# 99 GRANITE STREET
# BROOKLYN, NEW YORK
# SITE MANAGEMENT PLAN
# NYSDEC BCP Site Number: C224269

**Prepared for:**

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

| Revision No. | Date Submitted | Summary of Revision | NYSDEC Approval Date |
|---|---|---|---|
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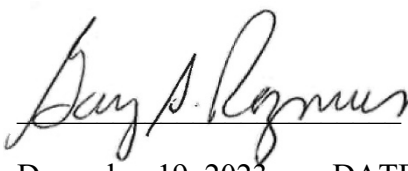
**DECEMBER 2023**

# CERTIFICATION STATEMENT

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



P.E.

December 19, 2023 DATE

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**BROOKLYN, NEW YORK**

**SITE MANAGEMENT PLAN**

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| G | Site Management Forms |
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## List of Acronyms

| | |
|---|---|
| AS | Air Sparging |
| ASP | Analytical Services Protocol |
| BCA | Brownfield Cleanup Agreement |
| BCP | Brownfield Cleanup Program |
| CERCLA | Comprehensive Environmental Response, Compensation and Liability Act |
| CAMP | Community Air Monitoring Plan |
| C/D | Construction and Demolition |
| CFR | Code of Federal Regulation |
| CLP | Contract Laboratory Program |
| COC | Certificate of Completion |
| CO2 | Carbon Dioxide |
| CP | Commissioner Policy |
| DER | Division of Environmental Remediation |
| DUSR | Data Usability Summary Report |
| EC | Engineering Control |
| ECL | Environmental Conservation Law |
| ELAP | Environmental Laboratory Approval Program |
| ERP | Environmental Restoration Program |
| EWP | Excavation Work Plan |
| GHG | Greenhouse Gas |
| GWE&T | Groundwater Extraction and Treatment |
| HASP | Health and Safety Plan |
| IC | Institutional Control |
| NYSDEC | New York State Department of Environmental Conservation |
| NYSDOH | New York State Department of Health |
| NYCRR | New York Codes, Rules and Regulations |
| O&M | Operation and Maintenance |
| OM&M | Operation, Maintenance and Monitoring |
| OSHA | Occupational Safety and Health Administration |
| OU | Operable Unit |
| P.E. or PE | Professional Engineer |
| PFAS | Per- and Polyfluoroalkyl Substances |

| | |
|---|---|
| PID | Photoionization Detector |
| PRP | Potentially Responsible Party |
| PRR | Periodic Review Report |
| QA/QC | Quality Assurance/Quality Control |
| QAPP | Quality Assurance Project Plan |
| QEP | Qualified Environmental Professional |
| RAO | Remedial Action Objective |
| RAWP | Remedial Action Work Plan |
| RCRA | Resource Conservation and Recovery Act |
| RI/FS | Remedial Investigation/Feasibility Study |
| ROD | Record of Decision |
| RP | Remedial Party |
| RSO | Remedial System Optimization |
| SAC | State Assistance Contract |
| SCG | Standards, Criteria and Guidelines |
| SCO | Soil Cleanup Objective |
| SMP | Site Management Plan |
| SOP | Standard Operating Procedures |
| SOW | Statement of Work |
| SPDES | State Pollutant Discharge Elimination System |
| SSD | Sub-slab Depressurization |
| SVE | Soil Vapor Extraction |
| SVI | Soil Vapor Intrusion |
| TAL | Target Analyte List |
| TCL | Target Compound List |
| TCLP | Toxicity Characteristic Leachate Procedure |
| USEPA | United States Environmental Protection Agency |
| UST | Underground Storage Tank |
| VCA | Voluntary Cleanup Agreement |
| VCP | Voluntary Cleanup Program |

# ES EXECUTIVE SUMMARY

The following provides a brief summary of the controls implemented for the 99 Granite Street site (the Site), as well as the inspection, monitoring, maintenance and reporting activities required by this Site Management Plan (SMP):

Site Identification: C224269 - 99 Granite Street, Brooklyn New York

| | | |
|---|---|---|
| Institutional Controls: | 1. The majority of the Site may be used for Unrestricted use, and the Track 4 area of the Site in the southeasternmost portion of the property, as described below, may be used Restricted Residential use. | |
| | 2. An Environmental has been prepared for the Site to prevent future exposure to impacts. | |
| | 3. Implement, maintain, and monitor Engineering Controls (ECs) systems at the in the Track 4 area of the Site. All ECs must be inspected at a frequency and in a manner defined in the SMP. | |
| Engineering Controls: | 1. Cover system overlying the Track 4 area. | |
| Inspections: | | Frequency |
| 1. Cover system inspection | | Annually |
| Reporting: | | |
| 1. Periodic Review Report | | Annually |

Further descriptions of the above requirements are provided in detail in Sections 3, 4, and 6 of this SMP.

