Huntington**
Site Address: **71 New Street**
Site County: **Suffolk**
Site Number: **C152248**

1. What is New York's Brownfield Cleanup Program?

New York's Brownfield Cleanup Program (BCP) works with private developers to encourage the voluntary cleanup of contaminated properties known as "brownfields" so that they can be reused and developed. These uses include recreation, housing, and business.

A *brownfield* is any real property that is difficult to reuse or redevelop because of the presence or potential presence of contamination. A brownfield typically is a former industrial or commercial property where operations may have resulted in environmental contamination. A brownfield can pose environmental, legal, and financial burdens on a community. If a brownfield is not addressed, it can reduce property values in the area and affect economic development of nearby properties.

The BCP is administered by the New York State Department of Environmental Conservation (NYSDEC) which oversees Applicants who conduct brownfield site investigation and cleanup activities. An Applicant is a person who has requested to participate in the BCP and has been accepted by NYSDEC. The BCP contains investigation and cleanup requirements, ensuring that cleanups protect public health and the environment. When NYSDEC certifies that these requirements have been met, the property can be reused or redeveloped for the intended use.

For more information about the BCP, go online at:
http://www.dec.ny.gov/chemical/8450.html .

2. Citizen Participation Activities

Why NYSDEC Involves the Public and Why It Is Important

NYSDEC involves the public to improve the process of investigating and cleaning up contaminated sites, and to enable citizens to participate more fully in decisions that affect their health, environment, and social well-being. NYSDEC provides opportunities for citizen involvement and encourages early two-way communication with citizens before decision makers form or adopt final positions.

Involving citizens affected and interested in site investigation and cleanup programs is important for many reasons. These include:

- Promoting the development of timely, effective site investigation and cleanup programs that protect public health and the environment

- Improving public access to, and understanding of, issues and information related to a site and that site's investigation and cleanup process

- Providing citizens with early and continuing opportunities to participate in NYSDEC's site investigation and cleanup process

- Ensuring that NYSDEC makes site investigation and cleanup decisions that benefit from input that reflects the interests and perspectives found within the affected community

- Encouraging dialogue to promote the exchange of information among the affected/interested public, State agencies, and other interested parties that strengthens trust among the parties, increases understanding of site and community issues and concerns, and improves decision making.

This Citizen Participation (CP) Plan provides information about how NYSDEC will inform and involve the public during the investigation and cleanup of the site identified above. The public information and involvement program will be carried out with assistance, as appropriate, from the Applicant.

Project Contacts

Appendix A identifies NYSDEC project contact(s) to whom the public should address questions or request information about the site's investigation and cleanup program. The public's suggestions about this CP Plan and the CP program for the site are always welcome. Interested people are encouraged to share their ideas and suggestions with the project contacts at any time.

Locations of Reports and Information

The locations of the reports and information related to the site's investigation and cleanup program also are identified in Appendix A. These locations provide convenient access to important project documents for public review and comment. Some documents may be placed on the NYSDEC web site. If this occurs, NYSDEC will inform the public in fact sheets distributed about the site and by other means, as appropriate.

Site Contact List

Appendix B contains the site contact list. This list has been developed to keep the community informed about, and involved in, the site's investigation and cleanup process. The site contact list will be used periodically to distribute fact sheets that provide updates about the status of the project. These will include notifications of upcoming activities at the site (such as fieldwork), as well as availability of project documents and announcements about public comment periods.
The site contact list includes, at a minimum:

- chief executive officer and planning board chairperson of each county, city, town and village in which the site is located;
- residents, owners, and occupants of the site and properties adjacent to the site;
- the public water supplier which services the area in which the site is located;
- any person who has requested to be placed on the site contact list;
- the administrator of any school or day care facility located on or near the site for purposes of posting and/or dissemination of information at the facility;
- location(s) of reports and information.

The site contact list will be reviewed periodically and updated as appropriate. Individuals and organizations will be added to the site contact list upon request. Such requests should be submitted to the NYSDEC project contact(s) identified in Appendix A. Other additions to the site contact list may be made at the discretion of the NYSDEC project manager, in consultation with other NYSDEC staff as appropriate.

Note: The first site fact sheet (usually related to the draft Remedial Investigation Work Plan) is distributed both by paper mailing through the postal service and through DEC Delivers, its email listserv service. The fact sheet includes instructions for signing up with the appropriate county listserv to receive future notifications about the site. See http://www.dec.ny.gov/chemical/61092.html .

Subsequent fact sheets about the site will be distributed exclusively through the listserv, except for households without internet access that have indicated the need to continue to receive site information in paper form. Please advise the NYSDEC site project manager identified in Appendix A if that is the case. Paper mailings may continue during the investigation and cleanup process for some sites, based on public interest and need.

CP Activities

The table at the end of this section identifies the CP activities, at a minimum, that have been and will be conducted during the site's investigation and cleanup program. The

flowchart in Appendix D shows how these CP activities integrate with the site investigation and cleanup process. The public is informed about these CP activities through fact sheets and notices distributed at significant points during the program. Elements of the investigation and cleanup process that match up with the CP activities are explained briefly in Section 5.

- **Notices and fact sheets** help the interested and affected public to understand contamination issues related to a site, and the nature and progress of efforts to investigate and clean up a site.

- **Public forums, comment periods and contact with project managers** provide opportunities for the public to contribute information, opinions and perspectives that have potential to influence decisions about a site's investigation and cleanup.

The public is encouraged to contact project staff at any time during the site's investigation and cleanup process with questions, comments, or requests for information.

This CP Plan may be revised due to changes in major issues of public concern identified in Section 3 or in the nature and scope of investigation and cleanup activities. Modifications may include additions to the site contact list and changes in planned citizen participation activities.

Technical Assistance Grant

NYSDEC must determine if the site poses a significant threat to public health or the environment. This determination generally is made using information developed during the investigation of the site, as described in Section 5.

If the site is determined to be a significant threat, a qualifying community group may apply for a Technical Assistance Grant (TAG). The purpose of a TAG is to provide funds to the qualifying group to obtain independent technical assistance. This assistance helps the TAG recipient to interpret and understand existing environmental information about the nature and extent of contamination related to the site and the development/implementation of a remedy.

An eligible community group must certify that its membership represents the interests of the community affected by the site, and that its members' health, economic well-being or enjoyment of the environment may be affected by a release or threatened release of contamination at the site.

As of the date the declaration (page 2) was signed by the NYSDEC project manager, it has been determined that the site does not pose a significant threat.

To verify the significant threat status of the site, the interested public may contact the NYSDEC project manager identified in Appendix A.

For more information about TAGs, go online at http://www.dec.ny.gov/regulations/2590.html

Note: The table identifying the citizen participation activities related to the site's investigation and cleanup program follows on the next page:

Citizen Participation Activities	Timing of CP Activity(ies)
Application Process:	
• Prepare site contact list • Establish document repository(ies)	At time of preparation of application to participate in the BCP.
• Publish notice in Environmental Notice Bulletin (ENB) announcing receipt of application and 30-day public comment period • Publish above ENB content in local newspaper • Mail above ENB content to site contact list • Conduct 30-day public comment period	When NYSDEC determines that BCP application is complete. The 30-day public comment period begins on date of publication of notice in ENB. End date of public comment period is as stated in ENB notice. Therefore, ENB notice, newspaper notice, and notice to the site contact list should be provided to the public at the same time.
After Execution of Brownfield Site Cleanup Agreement (BCA):	
• Prepare Citizen Participation (CP) Plan	Before start of Remedial Investigation **Note:** Applicant must submit CP Plan to NYSDEC for review and approval within 20 days of the effective date of the BCA.
Before NYSDEC Approves Remedial Investigation (RI) Work Plan:	
• Distribute fact sheet to site contact list about proposed RI activities and announcing 30-day public comment period about draft RI Work Plan • Conduct 30-day public comment period	Before NYSDEC approves RI Work Plan. If RI Work Plan is submitted with application, public comment periods will be combined and public notice will include fact sheet. Thirty-day public comment period begins/ends as per dates identified in fact sheet.
After Applicant Completes Remedial Investigation:	
• Distribute fact sheet to site contact list that describes RI results	Before NYSDEC approves RI Report
Before NYSDEC Approves Remedial Work Plan (RWP):	
• Distribute fact sheet to site contact list about draft RWP and announcing 45-day public comment period • Public meeting by NYSDEC about proposed RWP (if requested by affected community or at discretion of NYSDEC project manager) • Conduct 45-day public comment period	Before NYSDEC approves RWP. Forty-five day public comment period begins/ends as per dates identified in fact sheet. Public meeting would be held within the 45-day public comment period.
Before Applicant Starts Cleanup Action:	

Citizen Participation Activities	Timing of CP Activity(ies)
• Distribute fact sheet to site contact list that describes upcoming cleanup action	Before the start of cleanup action.
After Applicant Completes Cleanup Action:	
• Distribute fact sheet to site contact list that announces that cleanup action has been completed and that NYSDEC is reviewing the Final Engineering Report • Distribute fact sheet to site contact list announcing NYSDEC approval of Final Engineering Report and issuance of Certificate of Completion (COC)	At the time the cleanup action has been completed. **Note:** The two fact sheets are combined when possible if there is not a delay in issuing the COC.

3. Major Issues of Public Concern

This section of the CP Plan identifies major issues of public concern that relate to the site. Additional major issues of public concern may be identified during the course of the site's investigation and cleanup process.

At the former underground storage tank (UST) location, no volatile organic compounds (VOCs) were detected above CP-51 soil cleanup levels. The analytical results identified two semivolatile organic compounds (SVOCs) marginally exceeding CP-51 soil cleanup levels, benzo(k)flouranthene at 830 micrograms per kilogram (µg/Kg) and indeno(1,2,3-cd)pyrene at 660 µg/Kg, compared to their cleanup levels of 800 µg/Kg and 500 µg/Kg, respectively. The detected concentrations do not exceed SCDHS Article 12 action levels for these compounds which are 3,400 µg/Kg and 16,000 µg/Kg, respectively. However, the benzo(k)flouranthene and indeno(1,2,3-cd)pyrene concentrations exceeded their unrestricted use levels of 800 µg/Kg and 500 µg/Kg, respectively, in accordance with 6 NYCRR Part 375 unrestricted soil cleanup objectives (Track 1) under the New York State Brownfield Cleanup Program (BCP). The groundwater in this location show no exceedances of VOCs or SVOCs in the sample. Formaldehyde was detected above the New York Ambient Water Quality Value (AWQV) of 8 microgram per liter (µg/L), at a concentration of 62 µg/L. Eight of the eleven metals analyzed exceeded AWQVs. These metals included arsenic, barium, beryllium, cadmium, chromium, copper, lead, and nickel. It is noted that the analyses were of non-filtered samples and could be related to the metals being entrained on the soil particles and not representative of dissolved concentrations in the groundwater.

At the drywell location along the north side of the property, soil analytical results did not identify any VOCs, SVOCs, or metals exceeding Suffolk County Department of Health Services (SCDHS) SOP 9-95 soil cleanup objectives (SCOs). Formaldehyde was detected at 22,000 µg/Kg, above the SCDHS SCO of 1,000 µg/Kg. There is no BCP Track 1 SCO for formaldehyde. Two metals, arsenic at 14.4 mg/Kg and mercury at 0.22 mg/Kg, exceeded their BCP Track 1 SCOs of 13 mg/Kg and 0.18 mg/Kg, respectively. Groundwater in this location showed no exceedances for VOCs or SVOCs in the sample. Formaldehyde was detected above the AWQV of 8 µg/L, at a concentration of 130 µg/L. Eight of the eleven metals analyzed exceeded AWQVs. These metals included arsenic, barium, beryllium, cadmium, chromium, copper, lead, and nickel. It is noted that the analyses were of non-filtered samples and could be related to the metals being entrained on the soil particles and not representative of dissolved concentrations in the groundwater.

At the basement drain and suspected drywell location soil analytical results did not identify any VOCs, SVOCs, formaldehyde, or metals exceeding SCDHS or BCP Track 1 SCOs. Groundwater analytical results show no exceedances of VOCs or SVOCs in the sample. Formaldehyde was detected above the AWQV of 8 µg/L, at a concentration of

120 µg/L. Eight of the eleven metals analyzed exceeded AWQVs. These metals included arsenic, barium, beryllium, cadmium, chromium, copper, lead, and nickel. It is noted that the analyses were of non-filtered samples and could be related to the metals being entrained on the soil particles and not representative of dissolved concentrations in the groundwater.

At the exterior rear stairway drain, the soil analytical results did not identify any VOCs, SVOCs, formaldehyde, or metals exceeding SCDHS SCOs. However, two metals, copper at 72.8 mg/Kg and lead at 229 mg/Kg, exceeded their BCP Track 1 SCOs of 50 mg/Kg and 63 mg/Kg, respectively. No groundwater sample was collected in the area of this drain.

Water is supplied to the project site through municipal sources available in this area of Huntington, New York. No on-site water supply wells are present on the project site.

Major issues of public concern may be identified during the course of the Site's investigation and cleanup process. Currently, additional investigation of onsite soil in the area of the suspected UST is planned during removal of the UST, as well as the investigation of soil vapor, indoor air quality and shallow soil and groundwater quality across the site. The additional investigation in the UST area will help determine the extent of soil excavation needed to meet cleanup objectives.

The Site remediation will be carried out by professionals experienced in performing similar activities. All Site work will be conducted under a Site-wide Health and Safety Plan. Ground intrusive Site work conducted outside of the building will be performed under a Community Air Monitoring Program approved by the NYSDEC and the New York State Department of Health (NYSDOH). Exterior Site remediation, if necessary, will be conducted over limited time duration and during normal business hours. If excavation is necessary, it will likely be limited in nature so traffic is not expected to be significantly impacted. All soil excavations will be secured as needed to reduce the risk of injury and potential exposure to contaminated materials.

4. Site Information

Appendix C contains a map identifying the location of the site.

Site Description

The Subject Property, located at 71 New Street Huntington, Suffolk County, New York, includes one (1) rectangular-shaped parcel totaling approximately 0.31 acres in an urban setting. The Subject Property is currently improved with one (1) 7,100 square

foot commercial building. The building has two (2) floors and a basement. Current adjacent and nearby property uses are described as follows:

North - The property is bordered to the north by an insurance company.
South - The property is bordered to the south by a professional office.
East - The property is bordered to the east by New Street, then a parking lot.
West - The property is bordered to the west by a single-family residence.

History of Site Use, Investigation, and Cleanup

The Town of Huntington Department of Assessment files indicated the building was constructed prior to 1900 and was originally utilized as a single-family residence, then as a funeral parlor before being converted into a professional office building (and it was reported that the building is to be demolished in the near future). The building and associated parking lot occupy the majority of the parcel which is bordered by municipal walkways and right-of-ways.

The following environmental site investigation reports have been prepared for the Site. These include:

- Geotechnical Report (GR), GEI Consultants, Inc., P.C., February 2, 2017
- Phase I Environmental Site Assessment (ESA), Middleton Environmental Inc.(MEI) February 6, 2017
- Phase II Environmental Subsurface Investigation (ESI), GEI Consultants, Inc., P.C.,
  February 23, 2017

<u>Phase I ESA</u>

The Phase I ESA identified the following recognized environmental concerns (RECs) were identified for the project site:

To address these RECs, it was recommended that a Phase II ESI be conducted for the project site to characterize soil, drywell sediment, and groundwater in the areas of the RECs.

- The property manager indicated that this tank has been abandoned in place. However, there was no documentation pertaining to any past tank tests or abandonment information. Given the fact that the building is to be demolished in the near future, it is recommended that soil borings be extracted from the

perimeter of this tank to determine if any contamination from past tank leakage has impacted the subsurface.

- MEI observed one (1) floor drain inside the basement area of the building. The observed floor drain did not show any signs of chemical or petroleum staining. Given the past usage of the Subject Property and the fact that the building is to be demolished in the near future, it is recommended that this floor drain be dye tested to determine discharge endpoint. If drain discharges directly to the ground or an on-site cesspool or drywell, it is recommended that a sample of the sediment from the base of the drain or cesspool/drywell should be extracted and analyzed to determine if any contamination from past embalming activities has impacted the subsurface.

The Phase II ESI was conducted during February 2017. The Phase II ESI included a geophysical survey conducted to investigate the presence of subsurface tanks, conduits and associated drainage structures, and the installation of 4 probe holes to characterize subsurface materials, and soil and groundwater quality. The investigation was conducted in two phases to maximize investigation efforts.

Based on the findings of this Phase II ESI, the following conclusions were provided:

- The soil at the UST area was marginally impacted by SVOCs.
- The soil at a northern suspected storm water drywell was impacted by formaldehyde and metals.
- All three of the groundwater samples were impacted by formaldehyde and metals. It is noted that the metals results were of non-filtered samples and that dissolved levels in groundwater could be lower; however, the exceedances for most of the metals analyzed, as well as their concentrations, indicate that elevated metals concentrations are likely present in the groundwater.

Based on the Phase II ESI findings, it was recommended that the UST and impacted soil be removed, if needed. A report will be prepared documenting the UST removal/closure activities and submitted to NYSDEC for approval. Further investigation and assessment is warranted to define the extent of metals and formaldehyde contamination in groundwater and soils and to determine the need for remediation. As stated above, the primary contaminants of concern for the site include formaldehyde and metals.

Soil – SVOCs were found in relatively shallow soils adjacent to the UST located along the north side of the site building. Concentrations of petroleum-related SVOCs exceed soil cleanup objectives for unrestricted use by up to one order of magnitude. The soil at a northern suspected storm water drywell was impacted by formaldehyde and metals.

Groundwater –Formaldehyde and metals were also found in groundwater in all monitoring wells (site-wide) above groundwater standards.

5. Investigation and Cleanup Process

Application

The Applicant has applied for and been accepted into New York's Brownfield Cleanup Program as a Volunteer. This means that the Applicant was not responsible for the disposal or discharge of the contaminants or whose ownership or operation of the site took place after the discharge or disposal of contaminants. The Volunteer must fully characterize the nature and extent of contamination onsite, and must conduct a "qualitative exposure assessment," a process that characterizes the actual or potential exposures of people, fish and wildlife to contaminants on the site and to contamination that has migrated from the site.

The Applicant in its Application proposes that the site will be used for unrestricted purposes.

To achieve this goal, the Applicant will conduct investigation and/or cleanup activities at the site with oversight provided by NYSDEC. The Brownfield Cleanup Agreement executed by NYSDEC and the Applicant sets forth the responsibilities of each party in conducting these activities at the site.

Investigation

The Applicant has completed a "partial" site investigation before it entered into the BCP. For the partial investigation, NYSDEC will determine if the data are useable.

The Applicant will conduct an investigation of the site officially called a "remedial investigation" (RI). This investigation will be performed with NYSDEC oversight. The Applicant must develop a remedial investigation workplan, which is subject to public comment.

The site investigation has several goals:

1) define the nature and extent of contamination in soil, surface water, groundwater and any other parts of the environment that may be affected;
2) identify the source(s) of the contamination;
3) assess the impact of the contamination on public health and the environment; and
4) provide information to support the development of a proposed remedy to address the contamination or the determination that cleanup is not necessary.

The Applicant submits a draft “Remedial Investigation Work Plan” to NYSDEC for review and approval. NYSDEC makes the draft plan available to the public review during a 30-day public comment period.

When the investigation is complete, the Applicant will prepare and submit a report that summarizes the results. This report also will recommend whether cleanup action is needed to address site-related contamination. The investigation report is subject to review and approval by NYSDEC.

NYSDEC will use the information in the investigation report to determine if the site poses a significant threat to public health or the environment. If the site is a “significant threat,” it must be cleaned up using a remedy selected by NYSDEC from an analysis of alternatives prepared by the Applicant and approved by NYSDEC. If the site does not pose a significant threat, the Applicant may select the remedy from the approved analysis of alternatives.

Interim Remedial Measures

An Interim Remedial Measure (IRM) is an action that can be undertaken at a site when a source of contamination or exposure pathway can be effectively addressed before the site investigation and analysis of alternatives are completed. If an IRM is likely to represent all or a significant part of the final remedy, NYSDEC will require a 30-day public comment period.

Remedy Selection

When the investigation of the site has been determined to be complete, the project likely would proceed in one of two directions:

1. The Applicant may recommend in its investigation report that no action is necessary at the site. In this case, NYSDEC would make the investigation report available for public comment for 45 days. NYSDEC then would complete its review, make any necessary revisions, and, if appropriate, approve the investigation report. NYSDEC would then issue a “Certificate of Completion” (described below) to the Applicant.

or

2. The Applicant may recommend in its investigation report that action needs to be taken to address site contamination. After NYSDEC approves the investigation report, the Applicant may then develop a cleanup plan, officially called a “Remedial Work Plan”. The Remedial Work Plan describes the Applicant’s proposed remedy for addressing contamination related to the site.

When the Applicant submits a draft Remedial Work Plan for approval, NYSDEC would announce the availability of the draft plan for public review during a 45-day public comment period.

Cleanup Action

NYSDEC will consider public comments, and revise the draft cleanup plan if necessary, before approving the proposed remedy. The New York State Department of Health (NYSDOH) must concur with the proposed remedy. After approval, the proposed remedy becomes the selected remedy. The selected remedy is formalized in the site Decision Document.

The Applicant may then design and perform the cleanup action to address the site contamination. NYSDEC and NYSDOH oversee the activities. When the Applicant completes cleanup activities, it will prepare a final engineering report that certifies that cleanup requirements have been achieved or will be achieved within a specific time frame. NYSDEC will review the report to be certain that the cleanup is protective of public health and the environment for the intended use of the site.

Certificate of Completion

When NYSDEC is satisfied that cleanup requirements have been achieved or will be achieved for the site, it will approve the final engineering report. NYSDEC then will issue a Certificate of Completion (COC) to the Applicant. The COC states that cleanup goals have been achieved, and relieves the Applicant from future liability for site-related contamination, subject to certain conditions. The Applicant would be eligible to redevelop the site after it receives a COC.

Site Management

The purpose of site management is to ensure the safe reuse of the property if contamination will remain in place. Site management is the last phase of the site cleanup program. This phase begins when the COC is issued. Site management incorporates any institutional and engineering controls required to ensure that the remedy implemented for the site remains protective of public health and the environment. All significant activities are detailed in a Site Management Plan.

An *institutional control* is a non-physical restriction on use of the site, such as a deed restriction that would prevent or restrict certain uses of the property. An institutional control may be used when the cleanup action leaves some contamination that makes the site suitable for some, but not all uses.

An *engineering control* is a physical barrier or method to manage contamination. Examples include: caps, covers, barriers, fences, and treatment of water supplies.

Site management also may include the operation and maintenance of a component of the remedy, such as a system that pumps and treats groundwater. Site management continues until NYSDEC determines that it is no longer needed.

Appendix A -
Project Contacts and Locations of Reports and Information

Project Contacts

For information about the site's investigation and cleanup program, the public may contact any of the following project staff:

New York State Department of Environmental Conservation (NYSDEC):

John Sheehan, P.G.
Project Manager
NYSDEC
Division of Environmental Remediation
50 Circle Road
Stony Brook, NY 11790
(631)444-0244

Citizen Participation Specialist
William Fonda
NYSDEC Region 1
50 Circle Road
Stony, Brook, New York 11790
Phone: 631-444-0350

New York State Department of Health (NYSDOH):

Sarita Wagh
Project Manager
NYSDOH
Empire State Plaza - Corning Tower
Room 1787
Albany, NY 12237
Phone: (518) 402-7860

Locations of Reports and Information

The facilities identified below are being used to provide the public with convenient access to important project documents:

Huntington Public Library
338 Main Street, Huntington, NY 11743
Attn: Joanne Adam
Phone: 631-427-5165
Hours: 9 am – 5 pm

NYSDEC
Division of Environmental Remediation
50 Circle Road
Stony Brook, NY 11790
Attn: John Sheehan, P.G.
Phone: 631 444-024
Hours: Monday – Friday 9 am – 4 pm
(call for appointment)

Appendix B - Site Contact List

Municipal Contacts

Town of Huntington
Supervisor (Chief Executive Officer): Chad Lupinacci
Town Hall (Room 200)
100 Main Street
Huntington, NY 11743

Director, Department of Planning and Environment: Anthony J. Aloisio
Town Hall (Room 212)
100 Main Street
Huntington, NY 11743

Other Contacts

1. Chief Executive Officer and Planning Board Chairperson for each county:

Suffolk County – Chief Executive Officer – Steven Bellone

H. Lee Dennison Bldg 100 Veterans Memorial Hwy P.O. Box 6100 Hauppauge, NY 11788
Riverhead County Center County Road 51 Riverhead, NY 11901

2. Planning Board Chairperson:

Suffolk County Planning Commissioner – Town of Huntington - Jennifer Casey
100 Main St, Huntington, NY 11743

3. Local News Media from which the community typically obtains information

Newsday
235 Pinelawn Road, Melville, New York 11747

Long Islander News
14 Wall Street, Huntington, New York 11743
631.427.7000
Info@longislandergroup.com

News 12
Assignment Desk

1 Media Crossways, Woodbury, New York 11797

4. The Public Water supplier which services the area in which the property is located

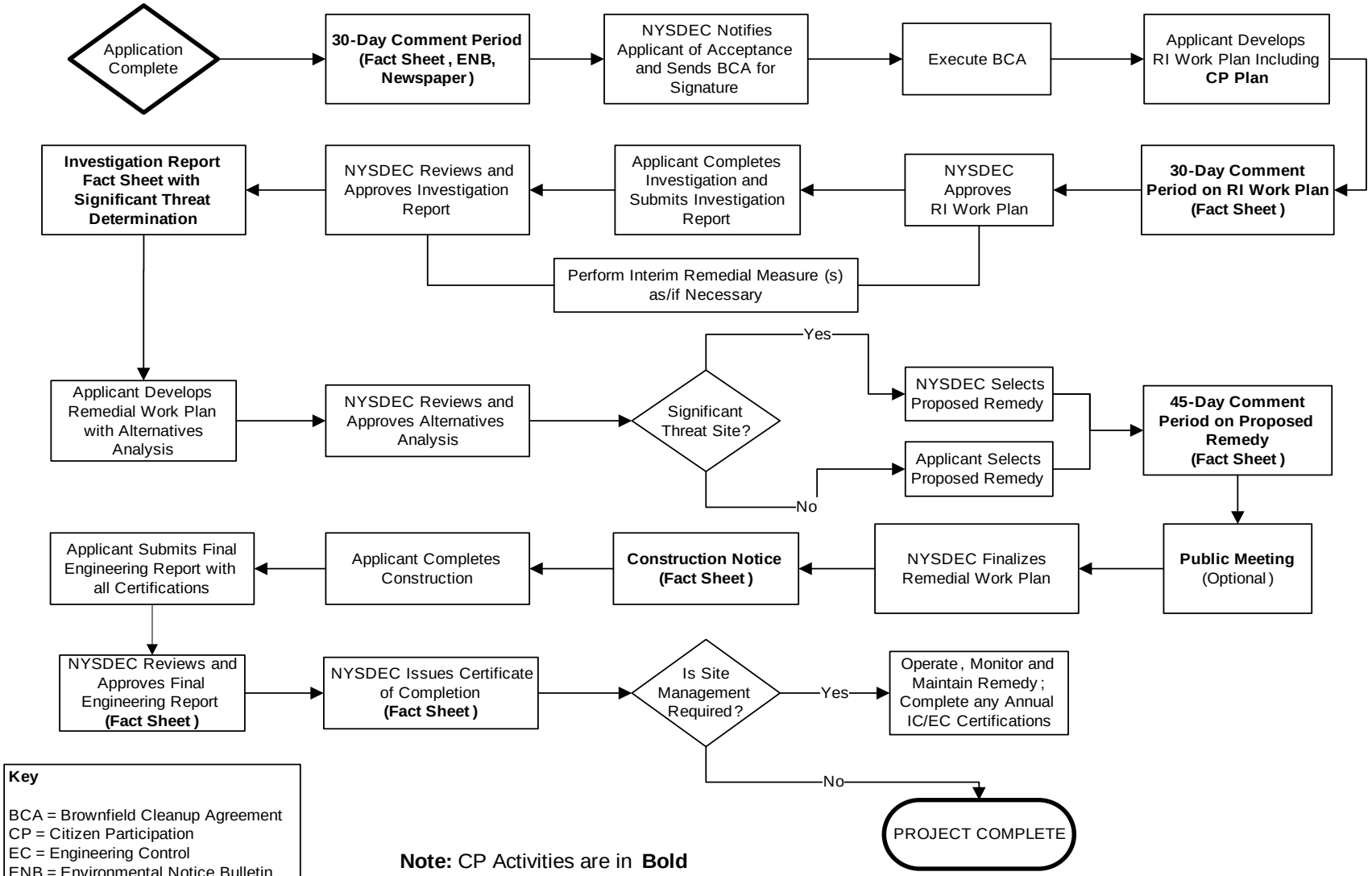
Suffolk County Water Authority– 131 Spring Road, Town of Huntington, Long Island, New York

Appendix C - Site Location Map

{Instruction to preparer: Insert a map locating the site under the above heading. Alternately, replace this page with such a map. Be sure to label the page/map as Appendix C - Site Location Map and number the page consecutively with the others.}

See Figure 1 of this RIR.

Appendix D– Brownfield Cleanup Program Process



Key

BCA = Brownfield Cleanup Agreement
CP = Citizen Participation
EC = Engineering Control
ENB = Environmental Notice Bulletin
IC = Institutional Control
RI = Remedial Investigation

Note: CP Activities are in **Bold**

NEW YORK STATE OF OPPORTUNITY. | Department of Environmental Conservation

Division of Environmental Remediation

Remedial Programs
Scoping Sheet for Major Issues of Public Concern

Instructions

This Scoping Sheet assesses major issues of public concern; impacts of the site and its remedial program on the community; community interest in the site; information the public needs; and information needed from the public.

The information generated helps to plan and conduct required citizen participation (CP) activities, and to choose and conduct additional CP activities, if appropriate. The scoping sheet can be revisited and updated as appropriate during the site's remedial process to more effectively implement the site's CP program.

Note: Use the information as an aid to prepare and update the Major Issues of Public Concern section of the site CP Plan.

General Instructions

- When to prepare: During preparation of the CP Plan for the site. It can be revisited and updated anytime during the site remedial process.
- Fill in site name and other information as appropriate.
- The Scoping Sheet may be prepared by DEC or a remedial party, but must be reviewed and approved by the DER site project manager or his/her designee.

Instructions for Numbered Parts

Consider the bulleted issues and questions below and any others that may be unique or appropriate to the site and the community to help complete the five Parts of this Scoping Sheet. Identify the issue stakeholders in Parts 1 through 3 and adjust the site's contact list accordingly.

Part 1. List Major Issues of Public Concern and Information the Community Wants.

- Is our health being impacted? (e.g. Are there problems with our drinking water or air? Are you going to test our water, yards, sumps, basements? Have health studies been done?)
- There are odors in the neighborhood. Do they come from the site and are they hazardous?
- Are there restrictions on what we may do (e.g. Can our children play outside? Can we garden? Must we avoid certain areas? Can we recreate (fish, hunt, hike, etc. on/around the site?)
- How and when were the site's contamination problems created?
- What contaminants are of concern and why? How will you look for contamination and find out where it is going? What is the schedule for doing that?
- The site is affecting our property values!
- How can we get more information (e.g. who are the project contacts?)
- How will we be kept informed and involved during the site remedial process?
- Who has been contacted in the community about site remedial activities?
- What has been done to this point? What happens next and when?
- The site is going to be cleaned up for restricted use. What does that mean? We don't want redevelopment on a "dirty" site.

Part 2. List Important Information Needed From the Community, if Applicable.

- Can the community supplement knowledge about past/current uses of the site?
- Does the community have knowledge that the site may be significantly impacting nearby people, properties, natural resources, etc.?
- Are activities currently taking place at the site or at nearby properties that may need to be restricted?
- Who may be interested or affected by the site that has not yet been identified?
- Are there unique community characteristics that could affect how information is exchanged?
- Does the community and/or individuals have any concerns they want monitored?
- Does the community have information about other sources in the area for the contamination?

Part 3. List Major Issues and Information That Need to be Communicated to the Community.

- Specific site investigation or remediation activities currently underway, or that will begin in the near future.
- The process and general schedule to investigate, remediate and, if applicable, redevelop the site.
- Current understanding about the site contamination and effects, if any, on public health and the environment.
- Site impacts on the community and any restrictions on the public's use of the site and/or nearby properties.
- Planned CP activities, their schedule, and how they relate to the site's remedial process.
- Ways for the community to obtain/provide information (document repositories, contacts, etc.).

Part 4. Community Characteristics

a. - e. Obtain information from local officials, property owners and residents, site reports, site visits, "windshield surveys," other staff, etc.

f. Has the affected community experienced other **significant** present or past environmental problems unrelated to this site? Such experiences could significantly affect public concerns and perspectives about the site; how the community will relate to project staff; the image and credibility of project staff within the community; and the ways in which project staff communicate with the community.

g. In its remedial programs, DER seeks to integrate, and be consistent with, environmental justice principles set forth in *DEC Commissioner Policy 29 on Environmental Justice* and *DER 23 – Citizen Participation Handbook for Remedial Programs*. Is the site and/or affected community wholly or partly in an Environmental Justice (EJ) Area? Use the Search feature on DEC's public web site for "environmental justice". DEC's EJ pages define an EJ area, and link to county maps to help determine if the site and/or community are in an EJ area.

h. Consider factors such as:

- Is English the primary language of the affected community? If not, provisions should be considered regarding public outreach activities such as fact sheets, meetings, door-to-door visits and other activities to ensure their effectiveness.
- The age demographics of the community. For example, is there a significant number of senior citizens in the community? It may be difficult for some to attend public meetings and use document repositories. This may suggest adopting more direct interaction with the community with activities such as door-to-door visits, additional fact sheets, visits to community and church centers, nursing homes, etc.
- How do people travel about the community? Would most people drive to a public meeting or document repository? Is there adequate public transportation?

Part 5. Affected/Interested Public.

Individuals and organizations who need or want information and input can change during the site's remedial process. This need is influenced by real, potential, or perceived impacts of the site or the remedial process. Some people may want information and input throughout the remedial process. Others may participate only during specific remedial stages, or may only be interested in particular issues.

It is important to revisit this question when reviewing this scoping sheet. Knowing who is interested in the site – and the issues that are important to them – will help to select and conduct appropriate outreach activities, and to identify their timing and the information to be exchanged.

Check all affected/interested parties that apply to the site. **Note: Adjust the site's contact list appropriately.** The following are some ways to identify affected/interested parties:

- Tax maps of adjacent property owners
- Attendees at public meetings
- Telephone discussions
- Letters and e-mails to DER, the remedial party, and other agencies
- Political jurisdictions and boundaries
- Media coverage
- Current/proposed uses of site and/or nearby properties (recreational, commercial, industrial)
- Discussions with community organizations: grass roots organizations, local environmental groups, environmental justice groups, churches, and neighborhood advisory groups

Division of Environmental Remediation

Remedial Programs
Scoping Sheet for Major Issues of Public Concern (see instructions)

Site Name: 71 New Street

Site Number: C152248

Site Address and County: 71 New Street Huntington, Suffolk County, New York

Remedial Party(ies): 71 New Street Huntington, LLC

Note: For Parts 1. – 3. the individuals, groups, organizations, businesses and units of government identified should be added to the site contact list as appropriate.

Part 1. List major issues of public concern and information the community wants. Identify individuals, groups, organizations, businesses and/or units of government related to the issue(s) and information needs.

Concentrations of petroleum-related SVOCs were found above cleanup objectives in relatively shallow soils adjacent to an underground storage tank (UST) located along the north side of the site building. No petroleum-related were found in groundwater in the area of the UST, however, formaldehyde and metals were detected above NYSDEC AWQV. The soils at the dry wells located along the north-central border of the property did not identify any VOCs or SVOCs exceeding cleanup objectives. Formaldehyde was detected above cleanup objectives as well as arsenic and mercury. Groundwater in the area of the dry wells did not show any VOCs or SVOCs above NYSDEC AWQV. Formaldehyde and metals were detected in excess of the NYSDEC AWQV. Concentrations of formaldehyde were also detected above the NYSDEC AWQV in the area of the basement drain and associated dry well. The soils in this area did not show evidence of impacts from VOCs, SVOCs, metals or formaldehyde. No soil is exposed at the site as the surface at the site is either occupied by buildings or paved.

Water is supplied to the project site through municipal sources available in this area of Huntington, New York. No on-site water supply wells are present on the project site.

How were these issues and/or information needs identified?

From subsurface investigations, ie. soil and groundwater sampling.

Part 2. List important information needed **from** the community, if applicable. Identify individuals, groups, organizations, businesses and/or units of government related to the information needed.

N/A

How were these information needs identified?

N/A

Part 3. List major issues and information that need to be communicated **to** the community. Identify individuals, groups, organizations, businesses and/or units of government related to the issue(s) and/or information.

Major issues of public concern may be identified during the course of the Site's investigation and cleanup

process. Currently, additional investigation of onsite soil in the area of the suspected UST is planned during removal of the UST, as well as the investigation of soil vapor, indoor air quality and shallow soil and groundwater quality across the site. The additional investigation in the UST area will help determine the extent of soil excavation needed to meet cleanup objectives.

The Site remediation will be carried out by professionals experienced in performing similar activities. All Site work will be conducted under a Site-wide Health and Safety Plan. Ground intrusive Site work conducted outside of the building will be performed under a Community Air Monitoring Program approved by the NYSDEC and the New York State Department of Health (NYSDOH). Exterior Site remediation, if necessary, will be conducted over limited time duration and during normal business hours. If excavation is necessary, it will likely be limited in nature so traffic is not expected to be significantly impacted. All soil excavations will be secured as needed to reduce the risk of injury and potential exposure to contaminated materials.

How were these issues and/or information needs identified?

From prior site investigations.

Part 4. Identify the following characteristics of the affected/interested community. This knowledge will help to identify and understand issues and information important to the community, and ways to effectively develop and implement the site citizen participation plan (mark all that apply):

a. Land use/zoning at and around site:
☒ **Residential** ☐ **Agricultural** ☐ **Recreational** ☒ **Commercial** ☐ **Industrial**

b. Residential type around site:
☐ **Urban** ☒ **Suburban** ☐ **Rural**

c. Population density around site:
☐ **High** ☒ **Medium** ☐ **Low**

d. Water supply of nearby residences:
☒ **Public** ☐ **Private Wells** ☐ **Mixed**

e. Is part or all of the water supply of the affected/interested community currently impacted by the site?
☐ **Yes** ☒ **No**

Provide details if appropriate:
Click here to enter text.

f. Other environmental issues significantly impacted/impacting the affected community?
☐ **Yes** ☒ **No**

Provide details if appropriate:
Click here to enter text.

g. Is the site and/or the affected/interested community wholly or partly in an Environmental Justice Area?
☐ **Yes** ☒ **No**

h. Special considerations:
☐ **Language** ☐ **Age** ☐ **Transportation** ☐ **Other**

Explain any marked categories in **h:**
N/A

Part 5. The site contact list must include, at a minimum, the individuals, groups, and organizations identified in Part 2. of the Citizen Participation Plan under 'Site Contact List'. Are *other* individuals,

groups, organizations, and units of government affected by, or interested in, the site, or its remedial program? (Mark and identify all that apply, then adjust the site contact list as appropriate.)

☐ **Non-Adjacent Residents/Property Owners:** Click here to enter text.

☐ **Local Officials:** Click here to enter text.

☐ **Media:** Click here to enter text.

☐ **Business/Commercial Interests:** Click here to enter text.

☐ **Labor Group(s)/Employees:** Click here to enter text.

☐ **Indian Nation:** Click here to enter text.

☐ **Citizens/Community Group(s):** Click here to enter text.

☐ **Environmental Justice Group(s):** Click here to enter text.

☐ **Environmental Group(s):** Click here to enter text.

☐ **Civic Group(s):** Click here to enter text.

☐ **Recreational Group(s):** Click here to enter text.

☐ **Other(s):** Click here to enter text.

Prepared/Updated By: Edward Bradshaw **Date:** March 20, 2018

Reviewed/Approved By: Gary Rozmus **Date:** March 20, 2018

Appendix D

Health and Safety Plan

GEI Consultants

Consulting
Engineers and
Scientists

Health and Safety Plan

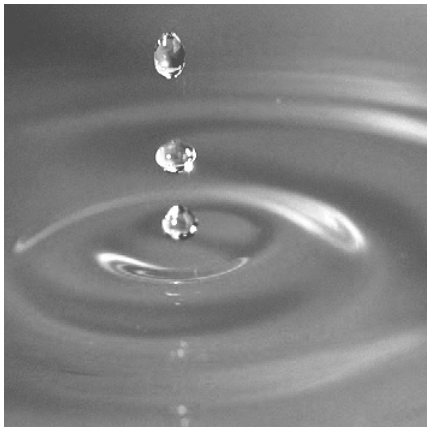
71 New Street Site
71 New Street
Huntington, New York

Prepared For:
71 New Street Huntington, LLC
53 Elm Street, Suite 7
Huntington, NY 11743

Submitted by:
GEI Consultants, Inc.
110 Walt Whitman Road, Suite 204
Huntington Station, NY 11746
631 760-9300

June 2018

Project No. 1700841



Edward Bradshaw
Senior Practice Leader

Jeena Sheepard
Regional Health and Safety Officer

Table of Contents

Tables

Appendices

1. Emergency Contact Information

Table 1. Emergency Contact Information

Important Phone Numbers	
Local Police:	911
Fire Department:	911
Ambulance:	911
Hospital and Occupational Clinic Information *(See Attached Maps and Directions in Appendix A)*	
Enter Local Hospital: Huntington Hospital 270 Park Avenue Huntington, NY 11743	(631) 351-2000
Enter Occupational Health Clinic: CityMD Huntington 314 Main Street Huntington, NY 11743	(631) 430-5778
Contacts	
Project Manager: Edward Bradshaw	(631) 759-2977 office (914) 879-1759 cell
Corporate Health and Safety Officer: Steve Hawkins	(860) 368-5348 office (860) 916-4167 cell
Regional Health and Safety Officer: Jeena Sheppard	(856) 291-6860 office (856) 298-7138 cell
GEI People Team:	(781) 721-4117 Boston (916) 631-4596 Sacramento
Medcor Triage	1-800-775-5866
Client Contact: Greg DeRosa	(631) 293-1700
Other Information	
Contractor Requesting/Performing Utility Clearance: Land, Air, Water Environmental Services, Inc. Utility Clearance Ticket Number:	
Nearest Telephone Location (or alternate means of communication)	On-site Cellular

2. Background

Project Name: 71 New Street Site

Project Location: Huntington, New York

GEI Project No: Enter Project Number 1700841

This Health and Safety Plan (HASP) establishes policies and procedures to protect GEI personnel from the potential hazards posed by the activities at the 71 New Street Site, 71 New Street, Huntington, New York. Reading of the HASP is required of on-site GEI personnel and will be reviewed by GEI subcontractors. Subcontractors will prepare their own Site-specific HASP and may use this as a guide. The plan identifies measures to minimize accidents and injuries, which may result from project activities or during adverse weather conditions. A copy of this HASP will be maintained on-site for the duration of the work.

Included in Section 1 and **Appendix A** is a route to the nearest medical facility from the Site with directions and contact information. Safety data sheets (formerly known as Material Safety Data Sheets [MSDS]), specific to chemicals that may be encountered while working at the Site, are in **Appendix B**. **Appendix C** details the signs, symptoms, care and procedures to both heat and cold stress. **Appendix D** includes the Tailgate Safety Briefing form, the Project Safety Briefing form, the Accident/Incident Report Form and the Near Miss Reporting Form. **Appendix E** contains the GEI Health and Safety (H&S) Standard Operating Procedures (SOPs) that apply to this project.

2.1 Scope of Field Work

Underground Storage Tank (UST) Removal

The UST is located adjacent to the northern wall of the site building and has been identified as closed in place. The UST contents will be removed as warranted. Once the UST contents are removed, the soil above the UST will then be removed to expose the UST and surrounding soil. Once the UST is removed from the ground, the sidewalls and base shall be sampled in accordance with all appropriate regulations. Impacted soil will be removed and disposed of as directed by New York State Department of Environmental Conservation (NYSDEC). All work involving the UST and impacted soil removal will be conducted in coordination with the NYSDEC. The excavation will immediately be backfilled with clean fill upon NYSDEC approval.

Soil Boring Installations

Drywell and Vault Locations

The two drywells located in the northern portion of the parking lot will have four (4) soil borings advanced around the exterior of the drywells. Additionally, the sediment within the drywells will be sampled. The vault on the south side of the building will have three (3) soil borings advanced around its exterior and the sediment within the vault will also be sampled.

Each soil boring, including the sediment soil borings, will be advanced to the groundwater interface, anticipated to be approximately 35-feet below ground surface (bgs). However, should the vault have a solid bottom, the boring will not be advanced beyond the bottom of the vault.

The soil samples will be inspected for impacts (e.g., staining and odor) and screened for volatile soil vapors using a photoionization detector (PID). One composite soil sample will be collected from every 5-foot interval from each boring, seven (7) samples per boring, and sent for laboratory analysis. The drywell and drain samples will be analyzed for target compound list (TCL) volatile organic compounds (VOCs) via United States Environmental Protection Agency (EPA) Method 8260, TCL semi-volatile organic compounds (SVOCs) plus formaldehyde via EPA Method 8270D, target analyte list metals (TAL Metals), pesticides, herbicides, and polychlorinated biphenyls (PCBs). Should two consecutive samples from the same boring indicate that no compounds of concern exceed the regulatory limits, the remaining samples will not be analyzed.

All analyses will be performed by a New York State Department of Health (NYSDOH) Environmental Laboratory Accreditation Program (ELAP)-certified laboratory.

The sampling of the drywells shall be conducted under the oversight of the Suffolk County Department of Environmental Health Services (SCDHS).

Site Characterization Soil Sampling

Four (4) groundwater monitoring wells (MW-1 through MW-4) will be installed as described below. During the installation of these four wells, soil samples will be collected from every 5-foot interval from each boring to the water table and will be inspected for impacts (e.g., staining and odor) and screened for volatile soil vapors using a PID. Samples that exhibit indications of impacts shall be collected and sent to the analytical laboratory for analysis. Should no impacts be detected, the sample above the water table shall be collected and sent to the laboratory for analysis. The soil samples will be analyzed for TCL VOCs via EPA Method 8260, TCL SVOCs plus formaldehyde via EPA Method 8270D, TAL Metals, pesticides, herbicides, and PCBs.

All analyses will be performed by a NYSDOH ELAP-certified laboratory.

Indoor Air Sampling

Two (2) indoor air samples will be collected within the lowest level of the existing on-site building. One outdoor ambient air sample will also be collected.

Samples will be collected in 6-liter Summa canisters which have been individually certified clean by the laboratory and analyzed using USEPA Method TO-15 as well as for formaldehyde and phenols. Sampling will occur for the duration of 8 hours.

Soil Vapor Monitoring Point Installations

Six (6) soil vapor samples (SV-1, through SV-4) will be collected. The rationale for the investigation sample locations is provided below:

- SV-1: Northeast portion of the site
- SV-2: Northwest portion of the site
- SV-3: Southeast portion of the site
- SV-4: Southwest portion of the site
- SSSV-1: Basement of onsite building
- SSSV-2: Basement of onsite building

All samples will be collected in accordance with the Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York (NYSDOH October 2006). Conditions in the field may require adjustment to the sampling locations. The soil vapor probes will be installed to a depth of 6 feet below grade.