This SMP has been prepared by Medford Ber LLC to address limited remaining impacted soil left in-place due to its location in close proximity to a New York City Department of Environmental Protection (NYCDEP) sewer line at the Site.

# 1.0 INTRODUCTION

## 1.1 General

This SMP is a required element of the remedial program for the 99 Granite Street site, located in Brooklyn, New York (the "Site") (see Fig. 1). The Site is currently in the New York State (NYS) Brownfield Cleanup Program (BCP), Site No. C224269, which is administered by New York State Department of Environmental Conservation (NYSDEC).

Medford Ber LLC entered into a Brownfield Cleanup Agreement (BCA), on April 25, 2018, with the NYSDEC to remediate the Site. A figure showing the Site location and boundaries is provided in Fig. 2. The boundaries of the Site are more fully described in the metes and bounds Site description that is part of the Environmental Easement (recording document number 2023122200234001) provided in Appendix A. A Site Layout Map, depicting the Track 4 Area, Remaining Soil Sample Exceedances, and Engineering Controls, as described below, is provided as Fig. 3.

After completion of the remedial work, minimal contamination limited to a small (approximately 400-square-foot) area in the southeasternmost area of the Site, referred to as the Track 4 area, was left in-place, which is hereafter further referred to as "remaining contamination". The limits of the Track 4 area are identified on Fig. 3.

Although not required by the February 2022 Remedial Action Work Plan (RAWP) for the Site, Institutional and Engineering Controls (ICs and ECs) have been incorporated into the Site remedy to control exposure to remaining contamination in the Track 4 area to ensure protection of public health and the environment. The Environmental Easement granted to the NYSDEC, and recorded with New York City, requires compliance with this SMP and all ECs and ICs placed on the Site.

This SMP was prepared to manage remaining contamination in the Track 4 area of the Site until the Environmental Easement is extinguished in accordance with ECL Article 71, Title 36. This SMP has been approved by the NYSDEC, and compliance with this SMP is required by the grantor of the Environmental Easement and the grantor's successors and assigns. This SMP may only be revised with the approval of the NYSDEC.

It is important to note that:

- This SMP details the site-specific implementation procedures that are required by the Environmental Easement. Failure to properly implement the SMP is a violation of the Environmental Easement, which is grounds for revocation of the Certificate of Completion (COC).

- Failure to comply with this SMP is also a violation of Environmental Conservation Law, 6 NYCRR Part 375 and the BCA for the Site, and thereby subject to applicable penalties.

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

This SMP was prepared by GEI Consultants, Inc., P.C. (GEI), on behalf of Medford Ber LLC, in accordance with the requirements of the NYSDEC's DER-10 ("Technical Guidance for Site Investigation and Remediation"), issued on May 3, 2010 and most recently updated on April 9, 2019, and the guidelines provided by the NYSDEC. This SMP addresses the means for implementing the ICs and/or ECs that are required by the Environmental Easement for the Site.

## 1.2 Revisions and Alterations

Revisions and alterations to this plan will be proposed in writing to the NYSDEC's project manager. The NYSDEC can also make changes to the SMP or request revisions from the remedial party. Revisions will be necessary upon, but not limited to, the following occurring: a change in media monitoring requirements, upgrades to or shutdown of a remedial system, post-remedial removal of contaminated sediment or soil, or other significant change to the Site conditions. All approved alterations must conform with Article 145 Section 7209 of the Education Law regarding the application of professional seals and alterations. For example, any changes to as-built drawings must be stamped by a New York State Professional Engineer (PE). In accordance with the Environmental Easement for the Site, the NYSDEC project manager will provide a notice of any approved changes to the SMP and append these notices to the SMP that is retained in its files.

## 1.3 Notifications

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

1. 60-day advance notice of any proposed changes in Site use that are required under the terms of the BCA, 6 NYCRR Part 375 and/or Environmental Conservation Law.

2. 7-day advance notice of any field activity associated with the remedial program.

3. 15-day advance notice of any proposed ground-intrusive activity pursuant to the Excavation Work Plan (EWP). If the ground-intrusive activity qualifies as a change of use as defined in 6 NYCRR Part 375, the above mentioned 60-day advance notice is also required.

4. Notice within 48 hours of any damage or defect to the foundation, structures or EC that reduces or has the potential to reduce the effectiveness of an EC, and likewise, any action to be taken to mitigate the damage or defect.

5. Notice within 48 hours of any non-routine maintenance activities.

6. Verbal notice by noon of the following day of any emergency, such as a fire; flood; or earthquake that reduces or has the potential to reduce the effectiveness of ECs in place at the Site, with written confirmation within 7 days that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.

7. Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action submitted to the NYSDEC within 45 days describing and documenting actions taken to restore the effectiveness of the ECs.

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

1. At least 60 days prior to the change, the NYSDEC will be notified in writing of the proposed change. This will include a certification that the prospective purchaser/Remedial Party has been provided with a copy of the BCA, and all approved work plans and reports, including this SMP.

2. Within 15 days after the transfer of all or part of the Site, the new owner's name, contact representative, and contact information will be confirmed in writing to the NYSDEC.

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

**Table 1. Notifications***

| **Name** | **Contact Information** | **Required Notification**** |
|---|---|---|
| NYSDEC Project Manager:<br>Aaron Fischer | 518.402.9805<br>aaron.fischer@dec.ny.gov | All Notifications |
| NYSDEC Project Manager's Supervisor:<br>Heidi Dudek | 518.402.9813<br>heidi.dudek@dec.ny.gov | All Notifications |
| NYSDEC Site Control:<br>Kelly Lewandowski | 518.402.9553<br>kelly.lewandowski@dec.ny.gov | Notifications 1 and 8 |
| NYSDOH Project Manager:<br>Sarita Wagh | 518.402.7817<br>sarita.wagh@health.ny.gov | Notifications 4, 6, and 7 |
| | | |

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

** Note: Numbers in this column reference the numbered bullets in the notification list in this section.

# 2.0 SUMMARY OF PREVIOUS INVESTIGATIONS AND REMEDIAL ACTIONS

## 2.1 Site Location and Description

The Site is located in Brooklyn, New York City, New York and is identified as Block 3457 and Lot 49 (formerly Lots 35, 49, and 50) on the New York City Tax Map (see Fig. 1). The Site is a 0.25-acre irregularly shaped parcel and is bounded by Evergreen Avenue to the north, a sub-grade rail track and Granite Street to the east, and residential buildings to the west and south (see Fig. 2). The boundaries of the Site are more fully described in Appendix A – Environmental Easement. The owner of the Site at the time of issuance of this SMP is Medford Ber LLC.

## 2.2 Physical Setting

### 2.2.1 Land Use

The Site consists of no structures. The Site is zoned residential and is currently being redeveloped via the construction of a 6-story (with cellar) approximately 59,000 gross square-foot residential building. The new building will cover approximately 9,200 square feet and will include below-grade parking with additional parking on the first floor.

Surrounding properties consist of a combination of 2- and 3-story dwellings, a 1-story commercial building, sub-grade railroad tracks, and a cemetery.

### 2.2.2 Geology

GEI encountered evidence of historical fill up to approximately 10 feet below ground surface (ft bgs) throughout the Site, which consisted of sand with gravel and silty sand with varying amounts of brick and concrete. Glacial sand deposits were noted to underly the fill layer and consisted of sand with gravel, silty sand, and clay. As described in the Final Engineering Report (FER) for the Site, soil was removed throughout the Site to approximately 13 ft bgs, and between 15 and 32 ft bgs in targeted areas of the Site, effectively removing the vast majority of historical fill. However, in the southeasternmost

portion of the Site, a limited area of soil likely containing limited historical fill was left in-place due to its proximity to a NYCDEP sewer line.

As soil was removed across the entire Site, as described above, boring logs are not included herein.

### 2.2.3 Hydrogeology

Groundwater has historically been detected at the Site at depths ranging from 28 to over 32 ft bgs. As groundwater has not been identified as a media of concern at the Site, groundwater flow figures are not included herein. All groundwater monitoring wells previously existing at the Site, were removed/abandoned prior to remediation of the Site.