The vapor probe borehole will be backfilled with #2 Morie well grade gravel. A surface seal will be placed using an impermeable clay seal installed within the last 6 inches of the probe-hole annulus from surface grade level. The vapor well will be purged using a hand pump or equivalent device after installation.

As part of the vapor intrusion evaluation, a tracer gas will be used in accordance with NYSDOH protocols to serve as a Quality Assurance/Quality Control (QA/QC) device to verify the integrity of the soil vapor probe seal. Helium will be used as the tracer gas and a box will serve to keep it in contact with the probe during testing. A portable monitoring device will be used to analyze a sample of soil vapor for the tracer prior to sampling.

Groundwater Monitoring Well Installations

Four (4) groundwater monitoring wells (MW-1 through MW-4) will be installed. The wells will be installed to bridge the water table. Groundwater is anticipated to be approximately 35-feet bgs, the downgradient monitoring well shall be extended to a depth of approximately 65-feet bgs with approximately 30-feet of screen within the water table. The remaining three

(3) monitoring wells will be installed to a depth of approximately 45-feet bgs with at least 10-feet of screen within the groundwater.

Each monitoring well will be constructed with 2-inch diameter schedule (SCH) 40 polyvinyl chloride (PVC) 0.010-inch slotted well screen threaded to 2-inch diameter SCH 40 PVC riser to surface. The wells will be completed with a Morie #2 sand pack to 2 feet above top-of-screen, 2 feet of wetted bentonite pellets, and tremie-grout to surface. Monitoring wells will be finished with an expanding well cap and accessed through an 8-inch bolted manhole. Drill cuttings and development water will be properly stored onsite until proper transportation and disposal.

Monitoring Well Development

Monitoring wells may be developed using a high flow pump and will be monitored for drawdown and recovery. Well development fluids will be pumped into 55-gallon drums, a large volume tank, or mobile tanker truck. All groundwater generated during development activities will be disposed offsite at an appropriate facility.

Monitoring Well Sampling

Groundwater samples will be collected from each monitoring well following installation and proper well development utilizing low-flow sampling techniques. Field parameter readings will be monitored during sampling including pH, oxidation reduction potential (ORP), specific conductance and dissolved oxygen (DO). Each monitoring well will be sampled for TCL VOCs by EPA Method 8260B, TCL SVOCs by EPA Method 8270D, and dissolved TAL Metals by EPA Method 6010B, as well as formaldehyde and phenols. Additional lab analyses may be included based on field observations. Groundwater samples will be properly transported to a NYSDOH ELAP-certified laboratory under chain of custody (COC) procedures.

Material Handling

Remedial Investigation Work Plan (RIWP)-derived wastes produced during soil boring and monitoring well installations, including soil cuttings, groundwater, decontamination waters, and removed groundwater will be collected and stored within 55-gallon United States Department of Transportation/United Nations (USDOT/UN) drums. The transporter and transport vehicle must be approved in accordance with 6 NYCRR, Chapter IV, Part 364. The location of the waste storage area will be determined during the preliminary Site visit to be completed prior to the start of RIWP activities.

Site Restoration

The drilling subcontractor will restore all areas disturbed by the RIWP activities to pre-existing conditions based on the applicable access agreements. Restoration actions shall include, but may not be limited to:

- Removal of all temporary facilities, including decontamination areas, and unused materials
- Replacement or repair of all asphalt and concrete surfaces removed or damaged during the RIWP, as appropriate.

2.2 Site Description

The site is a 0.31acre parcel located in a mixed commercial and residentially zoned area in the Town of Huntington New York. The site is bounded by New Street to the east, and residential and commercial buildings to the south, west, and north.

The property is currently occupied by a two-story professional office building with a basement, landscaped lawn, and an asphalt-paved parking area.

3. Statement of Safety and Health Policy

GEI is committed to providing a safe and healthy work environment for its employees. To maintain a safe work environment, GEI has established an organizational structure and a Corporate Health and Safety Program to promote the following objectives:

- Reduce the risk of injury, illness, and loss of life to GEI employees.
- Maintain compliance with federal, state, and other applicable safety regulations; and minimize GEI employees' work exposure to potential physical, chemical, biological, and radiological hazards.

Safety policy and procedure on any one project cannot be administered, implemented, monitored, and enforced by any one individual. The total objective of a safe, accident free work environment can only be accomplished by a dedicated, concerted effort by every individual involved with the project from management down to all employees.

Each GEI employee must understand their value to the company; the costs of accidents, both monetary, physical, and emotional; the objective of the safety policy and procedures; the safety rules that apply to the safety policy and procedures; and what their individual role is in administering, implementing, monitoring, and compliance of their safety policy and procedures. This allows for a more personal approach to compliance through planning, training, understanding, and cooperative effort, rather than by strict enforcement. If for any reason an unsafe act persists, strict enforcement will be implemented.

4. Hazard/Risk Analysis

The potential hazards associated with site conditions and activity hazards related to GEI on-site activities have been identified in this section.

4.1 Special Site Conditions or Concerns

- Traffic – The majority of traffic on the project site will be construction traffic and commercial and residential traffic.
- Drill Rig/Equipment – Drilling contractor will use truck-mounted rotary drill rigs. Specific attention given to rotating equipment, pinch points, and overhead equipment.
- Bio hazards (insect bites, poison ivy, etc.) – Poison ivy is present along with black flies.

Safety equipment will include: First aid kit, fire extinguisher, eye wash bottles, adequate supply of drinking water and electrolyte fluids, hand cleaner, insect repellent, sunscreen, and cell phone.

4.2 Activity Hazard Analysis

The potential hazards for this project associated with site conditions and activity hazards associated with GEI on-site activities have been identified in **Table 2**. General hazards and control measures that are applicable to all site activities are identified in the General Hazards section. The site-specific tasks, potential hazards, and control measures established to reduce the risk of injury or illness are identified in the Activity Hazard section of **Table 2**. Health and Safety SOPs for routine hazards and common-site conditions are referenced in the table below and included in **Appendix E**.

Table 2. Activity Hazard Analysis

General Hazards These Hazards Apply to All Site Activities	Control Measure
Chemical / Contaminant Exposure – Skin and eye injury/irritation	• Wear protective coveralls (e.g. Tyvek ®) with shoe covers, safety glasses, face shield, Nitrile gloves. • Dispose of gloves after use and wash hands. • Avoid contact with pooled liquids and limit contact with contaminated soils/groundwater. • See SOP HS-009

General Hazards These Hazards Apply to All Site Activities	Control Measure
Driving	• Employees must wear their safety belt while in a moving vehicle. • Vehicle accidents will be reported in accordance with GEI's accident reporting procedures. • Vehicles will be properly maintained and safely operated (refer to GEI's Fleet Maintenance Program). • Employees will follow safe driving behaviors, which include limiting distractions such as manipulating radios or other equipment that may cause a distraction. Employees should not exceed the posted speed limit and should maintain a safe distance between other vehicles. • Use defensive driving techniques. • Driving distance and time after a 12-hour shift should not exceed 30 miles or 30 minutes (whichever is greater). • See SOP HS-004
Heat stress – Fainting, Fatigue, Heat Stroke	• Increase water intake while working. • Increase number of rest breaks and/or rotate workers in shorter work shifts. Rest in cool, dry areas. • Watch for signs and symptoms of heat exhaustion and fatigue. • Plan work for early morning or evening during hot months. • Use ice vests when necessary. • In the event of heat stroke, bring the victim to a cool environment and initiate first aid procedures. • See **Appendix C** of the HASP
Inclement Weather	• Listen to local forecasts for warnings about specific weather hazards such as tornados, thunder storms, and flash floods. • If the storms produce thunder and/or lightning, leave the work area immediately and move to a safe area. • Discuss an action plan prior to the severe weather. • Wear appropriate PPE for the type of weather that could be encountered. • Stop work until conditions are suitable. Take cover in vehicles or shelter as appropriate. • See SOP HS-010

General Hazards These Hazards Apply to All Site Activities	Control Measure
Insects – Bites, Stings, Allergic Reactions	• Apply insect repellent prior to performing field work and as often as needed throughout the work shift. • Wear proper protective clothing (work boots, socks and light colored clothing). • Wear shoes, long pants with bottoms tucked into boots or socks, and a long-sleeved shirt when outdoors for long periods of time, or when many insects are most active (between dawn and dusk). • When walking in wooded areas, avoid contact with bushes, tall grass, or brush as much as possible. • Field personnel who may have insect allergies should have bee sting allergy medication on-site and should provide this information to the SSO and the CHSO prior to commencing work. • Field personnel should perform a self-check at the end of the day for ticks. • See SOP HS-001
Physical Injury – Slips, Trips and Falls	• Wear PPE that properly fits, is in good condition and appropriate for the activities and hazards. • Maintain good visibility of the work area. • Avoid walking on uneven, steeply sloped or debris ridden ground surfaces. • Plan tasks prior to preforming them including an activity hazard analysis. • Keep trafficked areas free from slip/trip/fall hazards. • Maintain weed growth in sampling areas, especially on slopes. • Wear shoes with traction. • Avoid traversing steep areas in slippery conditions. • Do not carry heavy objects to sampling areas, on steeply sloped areas, or where steep areas must be traversed to arrive at sample points.
Repetitive Motion Injury - Standing, Squatting, and Bending Over	• Take regular breaks and do not work in unusual positions for long periods of time. • Walk and stretch between tasks. • See SOP HS-025

General Hazards These Hazards Apply to All Site Activities	Control Measure
Utilities – Shock, Electrocution, Fire, Explosion	• A thorough underground utility survey must be conducted prior to intrusive activities. Coordination with utility locating services, property owner(s) or utility companies must be conducted. • Utilities are to be considered live or active until documented otherwise. • For overhead utilities within 50 feet, determine with the utility company the appropriate distance. Minimum distance for clearance is based on voltage of the line. • If exposing a utility, proper support and protection must be provided so that the utility will not be damaged. • If a gas line is contacted, the contractor must notify police, fire, and emergency personnel, and evacuate employees according to the site evacuation procedures. No attempt should be made to tamper with or correct the damaged utility. • See SOP HS-014

Activity	Potential Hazard	Control Measures
Carrying Equipment	Heavy lifting, strains/sprains, slips/trips/falls, pinch points	• Use proper lifting techniques as defined in the heavy lifting activity analysis below • Wear the proper type of glove to protect hands against sharp edges and skin/soft tissue injuries • Wear appropriate footwear • Be aware of hard to grip and hold items that may force your hand or wrist into awkward, stressful positions and cause disorders like tendinitis or carpal tunnel syndrome • Take breaks when carrying items frequently and/or for long distances • Do not over reach when picking up or placing items. • Use the buddy system when necessary • When climbing ladders, maintain three points of contact at all times. DO NOT carry equipment up or down ladders unless it is in a secure backpack or similar hands-free shoulder-strap bag or case. Lower or raise larger equipment by crane or rope

Activity	Potential Hazard	Control Measures
Drilling Oversight/ Sampling	Contaminant Exposure, Noise, Contact with Utilities, Cuts/Scrapes, Heavy Lifting, Repetition, Slips/Trips/Falls	• Wear hardhat; high visibility reflective safety vest; steel-toed, steel-shank boots or composite toe and shank; safety glasses; Nitrile/neoprene gloves; and earplugs. • Confirm utility locate has been completed. • Confirm adequate clearance from overhead utilities. • Dispose of gloves after use and wash hands. • Take regular breaks and do not work in unusual positions for long periods of time. • Keep trafficked areas free from slip/trip/fall hazards. • If cutting through concrete, follow the work practices and respiratory protection recommended in Table 1 of the GEI Silica Program based on the type of equipment being used to cut through the concrete.
Excavation and Trenching Oversight	Crushing, entrapment, falls, fire/explosion	• Prior to excavating, determine utility locations and have locations marked by utility companies and the property owner. • Utilities shall be properly supported and barriers should be erected around excavations in remote areas. • Backfill temporary excavations when work is completed. • Personnel must remain 2 feet from the face of the excavation. • Sides, slopes, and faces shall meet OSHA requirements. • Excavation entry will be allowed only with proper sloping or shoring. • See SOP HS-006
Groundwater Sampling	Contaminant Exposure, Heavy Lifting, Repetition, Slips/Trips/Falls	• Wear hardhat; high visibility reflective safety vest; steel-toed, steel-shank boots or composite toe and shank; safety glasses and Nitrile/neoprene gloves. • Dispose of gloves after use and wash hands. • User proper lifting techniques. • Take regular breaks and do not work in unusual positions for long periods of time. • Keep trafficked areas free from slip/trip/fall hazards.
Soil Sampling/Soil Vapor Sampling	Contaminant Exposure, Cuts/Scrapes, Heavy Lifting, Repetition, Slips/Trips/Falls	• Wear hardhat; high visibility reflective safety vest; steel-toed, steel-shank boots or composite toe and shank; safety glasses; Nitrile/neoprene gloves; and earplugs as necessary. • Dispose of gloves after use and wash hands. • Wear work gloves over nitrile gloves. • Excavation entry will be allowed only with proper sloping or shoring. • Take regular breaks and do not work in unusual positions for long periods of time. • Keep trafficked areas free from slip/trip/fall hazards.
Waste Characterization	Contaminant Contact Wear proper PPE during sampling including nitrile gloves and safety glasses. Cuts or Abrasions, Slips/Trips/Falls	• Wear proper PPE during sampling including nitrile gloves and safety glasses. • Dispose of gloves after use and wash hands. • Wear work gloves over nitrile gloves. • Keep trafficked areas free from slip/trip/fall hazards.

Personal Protective Equipment (PPE) is the initial level of protection based on the activity hazards and Site conditions which have been identified. Upgrades to respiratory protection may be required based on the designated Action Levels found in Section 9. General on-site provisions will include: extra nitrile, leather, and/or Kevlar gloves, extra protective coveralls (e.g. Tyvek®) with boot covers, drinking water and electrolyte fluids, reflective vest, first aid kit, fire extinguisher, hearing protection, and washing facilities.

If Site conditions suggest the existence of a situation more hazardous than anticipated, the Site personnel will evacuate the immediate area. The hazard, the level of precautions, and the PPE will then be reevaluated with the assistance and approval of the Corporate Health and Safety Officer (CHSO) and the Project Manager (PM).

4.3 Personal Safety

Field activities have the potential to take employees into areas which may pose a risk to personal safety. The following websites (sources) have been researched to identify potential crime activity in the area of the project:

- www.crimereports.com: No crimes identified in the past 30 days within a mile of the Site.
- www.cityrating.com/crimestatistics.asp: Crime in Huntington, New York is significantly less than the New York and national averages.
- www.crimemapping.com: No crimes identified in the past 30 days within a mile of the Site.

To protect yourself, take the following precautions:

- If deemed necessary by the PM, use the buddy system (teams of a minimum of two persons present);
- Let the Site Safety Officer (SSO) know when you begin work in these areas and when you leave;
- Call in regularly;
- Pay attention to what is going on around you; and
- If you arrive in an area and it does not look safe to get out of your vehicle, lock the doors and drive off quickly but safely.

Employees must not knowingly enter into a situation where there is the potential for physical and violent behaviors to occur. If employees encounter hostile individuals or a confrontation develops in the work area, suspend work activities, immediately leave the area of concern, and contact local 911 for assistance. Notify the SSO and Safety Team (Corporate Health and

Safety Officer and Regional Health and Safety Officers – SafetyTeam@geiconsultants.com) of any incidents once you are out of potential danger.

In the event of an emergency, prompt communications with local emergency responders is essential. At least one charged and otherwise functioning cell phone to facilitate emergency communications will be on-site. Confirmation of cellular phone operation will be confirmed at the start of each working day.

4.3.1 Handling Drums and Containers

Regulations for handling drums and containers are specified by Occupational Safety and Health Administration (OSHA) 29 Code of Federal Regulations (CFR) 1910.120(j). Potential hazards associated with handling drums include vapor generation, fire, explosions, and possible physical injury. Handling of drums/containers during the Site investigation and remediation activities may be necessary. If drum/container handling is necessary, it will be performed in accordance with applicable regulations.

4.3.2 Electrical Hazards

4.3.2.1 Utilities

The Site may have shallow, buried utilities and also overhead utilities in certain areas. It will be necessary for parties disturbing the existing ground surface and conducting operations with heavy equipment having high clearances to exercise caution in performing project-related work with respect to the presence of utilities. Utility companies with active, buried lines in the Site area will be asked by the Contractor performing intrusive activities to mark their facilities. Employees will use these data to choose work locations.

4.3.2.2 Underground Utilities

No excavating, drilling, boring, or other intrusive activities will be performed until an underground utility survey, conducted by knowledgeable persons or agencies, has been made. This survey will identify underground and in-workplace utilities such as the following:

- Electrical lines and appliances;
- Telephone lines;
- Cable television lines;
- Gas lines;
- Pipelines;
- Steam lines;
- Water lines;

- Sewer lines; and/or
- Pressurized air lines.

The location of utilities will be discussed with GEI employees and subcontractors during a Site Safety Briefing. Identified utilities should be marked or access otherwise restricted to avoid chance of accidental contact.

Even when a utility search has been completed, drilling, boring, and excavation should commence with caution until advanced beyond the depth at which such utilities are usually located. Utilities will be considered "live" or active until reliable sources demonstrate otherwise.

4.3.2.3 Overhead Utilities

Overhead transmission and distribution lines will be carried on towers and poles which provide adequate safety clearance over roadways and structures. Clearances will be adequate for the safe movement of vehicles and for the operation of construction equipment.

Overhead or above-ground electric lines should be considered active until a reliable source has documented them to be otherwise. Elevated work platforms, ladders, scaffolding, man-lifts, and drill or vehicle superstructures will be erected a minimum of 20 feet (the actual distance is dependent upon the voltage of the line) from overhead electrical lines until the line is de-energized, grounded, or shielded so arcing cannot occur between the work location or superstructure.

4.3.3 Excavations and Trenches

The safety requirements for excavations and trenches must be determined by a competent person who is capable of identifying existing and predictable hazards and work conditions that are unsanitary, hazardous, or dangerous to GEI employees. The competent person must also have the authorization to take prompt corrective measures to eliminate unsatisfactory conditions. GEI employees will not enter trenches.

The following are general requirements for work activities in and around excavations:

- Prior to initiation of excavation activity (or ground intrusive activity, such as drilling), the location of underground installations will be determined. The <One-Call/Dig-Safe> center will be contacted by the Contractor/Subcontractor a minimum of 72 hours prior to excavation activities. It may also be necessary to temporarily support underground utilities during excavation. When excavations approach the estimated location of underground installations, the exact location of the underground installations will be determined by means that are safe for GEI employees, i.e., hand dig, test pits, etc.

- Excavations should be inspected daily by the excavating company's competent person prior to commencement of work activities. Evidence of cave-ins, slides, sloughing, or surface cracks or excavations will be cause for work to cease until necessary precautions are taken to safeguard employees.
- Excavated and other materials or equipment that could fall or roll into the excavation, and vehicular traffic and heavy equipment will be placed at least 5 feet from the edge of the excavation.
- Excavation operations will cease immediately during hazardous weather conditions such as high winds, heavy rain, lightning, and heavy snow.

Employees will refer to GEI's Excavation Safety SOP for further information.

4.3.4 Fire and Explosion

When conducting excavating activities, the opportunity for encountering fire and explosion hazards exists from contamination in soil and the possibility of free product in underground structures and pipelines. Additionally, the use of diesel-powered excavating equipment could present the possibility of encountering fire and explosion hazards.

4.3.5 Heat Stress

Employees may be exposed to the hazards associated with heat stress when ambient temperatures exceed 70ºF. Employees should increase water intake while working in conditions of high heat. Enough water should be available so that each employee can consume 1 quart of water per hour. In addition, they should increase number of rest breaks and/or rotate employees in shorter work shifts. Employees should rest in cool, dry, shaded areas for at least 5 minutes. Employees should not wait until they feel sick to cool down. Watch for signs and symptoms of heat exhaustion and fatigue. In the event of heat stroke, bring the victim to a cool environment, call for help, and initiate first aid procedures

The procedures to be followed regarding avoiding heat stress are provided in **Appendix C** – Heat Stress Guidelines and in GEI's Heat Stress program.

4.3.6 Cold Stress

Employees may be exposed to the hazards of working in cold environments. Potential hazards in cold environments include frostbite, trench foot or immersion foot, hypothermia, as well as slippery surfaces, brittle equipment, and poor judgment. The procedures to be followed regarding avoiding cold stress are provided in **Appendix C** – Cold Stress Guidelines and in GEI's Cold Stress program.

4.3.7 Noise

Noise is a potential hazard associated with the operation of heavy equipment, power tools, pumps, and generators. Employees who will perform suspected or established high noise tasks and operations will wear hearing protection. If deemed necessary by the SSO, the CHSO will be consulted on the need for additional hearing protection and the need to monitor sound levels for Site activities. Other employees who do not need to be in proximity of the noise should distance themselves from the equipment generating the noise.

4.3.8 Slips, Trips, and Falls

Working in and around the Site may pose slip, trip, and fall hazards due to slippery and uneven surfaces. Excavation at the Site may cause uneven footing in trenches and around the soil piles. Steep slope and uneven terrain conditions at the Site are also a primary concern. GEI employees will wear proper foot gear and will employ good work practice and housekeeping procedures to minimize the potential for slips, trips, and falls.

4.3.9 Manual Lifting

Manual lifting of objects and equipment may be required. Failure to follow proper lifting technique can result in back injuries and strains. Employees should use a buddy system and/or power equipment to lift heavy loads whenever possible and should evaluate loads before trying to lift them (i.e., they should be able to easily tip the load and then return it to its original position). Carrying heavy loads with a buddy and proper lifting techniques include: 1) make sure footing is solid; 2) make back straight with no curving or slouching; 3) center body over feet; 4) grasp the object firmly and as close to your body as possible; 5) lift with legs; and 6) turn with your feet, don't twist.

4.3.10 Projectile Objects and Overhead Dangers

Overhead dangers, including but not limited to falling debris and equipment, can occur while operating drill rigs. GEI employees will maintain a minimum distance from large overhead operations and to maintain proper communication with heavy equipment operators and their handlers, should work necessitate their presence beyond the minimum safety distance. Proper PPE will be worn during these types of activities including steel-toed/shank boots, safety vests, and hard hats.

For each project/task the proper ladder needs to be selected. Prior to each use, a ladder needs to be inspected and used in accordance with 29 CFR 1926.1053, as applicable. Copies of the standards will be kept on file in GEI's main office.

If work on scaffolding is required, it will be performed in accordance with 29 CFR 1926.451, as applicable. Copies of the standards will be kept on file in GEI's main office. Work on

scaffolds will not be performed without first notifying and receiving approval from the CHSO. A competent person should supervise the erection, modification, and disassembly of scaffolds. GEI employees may not act as the competent person.

4.4 Chemical Hazards

The characteristics of compounds at the Site are discussed below for information purposes. Adherence to the safety and health guidelines in this HASP should reduce the potential for exposure to the compounds discussed below.

4.4.1 Heavy Metals

Exposure to high concentrations of arsenic can cause dermatitis, gastrointestinal disturbances, peripheral neuropathy, respiratory irritation, and hyper pigmentation of skin. Chronic exposure to arsenic has resulted in lung cancer in humans.

Exposure to high concentrations of aluminum can cause irritation of the eyes, skin, and the respiratory system.

Exposure to high concentrations of antimony can cause irritation of eyes, skin, nose, throat, and mouth; coughing; dizziness; headache; nausea, vomiting, diarrhea; stomach cramps; insomnia; anorexia; and could be unable to smell properly. Chronic exposure to antimony can produce respiratory effects that include antimony pneumoconiosis (inflammation of the lungs due to irritation caused by the inhalation of dust), alterations in pulmonary function, chronic bronchitis, chronic emphysema, inactive tuberculosis, pleural adhesions, irritation; cardiovascular effects (increased blood pressure, altered EKG readings and heart muscle damage) and gastrointestinal disorders in humans.

Exposure to high concentrations of beryllium can result in “beryllium sensitization”, which is an allergic response to beryllium. Symptoms of the disease include cough, shortness of breath, fatigue, fevers, skin rash, and night sweats. In the later stages, lung tissue becomes scarred. In severe cases, the right side of the heart may be strained due to increased pressure in the pulmonary artery from lung damage.

Exposure to high concentrations of cadmium can cause acute symptoms such as pulmonary edema, dyspnea (breathing difficulty), cough, chest tightness and pain; headache; chills, muscle aches; nausea, vomiting, diarrhea; loss of the sense of smell), mild anemia; and is considered a potential occupational carcinogen.

Exposure to chromium can cause acute symptoms such as irritation of the eyes, nose and throat as well as wheezing and coughing. Chronic effects include nosebleeds, nasal congestion, dermatitis, and loss of sight.

Exposure to high concentrations of copper through inhalation can cause irritation of the eyes, nose, pharynx, nasal septum. Ingestion may cause a metallic taste. Skin irritation may result from direct contact with skin. Damage to the liver and kidneys may occur.

No adverse health effects are associated with environmental exposure to iron. Target organs for iron via ingestion of iron (most often in supplement form) are the liver, cardiovascular system, and kidneys. Exposure to high concentrations of iron through ingestion can cause salivation nausea, vomiting, diarrhea, and abdominal pain.

Exposure to lead may cause acute symptoms such as eye irritation, weakness, weight loss, abdominal pain, and anemia. Chronic exposure to lead may result in kidney disease, effects to the reproductive system, blood forming organs, and central nervous system (CNS).

Lead and arsenic are regulated by specific OSHA standards. They are 29 CFR 1910.1025/1926.52 and 29 CFR 1910.1018/1926.1118, respectively. These standards include specific requirements for air monitoring, signs and labels, training and medical surveillance.

Exposure to high concentrations of manganese can cause manganism, metal fume fever, flu-like fever, and kidney damage.

Exposure to high concentrations of nickel may cause sensitization dermatitis, allergic asthma, and pneumonitis. Exposure to mercury can cause dizziness, salivation nausea, vomiting, diarrhea, constipation, emotional disturbance, and kidney injury. Chronic exposure to mercury can cause CNS damage.

Exposure to high concentrations of selenium can cause mucous membrane irritation, coughing, sneezing, shortness of breath, chills, headaches, hypotension, and CNS depression. Chronic exposure to selenium could cause bronchial irritation, gastrointestinal distress, excessive fatigue, and skin discoloration.

Exposure to high concentrations of thallium can cause nausea, diarrhea, abdominal pain, vomiting; tremor; chest pain, pulmonary edema; convulsions, psychosis; liver, kidney damage; and alopecia.

Vanadium may cause greenish-black discoloration of the tongue, and is possibly carcinogenic to humans. Long-term or repeated exposure to vanadium may have effects on the respiratory tract, resulting in chronic rhinitis and chronic bronchitis.

Exposure to high concentrations of zinc through ingestion can cause abdominal pain, nausea, vomiting, and diarrhea. Chronic exposure can lead to low blood pressure, jaundice, and seizures.

These metals are at environmental concentrations and are not expected to be at concentrations that exposure symptoms would occur. As with SVOCs, the primary route of exposure is through inhalation of dust particles when soil is disturbed and becomes airborne.

Polyfluoroalkyl Substances

Per- and polyfluoroalkyl substances (PFAS) are a group of compounds resistant to heat, water, and oil. They have been used in industrial applications and consumer products such as carpeting, apparels, upholstery, food paper wrappings, fire-fighting foams and metal plating. These chemicals are persistent, and resist degradation in the environment. They also bioaccumulate, meaning their concentration increases over time in the blood and organs. At high concentrations, certain PFAS have been linked to adverse health effects in laboratory animals that may reflect associations between exposure to these chemicals and some health problems such as low birth weight, delayed puberty onset, elevated cholesterol levels, and reduced immunologic responses to vaccination. If PFAS are ingested (by eating or drinking food or water that contain PFAS), the PFAS are absorbed, and can accumulate in the body. Studies indicate that perfluorooctanoic acid (PFOA) and perfluorooctyl sulfonate (PFOS) can cause reproductive and developmental, liver and kidney, and immunological effects in laboratory animals.

Semi-Volatile Organic Compounds

SVOCs usually consist of a mixture of acenaphthene, acenaphthylene, anthracene, benz(a)anthracene, benzo(b)fluoranthene, benzo(k)fluorethene, benz(a)pyrene, benzo(e)pyrene, benzo(g,h,i)peryline, chrysene, dibenz(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3cd)pyrene, 2-methyl naphthalene, naphthalene, phenanthrene, phenols, and pyrene.

These compounds are at environmental concentrations and are not expected to be at concentrations that exposure symptoms would occur. SVOCs such as those listed above may cause contact dermatitis. Direct contact can be irritating to the skin and produce itching, burning, swelling, and redness. Direct contact or exposure to the vapors may be irritating to the eyes. Conjunctivitis may result from prolonged exposure. Many SVOCs are considered to be very toxic, if ingested. High levels of exposure to SVOCs, though not anticipated during work activities conducted during this project, may increase the risk of cancer including lung, kidney, and skin cancer. Naphthalene is also an eye and skin irritant and can cause nausea, headache, fever, anemia, liver damage, vomiting, convulsions, and coma. Poisoning may occur by ingestion of large doses, inhalation, or skin absorption.

The major route of entry for the work activities to be conducted at this Site is through direct contact. Exposure is most likely when handling soil and water samples. Inhalation may occur when the soil is disturbed causing respirable and nuisance dust particles to become airborne.

Volatile Organic Compounds

VOCs, such as benzene, toluene, ethyl benzene, and xylene (BTEX) are present as soil and groundwater contaminants, and in some cases chemical components in non-aqueous phase liquids (NAPL) such as within soils and abandoned pipelines. These compounds are at environmental concentrations and are not expected to be at concentrations that exposure symptoms would occur. These compounds generally have a depressant effect on the CNS, may cause chronic liver and kidney damage, and some are suspected human carcinogens. Benzene is a known human carcinogen. Acute exposure may include headache, dizziness, nausea, and skin and eye irritation. The primary route of exposure to VOCs is through inhalation and therefore respiratory protection is the primary control against exposure to VOCs.

4.4.2 Evaluation of Organic Vapor Exposure

Air monitoring reduces the risk of overexposure by indicating when action levels have been exceeded and when PPE must be upgraded or changed. Action Levels for VOCs and associated contingency plans for the work zone are discussed within Section 9 of this HASP.

Exposure to organic vapors will be evaluated and/or controlled by:

- Monitoring air concentrations for organic vapors in the breathing zone with a PID or a flame ionization detector (FID).
- When possible, engineering control measures will be utilized to suppress the volatile organic vapors. Engineering methods can include utilizing a fan to promote air circulation, utilizing volatile suppressant foam, providing artificial ground cover, or covering up the impacted material with a tarp to mitigate volatile odors.
- When volatile suppression engineering controls are not effective and organic vapor meters indicate concentrations above the action levels, then appropriate respiratory protection (i.e., air purifying respirator with organic vapor cartridge) will be employed.

4.4.3 Evaluation of Skin Contact and Absorption

Skin contact by contaminants may be controlled by use of proper hygiene practices, PPE, and good housekeeping procedures. The proper PPE (e.g., Tyvek®, gloves, safety glasses) as described in Section 5 will be worn for activities where contact with potential contaminated media or materials are expected.

Safety Data Sheets (SDSs) for decontamination chemicals and laboratory reagents that may be used on-site are included in **Appendix B**. Specific chemical hazards information from the occupational health sources are summarized in **Table 3**.

Table 3. Chemical Data

Compound	CAS #	ACGIH TLV	OSHA PEL	Route of Exposure	Symptoms of Exposure	Target Organs	Physical Data
VOCs1	NA	0.5 ppm (Skin)	0.5 ppm TWA 2.5 ppm STEL	Inhalation, Skin Absorption, Ingestion, Skin Contact	Irritate eyes and skin; headaches; dizziness; nausea; kidney; liver damage; depress CNS	Skin, eyes, liver, kidney, CNS	Colorless volatile liquid, sometimes with a sweet or solvent odor
Formaldehyde	50-00-0	0.3 ppm	0.75 ppm TWA 2.0 ppm STEL	Inhalation, Skin / Eye Contact	Irritation of eyes, nose, throat, respiratory system; lacrimation, cough, wheezing	Eyes, respiratory system	Nearly colorless gas with pungent, suffocating odor

Abbreviations:

°F = degrees Fahrenheit
ACGIH = American Conference of Industrial Hygienists
A.L. = Action Level
atm = atmosphere
C = ceiling limit, not to be exceeded
CAS # = chemical abstract services number
CNS = Central Nervous System
CTPV = Coal Tar Pitch Volatiles
CVS = Cardiovascular System
eV = electron volt
f/cc = fibers per cubic centimeter
FP = Flash point
GI = Gastro-intestinal
H2S = Hydrogen Sulfide
HCN = Hydrogen Cyanide
hr = hour
IP = Ionization Potential
LEL = Lower explosive limit
mg/m^3 = micrograms per cubic meter
min = minute
mm = millimeter
mmHg = millimeters of mercury
N/A = not applicable
OSHA = Occupational Safety and Health Administration
PAH = Polycyclic Aromatic Hydrocarbons
PCB = Polychlorinated Biphenyls
PEL = Permissible exposure limit
ppm = parts per million
Skin = significant route of exposure
STEL = Short-term exposure limit (15 minutes)
TWA = Time-weighted average (8 hours)
VP = vapor pressure approximately 68°F in mm Hg

4.5 Biological Hazards

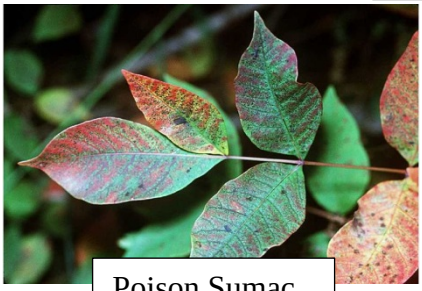
Areas of the Site may be wooded, surrounded with brush, or landscaped. Therefore, employees working on this project should be aware of the potential biological hazards at this Site. Each is discussed in detail below:

4.5.1 Poisonous Plants

Persons working on the Site should be aware of the possible presence of poisonous plants and insects. Poison ivy is a climbing plant with leaves that consist of three glossy, greenish leaflets. Poison ivy has conspicuous red foliage in the fall. Small yellowish-white flowers appear in May through July at the lower leaf axils of the plant. White berries appear from August through November. Poison ivy is typically found east of the Rockies. Poison oak is similar to poison ivy but its leaves are oak-like in form. Poison oak occurs mainly in the south and southwest. Poison sumac typically occurs as a small tree or shrub and may be 6 to 20 feet in height. The bark is smooth, dark and speckled with darker spots. Poison sumac is typically found in swampy areas and east of the Mississippi. The leaves have 7 to 13 smooth-edged leaflets and drooping clusters of ivory-white berries that appear in August and last through spring.

Poison Oak

Poison Ivy



Poison Sumac

The leaves, roots, stems and fruit of these poisonous plants contain urushiol. Contact with the irritating oil causes an intensely itching skin rash and characteristic, blister-like lesions.

The oil can be transmitted on soot particles when burned and may be carried on the fur of animals, equipment, and apparel.

Proper identification of these plants is the key to preventing contact and subsequent dermatitis. Wear long sleeves and pants when working in wooded areas. In areas of known infestation, wear Tyvek® coveralls and gloves. Oils are easily transferred from one surface to another. If you come in contact with these poisonous plants, wash exposed areas immediately with cool water to remove the oils. Some commercial products such as Tecnu's Poison Oak-n-Ivy Cleanser claim to further help with the removal of oils.

4.5.2 Ticks

4.5.2.1 Lyme Disease

Ticks are bloodsuckers, attaching themselves to warm-blooded vertebrates to feed. Deer ticks are associated with the transmission the bacteria that causes Lyme disease. Female deer ticks are about ¼-inch in length and are black and brick red in color. Males are smaller and all black. If a tick is not removed, or if the tick is allowed to remain for days feeding on human blood, a condition known as tick paralysis can develop. This is due to a neurotoxin, which the tick apparently injects while engorging. This neurotoxin acts upon the spinal cord causing incoordination, weakness, and paralysis.

The early stages of Lyme disease, which can develop within a week to a few weeks of the tick bite, are usually marked by one or more of these signs and symptoms:

- Tiredness
- Chills and fever
- Headache
- Muscle and/or join pain
- Swollen lymph glands
- Characteristic skin rash (i.e. bullseye rash)

4.5.2.2 Rocky Mountain Spotted Fever

Rocky Mountain spotted fever is spread by the American dog tick, the lone-star tick, and the wood tick, all of which like to live in wooded areas and tall, grassy fields. The disease is most common in the spring and summer when these ticks are active, but it can occur anytime during the year when the weather is warm.

Initial signs and symptoms of the disease include sudden onset of fever, headache, and muscle pain, followed by development of a rash. Initial symptoms may include fever, nausea, vomiting, severe headache, muscle pain, and/or lack of appetite.

The rash first appears 2 to 5 days after the onset of fever and is often not present or may be very subtle. Most often it begins as small, flat, pink, non-itchy spots on the wrists, forearms, and ankles. These spots turn pale when pressure is applied and eventually become raised on the skin. Later signs and symptoms include rash, abdominal pain, joint pain, and/or diarrhea.

The characteristic red, spotted rash of Rocky Mountain spotted fever is usually not seen until the 6th day or later after onset of symptoms, and this type of rash occurs in only 35% to 60% of patients with Rocky Mountain spotted fever. The rash involves the palms or soles in as many as 50% to 80% of patients; however, this distribution may not occur until later in the course of the disease.

4.5.2.3 Prevention

Tick season lasts from April through October; peak season is May through July. You can reduce your risk by taking these precautions:

- During outside activities, wear long sleeves and long pants tucked into socks. Wear a hat, and tie hair back.
- Use insecticides to repel or kill ticks. Repellents containing the compound n,n-diethyl-meta-toluamide (DEET) can be used on exposed skin except for the face, but they do not kill ticks and are not 100% effective in discouraging ticks from biting. Products containing permethrin kill ticks, but they cannot be used on the skin -- only on clothing. When using any of these chemicals, follow label directions carefully.
- After outdoor activities, perform a tick check. Check body areas where ticks are commonly found: behind the knees, between the fingers and toes, under the arms, in and behind the ears, and on the neck, hairline, and top of the head. Check places where clothing presses on the skin.
- Remove attached ticks promptly. Removing a tick before it has been attached for more than 24 hours greatly reduces the risk of infection. Use tweezers, and grab as closely to the skin as possible. Do not try to remove ticks by squeezing them, coating them with petroleum jelly, or burning them with a match. Keep ticks in a zip-lock baggie in case testing needs to be performed.
- Report any of the above symptoms and all tick bites to the PM and Safety Team for evaluation.

4.5.3 Mosquito- Borne Disease – West Nile Virus

West Nile encephalitis is an infection of the brain caused by the West Nile virus, which is transmitted by infected mosquitoes. Following transmission from an infected mosquito, West Nile virus multiplies in the person's blood system and crosses the blood-brain barrier to reach the brain. The virus interferes with normal CNS functioning and causes inflammation

of the brain tissue. However, most infections are mild and symptoms include fever, headache, and body aches. More severe infections may be marked by headache, high fever, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, paralysis, and rarely, death. Persons over the age of 50 have the highest risk of severe disease.

Prevention centers on public health action to control mosquitoes and on individual action to avoid mosquito bites. To avoid being bitten by the mosquitoes that cause the disease, use the following control measures:

If possible, stay inside between dusk and dark. This is when mosquitoes are most active. When outside (between dusk and dark), wear long pants and long-sleeved shirts. Spray exposed skin with an insect repellent, preferably containing DEET.

4.5.4 Wasps and Bees

Wasps (hornets and yellow-jackets) and bees (honeybees and bumblebees) are common insects that may pose a potential hazard to the field team if work is performed during spring, summer, or fall. Bees normally build their nests in the soil. However, they use other natural holes such as abandoned rodent nests or tree hollows. Wasps make a football-shaped, paper-like nest either below or above the ground. Yellow-jackets tend to build their nests in the ground but hornets tend to build their nests in trees and shrubbery. Bees are generally more mild-mannered than wasps and are less likely to sting. Bees can only sting once while wasps sting multiple times because their stinger is barbless. Wasps sting when they feel threatened. By remaining calm and not annoying wasps by swatting, you lessen the chance of being stung.

Wasps and bees inject a venomous fluid under the skin when they sting. The venom causes a painful swelling that may last for several days. If the stinger is still present, carefully remove it with tweezers. Some people may develop an allergic reaction (i.e. anaphylactic shock) to a wasp or bee sting. If such a reaction develops, seek medical attention at once. If a GEI employee is allergic to bees or wasps notify the SSO and if, needed, the location of the epi pen.

4.5.5 Sun Exposure

Employees are encouraged to liberally apply sunscreen, with a minimum sun protection factor (SPF) of 15, when working outdoors to avoid sunburn and potential skin cancer, which is associated with excessive sun exposure to unprotected skin. Additionally, employees should wear safety glasses that offer protection from ultraviolet A and B (UVA/UVB) rays.

5. Personal Protective Equipment

The PPE specified in **Table 4** represents PPE selection required by 29 CFR 1910.132, and is based on the Activity Hazard Analysis of Section 4 (**Table 2**). Specific information on the selection rationale activity can be found in the GEI Health and Safety Manual.

The PPE program addresses elements, such as PPE selection based on-site hazards, use and limitations, donning and doffing procedures, maintenance and storage, decontamination and disposal, training and proper fitting, inspection procedures prior to / during / and after use, evaluation of the effectiveness of the PPE program, and limitations during temperature extremes, heat stress, and other appropriate medical considerations. A summary of PPE for each level of protection is in **Table 4**.

Table 4. Site-Specific PPE

Task	PPE Level	Site-Specific Requirements	Respirator
Mobilization/Demobilization			
Reconnaissance	D	Hard hat, safety glasses, steel toe/shank safety boot, reflective vest, leather work gloves, hearing protection as needed	D - None
Mobilization/Demobilization of Equipment and Supplies	D	Hard hat, safety glasses, steel toe/shank safety boot, reflective vest, leather work gloves, hearing protection as needed	D – None
Establishment of Site Security, Work Zones, and Staging Area	D	Hard hat, safety glasses, steel toe/shank safety boot, reflective vest, leather work gloves, hearing protection as needed	D - None
Construction			
Drilling, Groundwater Well Installation, Excavation, Digging Test Pits, Backfilling, Grading Observation, Sampling	D	Hard hat, safety glasses, steel toe/shank safety boot with overboot as needed, reflective vest, leather work gloves as needed, nitrile gloves, hearing protection as needed, Tyvek as needed	Level D initially, Level C-If action levels exceeded (see Section 9 of HASP)
Demolition/Remediation Observation			
Observe Contractor Activities	D	Hard hat, safety glasses, steel toe/shank safety boot with overboot as needed, reflective vest, leather work gloves as needed, nitrile gloves, hearing protection as needed, Tyvek as needed	D - None

Use of Level A or Level B PPE is not anticipated. If conditions indicating the need for Level A or Level B PPE are encountered, personnel will leave the Site and this HASP will be revised with oversight of the CHSO or GEI personnel will not re-enter the Site until conditions allow.

For most work conducted at the site, Level D PPE will include long pants, hard hats, safety glasses with side shields, and steel toe/shank or EH-rated safety boots.

5.1 OSHA Requirements for PPE

Personal protective equipment used during the course of this field investigation must meet the following OSHA standards:

Table 5. OSHA Standards for PPE

Type of Protection	Regulation	Source
Eye and Face	29 CFR 1910.133	ANSI Z87.1 1968
Respiratory	29 CFR 1910.134	ANSI Z88.1 1980
Head	29 CFR 1910.135	ANSI Z89.1 1969
Foot	29 CFR 1910.136	ANSI Z41.1 1999 or ASTM F-2412-2005, and ASTM F-2413-2005

CRF = Code of Federal Regulations
ANSI = American National Standards Institute
ASTM = American Society For Testing and Materials

On-site GEI personnel who have the potential to don a respirator must have a valid fit test certification and documentation of medical clearance. The CHSO will maintain such information on file for on-site personnel. The PM will obtain such information from the subcontractor's site supervisor prior to the initiation of such work. Both the respirator and cartridges specified for use in Level C protection must be fit-tested prior to use in accordance with OSHA regulations (29 CFR 1910.134). Air purifying respirators cannot be worn under the following conditions:

- Oxygen deficiency (less than 20.7%).
- Imminent Danger to Life and Health (IDLH) concentrations.
- If contaminant levels exceed designated use concentrations.

6. Key Project Personnel/Responsibilities and Lines of Authority

6.1 GEI Personnel

- Edward Bradshaw — Project Manager
- George Holmes — Project Engineer
- George Holmes — Site Safety Officer
- George Holmes — Field Personnel
- Steve Hawkins — Corporate Health and Safety Officer
- Jeena Sheepard — Regional Health and Safety Officer

The implementation of health and safety at this project location will be the shared responsibility of the PM, the CHSO, Regional Health and Safety Officer (RHSO), the SSO, other GEI personnel implementing the proposed scope of work.

6.1.1 GEI Project Manager

The PM, Ed Bradshaw, is responsible for confirming that the requirements of this HASP are implemented. Some of the PM's specific responsibilities include:

- Conducting and documenting the Project Safety Briefing for GEI project employees and forwarding the signed form (**Appendix D**) to the Safety Team;
- Verifying that the GEI staff selected to work on this program are sufficiently trained for Site activities;
- Assuring that personnel to whom this HASP applies, including subcontractor personnel, have received a copy of it;
- Providing the CHSO with updated information regarding conditions at the Site and the scope of Site work;
- Providing adequate authority and resources to the on-site SSO to allow for the successful implementation of necessary safety procedures;
- Supporting the decisions made by the SSO and CHSO;
- Maintaining regular communications with the SSO and, if necessary, the CHSO;
- Verifying that the subcontractors selected by GEI to work on this program have completed GEI environmental, health and safety requirements and has been deemed acceptable for the proposed scope of work; and

- Coordinating the activities of GEI subcontractors and confirming that they are aware of the pertinent health and safety requirements for this project.

6.1.2 GEI Corporate Health and Safety Officer

The CHSO is the individual responsible for the review, interpretation, and modification of this HASP. Modifications to this HASP which may result in less stringent precautions cannot be undertaken by the PM or the SSO without the approval of the CHSO. Specific duties of the CHSO include:

- Writing, approving, and amending the HASP for this project;
- Advising the PM and SSO on matters relating to health and safety on this Site;
- Recommending appropriate PPE and safety equipment to protect personnel from potential Site hazards;
- Conducting accident investigations; and
- Maintaining regular contact with the PM and SSO to evaluate Site conditions and new information which might require modifications to the HASP.

6.1.3 GEI Site Safety Officer

GEI field staff are responsible for implementing the safety requirements specified in this HASP. However, one person will serve as the SSO. For this program, George Holmes, will serve as the SSO. The SSO will be on-site during all activities covered by this HASP. The SSO is responsible for enforcing the requirements of this HASP once work begins. The SSO has the authority to immediately correct situations where noncompliance with this HASP is noted and to immediately stop work in cases where an immediate danger is perceived. Some of the SSO's specific responsibilities include:

- Conducting/attending the Project Safety Briefing prior to beginning work, and subsequent safety meetings as necessary;
- Verifying that personnel to whom this HASP applies have attended and participated in the Project Safety Briefing and subsequent safety meetings that are conducted during the implementation of the program;
- Maintaining a high level of health and safety consciousness among employees implementing the proposed activities;
- Procuring the air monitoring instrumentation required and performing air monitoring for investigative activities;
- Procuring and distributing the PPE and safety equipment needed for this project for GEI employees;

- Verifying that PPE and health and safety equipment used by GEI is in good working order;
- Verifying that the selected contractors are prepared with the correct PPE and safety equipment and supplies;
- Notifying the PM of noncompliance situations and stopping work in the event that an immediate danger situation is perceived;
- Monitoring and controlling the safety performance of personnel within the established restricted areas to confirm that required safety and health procedures are being followed;
- Stopping work in the event that an immediate danger situation is perceived; and
- Reporting accident/incident and preparing accident/incident reports, if necessary.

6.1.4 GEI Field Personnel

GEI field personnel covered by this HASP are responsible for following the health and safety procedures specified in this HASP and for performing their work in a safe and responsible manner. Some of the specific responsibilities of the field personnel are as follows:

- Reading and signing the HASP in its entirety prior to the start of on-site work;
- Attending and actively participating in the required Project Safety Briefing prior to beginning on-site work and any subsequent safety meetings that are conducted during the implementation of the program;
- Stopping work in the event that an immediate danger situation is perceived;
- Bringing forth any questions or concerns regarding the content of the HASP to the PM or the SSO, prior to the start of work;
- Reporting accidents, injuries, and illnesses, regardless of their severity, to the SSO, CHSO, and HR; and
- Complying with the requirements of this HASP and the requests of the SSO.

6.1.5 Lines of Authority will be as follows:

On-Site – GEI will have responsibility for safety of its employees during the work performed at the Site 71 New Street. GEI's field representative will have a cell phone available to contact the appropriate local authorities, in the event of an emergency. GEI's field representative will be available for communication with the GEI PM and with the Greg DeRosa representative.

GEI employees have the authority to stop work activities if an unanticipated hazard is encountered or a potential unsafe condition is observed. The GEI employee should contact the Corporate Health and Safety Officer and the Project Manager to discuss the stop work conditions and potential control methods that can be implemented.

6.2 Subcontractors

GEI has subcontracted the following firms to assist in performing work on this project:

Subcontractor Name	Contact Name
Land, Air, Water Environmental Services, Inc.	John Lamprecht
	Office: (631) 874-2112
	Cell: (631) 871-5698

GEI requires its subcontractors to work in a responsible and safe manner. Subcontractors hired by GEI are required to submit documentation of their safety practices as part of GEI's Subcontractor Management Program for evaluation and approval before the start of work. Subcontractors for this project will be required to develop their own HASP for protection of their employees, but, at a minimum, must adhere to applicable requirements set forth in this HASP.

7. Training Program

7.1 HAZWOPER Training

In accordance with OSHA Standard 29 CFR 1910.120 "Hazardous Waste Operations and Emergency Response" (HAZWOPER) responders will, at the time of job assignment, have received a minimum of 40 hours of initial health and safety training for hazardous waste site operations. At a minimum, the training will have consisted of instruction in the topics outlined in the standard. Personnel who have not met the requirements for initial training will not be allowed to work in any Site activities in which they may be exposed to hazards (chemical or physical). Proof of training will be submitted to the PM or his/her representative prior to the start of field activities.

7.2 Annual 8-Hour Refresher Training

Annual 8-hour refresher training will be required of hazardous waste site field personnel in order to maintain their qualifications for fieldwork. The training will cover a review of 29 CFR 1910.120 requirements and related company programs and procedures. Proof of current 8-hour refresher training will be submitted to the PM or his/her representative prior to the start of field activities.

7.3 Supervisor Training

Personnel acting in a supervisory capacity will have received 8 hours of instruction in addition to the initial 40-hour training. In addition supervisors will have 1 year of field experience and training specific to work activities (i.e., sampling, construction observation, etc.).

7.4 Site-Specific Training

Prior to commencement of field activities, the PM or the SSO will verify GEI field personnel assigned to the project will have completed training that will specifically address the activities, procedures, monitoring, and equipment used in the Site operations. It will include Site and facility layout, hazards, and emergency services at the Site, and will highlight the provisions contained within this HASP and applicable GEI H&S SOPs (**Appendix E**). This training will be documented on the Project Safety Briefing Form **Appendix D**). The signed form will be forwarded to the Safety Team at SafetyTeam@geiconsultants.com. In addition, GEI personnel will sign the plan to document that they understand the hazards and control measures presented and agree to comply with the procedures established in the HASP. Personnel that have not received project-specific training will not be allowed on-site.

7.5 On-Site Safety Briefings

Other GEI personnel will be given health and safety briefings daily by the SSO or field representative to assist GEI personnel in safely conducting work activities. The briefing will include GEI subcontractors. The briefings can include information on new operations to be conducted, changes in work practices, or changes in the Site's environmental conditions, as well as periodic reinforcement of previously discussed topics. The briefings will also provide a forum to facilitate conformance with safety requirements and to identify performance deficiencies related to safety during daily activities or as a result of safety inspections. Documentation of these briefings will be recorded in the GEI field book, if the project duration is less than 5 days. If the project is longer than 5 days, the Tailgate Safety Briefing Form (**Appendix D**) will be used to document briefings. The meetings will also be an opportunity to periodically update the employees on monitoring results.

7.6 First Aid and CPR

The PM will verify that GEI field staff has current certifications in first aid and Cardiopulmonary Resuscitation (CPR), so that emergency medical treatment is available during field activities. The training will be consistent with the requirements of the American Red Cross Association. GEI employees also attend annual Bloodborne Pathogens training in compliance with OSHA regulations.

8. Medical Surveillance Program

GEI maintains a continuous, corporate, medical surveillance program that includes a plan designed specifically for field personnel engaged in work at sites where hazardous or toxic materials may be present. GEI's CHSO and is responsible for the administration and coordination of medical evaluations conducted for GEI's employees at branch office locations. Comprehensive examinations are given to GEI field personnel on an annual or biennial basis (as determined to be appropriate by the CHSO) participating in hazardous waste operations. The medical results of the examinations aid in determining the overall fitness of employees participating in field activities.

Under the CHSO's supervision, field personnel undergo a complete initial physical examination, including a detailed medical and occupational history, before they participate in hazardous waste site investigations. Extensive annual/biennial reexaminations are also performed. Upon completion of these tests, personnel are certified by an occupational health physician as to whether they are fit for field work in general, and fit to use respiratory protection.

If a GEI employee or other project worker shows symptoms of exposure to a hazardous substance and wishes to be rechecked, he/she will be directed to the nearest area hospital or medical facility.

GEI subcontractor personnel that will enter any active waste handling or other active non-"clean" area must certify that they are participating in a medical surveillance program that complies with OSHA regulations for hazardous waste operations (i.e., 29 CFR 1910.120 and 29 CFR 1926.65). Proof of medical clearance will be submitted to the GEI PM or SSO prior to the start of field activities.

9. Atmospheric Monitoring

Air monitoring will be performed to identify and quantify airborne levels of hazardous substances and safety and health hazards in order to determine the appropriate level of worker protection needed on-site in the event that intrusive work is conducted. Work requiring air monitoring includes the installation and/or abandonment of monitoring wells, Dense Non-Aqueous Phase Liquid (DNAPL) recovery wells, oxygen injection wells, and soil vapor points. Additionally, PID screening of the well head space will be conducted during groundwater sampling activities.

GEI will conduct work zone monitoring for on-site GEI employees during intrusive activities only. GEI will monitor and document daily Site conditions and operations and inform field representatives of results. ***If Action Levels are exceeded, the SSO will immediately implement Site action(s) according to Table 6 below and notify the PM and Safety Team***.

The following air monitoring equipment will be on-site:

- PID with 10.6 eV lamp or equivalent

9.1 Equipment Use

9.1.1 Calibration

Air monitoring equipment will be calibrated and maintained in accordance with manufacturer's requirements. Calibrations will be recorded in the project notes daily or on a daily calibration form.

9.1.2 Photoionization Detector

Organic vapor concentrations will be measured using a PID during intrusive activities. During intrusive operations, organic vapor concentrations will be measured continuously. Organic vapor concentrations will be measured upwind of the work site(s) to determine background concentrations at least twice a day, (once in the morning and once in the afternoon). The SSO will interpret monitoring results using professional judgment and according to the alert and Action Limits set forth in the associated Site Work Plan.

9.2 Action Levels

Table 6 provides a summary of real time air monitoring Action Levels and contingency plans for work zone activities. The below Action Levels are determined by halving the Permissible Exposure Limits (PELs) or Threshold Limit Values (TLVs) as set forth by OSHA and the American Conference of Government Industrial Hygienists (ACGIH). O_2 values are based

on the maximum use limits of a full face respirator if oxygen were being displaced by a chemical.

Table 6. Real-Time Work Zone Air Monitoring Action Levels

Air Monitoring Instrument	Action Level (above background)	Site Action
PID	1.0 ppm	Use detector tube for benzene or zNose® to verify if concentration is benzene. No respiratory protection is required if benzene is not present.
PID	1.0 - 10 ppm	Use Sensidyne detector tube for naphthalene or zNose® to verify if concentration is naphthalene. No respiratory protection is required if naphthalene is not present.
	10 – 50 ppm	No respiratory protection is required if benzene or naphthalene is not present.
	50 – 100 ppm	Stop work, withdrawal from work area, institute engineering controls, if levels persist, upgrade to Level C.
	> 100 ppm	Stop work, withdraw from work area, notify PM and Safety Team.

10. Site Control Measures

10.1 Site Zones

Site zones are intended to control the potential spread of contamination and to assure that only authorized individuals are permitted into potentially hazardous areas. A three-zone approach will be utilized. It will include an Exclusion Zone (EZ), Contamination Reduction Zone (CRZ) and a Support Zone (SZ). Specific zones will be established on the work site by the Contractor when operations begin for each task requiring such delineation. Maps depicting the zones will be available at the Site.

This project is being conducted under the requirements of 29 CFR 1910.120, and any personnel working in an area where the potential for exposure to Site contaminants exists, will only be allowed access after proper training and medical documentation.

The following will be used for guidance in revising these preliminary zone designations, if necessary.

Support Zone – The SZ is an uncontaminated area that will be the field support area for most operations. The SZ provides for field team communications and staging for medical emergency. Appropriate sanitary facilities and safety equipment will be located in this zone. Potentially contaminated personnel/materials are not allowed in this zone.

Contamination Reduction Zone – The CRZ is established between the EZ and the SZ. The CRZ contains the contamination reduction corridor and provides an area for decontamination of personnel and portable hand-held equipment, tools and heavy equipment. A personnel decontamination area will be prepared at each exclusion zone. The CRZ will be used for EZ entry and egress in addition to access for heavy equipment and emergency support services.

Exclusion Zone – Activities which may involve exposure to Site contaminants, hazardous materials, and/or conditions should be considered an EZ. This zone will be clearly delineated by cones, tapes, or other means. The Contractor may establish more than one EZ where different levels of protection may be employed or different hazards exist. The size of the EZ will be determined by the Contractor allowing adequate space for the activity to be completed, field members, and emergency equipment.

The Contractor is responsible for constructing, maintaining, and enforcing the zones.

10.2 Buddy System

GEI personnel should be in line-of-site or communication contact with another on-site person. The other on-site person should be aware of his or her role as a "buddy" and be able to provide assistance in the event of an emergency. A copy of this plan will be given to any person acting as a GEI "buddy" for informational purposes.

10.3 Sanitation for Temporary Work Sites

Sanitation requirements identified in the OSHA Standard 29 CFR 1926.51 "Sanitation" specifies that employees working at temporary project sites have at least one sanitary facility available to them. Temporary sanitary facilities including toilets will be available on-site.

10.4 Illumination

Illumination requirements identified by OSHA are directed to work efforts inside buildings and/or during non-daylight hours. Activities planned for the Site are anticipated to occur outside during daylight hours. However, if work areas do not meet illumination requirements, they will be equipped with appropriate illumination that meets or exceeds requirements specified in OSHA Standard 29 CFR 1926.56 "Illumination." Employees will not work on sites that are not properly lighted.

10.5 Smoking

Smoking is prohibited at or in the vicinity of hazardous operations or materials. Where smoking is permitted, safe receptacles will be provided for smoking materials.

10.6 Alcohol and Drug Abuse Prevention

Alcohol and drugs will not be allowed on the Site. Project personnel under the influence of alcohol or drugs will not be allowed to enter the Site.

11. Incident Reporting

GEI will report incidents involving GEI personnel or subcontractor personnel, such as: lost time injuries, injuries requiring medical attention, near miss incidents, fires, fatalities, accidents involving the public, chemical spills, vehicle accidents, and property damage. The following steps must be followed when an incident occurs:

1. In life-threatening situations, immediately call 9-1-1.
2. Stop work activity to address any injury, illness, property damage, spill or other emergency.
3. **Immediately** report any incidents to your Supervisor/Project Manager and Regional Health & Safety Officer.
4. If your injury or illness is not life-threatening, call Medcor Triage at 1-800-775-5866 to speak with a medical professional.
5. Complete an Incident Report Form **immediately** after addressing the incident.

For vehicle accidents involving another vehicle or damage to property, the employee will take pictures of each vehicle or property involved in the incident and obtain a police report. In some municipalities police will not be dispatched to a non-injury accident, but every effort needs to be made to try and obtain the report.

The Incident Report Form and the Near Miss Reporting Form can be found in **Appendix D**, on the GEI Health and Safety smartphone app, or on the Safety page of the GEI Intranet. To report subcontractor injuries or incidents, follow the same verbal reporting procedures and submit an email describing the event to the PM and the Safety Team.

11.1 Injury Triage Service

If a GEI employee experiences a work related injury that is not life-threatening, the employee will initiate a call to Medcor Triage at 1-800-775-5866. The injured employee will detail any medical symptoms or complaints which will be evaluated by a Registered Nurse (RN) specially trained to perform telephonic triage. The RN will recommend first aid self-treatment or refer the injured employee for an off-site medical evaluation by a health professional at a clinic within GEI's workers compensation provider network. GEI employees are still required to follow our Accident Reporting procedures as listed above.

12. Decontamination Procedures

12.1 Decontamination Equipment Requirements

The following equipment, if required, should be in sufficient supply to implement decontamination procedures for GEI's equipment.

- Buckets
- Alconox™ detergent concentrate
- Hand pump sprayers
- Long handled soft bristle brushes
- Large sponges
- Cleaning wipes for respirators
- Bench or stool(s)
- Methanol and/or Nitric Acid
- Liquid detergent and paper towels
- Plastic trash bags

The Contractor performing decontamination procedures is responsible for verifying that the above materials, as required for their operation, are in sufficient supply.

13. Supplemental Contingency Plan Procedures

13.1 Hazard Communication Plan

GEI personnel have received hazard communication training as part of their annual health and safety training and new employee health and safety orientation training. Hazardous materials used on the Site will be properly labeled, stored, and handled. SDS will be available to potentially exposed employees.

13.2 Fire

In the event of a fire personnel will evacuate the area. GEI's field representative will contact the local fire department with jurisdiction and report the fire. Notification of evacuation will be made to the PM and the Safety Team. The field representative will account for GEI personnel and subcontractor personnel and report their status to the PM.

13.3 Medical Support

In case of minor injuries, on-site care will be administered with the Site first aid kit. For serious injuries, call 911 and request emergency medical assistance. Seriously injured persons should not be moved, unless they are in immediate danger. Notify the PM and the Safety Team of the emergency.

Section 1 and **Table 1** of this HASP contain detailed emergency information, including directions to the nearest hospital, and a list of emergency services and their telephone numbers. In addition, **Appendix A** includes maps to the hospital and/or occupational health clinic. GEI field personnel will carry a cellular telephone.

13.4 Severe Weather

The contingency plan for severe weather includes reviewing the expected weather to determine if severe weather is in the forecast. Severe weather includes high winds over 30 miles per hour (mph), heavy rains or snow squalls, thunderstorms, tornados, and lightning storms. If severe weather is approaching, the decision to evacuate GEI personnel and subcontractor personnel from the Site will be the responsibility of GEI's field representative. Notification of evacuation will be made to the PM and the Safety Team. The field representative will account for GEI personnel and subcontractor personnel and report their status to the PM. If safe, work can resume 30 minutes after the last clap of thunder or flash of lightening.

13.5 Spills or Material Release

If a hazardous waste spill or material release occurs, if safe, the SSO or their representative will immediately assess the magnitude and potential seriousness of the spill or release based on the following:

- SDS for the material spilled or released;
- Source of the release or spillage of hazardous material;
- An estimate of the quantity released and the rate at which it is being released;
- The direction in which the spill or air release is moving;
- Personnel who may be or may have been in contact with the material, or air release, and possible injury or sickness as a result;
- Potential for fire and/or explosion resulting from the situation; and
- Estimates of area under influence of release.

If the spill or release is determined to be within the on-site emergency response capabilities, the SSO will verify implementation of the necessary remedial action. If the release is beyond the capabilities of the Site personnel, personnel will be evacuated from the immediate area and the local fire department will be contacted. The SSO will notify the PM and the Safety Team.

14. Health and Safety Plan Sign-Off

GEI personnel conducting site activities will be familiar with the information in this HASP. After reviewing this plan, please sign the copy in the project files, and bring a copy of the plan with you to the Site. By signing this site-specific HASP, you are agreeing that you have read, understand, and will adhere to the provisions described in this plan while working on the Project Site below.

Site Name: 71 New Street Site

Investigation: Remedial Investigation

GEI Project No: 1700841

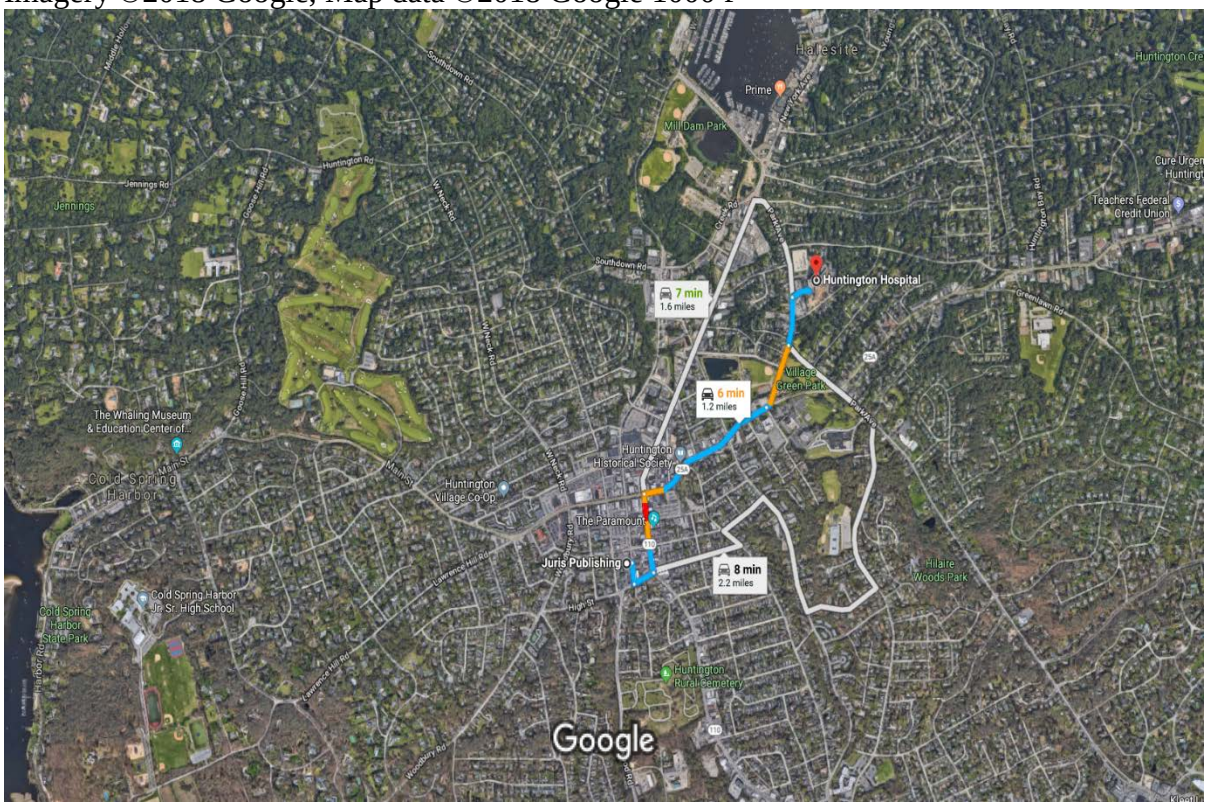
Print Name	Signature
Project Manager: Edward Bradshaw	

Appendix A

Map to Hospital and Occupational Health Clinic

Juris Publishing
71 New St, Huntington, NY 11743

Imagery ©2018 Google, Map data ©2018 Google 1000 f



t

1. Head south on New St toward High St
2. Turn left onto High St
3. Turn left onto New York Ave
4. Turn right onto Main St

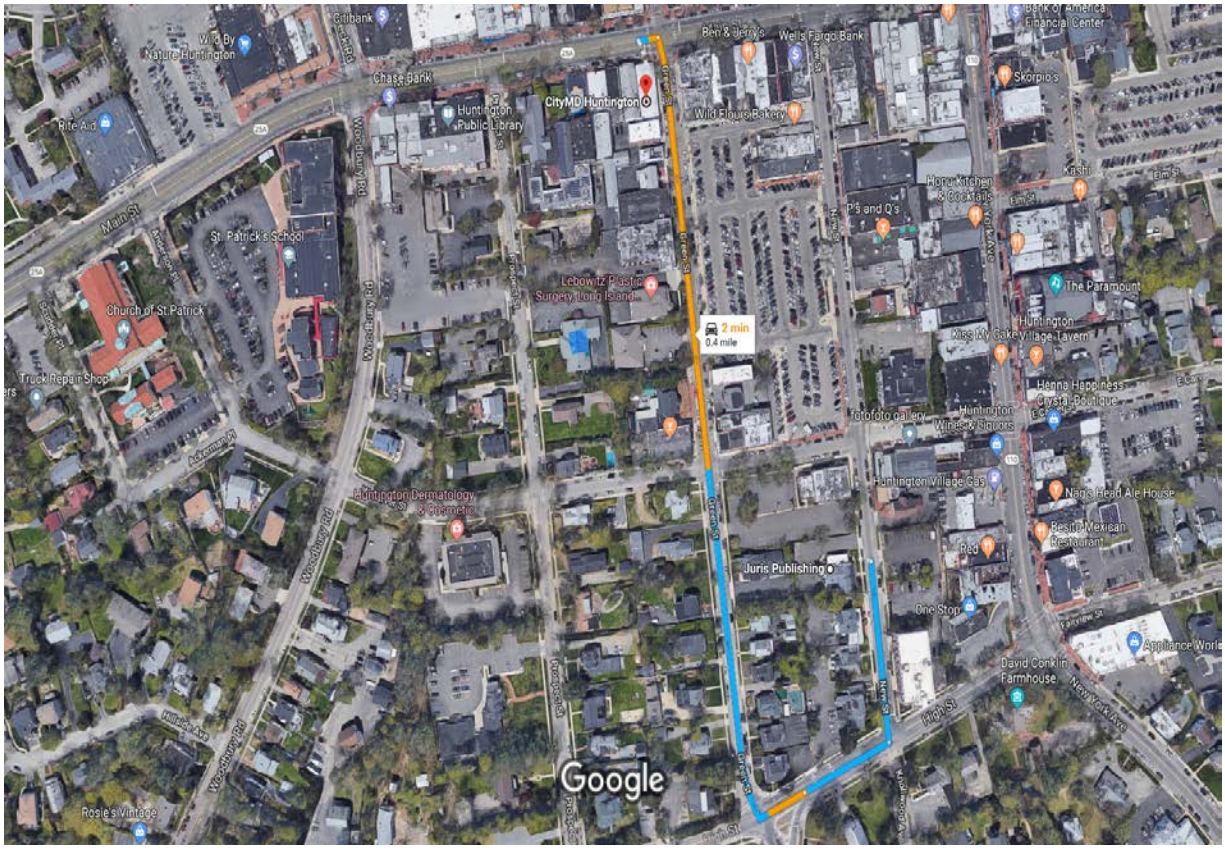
5. Turn left onto Sabbath Day Path

6. Continue onto Park Ave

7. Turn right

Destination will be on the left

Huntington Hospital
270 Park Ave, Huntington, NY 11743



Imagery ©2018 Google, Map data ©2018 Google 100 ft

1. Head south on New St toward High St

2. Turn right onto High St

3. Turn right onto Green St

4. Turn left onto Main St

Destination will be on the left

CityMD Huntington

314 Main St, Huntington, NY 11743

Appendix B

Safety Data Sheets

MATERIAL SAFETY DATA SHEET

ALCONOX®

Prepared to U.S. OSHA, CMA, ANSI, Canadian WHMIS, Australian WorkSafe, Japanese Industrial Standard JIS Z 7250:2000, and European Union REACH Regulations

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:	**ALCONOX®**
CHEMICAL FAMILY NAME:	Detergent.
PRODUCT USE:	Critical-cleaning detergent for laboratory, healthcare and industrial applications
U.N. NUMBER:	Not Applicable
U.N. DANGEROUS GOODS CLASS:	Non-Regulated Material
SUPPLIER/MANUFACTURER'S NAME:	Alconox, Inc.
ADDRESS:	30 Glenn St., Suite 309, White Plains, NY 10603. USA
EMERGENCY PHONE:	**TOLL-FREE in USA/Canada** 800-255-3924
	International calls 813-248-0585
BUSINESS PHONE:	914-948-4040
DATE OF PREPARATION:	May 2011
DATE OF LAST REVISION:	February 2008

SECTION 2 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: This product is a white granular powder with little or no odor. Exposure can be irritating to eyes, respiratory system and skin. It is a non-flammable solid. The Environmental effects of this product have not been investigated.

US DOT SYMBOLS

Non-Regulated

CANADA (WHMIS) SYMBOLS

EUROPEAN and (GHS) Hazard Symbols

Signal Word: **Warning!**

EU LABELING AND CLASSIFICATION:

Classification of the substance or mixture according to Regulation (EC) No1272/2008 Annex 1
EC# 205-633-8 This substance is not classified in the Annex I of Directive 67/548/EEC
EC# 268-356-1 This substance is not classified in the Annex I of Directive 67/548/EEC
EC# 231-838-7 This substance is not classified in the Annex I of Directive 67/548/EEC
EC# 231-767-1 This substance is not classified in the Annex I of Directive 67/548/EEC
EC# 207-638-8 Index# 011-005-00-2
EC# 205-788-1 This substance is not classified in the Annex I of Directive 67/548/EEC

GHS Hazard Classification(s):

Eye Irritant Category 2A

Hazard Statement(s):

H319: Causes serious eye irritation

Precautionary Statement(s):

P260: Do not breath dust/fume/gas/mist/vapors/spray
P264: Wash hands thoroughly after handling
P271: Use only in well ventilated area.
P280: Wear protective gloves/protective clothing/eye protection/face protection/

Hazard Symbol(s):

[Xi] Irritant

Risk Phrases:
R20: Harmful by inhalation
R36/37/38: Irritating to eyes, respiratory system and skin

Safety Phrases:
S8: Keep container dry
S22: Do not breath dust
S24/25: Avoid contact with skin and eyes

HEALTH HAZARDS OR RISKS FROM EXPOSURE:

ACUTE: Exposure to this product may cause irritation of the eyes, respiratory system and skin. Ingestion may cause gastrointestinal irritation including pain, vomiting or diarrhea.

CHRONIC: This product contains an ingredient which may be corrosive.

TARGET ORGANS: ACUTE: Eye, respiratory System, Skin CHRONIC: None Known

SECTION 3 - COMPOSITION and INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS:	CAS #	EINECS #	ICSC #	WT %	HAZARD CLASSIFICATION; RISK PHRASES
Sodium Bicarbonate	144-55-8	205-633-8	1044	33 - 43%	HAZARD CLASSIFICATION: None RISK PHRASES: None
Sodium (C10 – C16) Alkylbenzene Sulfonate	68081-81-2	268-356-1	Not Listed	10 – 20%	HAZARD CLASSIFICATION: None RISK PHRASES: None
Sodium Tripolyphosphate	7758-29-4	231-838-7	1469	5 - 15%	HAZARD CLASSIFICATION: None RISK PHRASES: None
Tetrasodium Pyrophosphate	7722-88-5	231-767-1	1140	5 - 15%	HAZARD CLASSIFICATION: None RISK PHRASES: None
Sodium Carbonate	497-19-8	207-638-8	1135	1 - 10%	HAZARD CLASSIFICATION: [Xi] Irritant RISK PHRASES: R36
Sodium Alcohol Sulfate	151-21-3	205-788-1	0502	1 – 5%	HAZARD CLASSIFICATION: None RISK PHRASES: None
Balance of other ingredients are non-hazardous or less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers).					

NOTE: ALL WHMIS required information is included in appropriate sections based on the ANSI Z400.1-2004 format. This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR, EU Directives and the Japanese Industrial Standard *JIS Z 7250: 2000*.

SECTION 4 - FIRST-AID MEASURES

Contaminated individuals of chemical exposure must be taken for medical attention if any adverse effect occurs. Rescuers should be taken for medical attention, if necessary. Take copy of label and MSDS to health professional with contaminated individual.

EYE CONTACT: If product enters the eyes, open eyes while under gentle running water for at least 15 minutes. Seek medical attention if irritation persists.

SKIN CONTACT: Wash skin thoroughly after handling. Seek medical attention if irritation develops and persists. Remove contaminated clothing. Launder before re-use.

INHALATION: If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention if breathing dificulty continues.

INGESTION: If product is swallowed, call physician or poison control center for most current information. If professional advice is not available, do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or MSDS with the victim to the health professional.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Pre-existing skin, or eye problems may be aggravated by prolonged contact.

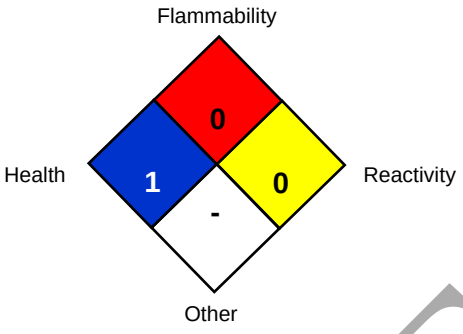
RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and reduce over-exposure.

SECTION 5 - FIRE-FIGHTING MEASURES

FLASH POINT: Not Flammable
AUTOIGNITION TEMPERATURE: Not Applicable
FLAMMABLE LIMITS (in air by volume, %): Lower (LEL): NA Upper (UEL): NA
FIRE EXTINGUISHING MATERIALS: As appropriate for surrounding fire. Carbon dioxide, foam, dry chemical, halon, or water spray.

UNUSUAL FIRE AND EXPLOSION HAZARDS: This product is non-flammable and has no known explosion hazards.
Explosion Sensitivity to Mechanical Impact: Not Sensitive.
Explosion Sensitivity to Static Discharge: Not Sensitive
SPECIAL FIRE-FIGHTING PROCEDURES: Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

NFPA RATING SYSTEM



HMIS RATING SYSTEM

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM

HEALTH HAZARD (BLUE)	1
FLAMMABILITY HAZARD (RED)	0
PHYSICAL HAZARD (YELLOW)	0

PROTECTIVE EQUIPMENT			
EYES	RESPIRATORY	HANDS	BODY
	See Sect 8		See Sect 8

For Routine Industrial Use and Handling Applications

Hazard Scale: **0** = Minimal **1** = Slight **2** = Moderate **3** = Serious **4** = Severe * = Chronic hazard

SECTION 6 - ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK RESPONSE: Personnel should be trained for spill response operations.
SPILLS: Contain spill if safe to do so. Prevent entry into drains, sewers, and other waterways. Sweep, shovel or vacuum spilled material and place in an appropriate container for re-use or disposal. Avoid dust generation if possible. Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, Disposal Considerations).

SECTION 7 - HANDLING and STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing dusts generated by this product. Use in a well-ventilated location. Remove contaminated clothing immediately.

STORAGE AND HANDLING PRACTICES: Containers of this product must be properly labeled. Store containers in a cool, dry location. Keep container tightly closed when not in use. Store away from strong acids or oxidizers.

SECTION 8 - EXPOSURE CONTROLS - PERSONAL PROTECTION

EXPOSURE LIMITS/GUIDELINES:

Chemical Name	CAS#	ACGIH TWA	OSHA TWA	SWA
Sodium Bicarbonate	144-55-8	10 mg/m³ Total Dust	15 mg/m³ Total Dust	10 mg/m³ Total Dust
Sodium (C10 – C16) Alkylbenzene Sulfonate	68081-81-2	10 mg/m³ Total Dust	15 mg/m³ Total Dust	10 mg/m³ Total Dust
Sodium Tripolyphosphate	7758-29-4	10 mg/m³ Total Dust	15 mg/m³ Total Dust	10 mg/m³ Total Dust
Tetrasodium Pyrophosphate	7722-88-5	5 mg/m³	5 mg/m³	5 mg/m³
Sodium Carbonate	497-19-8	10 mg/m³ Total Dust	15 mg/m³ Total Dust	10 mg/m³ Total Dust
Sodium Alcohol Sulfate	151-21-3	10 mg/m³ Total Dust	15 mg/m³ Total Dust	10 mg/m³ Total Dust

Currently, International exposure limits are not established for the components of this product. Please check with competent authority in each country for the most recent limits in place.

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided below. Use local exhaust ventilation to control airborne dust. Ensure eyewash/safety shower stations are available near areas where this product is used.

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada, or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.

RESPIRATORY PROTECTION: Based on test data, exposure limits should not be exceeded under normal use conditions when using Alconox Detergent. Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.

EYE PROTECTION: Safety glasses. If necessary, refer to U.S. OSHA 29 CFR 1910.133 or appropriate Canadian Standards.

HAND PROTECTION: Use chemical resistant gloves to prevent skin contact.. If necessary, refer to U.S. OSHA 29 CFR 1910.138 or appropriate Standards of Canada.

BODY PROTECTION: Use body protection appropriate to prevent contact (e.g. lab coat, overalls). If necessary, refer to appropriate Standards of Canada, or appropriate Standards of the EU, Australian Standards, or relevant Japanese Standards.

SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

PHYSICAL STATE:	Solid
APPEARANCE & ODOR:	White granular powder with little or no odor.
ODOR THRESHOLD (PPM):	Not Available
VAPOR PRESSURE (mmHg):	Not Applicable
VAPOR DENSITY (AIR=1):	Not Applicable.
BY WEIGHT:	Not Available
EVAPORATION RATE (nBuAc = 1):	Not Applicable.
BOILING POINT (C°):	Not Applicable.
FREEZING POINT (C°):	Not Applicable.
pH:	9.5 (1% aqueous solution)
SPECIFIC GRAVITY 20°C: (WATER =1)	0.85 – 1.1
SOLUBILITY IN WATER (%)	>10% w/w
COEFFICIENT OF WATER/OIL DIST.:	Not Available
VOC:	None
CHEMICAL FAMILY:	Detergent

SECTION 10 - STABILITY and REACTIVITY

STABILITY: Product is stable
DECOMPOSITION PRODUCTS: When heated to decomposition this product produces Oxides of carbon (COx)
MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: Strong acids and strong oxidizing agents.
HAZARDOUS POLYMERIZATION: Will not occur.
CONDITIONS TO AVOID: Contact with incompatible materials and dust generation.

SECTION 11 - TOXICOLOGICAL INFORMATION

TOXICITY DATA: Toxicity data is available for mixture:

CAS# 497-19-8 LD50 Oral (Rat)	4090 mg/kg
CAS# 497-19-8 LD50 Oral (Mouse)	6600 mg/kg
CAS# 497-19-8 LC50 Inhalation (Rat)	2300 mg/m³ 2H
CAS# 497-19-8 LC50 Inhalation (Mouse)	1200 mg/m³ 2H
CAS# 7758-29-4 LD50 Oral (Rat)	3120 mg/kg
CAS# 7758-29-4 LD50 Oral (Mouse)	3100 mg/kg
CAS# 7722-88-5 LD50 Oral (Rat)	4000 mg/kg

SUSPECTED CANCER AGENT: None of the ingredients are found on the following lists: FEDERAL OSHA Z LIST, NTP, CAL/OSHA, IARC and therefore is not considered to be, nor suspected to be a cancer-causing agent by these agencies.
IRRITANCY OF PRODUCT: Contact with this product can be irritating to exposed skin, eyes and respiratory system.
SENSITIZATION OF PRODUCT: This product is not considered a sensitizer.
REPRODUCTIVE TOXICITY INFORMATION: No information concerning the effects of this product and its components on the human reproductive system.

SECTION 12 - ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.
ENVIRONMENTAL STABILITY: No Data available at this time.
EFFECT OF MATERIAL ON PLANTS or ANIMALS: No evidence is currently available on this product's effects on plants or animals.

EFFECT OF CHEMICAL ON AQUATIC LIFE: No evidence is currently available on this product's effects on aquatic life.

SECTION 13 - DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate Federal, State, and local regulations, those of Canada, Australia, EU Member States and Japan.

SECTION 14 - TRANSPORTATION INFORMATION

US DOT; IATA; IMO; ADR:

THIS PRODUCT IS NOT HAZARDOUS AS DEFINED BY 49 CFR 172.101 BY THE U.S. DEPARTMENT OF TRANSPORTATION.
PROPER SHIPPING NAME: Non-Regulated Material
HAZARD CLASS NUMBER and DESCRIPTION: Not Applicable
UN IDENTIFICATION NUMBER: Not Applicable
PACKING GROUP: Not Applicable.
DOT LABEL(S) REQUIRED: Not Applicable
NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER (2004): Not Applicable
MARINE POLLUTANT: None of the ingredients are classified by the DOT as a Marine Pollutant (as defined by 49 CFR 172.101, Appendix B)

U.S. DEPARTMENT OF TRANSPORTATION (DOT) SHIPPING REGULATIONS:
This product is not classified as dangerous goods, per U.S. DOT regulations, under 49 CFR 172.101.

TRANSPORT CANADA, TRANSPORTATION OF DANGEROUS GOODS REGULATIONS:
This product is not classified as Dangerous Goods, per regulations of Transport Canada.

INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA):
This product is not classified as Dangerous Goods, by rules of IATA:

INTERNATIONAL MARITIME ORGANIZATION (IMO) DESIGNATION:
This product is not classified as Dangerous Goods by the International Maritime Organization.

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR):

This product is not classified by the United Nations Economic Commission for Europe to be dangerous goods.

SECTION 15 - REGULATORY INFORMATION

UNITED STATES REGULATIONS

SARA REPORTING REQUIREMENTS: This product is not subject to the reporting requirements of Sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act., as follows: None

TSCA: All components in this product are listed on the US Toxic Substances Control Act (TSCA) inventory of chemicals.

SARA 311/312:

Acute Health: Yes Chronic Health: No Fire: No Reactivity: No

U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for this product. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) may apply, per 40 CFR 370.20.

U.S. CERCLA REPORTABLE QUANTITY (RQ): None

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): None of the ingredients are on the California Proposition 65 lists.

CANADIAN REGULATIONS:

CANADIAN DSL/NDSL INVENTORY STATUS: All of the components of this product are on the DSL Inventory

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS: No component of this product is on the CEPA First Priorities Substance Lists.

CANADIAN WHMIS CLASSIFICATION and SYMBOLS: This product is categorized as a Controlled Product, Hazard Class D2B as per the Controlled Product Regulations

EUROPEAN ECONOMIC COMMUNITY INFORMATION:

EU LABELING AND CLASSIFICATION:

Classification of the mixture according to Regulation (EC) No1272/2008. See section 2 for details.

AUSTRALIAN INFORMATION FOR PRODUCT:

AUSTRALIAN INVENTORY OF CHEMICAL SUBSTANCES (AICS) STATUS: All components of this product are listed on the AICS.

STANDARD FOR THE UNIFORM SCHEDULING OF DRUGS AND POISONS: Not applicable.

JAPANESE INFORMATION FOR PRODUCT:

JAPANESE MINISTER OF INTERNATIONAL TRADE AND INDUSTRY (MITI) STATUS: The components of this product are not listed as Class I Specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese MITI.

INTERNATIONAL CHEMICAL INVENTORIES:

Listing of the components on individual country Chemical Inventories is as follows:

Asia-Pac:	Listed
Australian Inventory of Chemical Substances (AICS):	Listed
Korean Existing Chemicals List (ECL):	Listed
Japanese Existing National Inventory of Chemical Substances (ENCS):	Listed
Philippines Inventory if Chemicals and Chemical Substances (PICCS):	Listed
Swiss Giftliste List of Toxic Substances:	Listed
U.S. TSCA:	Listed

SECTION 16 - OTHER INFORMATION

PREPARED BY: Paul Eigbrett Global Safety Management, 10006 Cross Creek Blvd. Suite 440, Tampa, FL 33647

Disclaimer: To the best of Alconox, Inc. knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness is not guaranteed and no warranties of any type either express or implied are provided. The information contained herein relates only to this specific product.

ANNEX:

IDENTIFIED USES OF ALCONOX® AND DIRECTIONS FOR USE

Used to clean: Healthcare instruments, laboratory ware, vacuum equipment, tissue culture ware, personal protective equipment, sampling apparatus, catheters, tubing, pipes, radioactive contaminated articles, optical parts, electronic components, pharmaceutical apparatus, cosmetics manufacturing equipment, metal castings, forgings and stampings, industrial parts, tanks and reactors. Authorized by USDA for use in federally inspected meat and poultry plants. Passes inhibitory residue test for water analysis. FDA certified.

Used to remove: Soil, grit, grime, buffing compound, slime, grease, oils, blood, tissue, salts, deposits, particulates, solvents, chemicals, radioisotopes, radioactive contaminations, silicon oils, mold release agents.

Surfaces cleaned: Corrosion inhibited formulation recommended for glass, metal, stainless steel, porcelain, ceramic, plastic, rubber and fiberglass. Can be used on soft metals such as copper, aluminum, zinc and magnesium if rinsed promptly. Corrosion testing may be advisable.

Cleaning method: Soak, brush, sponge, cloth, ultrasonic, flow through clean-inplace. Will foam—not for spray or machine use.

Directions: Make a fresh 1% solution (2 1/2 Tbsp. per gal., 1 1/4 oz. per gal. or 10 grams per liter) in cold, warm, or hot water. If available use warm water. Use cold water for blood stains. For difficult soils, raise water temperature and use more detergent. Clean by soak, circulate, wipe, or ultrasonic method. Not for spray machines, will foam. For nonabrasive scouring, make paste. Use 2% solution to soak frozen stopcocks. To remove silver tarnish, soak in 1% solution in aluminum container. RINSE THOROUGHLY—preferably with running water. For critical cleaning, do final or all rinsing in distilled, deionized, or purified water. For food contact surfaces, rinse with potable water. Used on a wide range of glass, ceramic, plastic, and metal surfaces. Corrosion testing may be advisable.

Appendix C

Heat Stress and Cold Stress Guidelines

Heat Stress Guidelines

Form	Signs & Symptoms	Care	Prevention[3]
Heat Rash	Tiny red vesicles in affected skin area. If the area is extensive, sweating can be impaired.	Apply mild lotions and cleanse the affected area.	Cool resting and sleeping areas to permit skin to dry between heat exposures.
Heat Cramps	Spasm, muscular pain (cramps) in stomach area and extremities (arms and legs).	Provide replacement fluids with minerals (salt) such as Gatorade.	Adequate salt intake with meals[1]. ACCLIMATIZATION[2]
Heat Exhaustion	Profuse sweating, cool (clammy) moist skin, dizziness, confusion, pale skin color, faint, rapid shallow breathing, headache, weakness, and/or muscle cramps.	Remove from heat, sit or lie down, rest, replace lost water with electrolyte replacement fluids (water, Gatorade) take frequent sips of liquids in amounts greater than required to satisfy thirst.	ACCLIMATIZATION[2] Adequate salt intake with meals[1], only during early part of heat season. Ample water intake, frequently during the day.
Heat Stroke	HOT Dry Skin. Sweating has stopped. Mental confusion, dizziness, nausea, chills, severe headache, collapse, delirium, and/or coma.	HEAT STROKE IS A MEDICAL EMERGENCY • Remove from heat. • COOL THE BODY AS RAPIDLY AS POSSIBLE by immersing in cold (or cool) water, or splash with water and fan. • Call for Emergency Assistance. • Observe for signs of shock.	ACCLIMATIZATION[2] Initially moderate workload in heat (8 to 14 days). Monitor worker's activities.

Footnotes:

1.) American diets are normally high in salt, sufficient to aid acclimatization. However, during the early part of the heat season, (May, June), one extra shake of salt during one to two meals per day may help, so long as this is permitted by your physician. Check with your personal physician.

2.) ACCLIMATIZATION - The process of adapting to heat is indicated by worker's ability to perform hot jobs less fluid loss, lower concentrations of salt loss in sweat, and a reduced core (body) temperature and heart rate.

3.) Method to Achieve Acclimatization - Moderate work or exercise in hot temperatures during early part of heat season. Adequate salt (mineral) and water intake. Gradually increasing work time in hot temperatures. Avoid alcohol. Normally takes 8 to 14 days to achieve acclimatization. Lost rapidly, if removed from strenuous work (or exercise) in hot temperature for more than approximately 5 days.

Cold Stress Guidelines

Stress	Symptoms	What to do
Mild Hypothermia	• Body Temp 98 to 90°F • Shivering • Lack of coordination, stumbling, fumbling hands • Slurred speech • Memory loss • Pale, cold skin	• Move to warm area • Stay active • Remove wet clothes and replace with dry clothes or blankets • Cover the head • Drink warm (not hot) sugary drink
Moderate Hypothermia	• Body temp 90 to 86°F • Shivering stops • Unable to walk or stand • Confused and/or irrational	• All of the above, plus: o Call 911 o Cover all extremities completely o Place very warm objects, such as hot packs on the victim's head, neck, chest, and groin
Severe Hypothermia	• Body temp 86 to 78°F • Severe muscle stiffness • Very sleepy or unconscious • Ice cold skin • Death	• Call 911 • Treat victim very gently • Do not attempt to re-warm
Frostbite	• Cold, tingling, stinging, or aching feeling in the frostbitten area, followed by numbness • Skin color turns red, then purple, then white or very pale skin • Cold to the touch • Blisters in severe cases	• Call 911 • Do not rub the area • Wrap in soft cloth • If help is delayed, immerse in warm (not hot) water
Trench Foot	• Tingling, itching, or burning sensation • Blisters	• Soak feet in warm water, then wrap with dry cloth bandages • Drink a warm (not hot) sugary drink

Appendix D

Forms

GEI Consultants

Accident/Incident Report Form

Please complete this form and send it to your Branch Manager, HR and CHSO ***within 24 hours*** of the incident.

SECTION A — ACCIDENT/INCIDENT DETAILS

EMPLOYEE INFORMATION:

Name: _____

Home Address: _____
Street Address City State Zip Code

Contact Information: ( ) _____ ( ) _____
Primary Secondary

Date of Birth: _____

Date of Hire: _____

Branch: _____

Supervisor: _____

OTHER INJURED (IF APPLICABLE):

Name: _____

Home Address: _____
Street Address City State Zip Code

Contact Information: ( ) _____ ( ) _____
Primary Secondary

Date of Birth: _____

Date of Hire: _____

Branch: _____

Supervisor: _____

Date and Time Accident/Incident	Date and Time Reported
____ /____ /____ Month Day Year	____ /____ /____ Month Day Year
____ A.M. ____ P.M.	____ A.M. ____ P.M.