## 2.3 Investigation and Remedial History

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

Several environmental investigations have previously been completed at the Site, as follows:

- Phase I Environmental Site Assessment (ESA) prepared by Lawrence Environmental Group, LLC (LEG) and dated December 10, 2013.
- Soil Disposal Characterization Report for the 99 Granite Street Parcel prepared by Liberty Environmental, Inc. (Liberty) and dated July 5, 2017.
- Phase II Environmental Subsurface Investigation (ESI) report for the 99 Granite Street parcel prepared by GEI and dated October 25, 2017.
- Phase I ESA for the 97 Granite Street parcel prepared by GEI and dated February 2019.
- Phase II ESI for the 97 Granite Street parcel prepared by GEI and dated April 12, 2019.
- Remedial Investigation Report (RIR) for the 99 Granite Street Site prepared by GEI and dated April 2019 (and revised January 2021, March 2021, and June 2021).

The findings of the above previous investigations are summarized below, and copies of the reports are provided in Appendix C.

### *LEG Phase I ESA*

LEG performed a Phase I ESA for the 99 Granite portion of the Site in 2013. LEG Phase I ESA did not identify any recognized environmental conditions (RECs) at the 99 Granite Street parcel.

### *Liberty Soil Disposal Characterization Report*

Liberty advanced eight soil borings at the Site in 2017 using a direct-push drill rig to characterize soil. All borings were advanced to 20 ft bgs, the proposed depth of the new building cellar. Liberty screened and classified soil at each boring.

Based on field screening, 80 discrete soil samples were collected in total, with eight soil samples collected within each of 10 2-foot horizontal sample zones from 0 to 20 ft bgs. The eight soil samples collected within each sample zones were then composited, such that one composite soil sample would ultimately represent each of the 10 2-foot horizontal sample zones.

All composite soil samples were analyzed for disposal facility specific parameters, including diesel range organics (DRO), gasoline range organics (GRO), polycyclic aromatic hydrocarbons (PAHs), TOX, RCRA metals, TCLP metals, ignitability, corrosivity, reactivity, polychlorinated biphenyls (PCBs), and pesticides. In addition, a grab sample was collected from each of the 10 2-foot horizontal sample zones for Target Compound List (TCL) volatile organic compounds (VOCs).

The majority of analytes were either not detected or were detected at concentrations below the Part 375 Unrestricted Use Soil Cleanup Objectives (USCOs); however, lead was detected in exceedance of its hazardous waste characteristic threshold of 5.0 milligrams per liter (mg/L) in the 8 to 10-foot and 10 to 12-foot intervals. Although multiple other metals and PAHs were detected at various concentrations, no other parameter, including corrosivity, ignitability, or reactivity, exceeded hazardous waste thresholds.

### *GEI Phase II ESI for the 99 Granite Street Parcel*

GEI completed a Phase II ESI for the 99 Granite Street parcel in 2017 to determine if the PAH and metal impacts identified by Liberty existed throughout the Site.

A total of three soil borings (SB-1 through SB-3) were installed to depths of 12 ft bgs. GEI screened and classified soil at each boring. Two composite soil samples were collected for laboratory analysis of semi-volatile organic compounds (SVOCs) and metals from each boring: one soil sample was composited from the 0 to 4-foot interval and one was composited from the 8 to 12-foot interval. Analytical results were compared to the Part 375 SCOs.

The soil encountered in the borings were comprised of silty sand and had characteristics of historic urban fill. Several PAHs (benzo[a]anthracene, benzo[a]pyrene, benzo(k)fluoranthene, chrysene, and indeno[1,2,3-cd]pyrene) and metals (lead and mercury) were detected in exceedance of various Part 375 SCOs in the 0 to 4-foot interval at one or more of all three borings, while chromium and mercury were detected in exceedance of various Part 375 SCOs in the 8 to 12-foot interval at SB-3.

### *GEI Phase I ESA for the 97 Granite Street Parcel*

GEI prepared a Phase I ESA for the 97 Granite Street parcel, dated February 2019. The only REC identified was the property's proximity to the adjacent 99 Granite Street property. As such, GEI recommended a subsurface soil and groundwater investigation be completed at the Site to determine if contamination from the adjacent property had impacted 97 Granite Street.