LOCATION OF INCIDENT/ACCIDENT

Project Name: _____

Client and Location: _____

or _____

Office Location: _____

INCIDENT TYPE: (Check All That Applies)

- ☐ **Personal Injury/Illness**
- ☐ **Vehicle Accident**
- ☐ **Property Damage**
- ☐ **Environmental Spill**
- ☐ **Other**

WITNESS INFORMATION

Name: _____

Contact Number: _____

Company: _____

WHAT HAPPENED TO THE INJURED PARTY: ☐ First Aid Administered ☐ Refused Treatment/Transport ☐ Transported to Hospital ☐ Returned to Work ☐ Went Home ☐ Went to Physician ☐ Unknown

Clinic/Hospital or Treating Physician: _____ Phone: _____
Name Street Address City State Zip Code

SECTION B — PERSONAL INJURY

Cause of Injury: _____

Part of Body Injured: _____ Multiple Injuries: ☐ Y ☐ N

Was PPE worn when injured? : ☐ Y ☐ N What PPE was worn? _____

WAS INJURY A RESULT OF THE USE A MOTOR VEHICLE: ☐ **YES** ☐ **NO** **(If yes, complete Section C)**

GEI Consultants

Accident/Incident Report Form

Please complete this form and send it to your Branch Manager, HR and CHSO ***within 24 hours*** of the incident.

SECTION C — AUTO ACCIDENT ONLY

DRIVER/VEHICLE INFORMATION

Name of Insured: _____

Department: _____

Driver's License Number: _____

DOB: ____/____/____ State: _____

Description of Vehicle: License Plate Number: _____

Make: _____ Model: _____ Year:_____ Color:_____

Owner: _____

Name of Other Driver: _____

Driver's License Number: _____

State: _____

Description of Vehicle: License Plate Number: _____

Make: _____ Model:_____ Year:_____ Color:_____

Insurance Carrier: _____

Policy Number: _____Ph. Number:_____

SECTION D — PROPERTY DAMAGE OR CHEMICAL RELEASE ONLY

Type of Damage(s): _____

Cause of Damage(s): _____

Type of Chemical Released (if known): _____

Quantity of Chemical Released: _____

Spill Measures Employed: _____

SECTION E — NATURE OF ACCIDENT/INCIDENT AND EXTENT OF INJURIES/DAMAGES

(Please give a detailed description of what happened. Attach a sketch or picture if applicable)

_____

_____

_____

_____

_____

_____

_____

_____

_____

I hereby certify that the above information is true and correct to my understanding of this accident/incident.

_____ _____

Employee/Preparer's Name **Date and Time**

GEI Consultants

Near Miss Report Form

Please complete this form and send it to your Branch Manager, HR and the Safety Team ***within 24 hours*** of the near miss.

NEAR MISS DETAILS

Employee Name: _____

Phone Number: _____

Branch: _____

Supervisor: _____

Date and Time Accident/Incident	Date and Time Reported	LOCATION OF NEAR MISS
____/____/____ Month Day Year ____A.M. ____P.M.	____/____/____ Month Day Year ____A.M. ____P.M.	**Project Name:** _____ **Client and Location:** _____ **or** _____ **Office Location:** _____

WHAT HAPPENED?

(Please give a detailed description of what happened. Attach photos or a sketch, if applicable.)

_____

_____

_____

_____

_____

☐ **Photos were Taken**

WHAT WAS DONE?

(Please give a detailed description of what was done to prevent and incident from occurring.)

_____

_____

_____

_____

_____

_____

☐ **I have verbally contacted a member of the Safety Team and my Supervisor.**

_____ _____

Employee/Preparer's Name **Date and Time**

Project Safety Briefing Form

Project Number:	**Project Name:**
Date:	**Time:**
Briefing Conducted by:	**Signature:**

This sign-in log documents that a project specific-briefing was conducted in accordance with the site-specific HASP and GEI's H&S policy. GEI personnel who perform work on site are required to attend this project briefing. Applicable health and safety SOPs and any additional hazards are also required to be reviewed during this briefing. Prior to the start of the project or upon the start of a new on-site project team member, this form must be completed. Please email this completed form to:

SafetyTeam@geiconsultants.com

TOPICS COVERED (check all those covered):

SOP HS-001 Biological Hazards		SOP HS-025 Manual Lifting	
SOP HS-002 Bloodborne Pathogens		SOP HS -26 Hazard Identification	
SOP HS-003 Container Management		SOP HS-27 Confined Space Entry for Sanitary Sewers	
SOP HS-004 Driver Safety		SOP HS-28 Safe Trailer Use	
SOP HS-005a Electrical Safety		SOP HS-29 Overtime and Fatigue Management	
SOP HS-005b Lockout/Tagout		Accident Reporting Procedures	
SOP HS-006 Excavation/Trenching		Changes to the HASP	
SOP HS-008a Hand Tools (Non-Powered)		Cold Stress	
SOP HS-008b Powered Hand Tools		Confined Space	
SOP HS-009 Hazardous Substances Management		Decon Procedures	
SOP HS-010 Inclement Weather		Exposure Guidelines	
SOP HS-011 Ladders		General PPE Usage	
SOP HS-012 Noise Exposure		Heat Stress	
SOP HS-013 Nuclear Density Gauge		Hearing Conservation	
SOP HS-014 Utility Markout		Lockout/Tagout	
SOP HS-015 Respirator Fit Test		Personal Hygiene	
SOP HS-016 Traffic Hazards		Respiratory Protection	
SOP HS-017 Water Safety		Review of Hazard Evaluation	
SOP HS-018 Working Around Heavy Equipment		Site Control	
SOP HS-019 Rail Safety		Site Emergency Procedures	
SOP HS-020 Aerial Lift		Slips, Trips, Falls	
SOP HS-021 Mobile Equipment		Other (Specify):	
SOP HS-022 Aquatic Ecological Survey/Electrofishing		Other (Specify):	
SOP HS-023 Scaffolding		Other (Specify):	
SOP HS-024 Wilderness Safety		Other (Specify):	

Personnel Sign-in List

Printed Name	**Signature**

Daily Safety Briefing and Site Visitor Sign-In

Project Number:	**Project Name:**
[1]Date:	**Time:**
Briefing Conducted by:	**Signature:**

This sign-in log documents the tailgate briefing conducted in accordance with the site specific HASP. Personnel who perform work operations on site are required to attend each briefing and to acknowledge receipt of each briefing, daily.

TOPICS COVERED (check all those covered):

☐ Accident Reporting Procedures	☐ Heat Stress	☐ Site Emergency Procedures	☐ Other:
☐ Changes to the HASP	☐ Hearing Conservation	☐ Slips, Trips, Falls	☐ Other:
☐ Cold Stress	☐ Lockout/Tagout	☐ Traffic Safety	☐ Other:
☐ Confined Space	☐ Personal Hygiene	☐ Other:	☐ Other:
☐ Decon Procedures	☐ Respiratory Protection	☐ Other:	☐ Other:
☐ Exposure Guidelines	☐ Review of Hazards	☐ Other:	☐ Other:
☐ General PPE Usage	☐ Site Control	☐ Other:	☐ Other:

Daily Safety Topic Description:

Personnel Sign-in List

Printed Name	Signature	Company Name	Time-In	Time-Out

[1] This form is applicable for *only* 1 day of site activity.

Appendix E

GEI's Health and Safety SOPs

STANDARD OPERATING PROCEDURES

SOP No. HS-001 Biological Hazards

1.1 Objective

The objective of this Standard Operating Procedure (SOP) is to prevent or limit the potential for GEI personnel to encounter biological hazards during field activities.

1.2 General

This SOP is intended for use by employees engaged in work with the potential for contact with biological hazards such as animals, insects, plants, and sewage. The site-specific health and safety plan (HASP) should include a hazard assessment for the project that identifies the potential for encounters with biological hazards and the control methods to be implemented by GEI employees. These hazards must be reviewed in the project safety briefing and documented on the Project Safety Briefing form, found on the Safety page of the GEI intranet.

1.3 Mammals

During some site operations, animals such as stray or domesticated dogs or cats, raccoons, snakes, bears, rats, bats, etc. may be encountered. Employees should use discretion and attempt to avoid contact with animals. If these animals present a problem, efforts will be made to remove these animals from the site by contacting a licensed animal control technician.

1.3.1 Rabies

The rabies virus is transmitted through the bite of an infected animal or contact with saliva or brain/nervous system tissue of an infected animal. The rabies virus infects the central nervous system, causing disease in the brain. The early symptoms of rabies in people are fever, headache, and general weakness or discomfort. As the disease progresses, more specific symptoms appear and may include insomnia, anxiety, confusion, slight or partial paralysis, excitation, hallucinations, agitation, hypersalivation (increase in saliva), difficulty swallowing, and hydrophobia (fear of water). Death usually occurs within days of the onset of these symptoms.

If you are bitten or think you may be exposed, wash any wounds immediately and thoroughly with soap and water. Then go to the hospital emergency room and notify the Project Manager and the People Safety Team. The doctor, possibly in consultation with the state or local health department, will decide if you need a rabies vaccination. Decisions to start series of vaccinations will be based on your type of exposure and the animal you were exposed to, as well as laboratory and surveillance information for the geographic area where the exposure occurred. If possible have someone document what type of animal it was, how it was behaving prior to the bite, what caused it to bite the

employee, and if it's not a domestic animal that would be easy to find again in the future, try to get animal control on site to capture it. An Incident Report Form must be completed and submitted, per GEI's Incident reporting procedures. This form is available on the Safety App (smart phones) and on the Safety page on the GEI intranet.

1.4 Insects and Arachnids

Insects, including bees, wasps, hornets, mosquitoes, ticks, spiders, etc., may be present at a job site making the chance of a bite/sting possible. Some individuals may have a severe allergic reaction to an insect bite or sting that can result in a life-threatening condition. Some insect bites can transmit diseases such as Lyme disease or a virus such as West Nile. The following is a list of preventive measures:

- Apply insect repellent prior to performing field work and as often as needed throughout the work shift.
- Wear proper personal protective equipment (PPE), including protective clothing (work boots, socks, and light colored clothing).
- Wear shoes, long pants with bottoms tucked into boots or socks, and a long-sleeved shirt when outdoors for long periods of time, or when many insects are most active (between dawn and dusk).
- When walking in wooded areas, avoid contact with bushes, tall grass, or brush as much as possible.
- Field personnel who have or may have insect allergies must have insect allergy medication onsite and must inform the Site Safety Officer (SSO) and the People and Safety Team of their particular allergy prior to commencing work.
- Field personnel should perform a self-check at the end of the day for ticks.

1.4.1 Tick-borne Diseases

Lyme Disease

Lyme disease is caused by infection from a deer tick that carries a spirochete (a bacterium). During the painless tick bite, the spirochete may be transmitted into the bloodstream, often after feeding on the host for 12 to 24 hours. The ticks that cause the disease are often no bigger than a poppy seed or a comma in newsprint. The peak months for human infection are from May to September.

Symptoms appear in three stages. First symptoms usually appear from 2 days to a few weeks after a person is bitten by an infected tick. Symptoms usually consist of a ring-like red rash on the skin where the tick was attached. The rash is often bulls-eye like with red around the edges and clear in the center. The rash may be warm, itchy, tender, and/or "doughy." This rash appears in only 60 to 80 percent of infected persons. An infected

person also has flu-like symptoms of a stiff neck, chills, fever, sore throat, headache, fatigue, and joint pain. These symptoms often disappear after a few weeks.

The second stage symptoms, which occur weeks to months later include meningitis, severe headache, drooping of the muscles on the face, called Bell's Palsy, encephalitis, numbness, withdrawal, and lethargy. These symptoms may last for several weeks to several months. Third stage symptoms, which occur months or years later include arthritis, heart problems, and loss of memory. The third stage symptoms may mimic multiple sclerosis and Alzheimer's disease.

When in areas that could harbor deer ticks, employees should wear light color clothing, and visually check themselves and check and be checked by another employee when coming from wooded or vegetated areas. If a GEI employee has a tick bite, the People and Safety Team and Project Manager must be contacted immediately. The employee will be offered the option for medical treatment by a physician, which typically involves antibiotics. An Incident Report form must be completed in compliance with the Incident Reporting procedures. This form is available on the Safety App (smart phones) and on the Safety page on the GEI intranet.

If personnel feel sick or have signs similar to those mentioned above, the SSO and the People and Safety Team must be notified immediately.

Figure 1: From left to right, the deer tick adult female, adult male, nymph, and larva on a centimeter scale.

How to Remove a Tick

A tick can be removed from the skin by pulling gently at the head with tweezers. If tweezers are not available, use tissue paper or cloth to grasp the tick. It is important to grasp the tick as close to the site of attachment and use a firm steady pull to remove it. Wash hands immediately after with soap and water. The affected area should also be washed with soap and water, then disinfected with an antiseptic wipe, if available. All mouth parts must be removed from the skin. If the tick was removed by breaking off the

mouth parts, an irritation or infection may occur because the organism that is causing the disease can still enter the body through the skin.

Treatment for Lyme Disease

Treatment with antibiotics is effective and recovery is usually complete. For first stage symptoms, antibiotics are usually given orally. However, treatment for second and third stage symptoms is prolonged and recovery may take longer. Antibiotic treatment is usually provided intravenously for second and third stage Lyme disease.

Babesiosis

The deer tick can also cause Babesiosis, an infection of the parasite Babesia Microti. Symptoms of Baesiosis may not be evident, but may also include fever, fatigue and hemolytic anemia lasting from several days to several months. Babesiosis is most commonly diagnosed in the elderly or in individuals whose immune systems are compromised. If there are no signs or symptoms of Babesiosis, usually no treatment it needed. If an employee believes they might have Babesiosis they'll see a physician to be tested. Treatment usually consists of taking prescription medications for 7 to 10 days.

Ehrlichiosis

Ehrlichiosis is a tick-borne disease which can be caused by either of two different organisms. Human monocytic ehrlichiosis (HME) is caused by *Ehrlichia chaffeensis*, which is transmitted by the lone star tick (*Amblyomma americanum*). Human granulocytic anaplasmosis (HGA), previously known as human granulocytic ehrlichiosis (HGE), is caused by *Anaplasma phagocytophilia*, which is transmitted by the deer tick (*Ixodes scapularis*).

Ehrlichiosis is transmitted by the bite of infected ticks, including the deer tick and the lone star tick. The symptoms of HME and HGE are the same and usually include fever, muscle aches, weakness and headache. Patients may also experience confusion, nausea, vomiting and joint pain. Unlike Lyme disease or Rocky Mountain spotted fever, a rash is not common. Infection usually produces mild to moderately severe illness, with high fever and headache, but may occasionally be life-threatening or even fatal. Symptoms appear 1 to 3 weeks after the bite of an infected tick. However, not every exposure results in infection. For those that become infected a drug called Doxcycline will be prescribed.

Rocky Mountain Spotted Fever

Rocky Mountain spotted fever is a tick-borne disease caused by a rickettsia (a microbe that differs somewhat from bacteria and virus). In the eastern United States, children are infected most frequently, while in the western United States, disease incidence is highest among adult males. Disease incidence is directly related to exposure to tick-infested habitats or to infested pets. Rocky Mountain spotted fever is characterized by a sudden onset of moderate to high fever (which can last for 2-3 weeks), severe headache, fatigue, deep muscle pain, chills and rash. The rash begins on the legs or arms, may include the

soles of the feet or palms of the hands and may spread rapidly to the trunk or rest of the body. Symptoms usually appear within 2 weeks of the bite of an infected tick. Like Ehrlichiosis the prescription drug Doxcycline is the first line treatment option.

1.4.2 Mosquito-Borne Disease

West Nile Virus
West Nile Virus is a mosquito-borne infection transmitted through the bite of an infected mosquito. The symptoms of West Nile Virus can be asymptomatic (no symptoms) or in more serious cases can lead to West Nile Fever. West Nile Fever can include fever, headache, tiredness, body ache, an occasional rash on the trunk of the body, and swollen lymph glands, In severe cases, people have developed West Nile Encephalitis or Meningitis which symptoms include fever, headache, neck stiffness, tremors, coma, and in some cases death. The incubation period for the disease is usually 2 to 15 days. The symptoms can range from a few days to several weeks. Most mosquitoes are not infected and the chance of infection from a mosquito bite of an on-site employee is very small.

1.5 Repellants

The following precautions will be used to help reduce the risk of mosquito bites:

Reduce mosquito-breeding areas by making sure wheelbarrows, buckets, and other containers are turned upside down when not used so that they do not collect standing water. According to the Environmental Protection Agency (EPA), many mosquitoes can breed in pooled water that's minimal enough to fill a bottle cap.

Wear shoes, long pants with bottoms tucked into boots or socks, and a long-sleeved shirt when outdoors for long periods of time, or when many mosquitoes are most active (between dawn and dusk).

Use mosquito repellant according to the manufacturer's directions when outdoors for long periods of time and when mosquitoes are most active.

Centers for Disease Control and Prevention (CDC) evaluation of information contained in peer-reviewed scientific literature and data available from the EPA has identified several EPA-registered products that provide repellent activity sufficient to help people avoid the bites of disease carrying mosquitoes. Products containing these active ingredients typically provide reasonably long-lasting protection:

- **DEET** (Chemical Name: N,N-diethyl-m-toluamide or N,N-diethly-3-methyl-benzamide)
- **Picaridin** (KBR 3023, Chemical Name: 2-(2-hydroxyethyl)-1-piperidinecarboxylic acid 1-methylpropyl ester)

- **Oil of Lemon Eucalyptus** or **PMD** (Chemical Name: para-Menthane-3,8-diol) the synthesized version of oil of lemon eucalyptus
- **IR3535** (Chemical Name: 3-[N-Butyl-N-acetyl]-aminopropionic acid, ethyl ester)
- **Permethrin** (3-Phenoxybenzyl (1RS)-cis,trans-3-(2,2-dichlorovinyl) -2,2-dimethylcyclopropanecarboxylate) **–** Permethrin kills ticks and can be used on clothing (but not skin)

The EPA characterizes the active ingredients DEET and Picaridin as "conventional repellents" and Oil of Lemon Eucalyptus, PMD, and IR3535 as "biopesticide repellents", which are derived from natural materials.

In general, higher concentrations of active ingredient provide longer duration of protection, regardless of the active ingredient, although concentrations above approximately 50 percent do not offer a marked increase in protection time. Products with less than 10 percent active ingredient may offer only limited protection, often from 1 to 2 hours. Products that offer sustained release or controlled release (micro-encapsulated) formulations, even with lower active ingredient concentrations, may provide longer protection times. Regardless of what product you use, if you start to get mosquito bites reapply the repellent according to the label instructions or remove yourself from the area with biting insects if possible.

Clothing and other products can be purchased pre-treated, or products can be treated using EPA-registered products. Permethrin is the only pesticide approved by the EPA for these uses. Permethrin binds tightly to the fabrics, resulting in little loss during washing and minimal transfer to the skin. Permethrin is poorly absorbed through the skin, although sunscreens and other products may increase the rate of skin absorption.

If you decide to use permethrin-treated clothing, consider these tips:

- Read the application instructions carefully and apply the product according to the label directions. Do not over-treat products.
- Permethrin treatments are only intended for use on fabrics; do not apply them directly to the skin or other items.
- Do not apply permethrin to clothing while it is being worn.
- Apply the product to clothing outdoors in well ventilated areas that are protected from wind.
- Hang treated fabrics outdoors and allow them to dry completely before wearing them.
- Wash permethrin treated clothing separately from other clothing items.

1.6 Poisonous Plants

The potential for contact with poisonous plants, such as poison ivy, oak, and sumac exists when performing fieldwork in wooded or boggy areas. Urushiol, an oily organic allergen found in plants, can cause an allergic reaction when in contact with the leaves or vines.

Poison ivy can be found as vines on tree trunks or as upright bushes. Poison ivy consists of three leaflets with notched edges. Two leaflets form a pair on opposite sides of the stalk, and the third leaflet stands by itself at the tip. Poison ivy is red in the early spring and turns shiny green later in the spring. Poison ivy grows throughout much of North America, including all states east of the Rocky Mountains. It is normally found in wooded areas, especially along edge areas where the tree line breaks and allows sunshine to filter through. It also grows in exposed rocky areas, open fields, and disturbed areas.

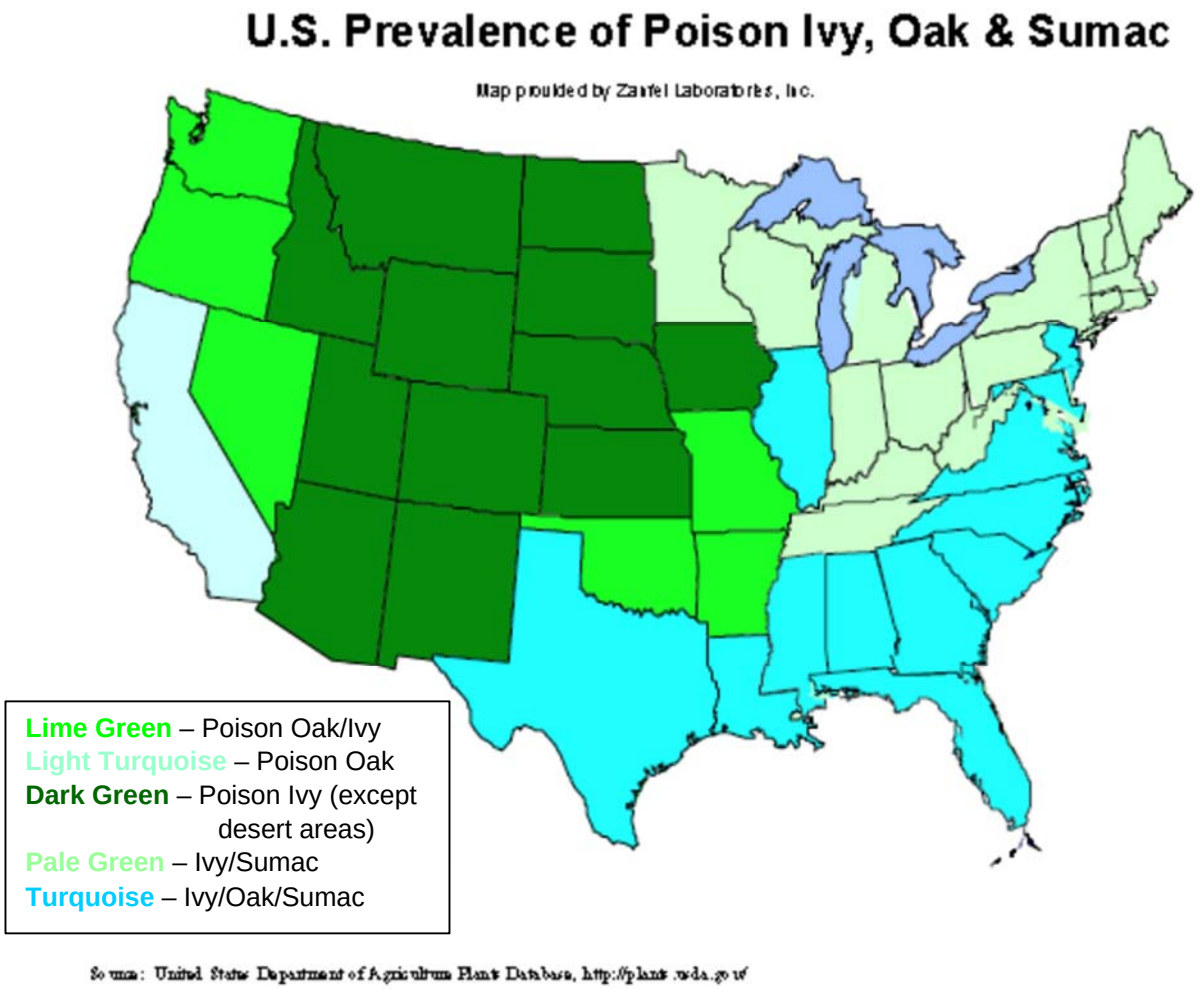
Poison oak can be present as a sparsely-branched shrub. Poison oak can grow anywhere in the United States with the exception of Hawaii, Alaska, and some southwest areas that have desert climates. Poison oak is similar to poison ivy in that it has the same leaflet configuration; however, the leaves have slightly deeper notches.

Poison sumac can be present in the form of a flat-topped shrub or tree. It has fern-like leaves, which are velvety dark green on top and pale underneath. The branches of immature trees have a velvety “down.” Poison sumac has white, “hairy” berry clusters. Poison sumac grows exclusively in very wet or flooded soils, usually in swamps and peat bogs, in the eastern United States.

Poison Ivy

Poison Oak

Poison Sumac



To prevent exposure to these poisonous plants:

- Wear proper PPE, including long sleeves, long pants, boots, and gloves.
- Barrier skin creams, such as lotion containing bentoquatum (Tecnu®), may offer some protection prevent the occurrence of exposure symptoms.
- Contact with poison ivy, sumac, or oak may lead to a skin rash, characterized by reddened, itchy, blistering skin which needs first aid treatment. Employees with known allergies should identify themselves to the SSO or Project Manager prior to starting field work as a precautionary measure. If you believe you have contacted one of these plants:
    - Immediately wash skin thoroughly with soap and water, taking care not to touch your face or other body parts.
    - Contact the People and Safety Team and Project Manager immediately after caring for affected skin.

  - Wash exposed clothing separately in hot water with detergent.

- After use, clean tools, and soles of boots with rubbing alcohol or soap and lots of water. Urushiol can remain active on the surface of objects for up to 5 years.
- If a rash occurs, contact the People and Safety Team and complete and submit an Incident Report Form. This form is available on the Safety App (smart phones) and on the Safety page on the GEI intranet.

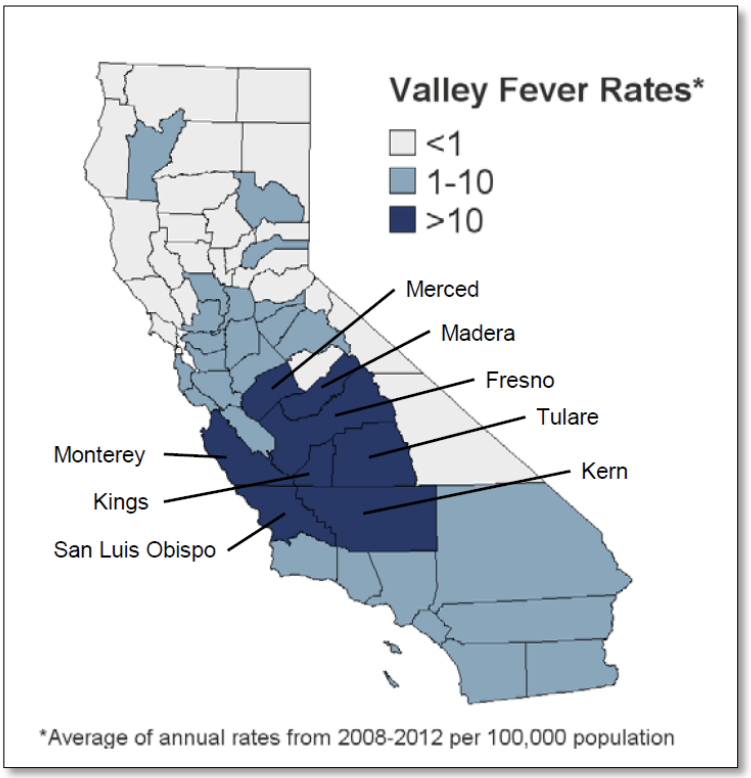
1.7 Sewage and Bacterial Impacted Sediments

Some project work may be conducted at sites that serve or have served as a combined sewer overflow and consequently may have received untreated sanitary sewage from numerous sources. Decomposed sewage can potentially be encountered within sites and their sediments. Sediments could contain soil and marine microorganisms, and bacterium associated with sewage. Many of these bacterium can cause illness through ingestion, direct contact, or the inhalation of a bio-aerosol possibly in the form of dust. Potential respiratory exposure to biological agents can also occur through the inhalation of aerosols produced during sediment handling activities. PPE as identified in the site-specific HASP will be worn to minimize potential exposures. Employees will follow the decontamination or disposal procedures identified in the HASP.

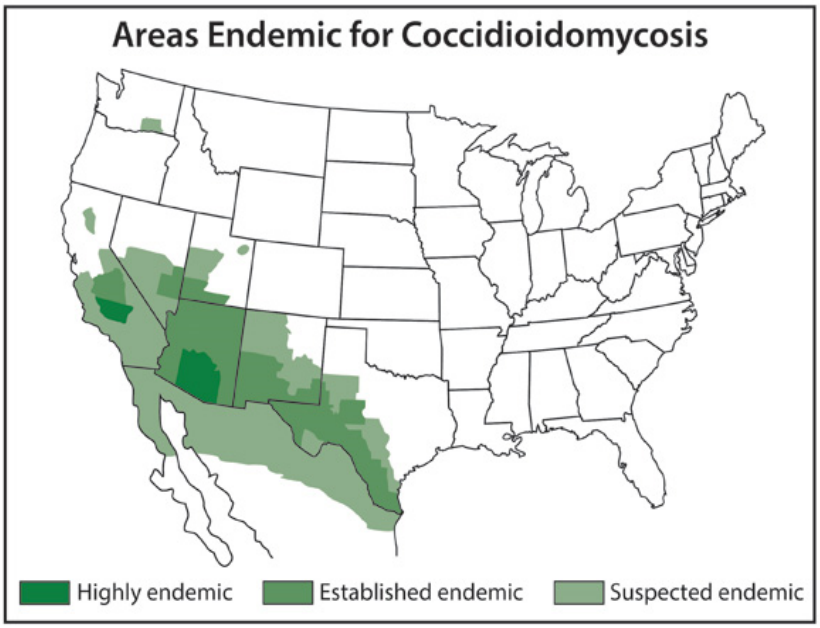
1.7.1 Fungal Spores in Soil – Valley Fever

Valley Fever is an illness that usually affects the lungs. It is caused by the fungus *Coccidioides immitis* that lives in the top 2 to 12 inches of soil in many parts of California. When fungal spores are present, any work activity that disturbs the soil, such as digging, grading, or other earth moving operations, or vehicle operation on dirt roads, can cause the spores to become airborne, therefore increasing the risk of Valley Fever. All employees on sites where the fungus is present, and who are exposed to dusty conditions and wind-blown dusts are at increased risk of becoming infected.

Valley Fever fungal spores are too small to be seen, and there is no reliable way to test the soil for spores before working in a particular place. Valley Fever can be found throughout the southwestern United States, parts of Mexico, and South America. Some California counties consistently have Valley Fever fungus present in the soil. In these regions Valley Fever is considered endemic. Health departments track the number of cases of Valley Fever illness that occur. This information is used to map illness rates as seen on the figures below from the Center of Disease Control Valley Fever Awareness website.



Rates of reported Valley Fever cases in California counties from 2008–2012. Darkest colored counties had the highest rates of Valley Fever.



When present, symptoms usually occur between 7 to 21 days after breathing in spores, and can include:

- Cough
- Fever
- Chest pain
- Headache
- Muscle aches
- Rash on upper trunk or extremities
- Joint pain in the knees or ankles
- Fatigue

Symptoms of Valley Fever can be mistaken for other diseases such as the flu (influenza) and TB (tuberculosis), so it is important for employees to obtain medical care for an accurate diagnosis and possible treatment.

While there is no vaccine to prevent Valley Fever, the following important steps must be taken in order to limit risk:

- Determine if the worksite is in an endemic area. Contact the local health department for more information about the risk in the county GEI is performing work that may disturb soils.
- Prepare work plans and work practices that reduce employee's exposure, which may include:
    - Provide air conditioned cabs with properly maintained dust filters for vehicles that generate heavy dust and make sure employees keep windows and vents closed.
    - Suspend work during heavy winds.
- When exposure to dust is unavoidable, National Institute for Occupational Safety and Health (NIOSH)-approved respiratory protection with particulate filters rated as N95, N99, N100, P100, or High Efficiency Particulate Air (HEPA) must be provided. The Project Manager must work with the Safety Team to develop and implement a respiratory protection program in accordance with California's Occupational Safety and Health Administration (Cal/OSHA's) Respiratory Protection standard (8 CCR 5144) for the project.
- Take measures to reduce transporting spores offsite, such as:
    - Clean tools, equipment, PPE, and vehicles before transporting offsite.
    - If employee's clothing is likely to be heavily contaminated with dust, provide coveralls and change rooms, and showers where possible.

1.8 Injury Reporting

If a GEI employee suffers an injury, bite, or sting on the job that is not life threating, call Medcor Triage at 1-800-775-5866 to speak with a medical professional. Then, immediately report the injury to the Supervisor/Project Manager and Regional Safety Officer.

After verbal notification has been made, an Incident Report Form is to be completed by the employee and/or Supervisor/Project Manager and submitted to the People & Safety Team immediately following care of the incident. This form is available on the Safety App (smart phones) and on the Safety page on the GEI intranet.

Upon notification from a Branch or Office Manager, Human Resources, and/or the receipt of the Incident Report Form, the Regional Health & Safety Officer (RHSO) will conduct an investigation and evaluation on what happened and how and why it happened. The Corporate Health and Safety Officer (CHSO) will then recommend (as necessary) engineering controls, personal protection equipment, training or other appropriate measures to minimize the potential for future injuries. The CHSO/RHSO may develop educational information based on lessons learned for distribution to GEI employees.

1.9 Limitations

Follow safety procedures as defined in the site-specific HASP. Appropriate PPE must be worn correctly to provide the intended level of protection.

1.10 References

http://www.cdc.gov/ncidod/dvbid/westnile/index.htm
http://www.cdc.gov/ncidod/dvbid/westnile/qa/insect_repellent.htm
http://www.epa.gov/pesticides/health/mosquitoes/insectrp.htm
http://www.cdc.gov/niosh/topics/lyme/
Protecting Yourself from Ticks and Mosquitoes, NIOSH Fast Facts, Publication No. 2010-119
http://npic.orst.edu/pest/mosquito/ptc.html
http://www.cdc.gov/features/valley-fever-10-things/
https://www.cdph.ca.gov/HealthInfo/discond/Documents/VFGeneral.pdf
https://blog.epa.gov/blog/tag/mosquitoes/

1.11 Attachments

None

1.12 Contact

Health&SafetyTeam@geiconsultants.com

1.13 Review History

- June 2016
- June 2014
- November 2013
- October 2010

STANDARD OPERATING PROCEDURE
HS-004 Driver Safety

1.1 Objective

GEI has implemented a Safe Driving Program to encourage safe driving habits and promote the ongoing safety of our staff and the communities where we work. For more information, refer to the Operation of Vehicles section of GEI's Employee Handbook.

This Standard Operating Procedure (SOP) provides requirements and recommendations to minimize the potential risks while operating or riding in a motor vehicle.

1.2 General

GEI employees will adhere to the following requirements when operating a vehicle while conducting business on behalf of GEI. These requirements apply to GEI-owned, rental, and personal vehicles used to conduct GEI business:

- Employees must maintain a valid and current driver's license.
- Employees using a personal vehicle for work-related travel must have proper insurance coverage that meets the requirements in the state in which they reside.
- Employees must wear their safety belt while in a moving vehicle.
- Vehicle incidents will be reported in accordance with GEI's Incident Reporting procedures (*refer to* GEI's Safety App for smart phones or the Safety page on the GEI intranet.).
- Vehicles will be properly maintained and safely operated (*refer to* GEI's Fleet Maintenance Program).
- Employees will follow safe driving behaviors, which include limiting distractions such as manipulating radios or other equipment that may cause a distraction. Employees should not exceed the posted speed limit and should maintain a safe distance between other vehicles.
- When parking a vehicle at a job site, the employee should position the vehicle in a manner which reduces or eliminates the need to operate the vehicle in reverse. It is recommended, a safety cone should be placed at the rear of the vehicle after parking the vehicle and be removed prior to moving the vehicle. This precautionary measure makes the employee aware of other vehicles, equipment, and structures within the backup radius of the vehicle.

When driving an unfamiliar vehicle (rental or GEI-owned), it is the driver's responsibility to orient themselves to the vehicle by:

- Walking around the vehicle to observe the condition of the vehicle and hazards that could be within the travel path.
- Becoming familiar with the size of the vehicle.
- Note if the vehicle has anti-lock braking system (ABS[1]).
- Adjusting mirrors (rear and side).
- Adjust seats to be situated as far back as safely practical, away from the air bag, located in the steering wheel.
- Becoming familiar with dashboard, center console, and steering controls.
- Locating the turn signals, windshield wipers, lights, emergency flashers, and the heating, air conditioning, and defrost controls.

1.3 Driving Defensively

Driving defensively means not only taking responsibility for oneself and actions but also keeping an eye on "the other guy." Good defensive drivers may be able to anticipate what the other driver will do next. GEI recommends the following guidelines to help reduce risks while driving:

- Do not start the vehicle until each passenger and any belongings are secured in the vehicle.
- Remember that driving above or below the speed limit can increase the likelihood of a collision.
- Be aware of impaired drivers; if a car is straddling the center line, weaving, making wide turns, stopping abruptly, or responding slowly to traffic signals, the driver may be impaired or using a cellular telephone. Avoid an impaired driver by turning right at the nearest corner or exiting at the nearest exit.
    - If it appears that an oncoming car is crossing into your lane, pull over to the roadside, sound the horn, and flash the headlights.
    - If an unsafe or suspicious driver is observed, notify the police.
- Follow the rules of the road. Do not contest the "right of way" or try to race another car during a merge. Always be respectful of other motorists.

[1] ABS is a mechanism that allows the wheels on a vehicle to maintain contact with the surface of the road, based on inputs from the driver (braking), to prevent the wheels from locking up (ceasing rotation) and to avoid an uncontrolled skid.

- Allow large vehicles, including tractor trailers, extra breaking distance, turning radius, and avoid traveling in the other driver's blind spots.
- Do not follow too closely. GEI employees should use a minimum of "3-second following distance."
- While driving, be cautious, aware, and responsible.
- Use extra caution, observe road signs, and reduce speed in construction areas and school zones.
- Always be aware of pedestrians, bicyclists, and motorcyclists.

1.4 Cellular Phone Use and Other Distractions

Refer to the *Portable Communication Device Use While Driving* section of the GEI Employee Handbook for GEI's policy on the use of cellular telephones while operating a vehicle.

1.5 Drugs and Alcohol

The use of illegal drugs or alcohol is prohibited when driving a vehicle on GEI business. Be aware of the side effects of prescription and over-the-counter medications which can impair an employee's ability to drive.

1.6 Adverse Driving Conditions

When operating a vehicle, its possible adverse driving conditions may be encountered. Below is a list of possible conditions and how they can be mitigated.

1.6.1 Driving at Night

Vision maybe limited at night due to impairment of the driver's depth perception, color recognition, and peripheral vision. Another factor adding danger to night or early morning driving is fatigue. Drowsiness makes driving more difficult by dulling concentration and slowing reaction time. Effective measures to minimize these hazards by preparing the car and following guidelines:

- Check the headlights to ensure they are properly aimed. If you notice the headlights are not properly aimed, report it to the Branch Manager, or if applicable the rental car agent. Misaimed headlights blind other drivers and reduce the driver's ability to see the road.
- In addition to the known hazards of consuming alcohol prior to driving, night driving can potentially be affected because the recovery rate of glare from headlights is prolonged. Thus reducing your ability to see.

- Smoking in GEI vehicles and rentals is not permitted. When driving a personal vehicle for business, avoid smoking while driving. Nicotine and carbon monoxide may hamper night vision.
- Observe driving safety as soon as the sun goes down. Twilight is one of the most difficult times to drive, because the eyes' pupils are constantly changing to adapt to the growing darkness Always use headlights at dusk and at dawn; lights will not help the driver see better in early twilight, but they will make it easier for other drivers to see your car. Drive at a speed that allows you to see the road that is within the headlights span. Driving in a manner that prevents you from seeing hazards as they are illuminated is known as overdriving the headlights; it may be necessary for the driver to reduce speed to be prepared to brake within the illuminated area of the headlights.
- If an oncoming vehicle does not lower beams from high to low, avoid glare by watching the right edge of the road and using it as a steering guide.
- The driver should make frequent stops for light snacks and exercise. If the driver is too tired to drive, stop in a safe area and get some rest.

1.6.2 Snow/Freezing Conditions

When snow and ice are present, be prepared by following these winter driving safety tips.

1.6.2.1 Prepare the Vehicle Before a Snowstorm

- Check under the hood and take a look at the vehicles cooling system. Make sure the vehicle contains adequate antifreeze and the hoses are in good condition.
- Test heaters and defrosters ahead of time to make sure they are in good working condition.
- Test the windshield wipers and check the condition of the wiper blades. If wipers leave streaks on the windshields, replace the blades at the next possible opportunity. Keep the receipt to expense the cost with GEI or with the car rental company.
- It is recommended that a windshield washer/antifreeze solution is used during winter conditions.
- Check the lights on the vehicle and periodically clear them of snow and dirt.
- Vehicle batteries need extra power in cold conditions. Make sure the battery's terminals are clean and cables are secure.
- Determine if the vehicle has a anti-lock brake (ABS) system.
- Keep the gas tank at least half-full in the winter to help avoid gas line freeze up.

1.6.2.2 Driving During and After a Snowstorm

- Wear sunglasses to aid in limiting reflection from snow.
- Be aware of blind spots created by snow banks.
- Be extra cautious of pedestrians and other vehicles in intersections.
- Allow extra time for braking and increase the distance between your car and the car immediately in front of the car.
- Reduce speed and do not exceed the posted limit.
- If the tires starts to lose traction, remove the foot off the gas and gradually reduce speed. Accelerate slowly once traction is regained.
- If the vehicle starts to skid, and does not have anti-lock brakes, steer into the skid. This will bring the back end of the car in line with the front. Avoid using the brakes. If the vehicle does have anti-lock brakes, firmly brake as you steer into the skid.

1.6.3 Driving In the Rain

To prevent losing control of the car on wet pavement, take these preventive measures.

- Prevent skids by driving slowly and carefully, especially on curves.
- Steer and brake with a light touch.
- When necessary to stop or slow, do not brake hard or lock the wheels.
- Maintain mild pressure on the brake pedal.

Skidding
If the car begins to skid, ease the foot off the gas, and carefully steer the car in the direction you want the front of the car to go. For cars without anti-lock brakes, avoid using the brakes. This procedure, known as “steering into the skid,” will bring the back end of the car in line with the front. If the car has anti-lock brake systems (ABS), brake firmly as you steer into the skid.

Hydroplaning
Hydroplaning happens when the water in front of the tires builds up faster than the car’s weight can push it out of the way. The water pressure causes the car to lose contact with the road surface and slide on a thin layer of water between the tires and the road. At this point, the car can be completely out of contact with the road, making it possible for the driver to skid or drift out of the lane, or even off the road.

To avoid hydroplaning, keep the tires properly inflated and maintain good tread on the tires. If tires need to be replaced on a company vehicle, notify the branch manager or their designee. Slow down when roads are wet, and stay away from puddles. Try to drive in the tire tracks left by the cars in front of the vehicle. If the car begins to hydroplane, do not brake or turn suddenly. This could throw the car into a skid. Ease the foot off the gas until the car slows; accelerate slowly once traction is regained. If braking is needed, do so gently with light pumping actions. If the car has ABS, brake normally; the car's computer will mimic a pumping action, as necessary.

If weather conditions worsen to the point where the driver is not comfortable driving, pull the vehicle over to a safe location until conditions improve. Do not drive during severe weather conditions. Do not attempt to drive on roads with standing water or that have been flooded. Find an alternate route if these conditions exist.

1.6.4 Off Road

If operation of a vehicle is required off public or private roads or in situations where four-wheel-drive vehicles are required, the appropriate vehicle for the situation will be used.

Be sure any gear or equipment is secured inside the vehicle so it doesn't bounce around while the vehicle is off-road.

- Know the underside of the vehicle. Look under the vehicle and learn where the lowest-hanging parts are located so they are not damaged.
- Scout tricky terrain on foot. Don't hesitate to get out of the vehicle to examine, up close, the terrain and soil conditions. And be sure to scout out what's on the other side of a hill ahead of time so there are no surprises.
- Drive cautiously. Drive, "as slow as possible, as fast as necessary." Remember to use the gears to efficiently manage engine power, braking, and torque.
- Create a mental picture. Look ahead and visualize the paths to the vehicle will travel. Follow those paths.
- Drive straight up and down hills. Avoid diagonal lines that put the vehicle in a situation where it might roll.

1.7 Driver Training

GEI employees are required to complete driver safety training every 3 years. This training is managed by the People Team and will be assigned through GEI's e-learning provider.

1.8 Injury Reporting

GEI employees will report incidents involving GEI personnel or subcontractor personnel, such as: lost time injuries, injuries requiring medical attention, near miss incidents, fires, fatalities, accidents involving the public, chemical spills, vehicle accidents, and property damage. The following steps must be followed when an incident occurs:

1. In life-threatening situations, immediately call 9-1-1.
2. Stop work activity to address any injury, illness, property damage, spill or other emergency.
3. **Immediately** report any incidents to your Supervisor/Project Manager and Regional Health & Safety Officer.
4. If your injury or illness is not life-threatening, call Medcor Triage at 1-800-775-5866 to speak with a medical professional.
5. Complete an Incident Report Form **immediately** after addressing the incident. Report forms are available on GEI's Safety App (for smart phones) and on the Safety page on the GEI intranet.

For vehicle accidents involving another vehicle or damage to property, the employee will take pictures of each vehicle or property involved in the incident and obtain a police report. In some municipalities police will not be dispatched to a non-injury accident, but every effort needs to be made to try and obtain the report.

1.8.1 Injury Triage Service

If a GEI employee experiences a work-related injury that is not life-threatening, the employee will initiate a call to Medcor Triage at 1-800-775-5866. The injured employee will detail any medical symptoms or complaints which will be evaluated by a Registered Nurse (RN) specially trained to perform telephonic triage. The RN will recommend first aid self-treatment or refer the injured employee for an off-site medical evaluation by a health professional at a clinic within GEI's workers compensation provider network. GEI employees are still required to follow our Accident Reporting procedures as listed above.

1.9 Limitations

Follow safety procedures as defined in the site-specific HASP.

1.10 References

National Safety Council
Oklahoma Safety Council
GEI Consultants, Inc. Employee Handbook

1.11 Attachments

None

1.12 Contact

SafetyTeam@geiconsultants.com

1.13 Review History

- December 2017
- November 2016
- May 2014
- November 2013
- January 2011

STANDARD OPERATING PROCEDURES

HS-005a Electrical Safety

1.1 Objective

Electrical hazards are typically the most serious physical hazards GEI employees encounter when working on or near an electric substation, conducting intrusive activities such as excavation or drilling, using powered hand tools, or working near overhead utilities. This Standard Operating Procedure (SOP) has been developed to minimize the potential for exposure to energized electrical equipment while performing work activities.

1.2 General

Employees who face a risk of electric shock will be trained and become familiar with electrically-related safety practices in the GEI annual Health and Safety training. This training will include safety-related work practices that pertain to their respective job assignments and minimum approach distances.

An activity hazard analysis conducted for the project scope of work will evaluate the potential for electrical shock and be incorporated in the site-specific health and safety plan (HASP). In addition, site-specific training will be conducted by the Project Manager or their designee to discuss the project electrical hazards and include a review of the HASP requirements.

Annual health and safety training will include review of this electrical safety SOP and GEI's lockout/tagout requirements. Retraining will be required when there is a change in job assignments; a change in the energy control procedures; or a new hazard is introduced. Retraining may also be conducted through the Project Safety Briefing and documented on the Project Safety Briefing form.

Safe work practices will be employed to prevent electric shock or other injuries resulting from either direct or indirect electrical contacts when work is performed near or on equipment or circuits that are or may be energized. Employees may not enter spaces containing exposed energized parts unless proper illumination, protective shields, protective barriers, or insulating materials (if necessary) are provided to enable employees to work safely. If portable ladders are needed near electrical equipment, they will have non-conductive side rails.

1.3 Personal Protection

Measures to mitigate exposure to overhead and subsurface electrical transmission and distribution lines should be adhered to at all times when working adjacent to electrical hazards. These measures include:

- Electrical Hazard (EH)-rated footwear and hardhat are required when working onsite. Additional personal protective equipment (PPE) may be needed as referenced in the site specific HASP.
- Avoid carrying tools/equipment above waist height if overhead electric hazards exist.
- Maintain the minimum approach distance (MAD) from bus bars, transformer/capacitor electrodes, and overhead transmission/distribution lines.
- Stop work immediately and vacate the work area in the event lightning is observed.

Measures of protection that should be adhered to within an active substation perimeter or if work adjacent to the substation perimeter consists of intrusive activities:

- Contact utility clearance agency at least 48 hours prior to any invasive activities for mark out of underground public utilities.
- Obtain the most recent as-built drawings of the transmission/distribution line layout from the client.
- Mark out of underground transmission/distribution lines by the client survey/mark out personnel if applicable.
- Conduct work under the supervision of the client's Health and Safety representative per client requirements.
- Conductive items such as jewelry or clothing containing metals will not be worn unless they are rendered non-conductive by insulating means such as covering or wrapping with materials that specifically rated as non-conductive, or other insulating means.
- Use hand digging tools specifically designed for use on substation property (i.e., insulated digging bar, long-handled spoon shovel, etc.). In addition, rubber gloves and fire-resistant clothing are required if hand digging in a substation.
- Use insulated lineman's gloves when handling equipment that may come into contact with electrical utilities.
- EH-rated footwear is required when working onsite.
- Flame resistant clothing that meets National Fire Protection Association (NFPA) 70E standards is to be worn.

- Avoid carrying tools/equipment above waist height if overhead electric hazards exist.
- Ground vehicles or equipment **within the substation perimeter** using 4-aught gauge grounding cable. Adhere to specific client or site requirement for grounding.
- Maintain a minimum clearances on substations in accordance with 29 CFR 1910.333 and NFPA 70E standards when working near energized equipment.
- Maintain a minimum offset of 3 feet from marked underground transmission/distribution lines.
- Avoid working within or outside of a substations in conditions of high humidity, rain, or thunderstorms.
- Stop work immediately and vacate the work area in the event lightning is observed.

1.3.1 Minimum Approach Distance

According to OSHA, the MAD is "…the closest distance an employee is permitted to approach an energized or grounded object." MADs ensure that employees do not approach or take any conductive object closer to energized equipment than the allowed distances. All GEI employees conducting work onsite must follow the MADs shown below:

Nominal Voltage in Kilovolts	Minimum Approach Distance: Phase to Ground Exposure
0.05 to 1.0	Avoid Contact
1.1 to 15.0	2'1"
15.1 to 36.0	2'4"
36.1 to 46.0	2'7"
46.1 to 72.5	3'
72.6 to 121	3'2"
138 to 145	3'7"
161 to 169	4'
230 to 242	5'3"
345 to 362	8'6"
500 to 550	11'3"
764 to 800	14'11"

Reference: Table R-6 in OSHA regulation CFR 1910.269 (l) (10)

Unqualified employees must maintain a 10-foot distance from all electrical sources. Vehicular and mechanical equipment will also maintain minimum clearance distances of 10 feet.

Site personnel will assume that all electrical equipment at surface, subsurface, and overhead locations are energized until the equipment has been designated as de-energized by a client representative. Client representatives will be responsible for de-energizing and lockout/tagout of all electrical equipment. If the equipment cannot be de-energized, work will stop and the GEI Field Representative and/or the Site Safety Officer (SSO) will consult with the Project Manager and CHSO. GEI will notify the client prior to working adjacent to this equipment, and will verify that the equipment is energized or de-energized in the vicinity of the project area.

All power lines that have been indicated by the client to be de-energized must be locked out by the client or their representative, such that the lines cannot be energized when personnel are working near them. The lines will not be unlocked and re-energized until GEI notifies the client that they have completed work in the area and that all personnel are clear of the area. The client representatives will thoroughly familiarize GEI personnel with site-specific lockout/tagout procedures during the site orientation. Conductors and parts of electrical equipment that have been de-energized, but not been locked or tagged out, shall be treated as live/energized. Only qualified persons may work on electric circuit parts or equipment that has not been de-energized. Such persons will be made familiar with the use of special precautionary techniques, PPE, insulating and shielding materials, and insulated tools.

If power lines cannot be de-energized, the SSO will consult with the client to discuss how to proceed. Work tasks will only commence after determining that a safe working distance (MAD) can be maintained and all personnel working in the area have been informed of the limitation. All work performed within the substation boundaries requires the use of task-specific PPE as described in the HASP.

GEI will verify that the contractor or subcontractor has located and marked all electric, gas, water, steam, sewer, and other utility service lines before any intrusive work is started. In each case, any utility company that is involved should be notified in advance by the contractor, and its approval or services will be obtained, if necessary.

1.3.2 Ground-Fault Circuit Interrupters (GFCI)

GEI employees will use approved ground-fault circuit interrupters for personnel protection when using electrical tools and equipment. Equipment will be plugged into receptacles protected by a GFCI, extension cords with built-in GFCIs, or a GFCI adapter is to be used.

1.3.3 Equipment Inspection

Each extension cord, plug and receptacle, and any equipment connected by the cord and plug, will be visually inspected before each day's use for external defects, such as deformed or missing pins or insulation damage, and for indications of possible internal damage. Each receptacle and plug will be tested for correct attachment of the equipment grounding conductor. The equipment grounding conductor will be connected to its proper terminal.

Inspection of equipment will be performed before first use; before equipment is returned to service following any repairs; before equipment is used after any incident which can be reasonably suspected to have caused damage (e.g., when an extension cord is run over), and at intervals not to exceed 3 months. Cords and receptacles which are fixed and not exposed to damage will be tested at intervals not exceeding 6 months. Equipment found damaged or defective will not be used and will be properly tagged as "Out of Service"; notify the Branch Manager so that the equipment can be replaced or repaired. If the equipment cannot be repaired it will be disposed of properly.

1.4 Injury Reporting

If a GEI employee suffers an injury on the job that is not life threating, call Medcor Triage at 1-800-775-5866 to speak with a medical professional. Then, immediately report the injury to the Supervisor/Project Manager and Regional Safety Officer.

After verbal notification has been made, an Incident Report Form is to be completed by the employee and/or supervisor/project manager and submitted to the People & Safety Team immediately following care of the incident. This form is available on the Safety App (smart phones) and on the Safety page on the GEI intranet.

Upon notification from a Branch or Office Manager, Human Resources, and/or the receipt of the Incident Report Form, the Regional Health & Safety Officer (RHSO) will conduct an investigation and evaluation on what happened and how and why it happened. The Corporate Health & Safety Officer (CHSO) will then recommend (as necessary) engineering controls, personal protection equipment, training or other appropriate measures to minimize the potential for future injuries. The CHSO/RHSO may develop educational information based on lessons learned for distribution to GEI employees.

1.5 Limitations

- Follow safety procedures as defined in the site-specific HASP at all times.
- If lockout/tagout procedures are going to be performed by GEI employees or GEI subcontractors, the specific procedure will be reviewed with the CHSO and the RHSO.

1.6 References

OSHA 29 CFR 1910.147 Appendix A – The control of hazardous energy (lockout/tagout)

1.7 Attachments

None

1.8 Contact

Health&Safetyteam@geiconsultants.com

1.9 Review History

- February 2017
- May 2014
- October 2011
- August 2010 (Titled Lock Out/Tag Out)

STANDARD OPERATING PROCEDURES
HS-005b Lockout/Tagout

1.1 Objective
Lockout/tagout, otherwise referred to as the control of hazardous energy, is the procedure used to eliminate the hazards from equipment that contains hazardous energy prior to working on or around this equipment. Energy sources that are controlled using lockout/tagout procedures include electrical, mechanical, hydraulic, pneumatic, chemical, or thermal. Other energy sources can include stored energy such as equipment held under tension, pressurized lines, and capacitors. Lockout/tagout also applies to electric generation, and pumping plant inspections and appurtenances.

This Standard Operating Procedure (SOP) has been developed to protect employees from exposure to these types of hazardous equipment while performing work activities on and around equipment. GEI employees will follow the client's lockout/tagout procedures, when available. If the client does not have specific lockout/tagout procedures in place, use these guidelines at a minimum.

This lockout/tagout program will be reviewed by the Safety Team annually. Health and Safety reviews are conducted by the Safety Team to document compliance with these requirements.

1.2 General
Employees servicing, maintaining, or working near machines or equipment may be seriously injured or killed if hazardous energy is not properly controlled. Injuries resulting from the failure to control hazardous energy during maintenance activities can be serious or fatal. Injuries may include electrocution, burns, crushing, cutting, lacerating, amputating, or fracturing body parts.

Employees who have the potential to work with or around equipment where lockout/tagout is needed, will be trained and become familiar with GEI's lockout/tagout procedures. This training will include safety-related work practices that pertain to their respective job assignments.

An activity hazard analysis conducted for the project scope of work will evaluate the potential for exposure to hazardous energy and be incorporated in the site-specific Health and Safety Plan (HASP). In addition, site-specific training will be conducted by the Project Manager or their designee to discuss the project lockout/tagout requirements and include a review of the HASP requirements.

Annual health and safety training will include review of GEI's lockout/tagout requirements. Retraining will be required when there is a change in job assignments, a change in the energy control procedures, or a new hazard is introduced. Retraining may also be conducted through the Project Safety Briefing and documented on the Project Safety Briefing form.

1.3 Roles and Responsibilities

There are two categories of employees in a lockout/tagout program, Authorized and Affected. Regardless of category, employees are required to comply with the restrictions and limitations imposed upon them during the use of lockout/tagout procedures.

1.3.1 Authorized Employees

Authorized employees are responsible for following established lockout/tagout procedures. An authorized employee is defined as a person who locks out or tags out machines or equipment in order to perform service, maintenance, or work near a piece of equipment that contains or has the potential to contain hazardous energy.

Authorized employees will receive training on the following topics:

- Recognition of hazardous energy sources, types, and magnitudes of energy.
- Methods and means required for energy isolation and control.
- Purpose and use of the lockout/tagout procedures.
- Limitations of the use of tagout systems.

1.3.2 Affected Employees

An affected employee is defined as a person whose job requires him/her to operate or use a machine or equipment on which work activities are being performed under lockout or tagout, or whose job requires him/her to work in an area in which such activities are taking place. Affected employees do not attempt to restart or re-energize machines or equipment that are locked out or tagged out.

Authorized employees will receive training on the following topics:

- Purpose and use of the lockout/tagout procedures.
- Prohibition relating to attempting to restart or reenergize equipment that has been locked or tagged out.

1.4 Lockout/Tagout Procedure

Lockout/tagout procedures will be followed when working on or around machines, equipment, or any system where the unexpected energization or start-up of the machine or equipment or release of stored energy can cause injury to the employee.

GEI uses a red Master Lock® 1 31/32-inch high body high-visibility aluminum padlock, keyed differently, with a 1 1/16-inch shackle, or its equivalent for lockout activities. An employee's lock and tag must not be removed by anyone other than the employee who installed the lock and tag unless removal is accomplished under the direction of the CHSO.

When GEI employees are working on project sites where a group lockout is required, the locked-out device will first be secured using a folding scissors clamp that has many padlock holes capable of holding it closed. Each employee/subcontractor will apply their own padlock to the clamp. The locked-out device cannot be activated until all workers have signed off on their portion of the project and removed their padlock from the clamp. The lead contractor responsible for the group lockout will assign an authorized employee who has primary responsibility for the number of employees working under the protection of a group lockout or tagout device. GEI employees will not act as the Authorized Employee.

Only GEI employees who have completed lockout/tagout training may conduct a lockout/ tagout procedure. Normally GEI employees will follow the client's lockout/tagout procedures. If the client does not have specific lockout/tagout procedures to follow, use these guidelines at a minimum:

- Prior to conducting any lockout/tagout procedures, notify all affected employees.
- Identify the type, magnitude, and hazards of the energy that the machine/ equipment uses.
- Shut down the machine/equipment by the normal stopping procedure (stop button, open switch, close valve, etc.).
- Disconnect the machine/equipment from the energy source.
- Stored or residual energy (such as capacitors, springs, elevated machine members, rotating flywheels, hydraulic systems, and air, gas, or water pressure, etc.) must be dissipated or restrained by methods such as grounding, repositioning, blocking, bleeding down, etc.
- Using the correct type of lockout/tagout device, lockout the machine/equipment with an assigned individual lock by placing a lock on each energy isolating device. Only the employee performing the work should have a key to this lock.
- Locks can be obtained from the RHSO. This lock will have a GEI-approved tag that allows the employee to write their name and date on the tag.

- Lockout devices, where used, will be affixed in a manner that will hold the energy isolating devices in a safe or off position. Locking devices will always be used on energy isolating devices designed with the capability of being locked.
- Tagout devices, where used, will be affixed in such a manner as will clearly indicate that the operation or movement of energy isolating devices from the safe or off position.
- Where a tag cannot be affixed directly to the energy isolating device, the tag shall be located as close, and as safely as possible, to the device in a position that will be immediately obvious to anyone attempting to operate the device.
- Confirm that the machine/equipment has been disconnected by attempting to operate or turn the machine/equipment on. If the machine does not operate, it is now locked out.
- If, during repair or maintenance activities, the machine or equipment is required to be energized, identify the location of lockout/tagout device(s) that can be removed to accomplish this. Only the lockout/tagout devices absolutely necessary to allow the equipment or machine to be energized or partially energized should be removed. After the equipment or machine has been cycled or jogged, the lockout/tagout devices will be reapplied and the steps above will be repeated prior to commencing work.
- When the machine/equipment is ready to be returned to service, make sure all tools are removed and the system is operationally intact. Verify that all employees are in a safe position and have been removed from the area.
- Remove the lockout/tagout devices and reenergize the machine/equipment.
- Notify affected employees that the service or maintenance work is complete and the machine/equipment is ready for use.

1.5 Injury Reporting

If a GEI employee suffers an injury on the job that is not life threating, call Medcor Triage at 1-800-775-5866 to speak with a medical professional. Then, immediately report the injury to the Supervisor/Project Manager and Regional Safety Officer.

After verbal notification has been made, an Incident Report Form is to be completed by the employee and/or supervisor/project manager and submitted to the People & Safety Team immediately following care of the incident. This form is available on the Safety App (smart phones) and on the Safety page on the GEI intranet.

Upon notification from a Branch or Office Manager, Human Resources, and/or the receipt of the Incident Report Form, the Regional Health & Safety Officer (RHSO) will

conduct an investigation and evaluation on what happened and how and why it happened. The Corporate Health & Safety Officer (CHSO) will then recommend (as necessary) engineering controls, personal protection equipment, training or other appropriate measures to minimize the potential for future injuries. The CHSO/RHSO may develop educational information based on lessons learned for distribution to GEI employees.

1.6 Limitations

Follow safety procedures as defined in the site-specific HASP at all times.

If lockout/tagout procedures are going to be performed by GEI employees or GEI subcontractors, the specific procedure will be reviewed the Safety Team, prior to any work being performed.

1.7 References

OSHA 29 CFR 1910.147 Appendix A – The control of hazardous energy (lockout/tagout)

1.8 Attachments

None.

1.9 Contact

Health&SafetyTeam@geiconsultants.com

1.10 Review History

- November 2016 (Separated from a previous SOP)

STANDARD OPERATING PROCEDURES

SOP No. HS-006 Excavations and Trenches

1.1 Objective

The objective of this Standard Operating Procedure (SOP) is to highlight the hazards and safety procedures when work activities include excavations and/or trenches. The following guidelines will be followed when excavations or trenches are present on GEI projects.

1.2 General

This SOP is intended for use by employees engaged in work on project sites that include trenching and/or excavation operations. The site-specific health and safety plan (HASP) must include a hazard assessment for the project that identifies the potential for trenching and excavation hazards and the control methods to be implemented by GEI employees. These hazards must be reviewed in the project safety briefing and documented on the Project Safety Briefing form, found on the Safety page of the GEI intranet.

An “excavation” is any man-made cut, cavity, trench, or depression in an earth surface formed by earth removal.

A “trench” (trench excavation) is a narrow excavation (in relation to its length) made below the surface of the ground. In general, the depth is greater than the width, but the width of a trench (measured at the bottom) is not greater than 15 feet.

Do not enter a trench or excavation without consulting with the Project Manager, Corporate Health and Safety Officer (CHSO), or Regional Health and Safety Officer (RHSO).

1.2.1 Personal Protective Equipment

Employees will be provided with the personal protective equipment (PPE) necessary to help protect them from the hazards of work activities related to excavations and/or trenches. All employees will wear a hard hat, steel toe or composite toe boots, and safety glasses at a minimum. In addition, face shields, gloves, fall protection and hearing protection may be required. PPE must be maintained in good condition, kept clean and properly stored when not in use. More information regarding PPE is located in Section 6 of GEI’s Corporate Health and Safety Program.

1.3 Hazards

Hazards associated with excavations and trenches can include collapse, falls, falling objects, hazardous atmospheres, and incidents involving mobile equipment. One cubic yard of soil can weigh as much as a car.

1.4 Entry

GEI employees will not enter trenches or excavations that do not comply with OSHA 29 CFR 1926.650. If a project requires GEI employees to enter a trench or excavation, the trench or excavation must meet the following requirements described in the following sections.

Do not enter a trench or excavation without consulting with the Project Manager, Corporate Health and Safety Officer (CHSO), or Regional Health and Safety Officer (RHSO).

1.4.1 Competent Person

The excavation must be inspected prior to the start of each shift by a competent person who most likely will work for the contactor performing the work. The competent person is an individual who is capable of identifying existing and predictable hazards or working conditions that are hazardous, unsanitary, or dangerous to workers, soil types and protective systems required, and who is authorized to take prompt corrective measures to eliminate these hazards and conditions. GEI generally does not act as the competent person.

1.4.2 Soil Type

The competent person for the project will determine what the soil type is and what type of protective system will be implemented. The type of soil where the excavation or trench is being dug has significant influence on what type of protective system will need to be in place. There are four types of soil: stable rock, type A, type B, and type C. As you progress from stable rock to type C, the cohesive properties of the soil change the soil becomes less stable.

1.4.3 Protective System

A protective system is required for trenches or excavations greater than 5 feet in depth unless the excavation is made entirely in stable rock. In special situations the competent person may require a protection system for an excavation that is less than 5 feet deep. The competent person is responsible for assessing the soil type and the protective systems required for a specific trench when an excavation is less than 20 feet deep. If the excavation is greater than 20 feet in depth, the protection system requires a design by a registered professional engineer or based on tabulated data prepared and/or approved by a registered professional engineer.

The protective system will be designed based on soil type, depth of excavation, water level, loads adjacent to the excavation, changes in weather conditions, or other operations in the area. Protective systems can include sloping or benching of the sidewalls, shoring the sidewalls using an approved support system, or shielding workers with a trench box or other similar type of support.

The different types of protective systems include:

Benching is a method of protecting workers from cave-ins by excavating the sides of an excavation to form one or a series of horizontal levels of steps, usually with vertical or near vertical surfaces between levels. Benching cannot be done with Type C soil.

Sloping involves cutting back the trench wall at an angle inclined away from the excavation.

Shoring requires installing aluminum hydraulic or other types of support structures to prevent soil movement and cave-ins.

Shielding protects workers by using trench boxes or other types of supports to prevent soil cave-ins.

Designing a protective system can be complex because many factors must be considered: soil classification, depth of cut, water content of soil, changes caused by weather or climate, surcharge loads (e.g., spoil, other materials to be used in the trench) and other operations in the vicinity.

1.4.4 Access and Egress

Excavations and trenches greater than 4 feet in depth require a safe access and egress including ladders, steps, or ramps. These points of access and egress are to be no greater than 25 feet of lateral travel in any direction.

1.4.5 Atmospheric Hazards

Where oxygen deficiency (atmospheres containing less than 20.7% oxygen) or a hazardous atmosphere exists or could reasonably be expected to exist, such as in excavations in landfill areas or excavations in areas where hazardous substances are stored nearby, the atmospheres in the excavation will be tested before employees enter excavation.

1.5 Subcontractor Oversight

When GEI is overseeing excavation activities performed by a subcontractor, the following safety hazards should be monitored:

- Care must be taken not to create new hazards like narrow walkways along edges of an excavation.
- Heavy equipment must not be parked or working at the edge of the excavation.
- Spoils should not be stockpiled within 2 feet of the trench edges.
- Confirm with subcontractor that underground utilities have been located before any excavation or trenching activities begin (*refer to* SOP HS-014 Utility Mark-out).
- Confirm with the subcontractor that the excavation or trench has been tested for hazardous atmospheres before entering.
- Confirm with the subcontractor that the excavation or trench has been inspected by a competent person before each work shift and after any type of precipitation. If hazards are identified during this inspection, verify that the hazards are controlled prior to entering the trench or excavation.
- GEI employees will not work under raised or suspended loads.
- Excavations/trenches must be protected at the end of a work shift if they are to be left open. These trenches/excavations must be covered and a sign that reads "Hole" must be placed in a location that will notify anyone of the hazard. Or a secure barricade will need to be installed.

In circumstances where GEI employees are working on sites where a contractual agreement with the excavation contractor does not exist and we cannot confirm the above stated conditions, entry into trenches or excavations will not be conducted. Any safety concerns that arise should be communicated to the Project Manager and, if necessary, the client.

1.6 Injury Reporting

If a GEI employee suffers an injury on the job that is not life threating, call Medcor Triage at 1-800-775-5866 to speak with a medical professional. Then, immediately report the injury to the Supervisor/Project Manager and Regional Safety Officer.

After verbal notification has been made, an Incident Report Form is to be completed by the employee and/or Supervisor/Project Manager and submitted to the People & Safety Team immediately following care of the incident. This form is available on the Safety App (smart phones) and on the Safety page on the GEI intranet.

Upon notification from a Branch or Office Manager, Human Resources, and/or the receipt of the Incident Report Form, the Regional Health & Safety Officer (RHSO) will conduct an investigation and evaluation on what happened and how and why it happened.

The Corporate Health and Safety Officer (CHSO) will then recommend (as necessary) engineering controls, personal protection equipment, training or other appropriate measures to minimize the potential for future injuries. The CHSO/RHSO may develop educational information based on lessons learned for distribution to GEI employees.

1.7 Limitations

Follow safety procedures as defined in the site-specific HASP. Appropriate PPE must be worn correctly to provide the intended level of protection.

Some states, including Massachusetts, require a trench permit prior to trenching or excavation activities. Verification of local requirements will be evaluated in the planning stage.

1.8 References

OSHA 29 CFR 1926.650 – Subpart P; *Excavations*
OSHA Construction eTool – http://www.osha.gov/SLTC/etools/construction/index.html
OSHA FactSheet Trenching and Excavation Safety – viewed on 9/13/2016
https://www.osha.gov/OshDoc/data_Hurricane_Facts/trench_excavation_fs.pdf

1.9 Attachments

None

1.10 Contact

Health&SafetyTeam@geiconsultants.com

1.11 Review History

- September 2016
- May 2014
- November 2013
- January 2011
- Initial Version Date Unknown

STANDARD OPERATING PROCEDURES

SOP No. HS-008a Non-Powered Hand Tools

1.1 Objective

This Standard Operating Procedure (SOP) is intended for use by employees working with non-powered hand tools. The site-specific health and safety plan (HASP) should include a hazard assessment for the project that identifies the hazards associated with the non-powered hand tools that will be used. These hazards should be reviewed during the project safety briefing and documented on the Project Safety Briefing form, found on the Safety page of the GEI intranet.

1.2 General

Misuse of hand tools accounts for the majority of accidents and injuries involving hand tools. Only use a tool for the task which it was designed for. If the right tool isn't available contact the Project Manager and discuss what is needed. Improper maintenance is another leading cause of injuries. Employees using hand tools may be exposed to a number of other potentially serious hazards: falling objects (i.e., objects can fall as a result of contact with tools or objects which are abrasive or splash), harmful dust, fumes mists, vapors, and gases, as well as contact with electrical power sources.

1.2.1 Condition of Tools

All hand tools, whether furnished by GEI or the employee, will be maintained in safe working condition. All hand tools must be inspected before use. Never use a tool if its handle has splinters, burrs, cracks, splits or if the head of the tool is loose. Never use impact tools such as hammers, chisels, punches or steel stakes having mushroomed (flattened) heads. Tag worn, damaged or defective tools "Out of Service" and do not use them; notify your Branch Manager or Project Manager so that the tool can be replaced or repaired. If the tools cannot be repaired they will be disposed of properly. GEI does not issue or permit the use of unsafe hand tools.

1.2.2 Personal Protective Equipment

Employees using hand tools will be provided with the personal protective equipment (PPE) necessary to protect them from the hazard of the tool as well as the associated hazards with using the tool. (i.e., projectile debris, dust, etc.). <u>All employees will wear work gloves, steel toe or composite toe boots, and safety glasses at a minimum</u>. In addition, face shields and hearing protection may be required. Most hand injures can be avoided with the proper use of PPE. PPE must be maintained in good condition, kept clean and properly stored when not in use. More information regarding PPE is located in Section 6 of GEI's Corporate Health and Safety Program.

1.2.3 General Safe Practices

Never wear sandals, open-toed or canvas shoes when working with tools. Always tie back long hair. Avoid loose-fitting clothes which might become entangled in a tool. Always remove rings and other jewelry. Make sure your grip and footing are secure when using large tools. Never carry tools up ladders; use a tool belt, hoist, or a rope. Use extra caution when using tools at heights – a falling tool could kill a co-worker. Always pass a tool to another person by the handle – never toss it to them. Never use a tool with hands are wet, oily, or greasy. Select ergonomically-designed tools for work tasks when movements are repetitive and forceful. Always make sure observers are at a safe distance. Always secure work with a vice, clamp, or other support.

1.3 Non-Power Hand Tools

Non-powered hand tools include anything from axes to wrenches. Even though the tool is powered by human inertia, injuries from improper use of non-powered hand tools often involve severe disabilities.

1.3.1 Knives

Only use a knife with a sharpened blade. Pull the knife through the object and away from your body; pulling motions are easier to manage. Never use a knife if its handle has splinters, burrs, cracks, splits or if the blade is loose. Knives should never be used as screwdrivers, pry bars, or can openers. Never pick up knives by their blades. Always carry knives with their tips/points toward the floor. Never carry knives, scissors, or other sharp tools in pockets. Never attempt to catch a falling knife. When not in use, knives should be stored in sheaths. Box cutters will be self-retracting.

1.3.2 Wrenches

Never use wrenches that are bent, cracked, badly chipped, or having loose or broken handles. Discard any wrench with spread or battered jaws; if the handle is bent; or if a wrench has broken or battered points and notify your Branch Manager so that a replacement can be made. Never slip a pipe over a single head wrench handle to increase leverage. Never use a shim to make a wrench fit. Pull on a wrench using a slow, steady motion. Do not use push force on a wrench; you could lose your balance if the wrench slips.

1.3.3 Screwdrivers

Always match the size and type of screwdriver blade to fit the head of the screw. Do not hold the work piece against your body while using a screwdriver. Never put your fingers near the tip of a screwdriver when tightening a screw. Never use a screwdriver to make a starting hole for screws. Never use a screwdriver as a chisel, pry bar, or nail puller. When performing electrical work, always use an insulated screwdriver. Never use a screwdriver to test the charge of a battery.

1.3.4 Hammers

Never use a hammer if your hands are oily, greasy or wet. Always check behind you before swinging a hammer. Use a claw hammer for pulling nails. Never strike nails or other objects with the "cheek" of the hammer. Do not strike a hardened steel surface, such as a cold chisel, with a claw hammer. Never strike one hammer against another hammer. Never use a hammer as a wedge or a pry bar.

1.3.5 Pliers

Never use pliers which are cracked, broken, or sprung. Never use pliers as a wrench or a hammer. Do not attempt to force pliers by using a hammer on them. Never slip a pipe over the handles of pliers to increase leverage. When performing electrical work, always use insulated pliers. When using diagonal cutting pliers, shield loose pieces of cut material from flying into the air by using a cloth or your gloved hand.

1.3.6 Snips

Never use snips as a hammer, screwdriver, or pry bar. Always wear safety glasses or safety goggles when using snips to cut materials. Always wear work gloves when cutting materials with snips. Keep the blade aligned by tightening the nut and bolt of the snips. Never use straight cut snips to cut curves. Always use the locking clip on the snips when you have finished using them. Never leave or store snips in the open position.

1.3.7 Hand Saws

Always keep handsaws sharp and free of rust to prevent them from binding or jumping. Never carry a saw by the blade. Always hold the work piece firmly against a work table. Keep control of saws by releasing downward pressure at the end of the stroke. Never use an adjustable blade saw such as a hacksaw, coping saw, keyhole saw, or bow saw, if the blade is not taut. Oil saw blades after each use. Never force the saw through the cut as this may cause the saw to buckle or fly out of the groove and cause injury.

1.3.8 Chisels

Only use sharpened chisels. Never use chisels having mushroomed (flattened) striking heads. Whenever possible, hold a chisel by using a tool holder. Clamp small work pieces in a vise and chip towards the stationary jaw of the vise. Chip or cut away from yourself and keep both hands in back of the cutting edge. Always wear safety glasses or a face shield.

1.3.9 Vise and Clamps

Never use a vise having worn or broken jaw inserts, or having cracks or fractures in the body of the vise. Position the work piece in the vise so the entire face of the jaw supports the work piece. When clamping a long work piece in a vise, support the far end of the work piece by using an adjustable pipe stand or saw horse. Never slip a pipe over the handle of a vise to increase leverage. Never use a C-clamp for hoisting materials. Never use a C-clamp as a permanent fastening device.

1.3.10 Jacks

A manufacture's rated capacity must be clearly marked on all jacks and all jacks must have a stop indicator. When using a jack, never exceed the capacity of the stop indicator. Jacks should be lubricated and inspected regularly. When setting up a jack, ensure the base is centered on a firm, level surface. The jack head should also be placed against a level surface. Lift force should be applied evenly. Put a block under the base of the jack when the foundation is not firm. If it seems likely the cap could slip, place a block between the jack cap and load. Immediately block the load after it is lifted.

1.4 Injury Reporting

If a GEI employee suffers an injury on the job that is not life threating, call Medcor Triage at 1-800-775-5866 to speak with a medical professional. Then, immediately report the injury to the Supervisor/Project Manager and Regional Safety Officer.

After verbal notification has been made, an Incident Report Form is to be completed by the employee and/or supervisor/project manager and submitted to the People & Safety Team immediately following care of the incident. This form is available on the Safety App (smart phones) and on the Safety page on the GEI intranet.

Upon notification from a Branch or Office Manager, Human Resources, and/or the receipt of the Incident Report Form, the Regional Health & Safety Officer (RHSO) will conduct an investigation and evaluation on what happened and how and why it happened. The Corporate Health & Safety Officer (CHSO) will then recommend (as necessary) engineering controls, personal protection equipment, training or other appropriate measures to minimize the potential for future injuries. The CHSO/RHSO may develop educational information based on lessons learned for distribution to GEI employees.

1.5 Limitations

Follow safety procedures as defined in the site-specific HASP or in the manufacturer's specifications. Appropriate PPE must be worn correctly to provide the intended level of protection. If a hand tool is being used that is not identified in this SOP consult the manufacturer's literature and contact the Safety Team so we can include the information in a future version of this SOP.

1.6 References

OSHA Standards for the Construction Industry, Subpart I
Risk Analytics, LLC Hand Tools Training, 2006

1.7 Attachments

None

1.8 Contact

Health&SafetyTeam@geiconsultants.com

1.9 Review History

- July 2016
- May 2014
- August 2011
- October 2010
- One revision date unable to be found

STANDARD OPERATING PROCEDURES

SOP NO. HS-009 Hazardous Substances Exposure Management

1.1 Objective

This Standard Operating Procedure (SOP) is intended to outline the steps GEI employees will take to identify potential hazards associated with exposure to hazardous substances, the risks associated with these hazards, and the proper controls to use to minimize exposure. The site-specific health and safety plan (HASP) should include a hazard assessment for the project that identifies the potential of encountering a hazardous substance and the control methods to be implemented by GEI employees. These hazards should be reviewed in the project safety briefing and documented on the Project Safety Briefing form, found on the Safety page of the GEI intranet.

1.2 General

A hazardous substance is any substance that has one or more of the following intrinsic properties:

- Explosiveness
- Flammability
- Ability to oxidize
- Human toxicity (acute or chronic)
- Corrosiveness (to human tissue or metal)
- Ecotoxicity (with or without bioaccumulation)
- Capacity, on contact with air or water, to develop one or more of the above properties

1.3 Hazard Identification

An initial identification of hazards should be done based on a review of available documents including lists of chemicals used on site, analytical data from soil, surface water, groundwater, air, spill history, site history, equipment on site, maps, photos, and a preliminary survey.

Once hazardous substances are identified the regulated exposure limits need to be identified. Each substance may have a state/federal exposure value for each of the following (if applicable):

Action Level – An airborne level, typically one-half of the permissible exposure limit (PEL) designated in Occupational Safety and Health Administration's (OSHA's) substance-specific standards, 29 CFR 1910, Subpart Z, calculated as an

8-hour time weighted average, which initiates certain required activities such as exposure monitoring and medical surveillance.

Ceiling Limit – The exposure limit a worker's exposure may never exceed.

Sampling and Analytical Error – A statistical estimate of the uncertainty associated with a given exposure measurement.

Short-Term Exposure Limit (STEL) – The average exposure to a contaminant to which a worker may be exposed during a short time period (typically 15-30 minutes).

Time Weighted Average (TWA) – The average exposure to a contaminant over a given period of time, typically 8 hours.

1.4 Risk Identification

Once the presence and concentrations of specific hazardous substances and health hazards have been established, the risks associated with these substances will be identified. GEI employees and GEI subcontractors who will be working on the site will be informed of risks that have been identified.

Risks to consider include, but are not limited to:

- Potential exposures exceeding the permissible exposure limits and published exposure levels
- Potential Immediately Dangerous to Life and Health (IDLH) concentrations
- Potential skin absorption and irritation sources
- Potential eye irritation sources
- Potential hazardous atmospheres, including oxygen deficiency and fire and explosion hazards

1.5 Engineering Controls, Work Practices, and Personal Protective Equipment for Employee Protection

Engineering controls, work practices, and personnel protective equipment (PPE) for substances regulated in OSHA Subpart G (Occupational Health and Environmental Control) and Subpart Z (Toxic and Hazardous Substances) will be implemented in to protect employees from exposure to hazardous substances and safety and health hazards.

1.5.1 Elimination/Substitution

The first control method should be to try and eliminate or substitute the hazards with a safer alternative. This is the most effective solution as shown is Figure 1 below. If you can remove the hazard than you no longer need to find a way to protect the employee

from it. Or you can substitute a different piece of equipment or chemical to use that doesn't pose the same hazard and doesn't create a new one.

1.5.2 Engineering Controls

Engineering controls implement physical change to the workplace, which eliminates/reduces the hazard on the job/task. Examples include:

- Change the process to minimize contact with hazardous chemicals
- Isolate or enclose the process
- Use of wet methods to reduce generation of dusts or other particulates
- General dilution ventilation
- Use of fume hoods

1.5.3 Administrative Controls (Work Practices)

Administrative controls establish efficient processes or procedures to help protect the employee. Examples of these are:

- Rotate job assignments
- Adjust work schedules so that workers are not overexposed to a hazardous chemical

1.5.4 Personal Protective Equipment

The use of PPE to reduce exposure to risk factors is the last line of defense. All other options should be exhausted before use of PPE. Examples of PPE are:

- Chemical protective clothing
- Respiratory protection
- Gloves
- Eye or hearing protection
- Steel toe boots

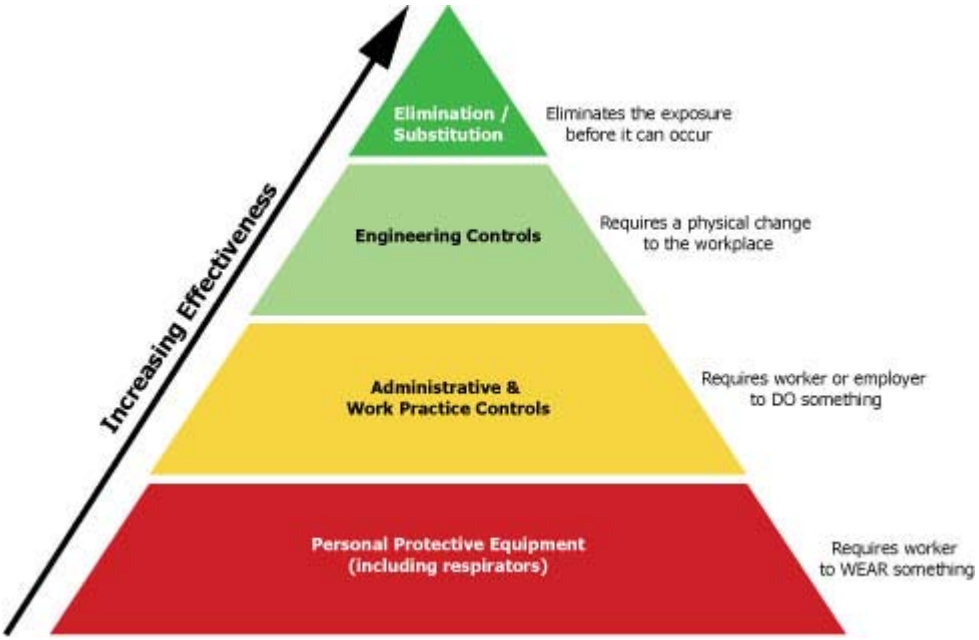


Figure 1: Hazard Mitigation Effectiveness Pyramid

1.5.5 Engineering Controls, Work Practices, and PPE for Substances Regulated in Subparts G and Subpart Z

Engineering controls and work practices will be instituted to reduce and maintain employee exposure at or below the PELs for substances regulated by 29 CFR Part 1910.

Engineering controls that may be feasible include the use of pressurized cabs or control booths on equipment, and/or the use of remotely operated material handling equipment. Work practices may include removing non-essential employees from potential exposure during opening of drums, wetting down dusty operations, and positioning employees upwind of potential hazards.

If engineering controls and work practices are not feasible, or not required, a reasonable combination of engineering controls, work practices, and PPE will be used to reduce and maintain at or below the PELs or dose limits for substances regulated by 29 CFR Part 1910, Subpart Z.

GEI will not implement a schedule of employee rotation as a means of compliance with PELs or dose limits except when there is no other feasible way of complying with the airborne or dermal dose limits for ionizing radiation.

The provisions of 29 CFR, subpart G, will be followed.

1.5.6 Engineering Controls, Work Practices, and Personal Protective Equipment for Substances Not Regulated in Subparts G and Subparts Z

An appropriate combination of engineering controls, work practices, and PPE will be used to reduce and maintain employee exposure to or below published exposure levels for hazardous substances and health hazards not regulated by 29 CFR Part 1910, Subparts G and Subparts Z. GEI will use published literature and Safety Data Sheets (SDS) as a guide in making the determination of what level of protection is appropriate for hazardous substances and health hazards for which there is no permissible exposure limit or published exposure limit.

1.5.7 Decontamination Procedures

Decontamination procedures will be developed, communicated to employees, and implemented before employees or equipment enter areas on site where potential for exposure to hazardous substances exists. Procedures will be developed to minimize employee contact with hazardous substances or with equipment that has contacted hazardous substances.

GEI employees leaving a contaminated area will be properly decontaminated; contaminated clothing and equipment leaving a contaminated area will be properly disposed of or decontaminated.

Decontamination procedures will be monitored by the site safety officer (SSO) to determine their effectiveness. When such procedures are found to be ineffective, the site safety officer will contact the Corporate Health and Safety Officer and appropriate steps will be taken to correct deficiencies.

Location
Decontamination will be performed in areas that will minimize the exposure to employees, equipment, and the environment.

Equipment and Solvents
Equipment and solvents used for decontamination will be decontaminated or disposed of properly.

Personal Protective Clothing and Equipment
Protective clothing and equipment will be decontaminated, cleaned, laundered, maintained, or replaced as needed to maintain their effectiveness.

Employees whose clothing comes in contact with hazardous substances will immediately remove that clothing and follow the directions on packaging or SDS sheet for how to properly clean the exposed area. The clothing will be disposed of or decontaminated before it is removed from the work zone.

Commercial Laundries or Cleaning Establishments
Commercial laundries or cleaning establishments that decontaminate protective clothing or equipment will be informed of the potentially harmful effects of exposures to hazardous substances.

Showers and Changing Rooms
Where the decontamination procedure indicates a need for regular showers and change rooms outside of a contaminated area, these will be provided and meet the requirements of 29 CFR 1910.141 (Sanitation). If temperature conditions prevent the effective use of water, then other effective means for cleansing will be provided and used.

1.6 Injury Reporting

If a GEI employee suffers an injury on the job that is not life threating, call Medcor Triage at 1-800-775-5866 to speak with a medical professional. Then, immediately report the injury to the Supervisor/Project Manager and Regional Health and Safety Officer.

After verbal notification has been made, an Incident Report Form is to be completed by the employee and/or Supervisor/Project Manager and submitted to the People & Safety Team immediately following care of the incident. This form is available on the Safety App (smart phones) and on the Safety page on the GEI intranet.

Upon notification from a Branch or Office Manager, Human Resources, and/or the receipt of the Incident Report Form, the Regional Health & Safety Officer (RHSO) will conduct an investigation and evaluation on what happened and how and why it happened. The Corporate Health and Safety Officer (CHSO) will then recommend (as necessary) engineering controls, personal protection equipment, training or other appropriate measures to minimize the potential for future injuries. The CHSO/RHSO may develop educational information based on lessons learned for distribution to GEI employees.

1.7 Limitations

None

1.8 References

OSHA 1910.120 Hazardous Waste Operations and Emergency Response
OSHA 1910 Subpart G Occupational Health and Environment Control
OSHA 1910 Subpart Z Toxic and Hazardous Substances
OSHA 1910.141 General Environmental Controls – Sanitation
http://www.business.govt.nz/worksafe/information-guidance/legal-framework/hsno-act-1996/defining-hazardous-substances/ (Viewed 7/8/2016)
https://www.osha.gov/SLTC/hazardoustoxicsubstances/ (Viewed 7/8/2016)
https://www.osha.gov/SLTC/hazardoustoxicsubstances/control.html (Viewed 7/11/2016)

1.9 Attachments

None

1.10 Contact

Health&SafetyTeam@geiconsultants.com

1.11 Review History

- July 2016
- May 2014
- November 2013
- August 2011 known as Hazard Identification and Management
- February 2011 known as HS-008 Contaminant Properties

STANDARD OPERATING PROCEDURES

SOP No. HS-010 Inclement Weather

1.1 Objective

This Standard Operating Procedure (SOP) is intended for use by employees engaged in work with the potential to be affected by inclement weather. The site-specific health and safety plan (HASP) should include a hazard assessment for the project that identifies the potential for working in inclement weather and the control methods to be implemented by GEI employees. These hazards should be reviewed in the project safety briefing and documented on the Project Safety Briefing form, found on the Safety page of the GEI intranet.

1.2 General

Employees should be aware of local weather conditions and monitor advisories issued by the National Weather Service and other local reporting services. Depending on location and season, storms are capable of producing heavy rain, floods, extreme temperatures, high wind conditions, lighting, tornados, and/or snowfall.

1.2.1 Heavy Rain

If working or driving in a rain storm, use extreme caution. When driving, turn your low beam lights on when the rainfall becomes heavy. Employees should be aware of the following:

- Heavy rain decreases visibility, especially when driving.
- Surfaces and tools become slippery.
- If you are working in the rain and your clothes become wet there is a risk of hypothermia when exposed to winds, even in warm temperatures.
- If the storms are going to produce thunder and/or lightning, leave the work area immediately and move to a safe area.
- Use your best judgment to determine if the rainfall becomes too heavy to continue working safely.

1.2.2 Lightning

Lightning can strike as far as 10 miles from the area where it is raining. That's approximately the distance you can hear thunder. **If you can hear thunder, you are within striking distance. Seek safe shelter immediately.** This can be within a building or vehicle. Wait 30 minutes after the last clap of thunder or flash of lightning before going outside again.

1.2.3 Flooding

Flooding may occur as a result of heavy rain in a short period of time. Flooding can be particularly acute in canyon areas where dry creek beds can turn into raging rivers from rainfall in distant or higher elevation areas. Be aware of this and your surroundings and move to a safe place if you begin to see signs that flooding may occur. Signs of potential flooding include sudden appearance of water in dry creek beds, increased water flow in rivers or streams, or quick rise in water levels.

Do not attempt to drive through areas or streets that are flooded. Seek alternate routes. Be particularly cautious at night when flooded areas are difficult to see. Urban flooding can stop traffic; increase the potential for traffic accidents; and can trap people in vehicles.

1.2.4 Extreme Temperatures

Work activities may take place in extreme heat or cold. Be prepared if these conditions are anticipated. Have the appropriate personal protective equipment (PPE) available; exercise proper fluid intake; and take breaks to prevent heat and cold stress. For more information about these conditions see the heat stress and cold stress programs found in GEI's Health and Safety Program.

1.2.5 High Winds, Tropical Storms, and Tornados

High Winds can be extremely dangerous. Appropriate measures will be taken to secure equipment and loose items when working in windy conditions. The project manager should be contacted about the weather conditions and, if necessary, work should be postponed.

Tropical storms are described as storms with sustained winds ranging from 39 to 73 miles per hour (mph) and hurricanes produce sustained winds that exceed 74 mph. When winds approach 40 mph (gale force winds) twigs begin to break off of trees and vehicles will veer off of the road. When winds approach 40 mph or the GEI employee feels unsafe based on the activities being performed, stop work and seek shelter as soon as possible. Blowing or falling debris and overhanging limbs/signs can be a significant hazard. If possible, avoid driving in these conditions; 70 percent of injuries during hurricanes are a result of vehicle accidents. Note that tall or elevated equipment will have manufacturer's safe operating wind speeds defined that could be less than 40 mph. The operator's manual should be consulted prior to operation of the equipment.

A tornado is a violent, dangerous, rotating column of air that is in contact with both the surface of the earth and a cumulonimbus cloud or, in rare cases, the base of a cumulus cloud. The Fujita Scale is used to rate the intensity of a tornado by examining the damage caused by the tornado after it has passed over a man-made structure. Based on the Fujita Scale, or F-Scale, numbers begin at F0: 40-72 mph and go to F6: 319-379 mph (F6 is

generally theoretical). Nearly three-fourths of tornados are on the weak F0-F1 scale with just over two-thirds of deaths resulting from the violent F4-F5 tornados.

If a tornado is seen, stop work and seek shelter immediately. If a tornado siren is sounded move immediately to safety indoors and then move to a windowless interior space, basement, stairwell, or designated fall-out shelter. Windows should not be opened before an oncoming tornado. If there is no shelter available, seat belt yourself into your stationary vehicle or seek a depression or low spot on the land surface.

1.2.6 Snowfall and Ice Conditions

Working in the winter months may result in activities taking place during periods of snowfall or icy conditions. If you are working during or after snow has fallen, dress appropriately for the conditions. Snow and ice can cause working surfaces to become slippery. Clear snow and ice from work areas to prevent slip hazards. Use caution when performing snow or ice removal activities to prevent injuries. Driving in snowy and icy conditions is also hazardous. Reduce speed and use caution if you must drive in these conditions.

If the weather conditions deteriorate and you do not feel safe working in these conditions, stop work, move to a safe indoor location, and contact your project manager to let them know the weather, work conditions, and your location.

1.3 Injury Reporting

If a GEI employee suffers an injury on the job that is not life threating, call Medcor Triage at 1-800-775-5866 to speak with a medical professional. Then, immediately report the injury to the Supervisor/Project Manager and Regional Safety Officer.

After verbal notification has been made, an Incident Report Form is to be completed by the employee and/or Supervisor/Project Manager and submitted to the People & Safety Team immediately following care of the incident. This form is available on the Safety App (smart phones) and on the Safety page on the GEI intranet.

Upon notification from a Branch or Office Manager, Human Resources, and/or the receipt of the Incident Report Form, the Regional Health & Safety Officer (RHSO) will conduct an investigation and evaluation on what happened and how and why it happened. The Corporate Health and Safety Officer (CHSO) will then recommend (as necessary) engineering controls, personal protection equipment, training or other appropriate measures to minimize the potential for future injuries. The CHSO/RHSO may develop educational information based on lessons learned for distribution to GEI employees.

1.4 Limitations

Follow safety procedures as defined in the site-specific HASP. Appropriate PPE must be worn correctly to provide the intended level of protection. Protection in extreme weather conditions can best be accomplished if the conditions are anticipated and actions are taken. Monitor local weather conditions prior to starting work.

1.5 References

Center for Disease Control and Prevention – Natural Disasters and Severe Weather
http://www.bt.cdc.gov/disasters/

National Lightning Safety Institute

NOAA, National Weather Service

Office of Climate, Water, and Weather Services

1.6 Attachment

None

1.7 Contact

Safety Team
Health&SafetyTeam@geiconsultants.com

1.8 Review History

- Previous revision dates were not documented
- May 2014
- July 2016

STANDARD OPERATING PROCEDURE

SOP HS-014 Utility Mark-out

1.1 Objective

This Standard Operating Procedure (SOP) provides guidance for utility mark-out procedures related to drilling, excavation, or other sub-surface or intrusive activities to avoid injury to GEI employees or property damage. This SOP is applicable when GEI is responsible for its operation or our subcontractor's operation for utility mark-out. A utility mark out is when paint, flags or other markers are put in place to identify the location of an underground utility.

Clients or local agencies may have additional requirements or procedures to mark out of utilities. If local utility mark-out procedures differ from those described within this SOP, applicable state or municipal regulations should be followed.

1.2 General

This SOP is intended for use by employees engaged in work with sub-surface or intrusive activities. The site-specific health and safety plan (HASP) should include a hazard assessment for the project that identifies the potential for subsurface hazards and the control methods to be implemented by GEI employees. These hazards should be reviewed in the project safety briefing and documented on the Project Safety Briefing form, found on the Safety page of the GEI intranet.

1.2.1 Contractor/GEI Responsibilities

- The contractor or GEI employee will pinpoint each exploration area with white paint, flags, or stakes. personal protection equipment (PPE), including eye protection when using spray paint will be worn.
- Exploration locations should be marked-out with sample identification number(s) and type of sample (e.g., boring, test-pit, or monitoring well).
- The contractor compiles information about the work areas on a request form specified by the state utility mark-out program and submits it. Work area location maps can be sent to the utility mark-out program to clarify locations.
- The mark-out program customer service representative will provide a mark-out ticket number and a list of utilities notified upon receipt of the request information. This information will be recorded on the GEI documentation form in Appendix B and/or in other project documents.
- If known, the contractor or GEI employee will also notify non-member utility operators (e.g., apartment complexes, commercial complexes, railroads with communication cables, etc.).

1.2.2 Utility Mark Outs

- Utility companies or their sub-contractors will only mark-out, or clear, utilities under their responsibility. Generally, this means that they will only mark-out utilities within the public right-of-way up to private property boundaries. Information needed to determine the location of utilities on private properties will be requested from the property owner. This may include available property drawings or as-built figures. If this information is not available, additional non-intrusive surveys of the property may be required by a private utility locator to find underground utilities by using techniques such as ground penetrating radar (GPR).
- American Public Works Association (APWA) Uniform Color Code For Marking Underground Utility Lines are:
    1. **White** – Proposed Excavation
    2. **Pink** – Temporary Survey Markings
    3. **Red** – Electric Power Lines, Cables, Conduit and Lighting Cables
    4. **Yellow** – Gas, Oil, Steam, Petroleum, and Gaseous Material
    5. **Orange** – Communications, Alarm, Signal Lines, Cables or Conduit
    6. **Blue** – Water
    7. **Purple** – Radioactive Materials
    8. **Green** – Sanitary and Storm Sewers and Drain Lines

1.2.3 Utility Mark Out Review

- Before the intrusive work activities begin, the contractor or GEI employee will verify that each utility company has completed a utility location for the work area or the location has been cleared by a private locator and record this on the mark-out request information sheet.
- A visual survey of the project area will be done prior to the start of intrusive activities. This visual inspection will be done to identify signs, manholes, utility boxes, or other evidence of an underground utility is present and has been considered.
- The contractor or GEI employee can begin work on the scheduled work date and time if the utility operators have responded, taking care to find and preserve markings that have been made.
- Completed clearance documentation will be located on the excavation site during excavation activities and kept in project files.

1.2.4 Excavations

- When excavating near a buried utility, observe the approximate location around that utility.
- If exposing a utility, proper support and protection must be provided so that the utility will not be damaged.
- If the excavation work requires significant spans of the utility to be exposed, it is the contractor's responsibility to support the infrastructure (to prevent sagging or collapse) as needed. Contact the utility operator for support, guidance, or assistance.
- When the excavation is complete, provide proper backfill for utilities that have been exposed.
- Take care not to damage the conduit or protective coating of a utility. If the damage occurs, leave the damaged utility exposed and immediately call the utility owner.
- If a gas line is encountered, everyone will be evacuated according to the site evacuation procedures and the contractor must notify police, fire, and emergency personnel. No attempt should be made to tamper with or correct the damaged utility. All site personnel are to evacuate to the site's predetermined meeting point or a location a minimum of 300 feet away from the incident location.
- If the contractor needs to dig within the approximate location of a combustible, hazardous fluid, or gas line (natural gas, propane or gasoline), soft digging is required (hand digging, vacuum extraction) to a maximum depth of 5 feet. The approximate location is defined as 24 inches on either side of the designated center line of the utility if the diameter is not provided or 24 inches from each outside edge if the diameter is provided.

1.3 Injury Reporting

If a GEI employee suffers an injury on the job that is not life threating, call Medcor Triage at 1-800-775-5866 to speak with a medical professional. Then, immediately report the injury to the Supervisor/Project Manager and Regional Health & Safety Officer (RHSO).

After verbal notification has been made, an Incident Report Form is to be completed by the employee and/or Supervisor/Project Manager and submitted to the People & Safety Team immediately following care of the incident. This form is available on the Safety App (smart phones) and on the Safety page on the GEI intranet.

Upon notification and/or the receipt of the Incident Report Form, RHSO will conduct an investigation and evaluation on what happened and how and why it happened. The Corporate Health and Safety Officer (CHSO) will then recommend (as necessary) engineering controls, personal protection equipment, training or other appropriate measures to minimize the potential for future injuries. The CHSO/RHSO may develop educational information based on lessons learned for distribution to GEI employees.

1.4 Limitations

- Follow safety procedures as defined in the site-specific HASP. Appropriate PPE must be worn correctly to provide the intended level of protection.
- Mark-out notification time usually does not include holidays. Make sure holidays are considered and mark-out time is scheduled accordingly. Under no circumstances are intrusive activities allowed to be performed prior to the required mark-out.
- Do not use white paint if precipitation is eminent. Consider using stakes if snow is predicted.

1.5 References

Reference the website for the "Call Before You Dig – 811" for the utility mark-out agency for the state you working in prior to site work. If you have issues locating the appropriate agency, contact the Safety Team for assistance.

1.6 Attachments

Attachment A – Standard Utility Color Codes

Attachment B – GEI Utility Clearance Documentation Form

1.7 Contact

Health&SafetyTeam@geiconsultants.com

1.8 Review History

- June 2016
- May 2014
- November 2013
- February 2011
- November 2010

ATTACHMENT A

COLOR CODE FOR UTILITY MARKING

(BASED ON 'THE AMERICAN PUBLIC WORKS ASSOCIATION' RECOMMENDATIONS AND THE ANSI STANDARD Z-53.1 FOR SAFETY COLORS)

UTILITY	COLOR
PROPOSED EXCAVATION	WHITE
ELECTRIC POWER LINES, CABLES, CONDUIT AND LIGHTING CABLES	RED
POTABLE WATER	BLUE
STEAM, CONDENSATE, GAS OR OIL COMPRESSED AIR	YELLOW
TELECOMMUNICATIONS, ALARM OR SIGNAL LINES, CABLES OR CONDUIT	ORANGE
TEMPORARY SURVEY MARKINGS	PINK
SEWER AND STORM DRAINS	GREEN
CHILLED WATER, RECLAIMED WATER, IRRIGATION AND SLURRY LINES	PURPLE
OTHER	LIGHT BLUE

ATTACHMENT B

Utility Clearance Documentation

Please print clearly. *For more room, use back of page.*

Client: _____

GEI Project Name & Number: _____

Site: _____

Excavation/Drilling Location ID: _____

Excavator/Driller: _____

GEI PM: _____ GEI Field Team Leader: _____

Utility Drawings Reviewed: _____

Provided By: _____ Reviewed By: _____

Utility Clearance Call Date: _____ Name of Utility: _____

Utility Clearance Call Date: _____ Name of Utility: _____

Utility Clearance Received from (utility & rep name): _____ Date: _____

Utility Clearance Received from (utility & rep name): _____ Date: _____

Company that completed clearance: _____ Date: _____

GEI Staff Responsible for Oversight: _____

Metal Detector Survey (yes/no): _____ Drilling Location Cleared by: _____

Contractor Name: _____ Company Name: _____

Contractor Signature: _____ Date: _____

GEI Staff Responsible for Oversight: _____

Private Location Clearance Required (yes/no): _____ Date: _____

Contractor Name: _____ Company Name: _____

Contractor Signature: _____ Date: _____

Methods used for utility location (i.e. GPR, electronic pipe location) _____

GEI Staff Responsible for Oversight: _____

Hand clearing Performed (yes/no): _____ Methods: _____ Date: _____

Contractor Name: _____ Company Name: _____

Contractor Signature: _____ Date: _____

GEI Staff Responsible for Oversight: _____

GEI Consultants, Inc. Representative (name & title): _____

GEI Consultants, Inc. Representative Signature: _____ Date: _____

Based upon the best available information, appropriate utility clearance procedures were performed for the invasive work specified. If client ordered site specific deviations from existing GEI utility clearance procedures, they are approved by the client signature below:

Client Representative (name & title): _____

Client Representative Signature: _____ Date: _____

Notes:

STANDARD OPERATING PROCEDURES

SOP No. HS-016 Traffic Hazard Management

1.1 Objective

The objective of this Standard Operating Procedure (SOP) is to prevent or limit the potential for GEI personnel to encounter traffic hazards during field activities.

1.2 General

This SOP is intended for use by employees engaged in work with the potential for traffic hazards. The site-specific health and safety plan (HASP) will include a hazard assessment for the project that identifies the potential for exposure to traffic hazards and the control methods to be implemented by GEI employees, including review or attainment of necessary permits, traffic control plans, and flagger/police detail requirements for the local jurisdiction. Routine checks of the work zone will be made to ensure there are adequate levels of protection. These hazards will be reviewed in the project safety briefing and documented on the Project Safety Briefing form, found on the Safety page of the GEI intranet.

1.3 Traffic Hazard Management

Traffic Hazard Management is the process of identifying and managing the potential risks associated with the movement of traffic through, around, or past a work area. This Traffic Hazard Management SOP is designed to assist employees in identifying and managing these hazards. Work areas should be as safe as possible. It is the responsibility of GEI employees to follow the Traffic Hazard Management SOP and adhere to these safety standards. Safety is not negotiable.

Under no circumstances are GEI employees permitted to commence work in a situation that the employee believes or knows their health and safety, or the health and safety of others, is at risk.

Major risk factors for work site Traffic Hazard Management include:

- The speed of traffic moving through a work site.
- The distance and clearance between moving traffic, workers, vehicles and equipment, and over-head power lines.
- Traffic volume and vehicle composition.
- Nature and conditions at the work site and approaches to the work site.

- Other factors such as the time of day, sight distance, weather, presence of pedestrians, or cyclists, and the type of work being carried out.
- Other hazards in proximity to the work site (e.g., power lines, open excavations) that may have conflicting safety management measures that need to be considered when developing the HASP.

1.4 Site Preparation

The following management measures will be considered whenever working in traffic areas. In addition, remain aware of the amount of traffic around the working area. The work space should be large enough for the job to be completed safely. Check permit, traffic control plans, and flagger/police detail requirements for the local jurisdiction. Perform routine checks of the work zone to make sure there are adequate levels of protection.

1.4.1 Traffic Barriers and Warning Signs

GEI employees will comply with the U.S. Department of Transportation's (DOT) Manual on Uniformed Traffic Control Devices (MUTCD) and/or state regulations for temporary traffic barriers (cones, barriers) and sign placement when required for working in traffic areas. Clearly define the work site by placing traffic barriers around the work space to indicate the space that is needed to safely perform the work. The traffic barrier will help make the work site more visible to other workers, pedestrians, cyclists, and moving vehicles. Place traffic barriers in such a way as to give yourself and equipment adequate space to work within the barriers. OSHA suggests placing the first warning sign at a distance calculated to be 4 to 8 times (in feet) the speed limit (in MPH).

1.4.2 Adequate Light

Requirements for night conditions and work areas with poor visibility are similar to day requirements. However there are a number of additional things to consider, such as visibility of the work site to advancing traffic and sufficient lighting. OSHA requires lighting for workers on foot and equipment operators to be at least 5-foot-candles or greater.

Visibility of the work area can be increased by employing the following measures:

- Using parked vehicles hazard and flashing lights.
- Wearing reflective personal protective equipment (PPE), such as a safety vest, in good condition.
- Providing adequate lighting to illuminate the work area with lights positioned so that there is no glare to approaching drivers.
- Placing reflective advance warning signs and traffic barriers so that they are visible to road users.

1.4.3 Distance from the Nearest Traffic Lane

Work areas located along roadsides will have a minimum clearance as defined by DOT's MUTCD and/or state or local DOT regulations for traffic barrier and sign placement.

1.4.4 PPE

The proper PPE, as outlined in the project HASP, will be worn when appropriate. The color/type of safety vest will comply with site regulations.

1.5 Equipment Operation

Vehicles and heavy equipment operators should use a spotter when possible if it is necessary to drive in reverse to reduce risk of collision with oncoming traffic. If it is necessary to drive against the flow of traffic make sure this area is within the work zone and properly blocked off from oncoming traffic.

1.6 Pedestrian Safety

When working near pedestrian traffic, a safe alternate pedestrian route will be established. Refer to local regulations when establishing pedestrian walkways.

1.7 Injury Reporting

If a GEI employee suffers an injury on the job that is not life threating, call Medcor Triage at 1-800-775-5866 to speak with a medical professional. Then, immediately report the injury to the Supervisor/Project Manager and Regional Health & Safety Officer (RHSO).

After verbal notification has been made, an Incident Report Form is to be completed by the employee and/or Supervisor/Project Manager and submitted to the People & Safety Team immediately following care of the incident. This form is available on the Safety App (smart phones) and on the Safety page on the GEI intranet.

Upon notification from a Branch or Office Manager, Human Resources, and/or the receipt of the Incident Report Form, the RHSO will conduct an investigation and evaluation on what happened and how and why it happened. The Corporate Health and Safety Officer (CHSO) will then recommend (as necessary) engineering controls, personal protection equipment, training or other appropriate measures to minimize the potential for future injuries. The CHSO/RHSO may develop educational information based on lessons learned for distribution to GEI employees.

1.8 Limitations

Follow safety procedures as defined in the site-specific HASP, federal DOT, and local jurisdictions. Appropriate PPE must be worn correctly to provide the intended level of protection.

1.9 References

DOT's Manual on Uniformed Traffic Control Devices (2009 Edition)

Hazard Exposure and Risk Assessment Matrix for Hurricane Response and Recovery Work: https://www.osha.gov/SLTC/etools/hurricane/work-zone.html

1.10 Attachments

None

1.11 Contact

Health&SafetyTeam@geiconsultants.com

1.12 Review History

- November 2016
- May 2014
- November 2013
- August 2011
- October 2010 Initially HS-027 Traffic Hazards

STANDARD OPERATING PROCEDURES

SOP No. HS-018 Working Around Heavy Equipment

1.1 Objective

The objective of this Standard Operating Procedure (SOP) is to prevent or limit the physical hazards when working around heavy equipment.

1.2 General

This SOP is intended for use by employees engaged in work with the potential for working near heavy equipment. The project site-specific health and safety plan (HASP) should include a hazard assessment for working near heavy equipment to be implemented by GEI employees. These hazards should be reviewed in the project safety briefing and documented on the Project Safety Briefing form, found on the Safety page of the GEI intranet.

1.3 Heavy Equipment Precautions

Heavy equipment (e.g., excavators, backhoes, drill rigs, etc.), can present many physical hazards that can result in serious injury or death if the proper safety precautions are not followed. The following is a list of precautions to be aware of when working around heavy equipment:

- Wear appropriate personal protective equipment (PPE), including at a minimum reflective, high-visibility safety vest, hard hat, safety glasses, and steel/composite toe boots.
- Always keep your distance from moving equipment.
- Do not assume the operator knows where you are or where you are going.
- Make sure to make eye contact and receive acknowledgement of your presence with the operator.
- Avoid working near heavy equipment, but if unavoidable, communicate your location with the operators. If using hand signals, discuss the signals with the equipment operator prior to starting work.
- Watch for moving equipment. Construction sites can have a lot of activity and equipment may be moving in an unpredictable manner.
- Do not rely on back-up or other alarms. They may not be working or you may not hear them with the noise of other activities taking place in the area.
- Stay out of the swing radius of cranes, excavators, or other equipment that swings or rotates.
- Do not walk beside a moving vehicle, the vehicle may turn, slip, or the load may shift causing the vehicle to go off course.
- Do not ride on the outside of a moving equipment.

- Never walk under or stand too close to a load suspended by cranes or hoists.
- Do not walk behind a piece of equipment that is backing up without acknowledgment from the operator it is safe to proceed. If working next to heavy equipment is unavoidable, be aware of the hazards including pinch points and moving parts. Use a spotter to watch the work area for moving equipment.
- If necessary, ask the operator to stop equipment operation to perform your work tasks.
- Verify the location and operation of emergency shut-off devices on the equipment.
- Be aware of the fuels and chemicals associated with the equipment. Have a spill prevention and response plan in place that includes the appropriate containment materials (i.e., spill kit).
- Do not wear loose fitting clothing when working around moving equipment (i.e., drill rig augers).
- Do not operate heavy equipment.
- Do not use cellular telephones near operating equipment.

1.4 Injury Reporting

If a GEI employee suffers an injury on the job that is not life threating, call Medcor Triage at 1-800-775-5866 to speak with a medical professional. Then, immediately report the injury to the Supervisor/Project Manager and Regional Safety Officer.

After verbal notification has been made, an Incident Report Form is to be completed by the employee and/or Supervisor/Project Manager and submitted to the People & Safety Team immediately following care of the incident. This form is available on the Safety App (smart phones) and on the Safety page on the GEI intranet.

Upon notification from a Branch or Office Manager, Human Resources, and/or the receipt of the Incident Report Form, the Regional Health & Safety Officer (RHSO) will conduct an investigation and evaluation on what happened and how and why it happened. The Corporate Health and Safety Officer (CHSO) will then recommend (as necessary) engineering controls, personal protection equipment, training or other appropriate measures to minimize the potential for future injuries. The CHSO/RHSO may develop educational information based on lessons learned for distribution to GEI employees.

1.5 Limitations

Follow safety procedures as defined in the site-specific HASP. Appropriate PPE must be worn correctly to provide the intended level of protection.

1.6 References

OSHA 29 CFR 1926.600 – Subpart O; Motor Vehicles, Mechanized Equipment, and Marine Operations.

www.toolboxtopics.com/Construction/ (Viewed 10/16)

Caterpillar Safety – http://safety.cat.com/ (Viewed 10/16)

1.7 Attachments

None

1.8 Contact

Health&SafetyTeam@geiconsultants.com

1.9 Review History

- October 2016
- May 2014
- November 2013
- August 2011
- October 2010

STANDARD OPERATING PROCEDURES

SOP No. HS-025 Manual Lifting

1.1 Objective

The purpose of this Standard Operating Procedure (SOP) is to identify and reduce potential work-related musculoskeletal disorder (WMSD) hazards. The SOP is intended to comply with state regulations and safe work practices developed by the Occupational Safety and Health Administration (OSHA). Modifications to meet these requirements will be made to this program as changing laws or regulations dictate.

1.2 General

Lifting heavy items is one of the leading causes of injury in the workplace. Overexertion and cumulative trauma when lifting are significant factors for injuries. When employees use smart lifting practices and work in their “power zone”, they are less likely to suffer from back sprains, muscle pulls, wrist/elbow/spinal and other injuries caused by lifting heavy objects. Common things to consider prior to lifting an object are: weight of the object, awkward postures, high-frequency and long duration lifting, inadequate handholds, and physical/environmental factors.

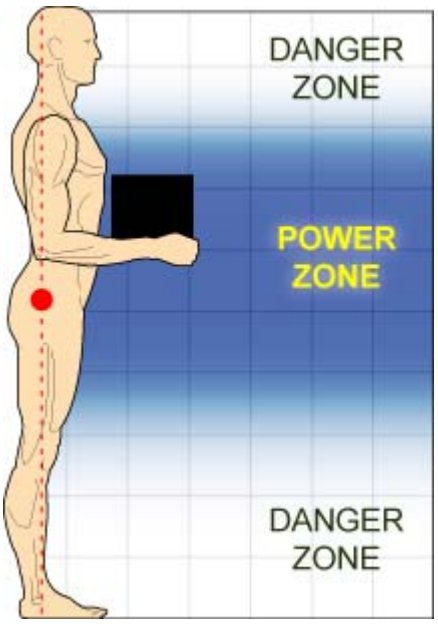


Figure 1: Lifting Power Zone

1.3 Safe Lifting Guidelines

The following safe lifting guidelines will be followed by employees involved in manual lifting activities:

- Before manual lifting is performed, a hazard assessment must be completed. The assessment must consider size, bulk, and weight of the object(s), if mechanical lifting equipment is required, if two-man lift is required, whether vision is obscured while carrying and the walking surface and path where the object is to be carried.
- Get a co-worker to help if equipment or other item is too heavy to lift.
- If possible, use powered equipment instead of manually lifting heavy materials. Lifting equipment such as dollies, hand trucks, lift-assist devices, jacks, or carts can be provided for employees.
- Reduce lifts from shoulder height and from floor height by repositioning the shelf or bin to closer to the power zone.
- Make sure walkways are clear of tripping hazards before moving materials.
- Use your legs and keep your back in a natural position while lifting. Keep the load close to your torso.

- Test the load to be lifted to estimate its weight, size, and bulk and to determine the proper lifting method.
- Do not twist while carrying a load. Instead, shift your feet and take small steps in the direction you want to turn.
- Make sure there are appropriately marked and sufficiently safe clearances for aisles and at loading docks or passageways where mechanical-handling equipment is used.
- Properly stack loose or unboxed materials which might fall from a pile by blocking, interlocking, or limiting the height of the pile to prevent falling hazards.
- Bags, containers, bundles, etc. should be stored in tiers that are stacked, blocked, interlocked, and limited in height so that they are stable and secure to prevent sliding or collapse.

- Storage areas should be kept free from accumulation of materials that could lead to tripping, fire, or explosion.
- Work methods and stations should be designed to minimize the distance between the person and the object being handled.

Supervisors should periodically evaluate work areas and employees' work techniques to assess the potential for and prevention of injuries. New operations should be evaluated to engineer out hazards before work processes are implemented.

1.4 Regulations

OSHA does not have a standard which sets limits on how much a person may lift or carry. They do however state that lifting loads heavier than about 50 pounds will increase the risk of injury.

The National Institute for Occupational Safety and Health (NIOSH) has developed a mathematical model that helps predict the risk of injury based on the weight being lifted and other criteria. The NIOSH model is based on previous medical research into the compressive forces needed to cause damage to bones and ligaments of the back. The mathematical model is incorporated in the *Applications Manual for the Revised NIOSH Lifting Equation*, which can be found on the NIOSH website (http://www.cdc.gov/niosh/docs/94-110/). It should be noted, however, that this NIOSH document provides only voluntary guidelines.

If there is a situation that arises where an employee is required to perform manual lifting on a reoccurring basis, the NIOSH Lifting Equation will be used to determine the appropriate weight that employee can safely lift. The lifting equation establishes a maximum load of 50 pounds for employees that are less likely to have to lift something, and don’t have to do any long distance travel or maneuvering of the item. This 50 pounds is then adjusted to account for:

- how often the employee is lifting
- twisting the back during lifting
- the vertical distance the load is lifted
- the distance of the load from the body
- the distance the employee must move while lifting the load
- how easy it is to hold onto the load

GEI uses 50 pounds as a standard. However each individual should not attempt to carry loads heavier than they can safely manage.

1.5 Training

Training will include general principles of ergonomics, correct manual lifting techniques to avoid musculoskeletal injuries, recognition of hazards and injuries, procedures for reporting hazardous conditions, and methods and procedures for early reporting of injuries.

1.6 Lifting Assistance

If employees are assigned a task that involves repetitive lifting and carrying of equipment the Safety Team and Project Manager should be contacted to conduct an ergonomic evaluation. The task should be discussed to determine if there is an alternative method that can be used. The alternative method should institute an engineering or administrative control to reduce/limit the amount of lifting that is required of the employee. Some examples include providing smaller containers to reduce the weight of what needs to be lifted; providing a device that helps carry awkwardly-shaped objects easier; or using a winch, fork lift, or other device to lift the item(s) for the employee.

1.7 Injury Reporting

Injuries experienced during manual lifting activities should receive prompt medical attention. If a GEI employee suffers an injury on the job that is not life threating, call Medcor Triage at 1-800-775-5866 to speak with a medical professional. Then, immediately report the injury to the Supervisor/Project Manager and Regional Health and Safety Officer.

After verbal notification has been made, an Incident Report Form is to be completed by the employee and/or Supervisor/Project Manager and submitted to the People & Safety Team immediately following care of the incident. This form is available on the Safety App (smart phones) and on the Safety page on the GEI intranet.

Upon notification from a Branch or Office Manager, Human Resources, and/or the receipt of the Incident Report Form, the Regional Health & Safety Officer (RHSO) will conduct an investigation and evaluation on what happened and how and why it happened. The Corporate Health & Safety Officer (CHSO) will then recommend (as necessary) engineering controls, personal protection equipment, training or other appropriate measures to minimize the potential for future musculoskeletal injuries. The CHSO/RHSO may develop educational information based on lessons learned for distribution to GEI employees.

1.8 Limitations

Follow safety procedures for manual lifting.

1.9 References

OSHA Technical Manual (OTM), Section VII: Chapter 1 - Back Disorders and Injuries
https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=29936 (Viewed 7/12/2016)
https://www.osha.gov/SLTC/etools/electricalcontractors/materials/heavy.html (Viewed 7/12/2016)

1.10 Attachments

None

1.11 Contact

Health&SafetyTeam@geiconsultants.com

1.12 Review History

- July 2016
- August 2014

STANDARD OPERATING PROCEDURES
SOP NO. HS-026 Hazard Identification and Management

1.1 Objective
This Standard Operating Procedure (SOP) is intended to outline the steps GEI employees will take to identify potential hazards on site, the risks associated with these hazards, and the proper engineering controls, work practices, and personal protective equipment (PPE) to use to minimize the associated risks.

1.2 Hazard Identification
Establishing proper work procedures by conducting a job hazard analysis will should be performed for all projects involving field work. An initial identification of hazards will be completed based on past and current property usage of the site, what tasks are required to perform the job, what equipment is needed to complete the assigned tasks, what hazards are in the working area etc.

The site-specific health and safety plan (HASP) will include a hazard assessment for the project that identifies the potential hazards and how to alleviate the hazard. These hazards will be reviewed in the project safety briefing and documented on the Project Safety Briefing form, found on the Safety page of the GEI intranet.

1.3 Risk Assessment
A risk assessment will be performed for all aspects of field work. This analysis is to determine the quantitative or qualitative value of risk related to a tangible situation and a recognized hazard. Identification, studies, and monitoring of any hazard to determine its potential, origin, characteristics, and behavior are examples of what could be included and performed during a risk assessment. The assessment will increase awareness of workplace hazards and provide an opportunity to identify and control workplace hazards.

1.3.1 Assessment Guidelines
It is necessary to consider certain general guidelines for assessing the foot, head, eye and face, and hand hazard situations that exist in an occupational operation or process, and to match the protective devices to the particular hazard.

Assessments should be conducted:

- Prior to starting any work at the site
- As conditions change
- Workplace layout changes
- Environmental changes
- Process changes

- Yearly or other pre-determined interval

1.3.2 Hazard Sources

Some examples of hazard sources include but are not limited to:

- Items, materials, or machinery in motion
- Extreme temperatures
- Chemical exposures
- Harmful dust
- Light radiation
- Falling objects or potential from dropping objects
- Sharp objects
- Rolling or pinching objects
- Layout of workplace and location of co-workers
- Electrical hazards
- Noise exposures
- Confined spaces
- Working near or on water
- Fall hazards
- Traffic or other activities taking place on the site
- Air quality issues

1.4 Prevention – Control Methods

Control methods should be considered in the following hierarchy:

- Elimination
- Substitution
- Engineering Controls
- Administrative Controls
- Personal Protective Equipment

1.4.1 Elimination and Substitution

Elimination and substitution, while most effective at reducing hazards, also tend to be the most difficult to implement in an existing process. If the process is still at the design or development stage, elimination and substitution of hazards may be inexpensive and

simple to implement. For an existing process, major changes in equipment and procedures may be required to eliminate or substitute for a hazard. Employees should work with the Safety Team to find solutions.

1.4.2 Engineering Controls

Engineering controls are used to remove a hazard or place a barrier between the work and the hazard. It's implemented to control the hazard at the source. Examples may include machine guards, sound deading/dampening panels, traffic barriers, guardrails, and shields.

1.4.3 Administrative Controls

Administrative controls change the work procedures such as programs, schedules, and supervision to reduce employee exposure to hazards. The controls are frequently used with existing processes where hazards are not particularly well controlled. Examples of administrative controls are requiring frequent breaks or implementing a specific method to perform a task.

1.4.4 Personal Protective Equipment Selection

To select the proper PPE, the potential hazards must be known. The protective equipment selected must ensure a level of protection *greater than* the minimum required in order to help protect employees. The user must be supplied with a properly fitting protective device and given instructions on care and use. Users must be aware of all warning labels for and limitation of the PPE. Employees must be aware that the PPE does not eliminate the hazard.

1.4.5 Hazard Re-Assessment

As necessary, the workplace should be re-assessed for hazards by identifying and evaluating new equipment and processes, reviewing accident records, and re-evaluating the suitability of previously selected PPE. Re-assessment should occur at a defined regular schedule interval.

1.5 Job Safety Analysis

A job safety analysis (JSA) sometimes referred to as a job hazard analysis (JHA) or an activity hazard analysis (AHA) is the breaking down of any method or procedure into its component parts to determine the hazards connected with each key step and the requirements for performing it safely.

When a JSA is being created, make sure it isn't too general where the resulting information is not enough to assess the hazard and select proper controls, and be careful not to add unnecessary steps.

1.6 Injury Reporting

If a GEI employee suffers an injury on the job that is not life threating, call Medcor Triage at 1-800-775-5866 to speak with a medical professional. Then, immediately report the injury to the Supervisor/Project Manager and Regional Health & Safety Officer (RHSO).

After verbal notification has been made, an Incident Report Form is to be completed by the employee and/or Supervisor/Project Manager and submitted to the People & Safety Team immediately following care of the incident. This form is available on the Safety App (smart phones) and on the Safety page on the GEI intranet.

Upon notification from a Branch or Office Manager, Human Resources, and/or the receipt of the Incident Report Form, the RHS) will conduct an investigation and evaluation on what happened and how and why it happened. The Corporate Health and Safety Officer (CHSO) will then recommend (as necessary) engineering controls, personal protection equipment, training or other appropriate measures to minimize the potential for future injuries. The CHSO/RHSO may develop educational information based on lessons learned for distribution to GEI employees.

1.7 Limitations

Limitations may arise on a project specific basis and will be addressed as they arise.

1.8 Attachments

None.

1.9 References

Risk Analytics, LLC Hazard Assessment Training Program, January 2011

1.10 Contact

Health&SafetyTeam@geiconsultants.com

1.11 Review History

- November 2016
- June 2015

Appendix E

Resumes

Gary Rozmus, P.E.
Senior Consultant

resume

Gary Rozmus is a recognized leader in the environmental services and Brownfield redevelopment marketplace. His expertise is in Site assessment (Phase I, II and II ESAs, soil vapor intrusion and RI/FS); remediation; Brownfield redevelopment and risk-based closure (including area-wide and site specific planning and redevelopment); environmental compliance; regulatory interaction and negotiations; permitting; impact assessments; hazardous materials management (including asbestos containing materials-ACM, lead-based paint and other building and facility hazardous materials); GIS mapping and inventory; hazardous and non-hazardous waste management; litigation support; design, construction and facility decommissioning and demolition environmental services; stormwater and wastewater management; natural resource assessments; landfill closure; emergency incident/derailment consulting response; sustainable environmental design; and real estate transaction and support.

EDUCATION
M.S., Civil Engineering, Polytechnic Institute of New York
B.S., Civil Engineering, Manhattan College

EXPERIENCE IN THE INDUSTRY
43 years

EXPERIENCE WITH GEI
4 years

REGISTRATIONS AND LICENSES
Professional Engineer, NY No. 056744
Professional Engineer, TN No. 103375

CERTIFICATIONS
e-RAILSAFE Badge: e-VERIFILE.COM, Inc

MTA Metro-North Railroad Roadway Worker Procedures Training

PREVIOUS EXPERIENCE

Vice President in charge of national and regional business development and client and project management to private and public clients. Directed the corporate Brownfield Redevelopment and Transit and Rail environmental services business development groups. Developed and implemented strategic business development plans, served as client manager/point of contact and senior project manager or project manager on numerous projects.

Major clients and projects include;

Freight Railroads

CSXT: provided services to CSXT since the 1980's. This includes its corporate environmental, real estate (RPI) and law departments. These projects include the transfer of the NYC Highline to New York City for development as a promenade park and the sale of the Staten Island north shore line and St. George's railyard to NYC. The railyard has been redeveloped from a Brownfield site to a NY Yankees minor league ballpark. Hundreds of projects were performed and grew account to generate $3-4 million in annual consulting fees.

Norfolk Southern: provided services under a master services contract to the environmental, real estate and design and construction groups. These projects include the investigation and closure of sites in central NY, real estate leasing support services and facilities engineering assistance. Projects ranged up to several hundred thousand dollars.

Amtrak: provided services under a master services contract and on design and construction projects. These projects included conducting environmental compliance audits of major shop facilities, preparing environmental compliance plans and programs, facility design and bridge design. Projects ranged up to several hundred thousand dollars.

GEI Consultants

Transit Railroads

Directed and provided senior project management support for national transit client programs including Long Island Railroad (LIRR), Metro North Railroad (MNR), NYC Transit Authority, New Jersey Transit (NJT), SEPTA and WMATA. Led the efforts to win general environmental services contracts with LIRR, MNR and NJT and led efforts to win environmental services work as part of design and construction projects with total fees in the millions of dollar range.

Public and Private Sector Clients

Directed and provided senior project management services to public clients including NYC Mayor's Office of Environmental Remediation, NYC Economic Development Corporation; Triborough Bridge and Tunnel Authority, NYS and NYC DOT, other NYC agencies, other NY municipalities; and private clients including attorneys; manufacturers/distributors-e.g. Duracell and Frito Lay, developers, communication companies and construction contractors. As Senior Vice President and principal, led the environmental services area for primarily private clients.

- Awarded an ACEC Diamond Award and ACEC National Recognition Award for developing the NYC SPEED portal (Searchable Property Environmental E-database)
- Secured and directed a multi-year Brownfield consulting services contract through the NYCEDC for the NYCMOER. Led a team of environmental planners and GIS specialists in developing the NYC SPEED portal which mapped the entire City of NY and identified vacant Brownfield sites and environmental/Phase I data for each site as well as many other informational features
- Secured and managed area-wide Brownfield contracts under eight NYSDOS Brownfield Opportunity Area (BOA) grant awards.

PROJECT EXPERIENCE

City of Mt. Vernon Canal Village Brownfield Opportunity Area (BOA) and Local Waterfront Revitalization Plan (LWRP) Study, Mt. Vernon, NY. Environmental Project Manager for the Canal Village combined BOA and LWRP project to develop a redevelopment plan for the 251-acre waterfront area which includes the industrial area in the southeast corner of the City. This area lays along the eastern edge of the city limits that coincide with the Hutchinson River and its southern boundary with the Bronx, New York City. Because this planning effort has been made possible by two separate grants being combined—New York State's BOA and LWRP programs—there are two separate project boundaries which overlap. The work will serve as a BOA Nomination Report and as a neighborhood master plan for the Canal Village and the Hutchinson River Waterfront. This project included a study of the transportation and pedestrian network; industrial sector and regional relationships; strategic redevelopment sites investigation; public outreach; climate change impacts, habitat restoration, waterfront redevelopment plans, and green infrastructure opportunities; economic and market conditions study; urban design and open space considerations; and priority/catalytic redevelopment site selections.

City of Newburgh Brownfield Opportunity Area (BOA) Project, Newburgh, NY, City of Newburgh. Environmental Task Leader for the study to create a strategy for revitalizing and redeveloping the Census Tract area of the city of Newburgh, New York. This work included analysis of local, regional, and national markets to determine best land use revitalization, inventory and analysis of brownfield sites, existing land use patterns and zoning, transportation systems and infrastructure, and natural resources and environmental features. Tasks included community outreach and participation in the BOA process and the development of a redevelopment master plan.

Remedial Investigation/Remedial Analysis, Elmira, NY, Norfolk Southern Railway Company. Project Principal responsible for project oversight of the development of a remedial investigation work plan, remedial investigation report, and remedial alternatives analysis for a former rail yard in accordance with the site's voluntary

cleanup agreement with the New York State Department of Environmental Conservation. Investigative efforts included surface and subsurface soil sampling, groundwater sampling, and soil gas investigation.

Newtown Creek Brownfield Opportunity Area, Brooklyn, NY, Greenpoint Manufacturing and Design Center. Project Manager responsible for providing services related to the Newtown Creek Brownfield Opportunity Area in Brooklyn, New York. Tasks included planning, developing a public engagement strategy, attending meetings, analyzing existing conditions of the study area, developing conceptual design guidelines, completing an economic analysis, developing a geographic information system (GIS) database, and preparing project recommendations and a draft nomination plan document.

Site Remediation, Redevelopment, and Legal Support Services, Huntington, NY, Town of Huntington. Project Manager responsible for site remediation, redevelopment, expert witness, and legal support services for the Town of Huntington in the Huntington Station Brownfield Opportunity Area. The Town had obtained a property under eminent domain that had been contaminated under prior usage involving a solid waste transfer station. Acted as Senior Project Manager in charge of evaluating remedial and redevelopment alternatives and costs that would meet New York Department of State brownfield future use standards and requirements. In addition, our firm was retained to assist the Town and legal counsel in litigation between the Town and the prior owner for cost recovery purposes.

Planning Work for Brownfields Opportunity Area Nomination Study, Huntington, NY, Town of Huntington. Project Manager responsible for planning work for the preparation of a Brownfields Opportunity Area nomination study to receive New York Department of State approval for the development of the Huntington Station area.

Brownfield Cleanup Program and Vacant Properties Database, New York, NY, New York City Mayor's Office of Environmental Remediation. Assistant Project Manager assisting with the development of a database for a Brownfield Cleanup Program (BCP) to promote the redevelopment of potentially contaminated and under-used sites. The City's BCP is the first municipal program of its kind in the country, and it is intended to facilitate the fast and efficient cleanup and reuse of contaminated sites. One of the 10 brownfield initiatives is the creation of a database of historical site uses across the city that can be used to identify potential brownfield sites. This vacant property database assists in the rapid redevelopment of these sites and allows the City to measure long-term progress toward the plan's goals.

On-Call Environmental Services, Various Locations, National Railroad Passenger Corporation (Amtrak). Contract Manager/Program Director providing on-call environmental service, which included conducting assignment audits of various facilities, designing a chemical storage and equipment washing facility at the Bear Delaware shop, and preparing spill prevention control and countermeasure (SPCC) plans for various facilities. Services also included permitting and plans; derailment and emergency response; SPCC and hazardous waste contingency; geographic information systems (GIS) services; hazardous waste and RCRA; air emissions permitting, compliance, and reporting; wastewater and stormwater; due diligence investigations; remedial investigations and feasibility studies; remedial design, oversight, and operation; wetlands assessments and mitigation; environmental management system, compliance audits, and environmental training; asbestos, lead-based paint, and mold services; environmental impact statement and National Environmental Policy Act services; industrial hygiene; and brownfield redevelopment.

Long Beach Brownfield Opportunity Area Study, Long Beach, NY, City of Long Beach. Project Manager responsible for providing professional planning services for the preparation of an approvable Brownfield Opportunity Area pre-nomination study for the revitalization of the bayfront area consistent with New York State Department of State and New York State Department of Environmental Conservation requirements. The project area was along Reynolds Channel on the southern shore of Long Island that is programmed for mixed-use redevelopment, including mid-rise residential development and a waterfront promenade.

Babylon Train Wash Facility, Babylon, NY, MTA Long Island Railroad. Senior Environmental Project Manager responsible for providing services for the conceptual, preliminary, and final designs and construction services for the unmanned, automatically operated, single-direction Babylon Train Wash Facility. The facility is

designed to accommodate electric and diesel-hauled trains and consists of a single-story unit masonry building adjacent to the steel-framed wash bay with metal clad siding.

Coes Neck Phase II Site Assessment, Bethpage, NY, Nassau County. Project Manager responsible for reviewing and evaluating the Coes Neck Phase II site assessment report on behalf of surrounding community groups.

Construction-Phase Services, Long Island City, Queens County, NY, MTA Long Island Railroad. Senior Environmental Project Manager responsible for providing construction-phase services for the demolition and reconstruction of Long Island City Diesel Yard in Long Island, New York. Construction-phase responsibilities included reviewing submittals, investigating field conditions, and resolving technical issues.

Environmental Services, NY, Confidential Client. Assistant Project Manager responsible for providing remediation assistance and other environmental services, including a document review and site visit; ongoing interim remedial measures (IRMs); operation and maintenance and reporting; an IRM engineering assessment; meetings and communications; troubleshooting and repair of the soil vapor extraction systems and groundwater extraction treatment system; record of decision-related services; and oil spill assistance.

Phase I Environmental Site Assessment, Hempstead, NY, Planned Parenthood of Nassau County. Project Manager responsible for performing a Phase I environmental site assessment.

Remedial Investigation/Remedial Alternative Analysis, Brooklyn, NY, Frito-Lay, Inc. Senior Project Manager responsible for providing project oversight and technical and policy assistance for a remedial investigation and alternatives analysis. The remedial investigation was conducted in accordance with New York State Department of Environmental Conservation (NYSDEC) DER-10 Guidelines. The work included a remedial investigation work plan, remedial investigation report, and supplemental remedial investigation work plan and the implementation of the supplemental remedial investigation and remedial alternatives analysis. Our firm prepared the brownfield applications and successfully worked with the NYSDEC case manager to gain acceptance into the Brownfield Cleanup Program.

General Engineering Services, Suffolk County, NY, Metron Development Services. Assistant Project Manager responsible for performing general engineering services for project development.

Hudson Line Overpass Improvements, Westchester County, NY, MTA Metro-North Railroad. Senior Environmental Project Manager responsible for providing construction supervision and inspection services for the rehabilitation of the Hudson Line stations from Hasting-on-Hudson to Ossining in Westchester County, New York. The goal of the project was to rehabilitate Hudson Line historic station overpasses and platforms, including canopies, stairs, and amenities.

Croton-Harmon Maintenance Facility Replacement Priority Repairs, Croton-on-Hudson, NY, MTA Metro-North Railroad. Senior Environmental Project Manager responsible for designing multiple fixed-facility improvements, including the preparation of design-build construction documents for a new wheel truing facility; the study and design of facility modifications and improvements to support the new M-7 fleet; and preparation of construction documents for roof and facade repairs and plumbing renovations inside and outside of the main shop facility. The new facility is a 12-bay, pre-engineered, 8,250-square-foot passenger-train maintenance facility incorporating vehicle pits for wheel-truing equipment, 3-ton bridge crane, and storage areas.

Acquisition Due Diligence Assessment and Environmental Health and Safety Compliance Audit, Fulton, NY, Crompton Corporation. Senior Project Manager responsible for a pre-acquisition due diligence assessment and regulatory compliance audit of a plastic extrusion equipment plant constructed in the early 1900s. A site survey was conducted and historical records reviewed to identify potential areas of environmental concern. Company environmental and health and safety files and practices were reviewed to assess the current status of regulatory compliance.

On-Call Services, Northport, NY, Village of Northport. Project Manager responsible for providing on-call services, including environmental, civil, geotechnical, structural, electrical and mechanical engineering, architectural, and construction management services.

Harmon Maintenance Facility Replacement, Phases I, II, and IV, Croton-on-Hudson, NY, MTA Metro-North Railroad (MNR). Environmental Task Leader for the various phases of the replacement of a rail maintenance facility. Responsibilities include providing leadership for the environmental tasks involved with the facility design and master planning efforts for the yard. Phase I included structural and facilities design, preparation of a master plan for the yard, and leadership for environmental design tasks at the yard. Our firm teamed with a construction company on a design-build contract to construct the Phase II improvements to the yard. Phase II consisted of the design and construction of several new facilities in the northern portion of the site and clearing a portion of the site for the major facilities to be constructed in Phase III and thereafter. In addition, our firm has designed a new wheel-truing facility, priority repairs to the main shop, and work to be performed at Metro-North's Ossining Substation, approximately 2 miles south of the Harmon site. Our firm was also selected to prepare the design-build documents for Croton-Harmon Yard and Shop Phase IV, Stage I, which is the latest stage of the $1.0 billion multiyear reconstruction of the century-old Harmon Shop. The Phase I, II, and IV work included assistance needed to address the environmental issues of concern, which are described below:

- Assistance to Metro-North's legal counsel in determining that the project was categorically exempt from the State Environmental Quality Review Act and National Environmental Policy Act, resulting in overall design cost savings
- Development and implementation of guidelines, which address the management of soils generated during investigation or excavation that will allow the reuse of soils on site
- Development and implementation of a geographic information system (GIS)/key database to store the chemical and geological data generated at the site
- Treatment and management of dewatering fluids discharged to the local publicly owned treatment works in accordance with permission requirements
- Asbestos, lead-based paint, and polychlorinated biphenyl (PCB) abatement
- Tank closure and construction
- Air permitting compliance
- Modifications to the facility stormwater discharge permit to include changes to the postconstruction wastewater stormwater management system
- Coverage for construction stormwater discharges under the New York State Department of Environmental Conservation State Pollutant Discharge Elimination System permit program GP-02-01
- Design of new environmental systems for the site, such as a spill control system for a new 400,000-gallon fuel oil storage tank and a fuel pad oil-water separator. Coordinated requirements with regulatory agencies.

In accomplishing these tasks, our firm took a proactive approach, and together with MNR, contacted regulatory agencies at the beginning of the project to introduce them to the project concepts and involve them in decision-making processes. We also involved the other design discipline team leaders in the process.

Croton-Harmon Maintenance Facility Replacement, Phase II, Croton-on-Hudson, NY, MTA Metro-North Railroad. Environmental Task Leader for Phase II of the replacement of the Croton-Harmon Maintenance Facility. Responsibilities included providing leadership for the environmental tasks involved with the facilities design and master planning efforts for the yard. Our firm provided design and construction assistance under a design-build contract for the Phase II work. Tasks included assisting Metro-North's legal counsel in determining that the project is categorically exempt from the requirements of New York's State Environmental Quality Review Act and the National Environmental Policy Act, which resulted in overall design cost savings; developing guidelines that address the management of soils generated during investigation or excavation activities, which allowed the reuse of petroleum-contaminated soils on site; developing and implementing a geographic information system (GIS)/key database in which to store chemical and geological data generated at the site; obtaining approval for dewatering fluids to be accepted by the local publicly owned treatment works, resulting in cost and time savings for the management of contaminated groundwater; designing new environmental systems for the site, such as a spill control system for a new 400,000-gallon fuel oil storage

tank and a fuel pad oil-water separator, and coordinating the associated requirements with the regulatory agencies; obtaining coverage under New York's State Pollutant Discharge Elimination System (SPDES) Permit GP-02-01 for stormwater discharges during construction; modifying the facility's industrial stormwater SPDES permit; and modifying the facility's groundwater monitoring well network.

North White Plains Station Access and Parking Improvements, White Plains, NY, MTA Metro-North Railroad. Environmental Task Leader/Site Planning Coordinator for the preparation of an environmental impact statement pursuant to the National Environmental Policy Act of 1969 and its amendments to analyze alternatives for improved station access and parking at Metro-North's North White Plains Station, with the Federal Transit Administration acting as federal lead agency, and begin preliminary design efforts. The commuter parking capacity was 1,200 spaces, which were located in three lots on the west side of the railroad tracks and a fourth lot on the east side of the tracks. Vehicle access to the three lots located to the west of the tracks was limited to the Bronx River Parkway from the west. Significant areas of the parking facilities were located within the County's Bronx River Parkway Reservation, a sensitive environmental area. Project elements evaluated included the construction of a multilevel parking structure, improvements to existing surface parking areas, the development of remote park-and-ride lots, improved station facilities, an intermodal area, pedestrian and bicycle connections, vehicular access to parking, and the reclamation of the Bronx River Parkway Reservation areas currently used for parking.

Niantic River Bridge, Niantic, CT, National Railroad Passenger Corporation (Amtrak). Environmental Task Leader responsible for addressing asbestos and lead-based paint management and associated wetlands issues involved with the replacement of a drawbridge. The drawbridge, located on Amtrak's Northeast Corridor is an electrified, two-rack railroad with high-density rail traffic. Intercity service is operated by Amtrak, and commuter service is provided by Metro-North Railroad. Oversaw the engineering services for the final design of track, signals, communications, catenary, traction power, structural, environmental, and geotechnical analyses. Our firm was retained to perform construction-related services to maintain continuity between the designer and installation contractor.

Grand Avenue Bus Depot, Environmental Services, Queens, NY, MTA New York City Transit. Senior Project Manager responsible for providing environmental services for a $226 million design-build project for a bus and central maintenance facility. Environmental services included developing and implementing an environmental permit strategy; modifying the facility air permit as required to reflect design-build conditions; conducting a Phase I assessment; developing and implementing soils, asbestos, waste management, and dewatering plans; developing and overseeing the implementation of a construction stormwater management plan; and obtaining permits for water and wastewater discharges and storage tanks and unloading systems. Soil and waste management plans were prepared, and ongoing management of contaminated soils encountered during excavation was provided. Our field personnel documented subsurface conditions during soil excavation and handling activities. On-site responsibilities included assistance with field screening of soils, collection of laboratory samples, and documentation and tracking of excavated USTs, asbestos, drums, and other discovered items of environmental concern.

Brownfield Redevelopment, Babylon, NY, Town of Babylon. Senior Project Manager and Principal-in-Charge responsible for conducting Phase I and Phase II assessments and end-use planning and for providing other engineering services related to the brownfield redevelopment of the Straight Path Area in the Hamlet of Wyandanch. This work was funded under a U.S. Environmental Protection Agency Brownfield Grant.

Harlem Line Station Improvements, Bronx and Westchester, NY, MTA Metro-North Railroad. Environmental Task Manager responsible for asbestos and lead-paint management, including abatement, handling, and disposal during the construction of improvements to rail stations, including the design and construction of new canopies, shelter installation with heat and lighting, platform lighting upgrades and uninterruptible power supply emergency lighting systems, installation of canopy drainage and supports, tactile warning strips, platform replacements that are enclosed, new and/or extension of public address system and electric service upgrades as required, pigeon-proofing, replacement of platform edge strips, and fall protection.

Nassau Expressway Rehabilitation, Queens, NY, New York State Department of Transportation. Environmental Task Manager responsible for asbestos and lead-paint surveys and abatement design, stormwater management, and permitting involved with the final highway design (Phases V and VI) for the rehabilitation and resurfacing of Nassau Expressway/Interim Nassau Expressway - Rockaway Boulevard (from the Van Wyck Expressway to the Nassau County line), including associated ramps and certain bridges, and preliminary design, right-of-way, and final design services for the proposed multiuse (bike/pedestrian) path.

Wall Revetment, Asharoken, NY, William Gallo. Senior Project Manager responsible for providing design, permitting, and construction management for a rock revetment wall along a property on Long Island Sound. The wall was constructed on the seaward side of a sheet pile retaining wall, which was in need of rehabilitation due to severe beachfront erosion and age.

Property Purchase, Site Development, and Litigation Support and Testimony, NJ, Confidential Client. Senior Project Manager responsible for providing litigation support and testimony in a cost allocation and recovery matter regarding two adjacent properties on which environmental concerns were noted and reported. The larger, 26-acre property was a former chemical plant that had gone through an administrative consent order cleanup under the direction of the New Jersey Department of Environmental Protection, which allowed waste residuals to be capped in place and groundwater contamination to remain unremediated. The smaller, 6-acre property was a trucking terminal with a fueling island and USTs. In addition, an extensive Phase II investigation was performed to establish a pre-existing environmental baseline for both properties. The client subsequently purchased the properties and developed a rail-to-truck intermodal facility. The sites border a river, and the federal and state governments took actions against the adjacent property owners to pay for the assessment and cleanup of the river. The former property owner sued our client to have them included in the cost recovery action. We provided litigation support to our client and their attorneys and testified during the trial.

Elevated Rail, NY, Confidential Client. Senior Project Manager responsible for reviewing demolition and material management plans provided by a prospective purchaser and for providing field oversight, including split sampling. The elevated railroad structure was built around 1900 and consists of trackage and ballast in a concrete containment supported by steel columns and extends approximately 1.7 miles. Assisted in addressing liabilities associated with handling ballast, which may be affected by chemical residuals, lead-based paint on the steel work, asbestos-containing materials, and areas of potential concern throughout the abandoned line. Split samples were collected during the purchaser's waste characterization efforts to verify the analytical results and to evaluate the proposed disposal and reuse methods.

Property Purchase and Site Redevelopment, NJ, Confidential Client. Senior Project Manager responsible for a Phase I environmental site assessment of two adjacent properties. The larger property, totaling 26 acres, was a former chemical plant that had gone through an Administrative Consent Order cleanup under the direction of the New Jersey Department of Environmental Protection (NJDEP), which allowed waste residuals to be capped in place and groundwater contamination to remain unremediated. The smaller property, totaling 6 acres, was a trucking terminal with a fueling island and USTs on the property. To establish a pre-existing environmental baseline for both properties, an extensive Phase II investigation was performed. The client subsequently purchased the properties and developed a rail-to-truck intermodal facility. An asbestos survey was conducted in support of the demolition of an on-site administration building. To support redevelopment work on the 6-acre property, an 8,000-gallon gasoline and diesel fuel UST on the property was removed. When removed, the gasoline tank was found to have several holes, and a sheen of phase-separated hydrocarbons was noted on groundwater that infiltrated the excavation. The observed release was reported to NJDEP. Organics detected in the gasoline tank excavation are not organics present in gasoline and were believed to be attributable to an off-site source detected in the baseline groundwater samples. This information was submitted to NJDEP. To support the site improvement of both properties, Occupational Safety and Health Administration (OSHA) surveillance of utility line trenching on the properties was provided, due to the groundwater contamination beneath the site. This required the preparation of a comprehensive health and safety plan, and personnel were provided to monitor trenching activities.

Croton-Harmon Maintenance Facility Replacement, Phase I, Croton-on-Hudson, NY, MTA Metro-North Railroad. Environmental Task Leader responsible for providing leadership for the environmental design tasks involved with the facility design and the master planning for the yard. Our firm was the overall environmental technical lead responsible for overseeing the efforts of four environmental design subconsultants. Tasks performed included assisting Metro-North's legal counsel in determining that the project was categorically exempt from New York's State Environmental Quality Review Act and the National Environmental Policy Act, which resulted in overall design cost savings; developing guidelines to address the management of soils generated during investigation or excavation operations, which allowed the reuse of petroleum-contaminated soils on site; developing and implementing a geographic information system (GIS)/key database to store the chemical and geological data generated at the site; obtaining approval for dewatering fluids to be accepted by the local publicly owned treatment works, which resulted in cost and time savings for the management of contaminated groundwater; and designing new environmental systems for the site, such as a spill control system for a new 400,000-gallon fuel oil storage tank and a fuel pad oil-water separator, and coordinating requirements with the regulatory agencies.

Brownfields Conversion of Rail Yard, NY, Confidential Client. Senior Project Manager responsible for a site that has been redeveloped as a sports park, which includes restaurants and retail activities. This former rail yard consists of 53 acres of property, including 25 upland areas and 28 acres under water. The site was used as a locomotive and railcar servicing and maintenance facility and switchyard from 1883 to 1994. A presale environmental assessment performed by our firm showed evidence of residuals common to rail yards. Several environmental issues were addressed by removing a UST and aboveground storage tank, removing asbestos from a fire-damaged pier, closing a weigh-scale pit, and removing debris and a railcar in poor condition. The site had been leased to a car parking concession that had filled the leased area and other parts of the property with shredded asphalt shingles. Some of this material was removed from wetland-related areas in accordance with a consent order with the State.

Town Improvements, Northport, NY, Village of Northport. Senior Project Manager and Principal-in-Charge responsible for providing various architectural and engineering services. Served as a Village Engineer in providing design and construction management during the upgrade of the municipal wastewater treatment plant, design and construction management of an interim roadway retaining structure along a major village thoroughfare, engineering assistance during a hillside collapse and response from the U.S. Army Corps of Engineers, design and construction management of a domed roadway salt and sand storage facility, engineering services for the Village Planning Board and Zoning Board of Appeals for various site development projects, architectural design of a new concession and restroom facility in Steers Park, design and construction management of various roadway improvement projects throughout the Village, engineering services involved with New York State Department of Environmental Conservation stormwater discharge regulation requirements, and design and construction management for the installation of new street lamps along Main Street.

Natural Gas Pipe Line Metering Stations, Various Locations, Southeastern U.S., Confidential Client. Project Director for remedial investigations and feasibility studies at more than 200 metering stations along a major natural gas pipeline located in the southeastern United States. In the past, mercury manometers were used in the metering process. Breakage, spillage, and operations and maintenance disposal practices resulted in mercury contamination inside the buildings and in the surrounding soils and groundwater. Due to the large number of sites, our firm used a rapid assessment process that relied primarily on field-testing techniques. Our firm pioneered the use of mercury vapor industrial hygiene equipment to quickly determine the presence/absence and the relative amount of mercury contamination in soil samples. This technique allowed the measurement of mercury vapor levels at various depths in boreholes, as well as in individual soil samples. An immunoassay field test was used on a representative number of samples to more specifically describe the mercury concentrations in samples of concern. Finally, a limited number of samples were sent to the laboratory for mercury measurements in accordance with accepted laboratory protocols. A combination of this data was used to describe the extent of

contamination at each of the metering stations and determine the need for and the extent of remedial actions required.

Expert Witness Services, Manhattan, NY. Expert Witness representing the owner of a property in midtown Manhattan whose tenant, an automobile service and fueling station, was decommissioning and closing the site. Fuel oil contamination was found on site, and the tenant claimed that it was not due to its operations. Provided technical and litigation support to the property owner and its attorney. Served as the plaintiff's Expert Witness in the case against Getty Oil to recover damages arising from environmental contamination allegedly caused by Getty Oil to the plaintiff's property. The court ruled in favor of the plaintiff and found Getty liable to the plaintiffs for more than $1 million.

Health and Safety Management, Oyster Bay, NY, Town of Oyster Bay. Senior Project Manager in charge of an on-call brownfield services contract, which included environmental Phase I and II investigations, end-use planning, and remedial design. Also provided health and safety consulting services and groundwater monitoring services to the Town.

LaGuardia, John F. Kennedy (JFK), and Newark Airports, New York City Metropolitan Area, NY, Various Clients. Principal-in-Charge responsible for fueling facility upgrades, site assessments, and remediation projects at three airports. Investigated the nature and extent of petroleum residuals at the LaGuardia Airport fuel farm and designed an upgrade to the tank farm and fuel truck loading area, which provided improved control of releases from the fueling operations. Rehabilitated several deep petroleum product recovery wells at the JFK Airport satellite fuel farm and investigated and remediated releases at the ramp fueling station at Newark Airport.

Illegal Landfill at a Religious Cemetery, Long Island, NY, Kaye Scholer, LLP. Senior Project Manager responsible for developing a restoration and closure plan for a cemetery. The cemetery contracted to fill 8.5 acres with about 180,000 cubic yards (CY) of soil and demolition debris to increase the area for burials. The state, however, cited the operation as a nonpermitted solid waste management facility after the contractor delivered 460,000 CY of material. The cemetery owners signed a consent order that required characterizing the fill materials and preparing a restoration plan. Local civic organizations and politicians demanded that the fill material be removed from the site. The estimated cost of removal and off-site disposal was about $20 million. It was argued that characterizing the fill was not warranted, and a site investigation/closure was proposed to verify that no environmental impacts occurred and closure of the site was in accordance with the cemetery's expansion plan. As part of the landfill closure, quarterly landfill gas monitoring is performed. The monitoring database is summarized in quarterly reports to the New York State Department of Environmental Conservation. The site is characterized by very steep slopes. Slope stability analyses were performed under various closure scenarios to evaluate alternative closure scenarios.

Environmental Site Assessment and On-Call Environmental Engineering Services, Long Island, NY, Northrop-Grumman Corporation. Senior Project Manager responsible for coordinating environmental site assessment and environmental engineering services on an on-call basis. The work included UST investigations and closure work, site investigations for soil excavation projects, asbestos investigations and abatement design and management, and environmental construction management for the closure of manufacturing facilities.

Manufacturing Research and Development Facility, NY, Confidential Client. Project Manager for the presale assessment of a former manufacturing research and development facility, consisting of a 25,000-square-foot main building and two smaller buildings on a 10-acre site. Identified cadmium and mercury residues from prior laboratory activities on building interior surfaces, equipment, and other areas. Determined acceptable metals concentrations on building surfaces and in soil through a risk assessment.

Abandoned Industrial Property, NY, Confidential Client. Environmental Task Leader in charge of a Phase I/Phase II environmental assessment of an inactive railroad property adjacent to mainline track to establish

baseline conditions prior to the railroad leasing the site for industrial use. To prepare the site for future use, the owner decided to remove approximately 30,000 cubic yards of concrete and demolition debris that had been stockpiled on the site by others. Our firm was retained to characterize and manage the removal and disposal of the debris pile. The project was coordinated with the New York State Department of Environmental Conservation's Division of Solid and Hazardous Materials to obtain the Department's concurrence on the scope of the proposed project and the Division of Environmental Permits to obtain a Tidal Wetlands Permit, due to the site location adjacent to a surface water body.

Illegal Landfill on Railroad Property, NY, Confidential Client. Principal-in-Charge for a project involving an illegal landfill site on inactive railroad property. A preliminary environmental assessment of the site was conducted in 1987. In 1988, illegal dumping occurred at the site, which resulted in approximately 500,000 cubic yards of waste being landfilled at the site. A site investigation was conducted in 1994, and ongoing monitoring has been performed at the site since that time. Groundwater and surface water sampling has been conducted, and volatile organic compounds, semivolatile organic compounds, metals, pesticides, ammonia, and various other landfill leachate constituents have been found in groundwater and surface water. A phytoremediation system has been designed and installed that consists of approximately 1,000 trees planted to withdraw groundwater from two water-bearing zones beneath the site. A landfill closure plan was designed and constructed, which included dewatering and closing on-site ponds, performing site grading and development, installing a multilayer cap on the 500,000-cubic-yard waste piles with gas controls, installing stormwater control systems, and installing a groundwater recovery and recirculation system. Also served as a fact witness for the property owner in his cost recovery action against waste generators whose waste was disposed at the site.

The landfilling has been conducted on 26 acres of the overall 39 acres of the inactive railroad. During the course of the site investigation, the railroad negotiated the sale of the rail yard outside of the landfill area. The sale included the track and right-of-way. Environmental issues of concern were addressed with minimal remediation. The sale was to support a revitalization project. The adjacent property is being developed into a sports complex, including restaurants and shops.

Railroad Pre-purchase Property Assessments, Westchester County, NY, MTA Metro-North Railroad. Senior Project Manager responsible for performing prepurchase property assessments to assist this railroad client in acquiring property to expand two rail facilities.

Site Investigation for Inactive Railroad Yard, NY, Confidential Client. Senior Project Manager for a presale site investigation to identify environmental issues that could be of concern to future users of the site. The development of the site was intended to be for sports, recreational, and commercial uses. Actions were taken to address the environmental issues of concern to both the state's and the buyer's satisfaction.

Railroad UST Closures, Various Locations, U.S., Confidential Client. Senior Project Manager responsible for a UST closure program. The program was originally limited to USTs in two states but was so successful that 12 more states were included. The closure program addressed specific state compliance requirements and included the following: initial UST registration, cost recovery for eligible tanks, paperwork and schedule tracking, tank removal, sampling and analysis operations, the establishment of the extent of soil and/or groundwater contamination, the design of remedial alternatives, remedial implementation, and site closure. Provided oversight and supervision services during the various phases of the work. More than 200 USTs were closed. The tanks ranged in capacity from 100 to 20,000 gallons and included buried railcars. Soil remediation efforts included on-site bioremediation cells, off-site bioremediation, and landfilling. Implemented groundwater remediation programs at some of the sites.

Railroad Consent Order Compliance, Various Locations, U.S., Confidential Client. Senior Project Manager for several sites that were placed under a U.S. Environmental Protection Agency consent order. Assisted the client in responding to the items required by the consent order, including demolition, site cleaning,

the closure of oil-water separators, the removal of drums, asbestos abatement, the removal of underground tanks, upgrades for aboveground tanks, the closure of septic systems, and the backfilling of open pits.

Remediation Services for Abandoned Railroad Yard, PA, Confidential Client. Senior Project Manager responsible for overseeing the excavation of 11 USTs and the stockpiling of 1,500 cubic yards of diesel-contaminated soils at an abandoned railroad yard. Solicited competitive bids from remedial contractors for on-site soil roasting or cold-batch asphalt recycling. Soil roasting was more cost-effective because it eliminated the need to landfill the waste. Provided oversight during the remedial work and coordinated state air and water permits. Following soil sampling to verify the treatment, the roasted soil was spread on site, graded, and seeded to close out the project.

Chemical Railcar Derailment, MI, Confidential Client. Senior Project Manager for a project involving a railcar derailment site in a residential area where more than 50,000 gallons of volatile organics and acids were released, some of which ignited. Conducted a remedial investigation that determined the nature and extent of chemical residues and their impacts on air, soil, surface water, and groundwater. Built a surface water diversion system as an interim measure to control overland flow from the area. The state initially demanded soil remediation to background levels, but a risk assessment indicated only a low exposure risk, which resulted in a significant reduction in the extent of required soil remediation. The state also initially listed the excavated soil as hazardous, but the soil was delisted on our petition. This was the first instance in the state where hazardous soil was delisted to a nonhazardous waste based on a private-party petition.

Locomotive Petroleum Spill, FL, Confidential Client. Senior Project Manager responsible for developing a cost-effective remedial action plan (RAP) to clean up soil and groundwater contaminated by approximately 4,000 gallons of diesel fuel. The RAP was based on data from soil borings and monitoring wells and called for limited soil excavation. Employed an organic vapor analyzer to delineate specific areas for excavation. Used an interceptor trench to contain and recover free product and dissolved petroleum constituents. The work was done in close coordination with the railroad to avoid disrupting normal operations. Negotiated soil cleanup levels with the state and demonstrated that it was not necessary to excavate the contaminated soil beneath the tracks. The soil and groundwater cleanup objectives were satisfied, and the state closed its file after receiving the site rehabilitation report.

Railcar Manufacturing Facility RCRA Management Plan, WV, Confidential Client. Senior Project Manager responsible for auditing waste management practices and developing a sitewide RCRA management plan at a facility that manufactures, renovates, and rebuilds approximately 40 railcars a day. The management plan integrated many diverse waste streams, including RCRA wastes, other chemical wastes, and waste oil from more than a dozen trade shops. The audit included reviewing operations in each shop and interviewing supervisors and foremen to identify chemical use, waste streams, and waste handling/disposal practices. Recommended product substitution and waste stream segregation to minimize the volume of RCRA wastes. Developed a sitewide RCRA contingency plan.

Site Investigation and Remedial Services for Inactive Railroad Yard, MD, Confidential Client. Senior Project Manager responsible for developing and managing a site investigation and subsequent remedial actions at a closed railroad yard. Facility operations had included painting, metal working, fueling, car building, and engine repair. Closure activities included site characterization, negotiations with state agencies, remedial design, bid specifications, and remedial implementation. Issues of concern included the characterization and disposal of unlabeled drummed waste; the removal of storage tanks; the remediation of soils contaminated with polychlorinated biphenyls (PCBs), chromium, and lead; the closing of two large lagoons containing petroleum-contaminated sludge and free liquids; and the removal of petroleum product floating on the water table. Closing the lagoons involved pumping off and treating approximately 200,000 gallons of water and stabilizing the lagoon sludge using lime kiln material. The remedial action was complicated by karst geology.

Railroad Service Yard Closure, IN, Confidential Client. Senior Project Manager for a preclosure investigation at a 250-acre locomotive and car service yard that found polychlorinated biphenyls (PCBs) and asbestos in buildings, hazardous residuals in underground tanks, and contaminated soil. A biological treatability study demonstrated that in situ biological treatment could remediate petroleum-impacted soil in two fueling areas. This yard contained more than 200,000 cubic yards of cinder, and elevated concentrations of polynuclear aromatic hydrocarbons were found in many of the cinder samples. A site-specific risk assessment demonstrated that no additional remedial actions were necessary.

Regulatory Compliance Assistance, NY, Confidential Client. Senior Project Manager responsible for determining the regulatory compliance of aboveground storage tanks, USTs, and drum storage areas at an aircraft manufacturing facility. Supervised the preparation of a health and safety plan to protect workers during tank closures, site assessments, and new tank system construction. Assisted in the preparation of plans and specifications for new USTs to replace underground tanks that did not meet UST requirements or would soon be out of compliance. The new specifications for gasoline, diesel fuel, and JP-4 jet fuel tanks included secondary containment and leak detection in accordance with municipal, state, and federal regulations. Developed closure plans for waste storage areas and underground and aboveground tanks. New tanks were constructed and old tanks were removed in a sequence that avoided disrupting the plant's activities. Managed the decommissioning of 30 manufacturing buildings with 1.2 million square feet of floor space. The demolition addressed lead paint, polychlorinated biphenyls (PCBs), reinforced-concrete slabs, and utility and testing tunnels. Provided asbestos abatement design and bid-phase management services to remove asbestos-containing roofs, thermal insulation, floor tiles, and other materials from the buildings.

Bridge Rehabilitations, New York, NY, New York City Department of Transportation. Principal-in-Charge of a project team that oversaw environmental issues of concern associated with the rehabilitation of the Williamsburg, Throgs Neck, Whitestone, and Verrazano-Narrows Bridges. The principal issue of concern was the lead paint being removed during the work. The primary project activities involved worker protection to meet Occupational Safety and Health Administration (OSHA) requirements, the containment and management of lead-based paint dislodged/removed during the work, and the assessment of surrounding areas (soil, pavements, tops of buildings) where the lead may have fallen prior to and during the work. Several buildings required asbestos abatement and demolition and UST inspections and removals.

Remediation Services for U.S. Environmental Protection Agency Superfund Site, WI, Confidential Client. Senior Project Manager responsible for a remedial investigation, a feasibility study, and a remediation project. The site was a former munitions manufacturing facility that contained several landfills, waste lagoons, and areas affected by chemicals associated with the manufacturing processes. Conducted an investigation of the on- and off-site groundwater, soil, and waste. The chemicals of concern at the site included chlorinated hydrocarbons, a forge compound consisting of graphite and long-chain hydrocarbons mixed with kerosene and chlorinated solvents, polynuclear aromatic hydrocarbons, arsenic, and metals. Performed a risk assessment to define the need for remedial action at the site. Conducted a pilot study to evaluate the use of forge compound and forge compound mixed with soil as a secondary fuel in cement kilns. An 11-acre lagoon filled with up to 12 feet of forge compound was excavated, and the material was used as fuel at the kilns. Several on-site landfills were consolidated and closed in place with a soil vapor extraction system serving as the "bottom liner" for the landfill wastes.

Investigative and Remedial Services for Abandoned Industrial Property, WV, Confidential Client. Senior Project Manager responsible for investigating and remediating an abandoned property under the West Virginia Department of Environmental Protection's Voluntary Remediation Program. Historic uses of the 8.5-acre site included a railroad switching yard, a scrap metal yard, a steel mill, a tool and die operation, a wall plaster manufacturer, and a lumber warehousing operation. The involved city has been identified as a U.S. Environmental Protection Agency brownfields pilot community, and the city is interested in facilitating the development of several properties in the vicinity of the subject property. Obtained historical site information from the city and conducted a fast-track Phase I environmental assessment of the site to identify areas of

potential concern. Based on the findings of the Phase I assessment, developed and implemented a site investigation work plan to assess the potential presence of residual contamination associated with former site uses. Reviewed the site investigation results in consideration of the proposed redevelopment of the site for commercial use and evaluated potential risks posed by chemical residuals in surficial and shallow soils. Determined that the chemical residuals in the soils did not pose a risk since they will be capped under the proposed site development. Concluded that no remedial action was warranted, and the agency concurred.

Class I Railroad Freight Yard, IL, Confidential Client. Senior Project Manager responsible for obtaining a no further remediation (NFR) letter for a former railroad yard under the Illinois Environmental Protection Agency's (IEPA's) Site Remediation Program (SRP). The 24.73-acre site was used as a railroad freight yard and contained several freight houses, platforms, and many switching tracks. The freight yard was closed and dismantled in the early 1970s and has been vacant since its decommissioning. Based on the site's location, the redevelopment potential of this brownfield for multiuse, multifamily housing made it extremely attractive to potential developers. As such, the site's remediation objectives were designed to allow for unrestricted residential use. Performed an assessment that found elevated concentrations of arsenic in surficial and near-surface soils and concluded that these elevated concentrations were from historical and routine applications of arsenic-containing herbicides to the main tracks. After a sales agreement was completed with a local developer, the site was enrolled in the IEPA's SRP. Based on past site operations and the results of the initial assessment, arsenic was identified as the only chemical of concern. Performed a feasibility assessment concerning the achievement of both risk-based criteria and generic metropolitan statistical area median background values and concluded that soil excavation was the preferred remedial action to achieve a residential land use endpoint. However, reaching the risk-based criteria and/or generic background values required the excavation and disposal of a large quantity of soil. Conducted further research to assess actual arsenic soil concentrations within the city. The study addressed arsenic levels within various types of fill material that had been imported to the site and the subsequent construction of the freight yard. Based on this study, a site-specific arsenic level was calculated for the area surrounding the impacted zone. Used this information to show the IEPA that achieving default risk-based criteria and/or generic background levels was impractical. Presented an alternative remediation objective (RO) based on the statistical evaluation of data collected outside the Federal Insecticide, Fungicide, and Rodenticide Act application area and the practicality of achieving the alternative RO. The alternative RO was reviewed and accepted by the IEPA. Submitted a remedial action completion report to the IEPA that resulted in the issuance of a NFR letter for unrestricted residential use of the site. The site was sold to a local developer for redevelopment as a multifamily housing complex.

Railroad Yard and Track Redevelopment and Site Remediation, NY, Confidential Client. Senior Project Manager for a site where a land developer had illegally operated a nonpermitted landfill on property owned by a major railroad company. It was alleged that hazardous wastes, medical wastes, asbestos, construction and demolition debris, and municipal wastes had been disposed of in the landfill. Landfill leachate constituents, including hazardous substances, were found in the groundwater downgradient of the site, which is elevated relative to undeveloped wetlands to the south. Prepared a site investigation plan and a closure alternatives study to further define the site hydrogeology; increase the database on possible contaminant migration from the landfill; and identify the extent of contamination and potential impacts to human health and the environment, particularly the adjacent wetlands. Work included installing groundwater monitoring wells and sampling surface water and sediments in the wetlands. The objective of the closure alternatives study was to develop alternative closure and postclosure plans to mitigate unacceptable environmental impacts, evaluate these alternatives, and recommend a cost-effective remediation program. Successfully negotiated the acceptance of the plan and study with the state. The landfilling had been conducted on 26 acres of the 39-acre inactive railroad yard. During the course of the site investigation, the railroad negotiated the sale of the railroad yard outside of the landfill area. The sale included the track and right-of-way, a railroad bridge, and tracks connecting to existing freight lines. Environmental issues of concern were addressed with minimal remediation. This purchase was made to support revitalization. The adjacent property is being developed into a sports complex, including restaurants and shops.

Former Scrap Metal Yard, WV, Confidential Client. Senior Project Manager for a project involving a property that has been used as a railroad yard since the early 1900s. A small parcel on the property, approximately 6 acres, was leased to another party in the early 1970s and used for scrap metal salvaging and sorting. The scrap metal operations were terminated sometime in the 1980s. A subsequent inspection of the parcel by the U.S. Environmental Protection Agency identified polychlorinated biphenyls (PCBs) in the soil at two locations. In response to this finding, the property owner implemented two site investigations that focused on defining the horizontal and vertical extent of the PCBs in the soil, which indicated that approximately 4,400 cubic yards of soil were affected by the PCB residuals. A real estate developer subsequently expressed interest in purchasing and developing the parcel. Based on the environmental conditions identified at the property and the site development interest, the site was accepted into the West Virginia Department of Environmental Protection's (WVDEP's) Voluntary Remediation and Redevelopment Program. A site assessment work plan was developed and approved by WVDEP to guide the characterization of soil and groundwater at the property with respect to PCBs and other chemicals typically found at railroad yards and scrap yards. The resulting environmental monitoring database was used to assess public health and environmental risks posed by the chemical residuals under the proposed site development scenario. It was concluded that the site development plan, including building slabs, parking lots, roadways, and gardens, would provide an engineering barrier above the chemical residuals and mitigate risks to human health and the environment. As a result no active remediation was needed, saving the property owner the multimillion-dollar cleanup that would have been needed to remediate the site. The owner will thus profit by selling the property, the developer will be able to obtain property that will fit into its development plans, and both will benefit from the development and the rehabilitation of the downtown area.

Railroad Mechanical Facility, MD, Confidential Client. Senior Project Manager responsible for providing environmental and engineering management services during the investigation, decommissioning, and remediation of a railroad mechanical facility. The site consists of 45 acres occupied by 38 structures. The project included a site investigation, remedial actions, lagoon closure, storage tank decommissioning, asbestos abatement, building demolition, and floating product recovery. Performed a preliminary assessment to characterize the site and identify areas of potential environmental concern. Based on the findings of the preliminary assessment, prepared and submitted a lagoon closure plan to the Maryland Department of the Environment (MDE) for approval. Prepared contract and bidding documents, provided project and field management of the closure activities, characterized the underlying soils, and prepared a summary report for submittal to MDE. Provided construction management services during the pumping, cleaning, and dismantling of abandoned aboveground storage tanks and USTs. Prepared an assessment of the potential environmental impacts associated with each tank. Prepared specifications and contract documents for the demolition of the 38 structures at the former locomotive manufacturing, maintenance, and repair facility. The larger structures included a 25-stall roundhouse, two erecting shops, a powerhouse equipped with several boilers, an 80-foot stack, and a wastewater treatment plant. The facility had been inactive for 10 years, and most structures were in poor condition. Performed a structural survey to identify those structures that posed safety concerns due to their potential for collapse and conducted a confirmatory asbestos inspection to verify the asbestos materials and quantities identified by a previous survey. Evaluated the feasibility of a partial demolition approach to remove safety hazards, as well as the full demolition. The full demolition option was selected, and the demolition and abatement specifications were finalized. Performed oversight inspections and air monitoring throughout the duration of the asbestos abatement to make certain of compliance with project specifications and applicable regulations. Provided construction management and inspection services during construction and demolition activities. The facility demolition included the characterization of residual liquids and sludges in the on-site wastewater treatment plant and various subgrade pits, as well as disposal coordination. With the completion of demolition activities, the facility is being entered into Maryland's Voluntary Cleanup Program. Product recovery will continue, and risks posed by residual constituents will be evaluated in consideration of a commercial/retail end use. There is an interest in extending a boulevard through the site, which would create a significant amount of useful and valuable real estate and return this former railroad yard to a beneficial use.

Environmental Assessment, Remediation, and Regulatory Compliance for the Railroad Industry, Various Locations, U.S., Various Clients. Principal-in-Charge responsible for managing a firmwide team providing environmental consulting services to the railroad industry since 1987. Railroad clients have included Norfolk Southern; Conrail; Amtrak; CP Rail; the Metro-North Railroad; and the New York, Susquehanna, and Western Railway. Hundreds of tasks have been performed for these clients throughout the United States. Services provided have involved investigating and remediating railroad sites affected by a variety of chemicals, including solvents, diesel fuel, lubricating oils, gasoline, arsenic, polynuclear aromatic hydrocarbons, and metals; conducting human health and environmental risk assessments; inspecting and removing numerous UST systems and assessing and remediating spills; providing assistance during train derailments involving spilled hazardous chemicals and diesel fuel; assessing the nature and extent of chemical residues in inactive facilities and designing and overseeing the cleanup and demolition of these structures; obtaining approvals of RBCA at rail sites and for barge lines; performing Phase I and Phase II assessments of properties being sold and/or purchased; assessing hazardous material management practices across the system and assisting with the steps needed to comply with the Clean Air Act 112-R Risk Management Plan requirements; and providing wastewater, air, and hazardous/solid waste engineering services.

UST Program for a Municipality, Hempstead, NY, Town of Hempstead. Project Manager responsible for managing a detailed survey of 90 USTs owned by a town in Nassau County, New York. Developed and coordinated a tank compliance program designed to register, test, remove, and close old tanks and design and oversee the construction of new tank facilities. Negotiated tank closure criteria with the state based on risk. Coordinated a compliance program that included registration, leak testing, bidding, and oversight services during UST removal operations. Designed new tank facilities and provided construction oversight.

Site Investigations for a Class I Railroad, Various Sites, U.S., Confidential Client. Project Manager responsible for site investigations at railroad yards characterized by failed USTs and aboveground storage tanks. Primary contaminants of concern were industrial solvents and diesel fuel. Negotiated site closures with state regulators and designed remediation systems, including soil roasting, bioremediation, barriers, and product recovery and pump-and-treat systems.

Environmental Assessment LaGuardia Airport, New York, NY, Ogden Aviation Services. Principal-in-Charge of the reconstruction of a bulkhead seawall surrounding a bulk fuel storage terminal. Prepared health and safety and confined space entry plans to cover the excavation and removal of fuel-contaminated soils. Collected and analyzed soil samples to determine the concentrations of gasoline and aviation fuel to assess potential entry hazards. The entry plan allowed the confined spaces to be classified as nonpermit-required spaces, which allowed workers to enter the excavation in Level C protection. This classification was justified by pre-entry continuous air monitoring, the design of a confined space entry program, and the cleaning of the confined workspace so that the workers could avoid contact with contaminated soils.

Remedial Action Plan, FL, Confidential Client. Project Manager responsible for the cleanup of 4,000 gallons of diesel fuel released during a tank car derailment. The technology assessment identified air sparging, interceptor trenches, and a groundwater pump-and-treat system as the most feasible and cost-effective remedies. Developed and implemented a remedial action plan. Provided construction oversight during the abatement, investigation, and remedial construction to make certain that the work plan and designs were followed in a cost-effective manner.

Environmental Compliance for the Rehabilitation of the Williamsburg Bridge, New York, NY, New York City Department of Transportation. Project Manager responsible for the environmental oversight and hazardous waste and materials compliance program and a site-specific health and safety plan related to the containment, collection, and disposal of lead paint waste. Other significant issues included asbestos abatement, RCRA compliance, demolition, UST decommissioning, and soil remediation.

Pipe Line Rupture, IN, Buckeye Pipeline Company. Project Manager responsible for overseeing the installation of a groundwater pump-and-treat system after a major pipeline ruptured and released several hundred gallons of petroleum product. Evaluated the impact of the release and designed a cost-effective treatment system that met the operating parameters and the state's discharge criteria.

Site Assessment at Willow Run Airport, Detroit, MI. Project Manager responsible for directing a site assessment to document and evaluate environmental concerns at this property to prepare for long-range redevelopment. Estimated the extent of environmental problems and the risks associated with site development and identified potential funding sources to address environmental risks and liabilities. Provided a preliminary evaluation of the environmental constraints implied by redeveloping the airport and nearby properties.

Environmental Compliance for the Rehabilitation of the Whitestone and Verrazano-Narrows Bridges, New York, NY, New York City Department of Transportation. Project Manager responsible for managing air monitoring and environmental compliance assistance during the rehabilitation of two major bridges. The principal issues of concern were to protect workers, the public, and the environment from lead hazards and to manage lead paint waste in accordance with hazardous waste requirements.

Assessment of an Electronics Manufacturing Facility, NY, Confidential Client. Project Manager responsible for managing an investigation of an electronics manufacturing facility to evaluate ways to decommission and demolish the building and dispose of the debris. Supervised the oversight of the building cleaning program, which included removing asbestos-containing material and polychlorinated biphenyl (PCB) equipment prior to demolition and remediating mercury residues found on building surfaces and in on- and off-site soils. Developed building demolition and soil excavation protocols to minimize fugitive dust. Supervised the air monitoring program used to document compliance with ambient air quality standards during the work. USTs and waste disposal pits were decommissioned using negative ventilation enclosures with exhaust air treatment. Residential soil on properties adjacent to the site and residential interiors near the site were contaminated with mercury dust. Developed a sampling plan and cleanup protocol and provided oversight during the cleanup.

Wire and Cable Manufacturing Facility Decommissioning, NY, Confidential Client. Project Manager responsible for managing the decommissioning of a closed, 300,000-square-foot industrial facility located on 40 acres, which was a listed Superfund site. A site investigation and risk assessment showed that demolition workers and the public could be exposed to unacceptable levels of organics and heavy metals. The risk assessment also found that the state-approved remedy to solidify on-site soils contaminated with heavy metals was not justified because the metal concentrations were below levels of concern. The state accepted the risk assessment and rescinded its request to remediate the soil. Developed a plan to minimize the exposure risk posed by the building residues by increasing the level of worker protection and developing dust control programs during demolition in lieu of more costly building decommissioning. Asbestos insulation in the closed facility was in very poor condition, and asbestos fibers were spread throughout the building. Developed and carried out an interior cleanup plan to remove the asbestos, as well as other residuals from prior manufacturing operations. Several aboveground wastewater tanks containing cyanide residuals were cleaned and closed in place. An on-site electrical substation was vandalized, and transformers and circuit breakers containing polychlorinated biphenyls (PCBs) were damaged. Decommissioned the substation, removed the PCB fluid, and cleaned up PCB-contaminated soil.

Tool Manufacturing Facility Closure, NY, Confidential Client. Senior Project Manager responsible for directing the decommissioning of a turn-of-the-century tool manufacturing facility that consisted of forging, cutting, machining, parts washing, steel hardening, and painting operations. Fuel oil for the forges and an on-site power plant was stored in USTs. Developed a facility decommissioning plan that involved the cleanup of machinery pits and contaminated building surfaces and the demolition and disposal of the facility buildings. Asbestos was found in certain areas of the facility. Designed and carried out an asbestos abatement program. The roof of the main building was covered with corrugated asbestos roofing material. Obtained waivers from the state's full-enclosure requirements that would have increased the cost of work. Provided oversight and air monitoring services during building demolition and UST removal operations.

Aircraft Manufacturing Facility Closure and Site Redevelopment, NY, Confidential Client. Project Manager responsible for the decommissioning of 30 manufacturing buildings with 1.2 million square feet of floor space. The demolition addressed lead paint, polychlorinated biphenyls (PCBs), reinforced-concrete slabs, and utility and testing tunnels. Provided asbestos abatement design and bid-phase management services to remove asbestos-containing roofs, thermal insulation, floor tiles, and other materials from the buildings. The main plant site was redeveloped into a large-scale recreational, retail, and commercial development. Construction and demolition debris was used to fill in an existing recharge basin. This fill served as a cap for the contaminants in the basin sediments.

Superfund Assessment of a Metal Finishing Facility, WI, Confidential Client. Senior Project Manager responsible for conducting a Superfund remedial investigation/feasibility study and a risk assessment and developing arguments to support the continued discharge of groundwater contaminated by metal finishing waste into a nearby river prior to the RCRA alternate concentration limit regulations.

Site Investigation and Corrective Action Plan for a Recycling Facility, OH, Confidential Client. Project Manager responsible for developing and supervising a site investigation and multiphase RCRA corrective action program at a solvent recovery facility. Negotiated a phased soil cleanup based on continuing discharges to surface waters with limits established through a risk assessment.

Response Strategy Development for a Waste Recovery and Treatment Facility, WI, Confidential Client. Project Manager responsible for supervising and developing a CERCLA response strategy for a potentially responsible party committee at a site where groundwater contaminated by metal-working waste and solvent discharged to a river.

Remedial Program Following a Transportation Accident, MI, Confidential Client. Project Manager responsible for supervising a remedial program after a transportation accident released extremely toxic materials. Established cleanup requirements for uncommon chemicals based on a risk assessment where no cleanup protocols existed.

Site Investigation of a Textile Finishing Facility, NJ, Confidential Client. Project Manager responsible for supervising an Industrial Site Recovery Act site investigation, including soil and groundwater sampling and UST removal. Designed a petroleum recovery and in situ soil remediation system.

PROFESSIONAL ASSOCIATIONS

American Society of Civil Engineers, Member

American Railway Development Association, Board of Directors and former Environmental Committee Co-chair

New York City Brownfield Partnership, Board of Directors and Former First President

Railroad Environmental Conference at University of Illinois at Urbana - Champaign (annual), Conference Moderator and Planning Committee

National Brownfield Association, Former Member of NYS Executive team and National Advisory Board

Northeast Sustainable Communities Workshop, Conference Moderator and Planner

Brownfield Renewal Magazine, Brownfield Award Judge

EPA National Brownfield Conference, Speaker and Conference Planning Committee

Sustainable Long Island Conference, Speaker and Conference Planning Committee

Edward Bradshaw
Senior Practice Leader

resume

Edward Bradshaw is a Senior Practice Leader in GEI's Huntington, NY office. He has over 29 years' experience in environmental engineering. His responsibilities include providing leadership, strategic guidance and management to the greater New York Metro area market segment. In addition to providing technical oversight and managing project personnel, he is responsible for budget analysis, quality, safety and schedule performance of major environmental projects. He is responsible for the management of projects and initiatives within various industries including electric and gas utility, manufacturing, printing, real estate development, waste management, railroad, food services, petroleum distribution, pharmaceutical and general manufacturing, and also provide environmental services to municipal agencies. As a Senior Practice Leader, he leads and stewards the performance of project teams ensuring project tasks are completed on time and within budget and are of high quality. Additionally, he is responsible for the day to day management of the technical and field staff, as well as managing several contracts with multiple companies.

PROJECT EXPERIENCE

Second Avenue Subway, NYC Transit Authority, Environmental Manager. Prepared and implemented a Hazardous Materials Intrusive Investigation Work Plan to assess the presence of hazardous materials at sites identified by the SDEIS (and supplemental data review) that may affect construction/operation of the Project. Developed Concept/ Preliminary designs for soil/groundwater areas identified as needing special management during construction. The management of contaminated materials was required both as separate projects in advance of general construction, and as part of the overall construction project. A standard design specification was prepared for treatment of contaminated dewatering effluent when it is encountered, so that the treatment systems can be readily available on short notice. Developed Preliminary Contaminated Soil Monitoring and Confirmation Protocols for use during remedial action and associated construction. Developed a Spoils Management Plan. The plan will show the quantity, quality, and rate at which spoil will be produced from different portions of the project; provide means for minimizing intrusion into the community; promote beneficial reuse; and, identify the permit requirements.

NJ Trans-Hudson Express, Environmental Manager. Managed the LSRP/Remedial design work for several properties NJ Transit purchased as part of this project. The total billings on this work was in excess of $1.1MM. Prepared and implemented a Soil and Groundwater Investigation Work Plan to assess the presence of contamination at sites identified by the SDEIS (and supplemental data review) that may affect construction/operation of the project;

EDUCATION
B.S. Civil Engineering, Manhattan College
M.E. Environmental Engineering, Manhattan College

EXPERIENCE IN THE INDUSTRY
29 years

EXPERIENCE WITH GEI
Since 2017

CERTIFICATIONS
Certified Environmental Specialist
Professional Environmental Health & Safety Auditor
OSHA 40 Hour HAZWOPER
OSHA 30 Hour Construction
OSHA Incident Commander Training
OSHA Hazardous Materials Management
OSHA Hazardous Operations and Emergency Response
OSHA Hazardous Materials Specialist
US DOT HazMat General and Security Awareness
NYSDEC Class A and B PBS Operator
PADI Advanced SCUBA Diver

PROFESSIONAL ASSOCIATIONS
National Association of Safety Professionals (NASP)
National Association of Environmental Professionals (NAEP)

GEI Consultants

Prepare and implement Property Acquisition Environmental Cost Estimate (PAECE) reports for properties designated for full and/or partial acquisition, as well as temporary and/or permanent easements; Developed concept/ preliminary designs for soil/groundwater areas identified as needing special management during construction. It was anticipated that the management of contaminated materials was required both as separate projects in advance of general construction, and as part of the overall construction project. Reviewed construction design to determine environmental impacts; Developed Remedial Action Work Plans (RAWP) for sites along NJT's alignment which require remediation. RAWPs were for sites contaminated with coal tar, chromium, petroleum and PCBs. Developed a Spoils Management Plan. Provided means for minimizing intrusion into the community; promoted beneficial reuse; and, identified the permit requirements; Prepared plan which provided requirements for the collection, sampling, and discharge of dewatering effluent generated during project construction.

NJ Turnpike Interchange 6 to 9 Widening Program Project Manager. Responsible for managing the Freshwater Wetlands Individual Permit and Flood Hazard Area Permit applications and associated fieldwork and reporting. Manage the site investigation of land donation and wetland preservation site which included an ecological survey/investigation. Responsible for coordinating field personnel for ID 27 sampling, excavation and disposal. Ensure environmental permits are updated for each segment.

Managed "on-call" environmental contracts for both the MTA and Port Authority on New York and New Jersey. The contract required us to prepare bid documents, analyze bids, select contractor(s), and supervise the contractor during work. Developed and maintained systems to allow projects to be implemented effectively.

Confidential Client Chromium Site in Jersey City, NJ, Environmental Oversight/Construction Manager. After successfully negotiating the existing contract renewal, for $1.4MM, prepared a written and cost proposal for oversight services at another site where the client was to begin remediation. Facilitated a two year construction management contract worth $1.8 million. Advised client of any constructability or bidding problems with the proposed construction specifications and methods for staging the work; Participated in updates of the contractor's schedule and subsequently review the contractor's schedule and provide recommendations of adjustment or approval to the client as required. Maintained a master construction schedule; Maintained a direct line of communication with the project's design consultant as it pertains to the project's technical evaluation issues and resolutions; Participated in the client's bid analysis for all contracts associated the chromium sites; Enforced the environmental commitments project-wide; Worked with client to identify site-specific mitigation needs and construction sequencing to limit impacts and help ensure environmental compliance; Informed client of contract non-compliance, so that the client can assess the need for payment to be withheld or for a stop-work order to be issued; Facilitated timely communication of environmental compliance issues to the client. Responsible for ensuring effective written communication with the contractor(s), transmittal of information on environmental requirements and compliance; Enforced contract language that clearly states that the contractor(s) is responsible for complying with all Federal, State, and local environmental regulations and plans and procedures.

Project Manager, Con Edison, generation facilities. Monitored all phases of planning, design and construction for Con Edison at several generation facilities throughout the five boroughs of New York City. Additionally, ensured that the work met all applicable regulatory requirements, developed and maintained project schedule and budget, tracked all change orders and maintained document control; Managed completion of hazardous waste cleanups valued in excess of $1.0 million with major utility companies in the tri-state area, including Con Edison.

Project Manager, geotechnical investigations, generating plants. As Project Manager, managed the geotechnical investigations and laboratory testing for ten simple cycle, natural gas-powered generating plants. Three sites are adjacent to current Con Edison facilities and located in residential and industrial neighborhoods. Prior to and during the geotechnical investigations, managed the health and safety plans for each site. Completed complex field investigations that included drilling numerous borings; performing field reconnaissance and geophysical studies; and acquiring published subsurface and geologic data. Engineering recommendations were provided for rock supported piles, friction piles, undreamed (belled) piles, as well as soil improvements. Assisted

the design engineer in selecting the most effective methods to found the generation equipment in the limited space that is available.

Project Manager, NYC Dept of Design and Construction. As Project Manager, managed several contracts with the New York City Department of Design and Construction for the upgrade, removal, replacement of petroleum storage tanks, approximately 100 tanks, at New York City owned and operated facilities throughout New York State. Responsible for handling contaminated soil/groundwater encountered during the removal/replacements.

Appendix F

Construction Quality Assurance Plan

GEI Consultants

Consulting
Engineers and
Scientists

Construction Quality Assurance Plan

71 New Street
Huntington, New York
NYSDEC BCP Site No. C152248

Prepared on Behalf of:
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52 Elm Street, Suite 7
Huntington, New York 11743

Submitted by:
GEI Consultants, Inc., P.C.
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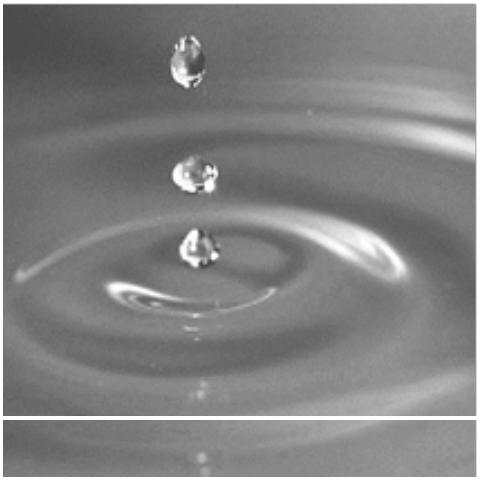
October 2018
Project 1700841



Edward Bradshaw
Project Manager/Sr. Practice Leader

Gary A. Rozmus, P.E.
Senior Consultant

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1. Introduction

This Construction Quality Assurance Plan (CQAP) presents the organization, objectives, planned activities, and quality assurance/quality control (QA/QC) procedures associated with the Remedial Investigation Report (RIR) remedial activities proposed for the contiguous properties located at 71 New Street, Huntington, New York (the "Site"). The CQAP will address the following components.

1.1 Construction Activities

The CQAP for the remedial construction activities discusses the QA/QC requirements for each of the project tasks. These tasks include a minimum of the following:

- Soil Erosion and Sediment Control Measures;
- Excavation of contaminated soils to a minimum depth of 10 feet below ground surface (ft bgs);
- Traffic Control; and
- Site Redevelopment.

1.2 Material Sampling

The CQAP describes specific protocols for field testing, material handling, sample handling and storage, chain-of-custody, laboratory analysis, and data handling and management. This CQAP was prepared based upon guidance provided by the United States Environmental Protection Agency (EPA) and New York State Department of Environmental Conservation (NYSDEC) including:

- *Division of Environmental Remediation (DER)-10, Technical Guidance for Site Investigation and Remediation.* New York State Department of Environmental Conservation. May 3, 2010.
- *Analytical Service Protocol,* New York State Department of Environmental Conservation. July 2005.
- *US EPA Requirements for Quality Assurance Project Plans for Environmental Data Operations (EPA QA/R-5, March 2001).*
- *Guidance for Quality Assurance Project Plans (EPA QA/G-5, December 2002).*

The data generated from the analysis of samples will be used to determine the extent of contamination, identify impacted intervals, and compare the results of the remedial actions to site-specific remedial goals.

2. Project Organization and Responsibility

The Site Owner/New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program Volunteer is 71 New Street LLC ("Volunteer"). 71 New Street Huntington, LLC is providing oversight of Site activities associated with completion of the development. The Contractor to complete excavation and development activities is Macx Corp. GEI Consulting, Inc., P.C. (GEI) is the environmental consultant and remedial engineer for the Owner. GEI will coordinate and manage in conjunction with 71 New Street Huntington, LLC and the Construction Manager, site sampling and analysis program, material testing, data reduction, QA/QC, data validation, analysis, and reporting. GEI will direct the sampling activities, coordinate laboratory and remediation activities.

The project organization and key personnel for GEI are listed below:

In-House Consultant:	Errol S. Kitt
Program Manager:	Gary A. Rozmus, P.E.
Project Manager:	Edward Bradshaw
Field Team Leader:	George Holmes, P.G.
Quality Assurance Officer:	Jaimie Wargo
GEI Corporate Health & Safety Officer:	Steve Hawkins, CSP
Data Manager:	Brian Skelly

The primary responsibilities of each of these personnel are described in the following table.

Key Project Personnel and Responsibilities		
Position	**GEI Personnel**	**Areas of Responsibilities**
In-House Consultant	Errol S. Kitt	▪ Provide strategic guidance of project activities ▪ Client contact regarding strategic issues ▪ Review of project deliverables
Program Manager	Gary A. Rozmus, P.E.	▪ Overall program oversight ▪ Project management ▪ Project schedule ▪ Client contact regarding project related issues ▪ Personnel and resource management ▪ Review of project submittals ▪ Budgeting
Project Manager	Edward Bradshaw	▪ Client contact regarding project related issues ▪ Coordination of contractors ▪ Technical development and implementation of IRP and related documents ▪ Personnel and resource management

		▪ Preparation and review of project submittals ▪ Budgeting
Field Team Leader	George Holmes, P.G.	▪ Client contact regarding project related issues on day to day basis as part of field operations ▪ Coordination of contractors ▪ Implementation of RIR/Interim Remedial Measure (IRM) and Field Sampling ▪ Plan personnel and resource management ▪ Preparation of project submittals
Quality Assurance (QA) Officer	Jaimie Wargo	▪ QA/QC for sampling and laboratory performance
Data Manager	Brian Skelly	▪ Manage raw data from the laboratory ▪ Maintain copies of chain of custodies (COCs) in the project file

York Analytical Laboratories Inc. (York), located in Stratford Connecticut, has been selected to perform the following standard analytical chemistry parameters for soil samples including:

- Volatile Organic Compounds (VOCs) by USEPA Method 8260C;
- Semivolatile Organic Compounds (SVOCs) by USEPA Method 8270D;
- Target Analyte List (TAL) Metals by USEPA Method 6010C;
- Mercury by USEPA Method 7471B;
- Pesticides by USEPA Method 8081B; and
- Polychlorinated Biphenyls (PCBs) by USEPA Method 8082A.

York's relevant certifications are summarized in the following table.

York Analytical Laboratories Inc. Certifications		
Location	**Responsible Agency**	**Certification**
New York	New York State Department of Health	Environmental Laboratory Approval Program (ELAP) for potable water/non-potable water, solid and hazardous waste Contract Laboratory Protocol (CLP)
	New York State Department of Environmental Conservation	July 2005 Analytical Service Protocol (ASP)
United States	United States Environmental Protection Agency	CLP-Lab: 10478 [VOCs/SVOCs/Inorganics/Pesticides/ PCBs/Herbicides]

Table 1 provides a summary of quality assurance samples, holding times, and analysis for the media.

3. Site Operation Plan

3.1 Work Hours

The hours for operation of remedial construction will be from 0700 to 1500 and will conform to the Town of Huntington construction code requirements or according to specific variances issued by that agency.

3.2 Site Security

Site security will be provided by 71 New Street Huntington, LLC and will be on a 24-hour basis. The construction site is fenced in along the perimeter and will be locked at the end of each work day.

3.3 Traffic Control

At each construction entrance 71 New Street Huntington, LLC/Construction Manager will provide personnel to guide traffic.

3.4 Worker Training and Monitoring

All those who enter the work area while intrusive activities are being performed must recognize and understand the potential hazards to health and safety.

Construction personnel will be responsible for identifying potential hazards in the work zone. The project manager will be responsible for insuring that the training is conducted. Others who enter the Site must be accompanied by a suitably-trained construction worker.

4. Quality Assurance Objectives

This section establishes the QA objectives for measurements that are critical to the project. The QA objectives are developed for relevant data quality indicators. These indicators include the method detection limit (MDL), reporting limit (RL), precision, accuracy, completeness, representativeness, and comparability. The data quality objectives (DQOs) are based on project requirements and ensure: (1) that the data generated during the project are of known quality, and (2) that the quality is acceptable to achieve the project's technical objectives.

Quantitation Limits are laboratory-specific and reflect those values achievable by the laboratory performing the analyses. However, to ensure that the analytical methodologies can achieve the DQOs, measurement performance criteria have been set for the analytical measurements in terms of accuracy, precision, and completeness. The analytical methods to be used at this site will provide a level of data quality and can be used to evaluate potential impacts to soil, soil vapor, and groundwater compared to New York State Standards, Criteria and Guidance values, and for purposes of risk assessment.

The overall QA objective is to develop and implement procedures for field sampling, chain-of-custody, laboratory analysis, and reporting which will provide results that are scientifically valid, and the levels of which are sufficient to meet DQOs. Specific procedures for sampling, chain of custody, laboratory instruments calibration, laboratory analysis, reporting of data, internal quality control, and corrective action are described in other sections of the QAPP.

The data quality indicators are presented in subsections 4.1 through 4.6. Procedures to assess the data quality indicators are given below in Section 10.

The DQOs for soil samples for this project include minimum RLs specified within the 2005 NYSDEC Analytical Service Protocol (ASP), as well as unrestricted use criteria listed in 6 New York Codes, Rules and Regulations (Title 6 NYCRR) Part 375.

4.1 Required Quantification Limit

The required quantification limit is the quantitative analytical level for individual analytes needed to make decisions relative to the objectives of the project. Quantitative limits may be expressed as the MDL or some quantitative level defined in terms relative to the program. It should be noted that there is some ambiguity in the definitions and use of terms that define quantification limits. The MDL presented herein is a well-defined and accepted entity, although attainable only under ideal laboratory conditions.

Method Detection Limit: The MDL is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than

zero. MDL is determined from analysis of a sample in a given matrix type containing the analyte.

Practical Quantitation Limit: The practical quantitation limit (PQL) (also referred to as the reporting limit [RL]) is the concentration in the sample that corresponds to the lowest concentration standard of the calibration curve.

4.2 Accuracy

Accuracy is the closeness of agreement between an observed value and an accepted reference value. The difference between the observed value and the reference value includes components of both systematic error (bias) and random error.

Accuracy in the field is assessed through the adherence to all field instrument calibration procedures, sample handling, preservation, and holding time requirements, and through the collection of equipment blanks prior to the collection of samples for each type of equipment being used (e.g., sample liners, drilling shoe, or stainless steel sampling implements).

The laboratory will assess the overall accuracy of their instruments and analytical methods (independent of sample or matrix effects) through the measurement of "standards," materials of accepted reference value. Accuracy will vary from analysis to analysis because of individual sample and matrix effects. In an individual analysis, accuracy will be measured in terms of blank results, the percent recovery (%R) of surrogate compounds in organic analyses, or %R of spiked compounds in matrix spikes (MS), matrix spike duplicates (MSD) and/or laboratory control samples (LCS). This gives an indication of expected recovery for analytes tending to behave chemically like the spiked or surrogate compounds.

4.3 Precision

Precision is the agreement among a set of replicate measurements without consideration of the "true" or accurate value: i.e., variability between measurements of the same material for the same analyte. In environmental sampling, precision is the result of field sampling and analytical factors. Precision in the laboratory is easier to measure and control than precision in the field. Replicate laboratory analyses of the same sample provide information on analytical precision; replicate field samples provide data on overall measurement precision. The difference between the overall measurement precision and the analytical precision is attributed to sampling precision. Precision is measured in a variety of ways including statistically, such as calculating variance or standard deviation. The difference between the overall measurement precision and the analytical precision is attributed to sampling precision.

Precision in the field is assessed through the collection and measurement of field duplicates. Field duplicates will be collected at a frequency of one per twenty investigative samples per matrix per analytical parameter, except for the waste characterization parameters. Precision will

be measured through the calculation of relative percent differences (RPD) as described in subsection 13.2. The resulting information will be used to assess sampling and analytical variability.

Precision in the laboratory is assessed through the calculation of RPD for duplicate samples. For organic analyses, laboratory precision will be assessed through the analysis of MS/MSD samples and field duplicates. For the inorganic analyses, laboratory precision will be assessed through the analysis of matrix duplicate pairs and field duplicate pairs. MS/MSD samples or matrix duplicate pairs will be performed at a frequency of one per twenty primary samples per matrix.

Duplicate samples are described in subsection 5.1.2. **Table 1** summarizes the number of duplicates required during completion of the RIR/IRM end-point sampling.

4.4 Completeness

Completeness is a measure of the amount of valid data obtained from a measurement system compared to the amount that was expected to be obtained under normal conditions. "Normal conditions" are defined as the conditions expected if the sampling plan was implemented as planned. The objective for completeness is a sufficient amount of valid data to achieve a predetermined statistical level of confidence. Critical samples must be identified, and plans must be formulated to secure requisite valid data for these samples.

Field completeness is a measure of the amount of 1) valid measurements obtained from all the measurements taken in the project, and 2) valid samples collected. The field completeness objective is greater than 90 percent.

Laboratory completeness is a measure of the amount of valid measurements obtained from all valid samples submitted to the laboratory. The laboratory completeness objective is greater than 95 percent.

To ensure that these percentages are met, materials for crucial parameters will be retained if resampling is required and strict adherence to holding times will be required.

4.5 Representativeness

Representativeness is a qualitative parameter that expresses the degree to which data accurately and precisely represents either a characteristic of a population, parameter variations at a sampling point, a process condition, or an environmental condition within a defined spatial and/or temporal boundary. To ensure representativeness, the sampling locations have been selected to provide coverage over a wide area and to highlight potential trends in the data.

Representativeness is dependent upon the proper design of the sampling program and will be satisfied by ensuring that any future work plans are followed and that proper sampling, sample handling, and sample preservation techniques are used.

Representativeness in the laboratory is ensured by using the proper analytical procedures, appropriate methods, and meeting sample-holding times.

4.6 Comparability

Comparability is a qualitative parameter that expresses the confidence with which one data set can be compared to another. Comparability is dependent upon the proper design of the sampling program and will be satisfied by ensuring that the RIR/IRM is followed and that proper sampling techniques are used. Maximization of comparability with previous data sets is expected because the sampling design and field protocols are consistent with those previously used.

Comparability is dependent on the use of recognized EPA or equivalent analytical methods and the reporting of data in standardized units. To facilitate data comparison, the data-reporting format as presented below will be used:

- Conventions (units reported as): for solids (weight/unit weight [i.e., mg/kg]); for liquids (weight/unit volume [i.e., µg/L]); for air (weight/unit volume [i.e., $\mu g/m^3$]).
- Use common chemical name with corresponding chemical abstracts service (CAS) code.
- Report all data for soils on a dry-weight basis.

5. Sampling Plan

Sampling for the Site will include end-point soil sampling. Performing grab or composite sampling by appropriate hand-held sampling equipment will be the preferred method for end-point sampling. Sampling methods and procedures are described fully in the RIR.

5.1 Sample Type, Location, and Frequency

5.1.1 End-Point Soil Samples

End-point excavation bottom samples will be collected at a frequency of one sample per 2,000 square feet of excavation bottom in accordance with NYSDEC Division of Environmental Remediation (DER)-10 Section 5.4A. End-point Soil samples will be collected and submitted for laboratory analysis in general accordance with the RIR/IRM. Summary of typical subsurface soil sample naming analysis described in subsection 7.1.3.

5.1.2 Field QC Sample Collection

Field QC samples are used to monitor the reproducibility and representativeness of field sampling activities. The field QC samples are handled, transported and analyzed in the same manner as the associated field samples. Field QC samples will include equipment blanks, trip blanks, field duplicates and MS/MSDs. The quantity, field QC sample type and analysis is detailed in **Table 1**.

Equipment Blank Samples are used to monitor the adequacy of decontamination procedures and possible sources of contamination such as potential laboratory methodologies. Equipment blanks will consist of laboratory-supplied, distilled or de-ionized water and will be used to check for potential contamination of the equipment which may cause sample contamination. Equipment blanks will be collected by routing the distilled water through a decontaminated piece of sampling equipment or disposable sampling equipment into laboratory supplied bottles. Non-dedicated field equipment will be decontaminated as specified below in subsection 6.2. Equipment blanks will be submitted to the laboratory at a frequency of one per twenty samples per matrix per type of equipment being used per parameter. Equipment blanks will not be completed for waste characterization sampling activities.

Trip Blank Samples will consist of analyte free water and will be prepared by the laboratory. Trip blanks are used to assess the potential for VOC contamination of samples due to contaminant migration during sample shipment and storage. Trip blanks will be transported to the project location unopened, stored with the site characterization samples, and kept closed until analyzed by the laboratory. Trip blanks will be submitted to the laboratory at a frequency of one per cooler which contains samples submitted for VOC analysis.

Field Duplicate Samples, also referred to as blind duplicate samples, are two samples that are submitted from the same interval using the same sample procedures. Field duplicates will be used to assess the sampling and analytical reproducibility. Both samples are collected utilizing the same methods and are submitted for the same laboratory analysis however different sample identification numbers are used. Field duplicates will be submitted at a frequency of one per twenty samples for all matrices and all parameters. Field duplicates will not be completed for waste characterization sampling activities.

MS/MSD Samples are two additional aliquots of the same sample submitted for the same parameters as the original sample. However, the additional aliquots are spiked with the compounds of concern. Matrix spikes provide information about the effect of the sample matrix on the measurement methodology. MS/MSDs will be submitted at a frequency of one per twenty investigative samples per matrix for organic and inorganic parameters. MS/MSDs will not be completed for waste characterization sampling activities.

5.2 Sample Preservation and Containerization

The analytical laboratory will supply the sample containers for the chemical samples. These containers will be cleaned by the manufacturer to meet or exceed all analyte specifications established in the latest EPA's Specifications and Guidance for Contaminant-Free Sample Containers. Certificates of analysis are provided with each bottle lot and maintained on file to document conformance to EPA specifications. The containers will be pre-preserved, where appropriate.

Refer to **Table 1** for a summary of QC sample preservation and container requirements.

5.3 Equipment Decontamination

All non-dedicated sampling equipment shall be cleaned between each use in the following manner:

- Wash/scrub with a biodegradable degreaser ("Simple Green") if there is oily residue on equipment surface.
- Tap water rinse.
- Wash and scrub with Alconox™ (or non-phosphate soap) and water mixture.
- Tap water rinse.
- Equipment will be wrapped in polyethylene plastic or aluminum foil for storage or transportation from the designated decontamination area to the sampling location, where appropriate.

The drilling equipment will be decontaminated by steam cleaning or equivalent.

Decontamination fluids will be containerized into United States Department of Transportation (USDOT)/UN-approved 55-gallon drums or containment vessels and will be characterized and disposed of by an approved disposal facility.

6. Construction Quality Control

All Contractor QA/QC procedures will adhere to industry standards and will follow generally accepted practices as well as complying with applicable ASTM standards.

6.1 Mobilization

Preparation of the Site for remedial activities will involve the setup of temporary support

facilities (i.e. electrical power, water, telephone service, security, etc.) and the following mobilization and Site preparation activities:

- Identification and markout of all aboveground and underground utilities;
- De-energizing, turning off and disconnecting existing subsurface utility services known to be present in the work area (e.g., water, gas, electric and sewer);
- Mobilization of remediation equipment and materials;
- Traffic control measures;
- Work zone demarcation;
- Installation of erosion control devices;
- Installation of perimeter air monitoring system;
- Removal of concrete at or below the surface of the Site;
- Installation of temporary facilities; and
- Installation of decontamination facilities.

Topographic Surveys: The Contractor will either utilize the existing site topographic survey or create a new survey prepared by a Professional Surveyor licensed in the State of New York.

6.2 Decontamination Plan

The objective of the decontamination plan at the Site is to provide the procedures and equipment necessary to decontaminate personnel and equipment and prevent cross-contamination from the excavation area to public areas (i.e., highways, roads, support zones, vehicles, etc.). If impacted materials are encountered, the decontamination procedures for personnel and equipment are outlined below.

The Contractor will establish decontamination areas for the following:

- Personnel decontamination
- Equipment decontamination
- Vehicle decontamination

6.2.1 Personnel Decontamination

A personnel decontamination station where employees can drop equipment and remove personal protective equipment (PPE) will be set up by the Contractor. It will be equipped with trash bag(s), or cans for containing disposable PPE and discarded materials. Once personnel have decontaminated at this station and taken off their PPE, they will proceed to an area where they will wash themselves, as necessary, wherever they have potentially been exposed to any contaminants (e.g., hands, face, etc.)

The following specific decontamination procedure will be used as necessary by GEI personnel or subcontractor personnel wearing PPE from Level D through Level C.

- ***Step 1*** – Equipment drop (respirator, tools, monitoring equipment, etc.) Decontaminate as appropriate (per GEI's field representative's instructions).
- ***Step 2*** – Boot wash/rinse (wash with non-foaming detergent, rinse with fresh water spray). Remove boots. If inner and outer gloves are worn, wash outer gloves, remove and save for later use, or remove and discard outer gloves and place in trash bag/can provided in the decontamination area.
- ***Step 3*** – Hard hat removal; wash if visibly contaminated (use same wash as in Step 2).
- ***Step 4*** – If Tyvek® (or equivalent) suit was worn and is visibly contaminated, remove and place in trash bag/can provided in the decontamination area or decontaminate (wash) and store for reuse. Contaminated washable coveralls should be removed and bagged for washing.
- ***Step 5*** – Respirator and/or eye protection removal (as applicable). Wash (per Step 2) to remove visible contamination.
- ***Step 6*** – Remove outer gloves.
- ***Step 7*** – Wash potentially exposed skin (use water and soap at indoor sink).
- ***Step 8*** – Disinfect respirator per manufacturer's recommendations.

Contaminated PPE (gloves, suits, etc.) will be decontaminated and stored for reuse or placed in plastic bags (or other appropriate containers) and disposed of in an approved facility.

Decontamination wastewater and used cleaning fluids will be collected and disposed of in accordance with applicable state and federal regulations.

6.2.2 Heavy Equipment Decontamination

Heavy equipment decontamination will be performed by the Contractor within the limits of the Site in accordance with the contract specifications. No heavy equipment will be permitted to leave the Site unless it has been thoroughly decontaminated.

Wastewater from the heavy equipment and personnel decontamination areas will be collected and disposed of in accordance with applicable state and federal regulations. The Contractor will be responsible for ultimate disposal of investigation-derived wastes.

6.2.3 Vehicle Decontamination

Trucks transporting soil off site for ultimate disposal will enter the Site as described in the Traffic Control Plan. Care will be exercised when loading trucks not to spill material on the outside of the trucks. Before exiting the Site, the trucks will be visually inspected (i.e., box sidewalls, box tailgate, tires, etc.), cleaned and decontaminated as necessary prior to being allowed to leave the Site. In addition, trucks will be required to be tarped prior to departing the Site. All collected soil and decontamination fluids will be collected and managed in accordance with the RIR/IRM.

6.2.4 Decontamination Equipment Requirements

The following equipment, if required, should be in sufficient supply to implement decontamination procedures:

- Buckets
- Alconox™ detergent concentrate
- Hand pump sprayers
- Long handled soft bristle brushes
- Large sponges
- Cleaning wipes for respirators
- Bench or stool(s)
- Methanol and/or Nitric Acid
- Liquid detergent and paper towels
- Plastic trash bags

The Contractor performing decontamination procedures is responsible for verifying that the above materials, as required for their operation, are in sufficient supply.

6.3 Soil and Erosion Control Measures

Soil erosion and sediment control measures for management of storm water will be installed in accordance with the New York Guidelines for Urban Erosion and Sediment Control. Erosion and sediment control measures which will be limited to hay bales, will be installed around the entire perimeter of the remedial construction area and inspected daily and after any significant storm events to ensure that they are operating appropriately. Discharge locations will be inspected to determine whether erosion control measures are effective in preventing significant impacts to receptors. All necessary repairs shall be made immediately. Accumulated sediments

will be removed as required to keep the hay bale check functional. The following measures shall be implemented as a component of the erosion and sediment controls:

- Efforts will be made to minimize the amount of soil exposed during construction. Erosion control measures will be implemented during construction to keep soil in place.
- Temporary stabilization measures will immediately be applied on all disturbed areas where work is delayed.
- All disturbed areas, except roadways, which will remain unfinished for more than 30 days shall be temporarily seeded with 1/2-lb. of rye grass or mulched with 100-lbs. of straw or hay per 1,000 sf. Roadways shall be stabilized as rapidly as practicable by the installation of the base course.
- Sediment control measures will be installed at any location where surface runoff from disturbed areas may flow offsite to prevent sediment from being transported out of the designated work areas. Given the proposed sequencing of construction, the project location, width of ground disturbance, and duration of disturbance, significant surface runoff from the project area is not anticipated.
- Sediment tracked onto the roadway will be removed or cleaned as necessary.

Selected erosion and sediment control measures will be installed prior to ground disturbance and maintained through the duration of construction to minimize the discharge of pollutants and prevent a violation of the water quality standards in conformance with the *New York Standards and Specifications for Erosion and Sediment Control* (November 2016). The erosion and sediment controls will be in conformance with requirements presented in the New York State Guidelines for Urban Erosion and Sediment Control.

During remedial construction, erosion and sediment control measures will be inspected and maintained daily. Accumulated sediment will be removed from the erosion and sediment controls as needed. Sediment that originates from the excavated area will be added to the stockpile for off-site disposal. Construction activities shall be carried out to minimize erosion and silting in accordance with Soil Erosion and Sediment Control Requirements, and requirements of local and state authorities having jurisdiction.

The Site is exempt from the NYSDEC State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (Permit No. GP-02-01) requirement as the area disturbed on the site will be less than one acre in size.

6.4 Support and Protection of Existing Utilities

The Volunteer and its contractors are solely responsible for the identification of utilities that might be affected by work under the RIR/IRM and implementation of all required, appropriate, or necessary health and safety measures during performance of work under the RIR/IRM. The Volunteer and its contractors are solely responsible for safe execution of all invasive and other work performed under the RIR/IRM. The Volunteer and its contractors must obtain any local,

State or Federal permits or approvals pertinent to such work that may be required to perform work under the RIR/IRM.

The Contractor will protect and support all identified Site features. In addition, the Contractor will repair any damage to protected structures and features during the remedial construction operations in accordance with applicable regulations and as approved by 71 New Street Huntington, LLC and/or GEI.

6.5 Excavation of Source Material

As depicted on the Design Drawings included in the RIR/IRM, the entirety of the Site shall be excavated to 15 ft bgs for development purposes. Contaminated soils have been identified to be present in the soils targeted for removal from the Site for redevelopment. Excavated material will be live-loaded directly onto transport vehicles for proper off-site disposal. If, during excavation, petroleum-source material is identified to extend deeper than 15 ft bgs, this material will be addressed via additional excavation, if possible within the excavation support system. Excavation and off-site disposal will be completed for any underground storage tanks (USTs) and associated piping, or other structures encountered.

The Contractor is to verify quantities in the field of the actual in-place compacted volume of the excavation. Actual volumes will be based on field surveys by a Professional Surveyor licensed in the State of New York as agreed upon by 71 New Street Huntington, LLC and GEI. This surveyor will prepare and submit a field survey and tabulation of the actual volume for review and approval by 71 New Street Huntington, LLC and GEI.

Daily Activity Reports will be prepared and maintained on site for compilation and record management by GEI. Daily reports will be submitted to NYSDEC and NYSDOH Project Managers at minimum, once a week with the previous weeks' reports. Each Daily Report will include narratives discussing any problems encountered during the subject week, as well as a progress summary (i.e., material excavation volumes, material loading, air monitoring summary, etc.).

7. Documentation and Chain-of-Custody

7.1 Sample Collection Documentation

7.1.1 *Field Notes*

Field notes documenting field activities will be maintained in a field notebook. Field logbooks will provide the means of recording the chronology of data collection activities performed during the investigation. The logbook will be a bound notebook with water-resistant pages. Logbook entries will be dated, legible, and contain accurate and inclusive documentation of the activity. No erasures or obliterations of field notes will be made. If an incorrect entry is made, the information will be crossed out with a single strike mark, which is signed and dated by the sampler. The correction shall be written adjacent to the error.

Field logbooks will be reviewed at regular intervals by the field team leader, site manager, and project manager for completeness and representativeness. When necessary, logbooks will be supported by daily activity reports.

7.1.2 *Chain-of-Custody Records*

Sample custody is discussed in detail below in subsection 7.2. COC records are initiated by the samplers in the field. The field portion of the custody documentation should include:

- The project name;
- Signature(s) of sampler (s) responsible for sample custody;
- Sample ID number;
- Date and time of collection;
- Whether the sample is grab or composite;
- Names of individuals involved in sampling; and
- Air bill or other shipping number (if applicable).

On a regular basis (daily or on such a basis that all holding times will be met), samples will be transferred to the custody of the respective laboratories, via third-party commercial carriers or via laboratory courier service. Sample packaging and shipping procedures, and field COC procedures are described below in subsection 7.2.1 of this Plan. Sample receipt and log-in procedures at the laboratory are described below in subsection 7.2.2 of this Plan.

7.1.3 *Sample Labeling*

Each sample will be labeled with a pre-printed adhesive label using indelible ink. The label should include the date and time of collection, sampler's initials, tests to be performed,

preservative (if applicable), and a unique identification. The following identification scheme will be used:

PRIMARY SAMPLES TYPES	QA/QC SAMPLE TYPES
SOIL SAMPLES End-Point-ID (SAMPLE DEPTH-FEET) EP-01 (15)	**FIELD BLANKS** SAMPLE ID [DATE] FB-03292018 **MATRIX SPIKE/DUP** SAMPLE [ID] [DEPTH] [EITHER MS OR MSD] EP-01 (15) MS/MSD **TRIP BLANKS** SAMPLE-ID [DATE] TB-03292018 **BLIND DUPLICATES** SAMPLE-ID [XX] [DATE] DUP-XX-03292018

This sample label contains the authoritative information for the sample. Inconsistencies with other documents will be settled in favor of the vial or container label unless otherwise corrected in writing from the field personnel collecting samples or the Data Manager and/or the Project QA Officer.

7.2 Sample Custody

The COC provides a record of the custody of any environmental field sample from the time of collection to the delivery to the laboratory. Custody is one of several factors that are necessary for the admissibility of environmental data as evidence in a court of law. Custody procedures help to satisfy the two major requirements for admissibility: relevance and authenticity. Sample custody is addressed in three parts: field sample collection, laboratory analysis, and final evidence files.

A sample is under a person's custody if:

- The item is in the actual possession of a person;
- The item is in the view of the person after being in actual possession of the person;
- The item was in the actual physical possession of the person and is locked up to prevent tampering; or
- The item is in a designated and identified secure area.

7.2.1 Field Custody Procedures

Samples will be collected following the sampling procedures described in the RIR/IRM. A summary of samples and collection methods are provided above in Section 5 of this CQAP. Documentation of sample collection is described above in subsection 7.1. Sample COC and

packaging procedures are summarized below. These procedures will ensure that the samples will arrive at the laboratory with the COC intact.

- The field sampler is personally responsible for the care and custody of the samples until they are transferred or dispatched properly. Field procedures have been designed such that as few people as possible will handle the samples.
- All bottles will be identified using sample labels with sample numbers, sampling locations, date/time of collection, and type of analysis. The sample numbering system is presented above in subsection 7.1.3.
- Sample labels will be completed for each sample using waterproof ink unless prohibited by weather conditions.
- Samples will be accompanied by a completed COC form. The sample numbers and locations will be listed on the COC form. When transferring the possession of samples, the individuals relinquishing and receiving will sign, date, and note the time on the record. This record documents the transfer of custody of samples from the sampler to another person, to a mobile laboratory, and to the laboratory facility.
- All shipments will be accompanied by the COC record identifying the contents. The original record will accompany the shipment, and copies will be retained by the sampler and provided to the data manager and placed in the project files.
- Samples will be properly packaged for shipment and dispatched to the appropriate laboratory for analysis, with a separate signed custody record enclosed in and secured to the inside top of each sample box or cooler. Shipping containers will be secured with strapping tape and custody seals for shipment to the laboratory. The custody seals will be attached to the cooler and covered with clear plastic tape after being signed by field personnel.
- If the samples are sent by common carrier, the air bill will be used. Air bills will be retained as part of the permanent documentation. Commercial carriers are not required to sign off on the custody forms since the custody forms will be sealed inside the sample cooler and the custody seals will remain intact.
- Samples remain in the custody of the sampler until transfer of custody is completed. This consists of delivery of samples to the laboratory sample custodian, and signature of the laboratory sample custodian on COC document as receiving the samples and signature of sampler as relinquishing samples.

7.2.2 Laboratory Custody Procedures

After accepting custody of the shipping containers, the laboratory will document the receipt of the shipping containers by signing the COC record. The laboratory will:

- Examine the shipping containers to verify that the custody tape is intact;
- Examine all sample containers for damage;
- Determine if the temperature required for the requested testing program has been maintained during shipment and document the temperature on the COC records;

- Compare samples received against those listed on the COC;
- Verify that sample holding times have not been exceeded;
- Examine all shipping records for accuracy and completeness;
- Determine sample pH (if applicable) and record on COC forms;
- Sign and date the COC immediately (if shipment is accepted) and attach the air bill;
- Note any problems associated with the coolers and/or samples on the cooler receipt form and notify the laboratory project manager, who will be responsible for contacting the GEI data manager;
- Attach laboratory sample container labels with unique laboratory identification and test; and
- Place the samples in the proper laboratory storage.

Following receipt, samples will be logged in according to the following procedure:

- The samples will be entered into the laboratory tracking system. At a minimum, the following information will be entered: project name or identification, unique sample numbers (both client and internal laboratory), type of sample, required tests, date and time of laboratory receipt of samples, and field ID provided by field personnel.
- The completed COC, air bills, and any additional documentation will be placed in the project file.

8. Calibration Procedure

8.1 Field Instruments

Field instruments will be calibrated according to the manufacturer's specifications. Air monitoring instruments will be calibrated to a known reference gas standard and ambient air outside the work zone. Calibration will be completed daily. If concentrations of VOCs are encountered above the reference gas standard, the soil screening photoionization detector (PID) may be calibrated or re-checked against the reference gas standard. All calibration procedures performed will be documented in the field logbook and will include the date/time of calibration, name of person performing the calibration, reference standard used, and the readings. The following equipment may be used during soil sampling activities.

End-Point Soil Sampling Activities:

- RAE Systems MiniRAE 2000 (PID) with 10.6 eV lamp or equivalent.
- MIE pDR 1200 with cyclone and pump [particulate monitor] or equivalent.

8.2 Laboratory Instruments

Calibration procedures for a specific laboratory instrument will consist of initial calibrations, initial calibration verifications, and/or continuing calibration verification. Detailed descriptions of the calibration procedures for a specific laboratory instrument are included in the laboratory's quality assurance plan, which describe the calibration procedures, their frequency, acceptance criteria, and the conditions that will require recalibration.

The laboratory quality plan for York Analytical Laboratory is in **Appendix A**.

9. Sample Preparation and Analytical Procedures

Analytical samples will be collected as specified in the RIR/IRM. **Table 1** provides sample collection matrices for soil.

10. Data Reduction, Validation, and Reporting

Appropriate QC measures will be used to ensure the generation of reliable data from sampling and analysis activities. Proper collection and organization of accurate information followed by clear and concise reporting of the data is a primary goal in this project. Complete data packages suitable for data validation to support the generation of a Data Usability Summary Report (DUSR) according to NYSDEC requirements will be provided by the project data validator. Data Management will be performed under the direction of Jaimie Wargo, Senior Technician – Data Management.

10.1 Field Data Evaluation

Measurements and sample collection information will be transcribed directly into the field logbook or onto standardized forms. If errors are made, results will be legibly crossed out, initialed and dated by the person recording the data, and corrected in a space adjacent to the original (erroneous) entry. Reviews of the field records by the field team leader, site manager, and project manager will ensure that:

- Logbooks and standardized forms have been filled out completely and that the information recorded accurately reflects the activities that were performed.
- Records are legible and in accordance with good record keeping procedures, i.e., entries are signed and dated, data are not obliterated, changes are initialed, dated, and explained.
- Sample collection, handling, preservation, and storage procedures were conducted in accordance with the protocols described in the RIR/IRM, and that any deviations were documented and approved by the appropriate personnel.

10.2 Analytical Data Validation

Laboratory deliverables will consist of an original hard copy data package that is in general accordance with NYSDEC ASP Category B data deliverable requirements when validation is requested.

A DUSR will be prepared to evaluate the end-point samples by a party independent from the laboratory performing the analysis in accordance with Appendix 2B of DER-10.

11. Internal Quality Control

Laboratory and field quality internal control checks will be used to ensure the data quality objectives. At a minimum, this will include:

- Matrix spike and/or matrix spike duplicate samples
- Matrix duplicate analyses
- Laboratory control spike samples
- Instrument calibrations
- Instrument tunes for VOC 8260B analyses
- Method and/or instrument blanks
- Surrogate spikes for organic analyses
- Internal standard spikes for VOC 8260B analyses
- Detection limit determination and confirmation by analysis of low-level calibration standard

Field quality control samples, as identified in **Table 1**, will include:

- Equipment blanks as outlined
- Field duplicate samples as outlined
- Trip blanks as outlined
- MS/MSDs as outlined

12. Corrective Action

If unacceptable conditions are identified as a result of audits or are observed during field sampling and analysis, the PM, Field Team Leader, and QA officer will document the condition and initiate corrective procedures. The specific condition or problem will be identified, its cause will be determined, and appropriate action will be implemented.

The entire sampling program will be under the direction of the Project Manager and Quality Assurance officer. The emphasis in this program is on preventing problems by identifying potential errors, discrepancies, and gaps in the data collection, laboratory analysis, and interpretation process. Any problems identified will be promptly resolved. Likewise, follow-up corrective action is always an option if preventative corrective actions are not effective.

The acceptance limits for the sampling and analyses to be conducted in this program will be those stated in the method or defined by other means in the Work Plan and Field Sampling Plan (FSP). Corrective actions are likely to be immediate in nature and most often will be implemented by the contracted laboratory analyst or the Project Manager. The corrective action will usually involve recalculation, reanalysis, or repeating a sample run.

12.1 Immediate Corrective Action

Corrective action in the field may be needed when the sample requirements are changed (i.e., more/less samples, sampling locations other than those specified in the Work Plan), or when sampling procedures and/or field analytical procedures require modification, etc. due to unexpected conditions. The field team may identify the need for corrective action. The Field Team Leader, Site Manager, and Project Manager will approve the corrective action and notify the Quality Assurance officer. The Project Manager and Quality Assurance officer will approve the corrective measure. The Field Team Leader and Site Manager will ensure that the corrective measure is implemented by the field team.

Corrective actions will be implemented and documented in the field record book. Documentation will include:

- A description of the circumstances that initiated the corrective action
- The action taken in response
- The final resolution
- Any necessary approvals

Corrective action in the laboratory will be completed in accordance with the quality assurance procedures located in **Appendix A**. Any corrective actions completed by the laboratory will be documented in both the laboratory's corrective action files, and the narrative data report sent from the laboratory to the PM. If the corrective action does not rectify the situation, the

laboratory will contact the Project Manager, who will determine the action to be taken and inform the appropriate personnel.

If potential problems are not solved as an immediate corrective action, the contractor will apply formalized long-term corrective action if necessary.

Table 1

Table 1. Analytical Methods/Quality Assurance Summary
Remedial Investigation Report
71 New Street, Huntington, New York

Media	Number of Primary Samples	QA/QC Samples				Total Number of Samples	Analytical Parameters	USEPA Method	Preservative	Holding Time	Container
		TB	FB	DUP	MS/MSD						
End-Point Soil Samples	TBD	1/VOC Cooler	One (1) per day of sampling	One (1) per 20 samples for all matrices and all parameters		TBD	VOCs	8260C	Cool to 4°C	48 hours to lab for preparation / 14 day hold time following	EnCore/TerraCore
	TBD	N/A				TBD	SVOCs	8270D	Cool to 4°C	14 days	100 grams
	TBD	N/A				TBD	TAL Metals	6010C	Cool to 4°C	6 months	25 grams
	TBD	N/A				TBD	Mercury	7471B	Cool to 4°C	28 Days	25 grams
	TBD	N/A				TBD	Pesticides	8081B	Cool to 4°C	14 days	100 grams
	TBD	N/A				TBD	Formaldihyde	8315A	Cool to 4°C	3 days	25 grams
	TBD	N/A				TBD	PCBs	8082A	Cool to 4°C	14 days	100 grams

Notes:
NYSDEC - New York State Department of Envirnmental Conservation
BCP - Brownfield Cleanup Program
TBD - To be Determined
QA/QC - Quality Assurance/Quality Control
TB - Trip Blank
FB - Field Blank
DUP - Duplicate
MS/MSD - Matrix Spike/Matrix Spike Duplicate
VOCs - Volatile organic compounds
SVOCs - Semivolatile organic compounds
°C- Degrees Celsius
TAL - Target Analyte List
PCBs - Polychlorniated biphenyls
NA - Not Available/Not Analyzed
USEPA - United States Environmental Protection Agency

Appendix G

Community Air Monitoring Plan

Appendix 1A
New York State Department of Health
Generic Community Air Monitoring Plan

Overview

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

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

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

Community Air Monitoring Plan

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

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

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

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

VOC Monitoring, Response Levels, and Actions

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

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

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

3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

4. All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

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

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

2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/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 mcg/m^3 of the upwind level and in preventing visible dust migration.

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

December 2009

Appendix H

Waste Facility Acceptance Letters

Appendix I

Vapor Barrier Specifications

Stego® Wrap 20-Mil Vapor Barrier

STEGO INDUSTRIES, LLC

Vapor Retarders
07 26 00, 03 30 00

1. Product Name

Stego Wrap 20-Mil Vapor Barrier

2. Manufacturer

Stego Industries, LLC
216 Avenida Fabricante, Suite 101
San Clemente, CA 92672
Sales, Technical Assistance
Ph: (877) 464-7834
Fx: (949) 257-4113
www.stegoindustries.com

3. Product Description

USES: Stego Wrap 20-Mil Vapor Barrier is used as a below-slab vapor barrier, and as a protection course for below grade waterproofing applications.
COMPOSITION: Stego Wrap 20-Mil Vapor Barrier is a multi-layer plastic extrusion manufactured with only the highest grade of prime, virgin, polyolefin resins.
ENVIRONMENTAL FACTORS:
Stego Wrap 20-Mil Vapor Barrier can be used in systems for the control of soil gases (radon, methane), soil poisons (oil by-products) and sulfates.

5. Installation

UNDER SLAB: Unroll Stego Wrap 20-Mil Vapor Barrier over an aggregate, sand or tamped earth base. Overlap all seams a minimum of six inches and tape using Stego Tape or Crete Claw® Tape. All penetrations must be sealed using a combination of Stego Wrap and Stego accessories.

For additional information, please refer to Stego's complete installation instructions.

6. Availability & Cost

Stego Wrap 20-Mil Vapor Barrier is available nationally via building supply distributors. For current cost information, contact your local Stego Wrap dis-tributor or Stego Industries' sales department.

7. Warranty

Stego Industries, LLC believes to the best of its knowledge, that specifications and recommendations herein are accurate and reliable. However, since site conditions are not within its control, Stego Industries does not guarantee results from the use of the information provided and disclaims all liability from any loss or damage. No warranty, express or implied, is given as to the merchantability, fitness for a particular purpose, or otherwise with respect to the products referred to.

8. Maintenance

None required.

9. Technical Services

Technical advice, custom CAD drawings, and additional information can be obtained by contacting Stego Industries' technical assistance department or via the website.

4. Technical Data

TABLE 1: PHYSICAL PROPERTIES OF STEGO WRAP 20-MIL VAPOR BARRIER

PROPERTY	TEST	RESULTS
Under Slab Vapor Retarders	ASTM E 1745 Class A, B & C – Standard Specification for Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs	Exceeds Class A, B & C
Water Vapor Permeance	ASTM F 1249 – Test Method for Water Vapor Transmission Rate Through Plastic Film and Sheeting Using a Modulated Infrared Sensor	0.0071 perms
Puncture Resistance	ASTM D 1709 – Test Methods for Impact Resistance of Plastic Film by Free-Falling Dart Method	3500+ grams*
Tensile Strength	ASTM D 882 – Test Method for Tensile Properties of Thin Plastic Sheeting	97.7 lbf/in.
Permeance After Conditioning (ASTM E 1745 Sections 7.1.2 - 7.1.5)	ASTM E 154 Section 8, F 1249 – Permeance after wetting, drying, and soaking ASTM E 154 Section 11, F 1249 – Permeance after heat conditioning ASTM E 154 Section 12, F 1249 – Permeance after low temperature conditioning ASTM E 154 Section 13, F 1249 – Permeance after soil organism exposure	0.0088 perms 0.0081 perms 0.0084 perms 0.0077 perms
Thickness	ACI 302.1R-04 – Minimum Thickness (10 mils)	20 mils
Roll Dimensions		14 ft. wide x 105 ft. long or 1,470 ft^2
Roll Weight		140 lbs.

Note: perm unit = grains/(ft^2 *hr* in.Hg)

* The material maxed out the testing equipment and did not fail at 3746 grams.