### *GEI Phase II ESI for the 97 Granite Street Parcel*

GEI completed a Phase II ESI at the 97 Granite Street parcel in 2019. A total of two soil borings (97SB-1 and 97SB-2) were installed to 8 ft bgs. GEI screened and classified soil at each boring. Two composite soil samples were collected for laboratory analysis of VOCs, SVOCs, metals, pesticides, and PCBs from each boring: one soil sample was composited from the 0 to 4-foot interval and one was composited from the 4 to 8-foot interval. Analytical results were compared to the Part 375 SCOs.

VOCs, SVOCs, pesticides, and PCBs were either not detected or were detected at concentrations below the USCOs. Several metals (arsenic, copper, lead, mercury, nickel, and zinc) were detected in one or both soil borings in exceedance of various Part 375 SCOs.

GEI's findings indicate that historical fill exists at the 97 Granite Street property, which exhibits similar characteristics as the historical fill encountered at the 99 Granite Street property. As such, the 97 Granite Street property was added to the 99 Granite Redevelopment BCP Site by an amendment to the BCA.

## *GEI Remedial Investigation for the 99 Granite Street Site*

GEI completed a Remedial Investigation (RI) at the Site in February and March 2019 and November 2020 to define the extents of SVOC and metals contamination and better define remedial excavation area and depth requirements. The RI included the following tasks:

- Advancement of five soil borings (SB-1 through SB-5) and the collection of 27 soil samples for laboratory analysis. Analytical results were compared to the USCOs and Restricted Residential SCOs (RRSCOs).
- Installation of three monitoring wells (MW-1 through MW-3) and the collection of three groundwater samples for laboratory analysis. It should be noted that, due to recharge issues, monitoring well MW-1 was replaced with well MW-1A. Analytical results were compared to the NYSDEC Class GA Ambient Water Quality Standards (AWQS).
- Installation of three soil vapor probes (SV-1 through SV-3) and the collection of three soil vapor samples for laboratory analysis. Although not applicable for soil vapor, analytical data was compared to the New York State Department of Health (NYSDOH) Evaluating Soil Vapor Intrusion in New York State guidance, dated October 2006, and the May 2017 revised Soil Vapor/Indoor Air Matrix for informational purposes.

**Soil**

The five soil borings (SB-1 through SB-5) were advanced throughout the Site utilizing a direct-push drill rig. Two soil borings (SB-2 and SB-4) were advanced to the target depth 30 ft bgs, while the remaining soil borings encountered refusal at 20 ft bgs (SB-1), 22 ft bgs (SB-3), and 29 ft bgs (SB-5). Four groundwater monitoring well soil borings (MW-1 through MW-3 and MW-1A) were also advanced approximately 10 feet into the water table (approximately 28 ft bgs) around the perimeter of the Site where monitoring wells were installed, as described below.

Soil samples were collected continuously and were inspected for evidence of impacts. No petroleum odors, staining, or photoionization detector (PID) reading indicative of contamination were noted at any boring location. One composite soil sample was collected for laboratory analysis from every 5-foot interval at each boring (27 soil samples in total). In addition, one VOC sample was collected as a grab sample from each 5-foot interval.

GEI encountered evidence of historical fill up to approximately 10 ft bgs throughout the Site, which consisted of sand with gravel and silty sand with varying

amounts of brick and concrete. Glacial sand deposits were noted to underly the fill layer and consisted of sand with gravel, silty sand, and clay.

Soil samples were analyzed for the following parameters:

- 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 and 7473.
- Pesticides by USEPA Method 8081B.
- PCBs by USEPA Method 8082A.

Similar to previous analytical results, VOCs, pesticides, and PCBs were either not detected or were detected at concentrations below the USCOs. Several PAHs (benzo[a]anthracene, benzo[a]pyrene, benzo(k)fluoranthene, indeno[1,2,3-cd]pyrene) and metals (copper, lead, and mercury, and zinc) were detected in exceedance of the USCOs and RRSCOs throughout the Site.

**Groundwater**

Three 2-inch monitoring wells, including MW-1A, MW-2 and MW-3, were installed to depths of 39 ft bgs (MW-1A, screened from 29 to 39 ft bgs), 27 ft bgs (MW-2, screened from 17 to 27 ft bgs), and 29.5 ft bgs (MW-3, screened from 19.5 to 29.5 ft bgs).

Groundwater samples were collected utilizing low-flow sampling methodologies with dedicated and decontaminated sampling equipment for the following parameters:

- TCL VOCs by USEPA Method 8260C.
- TCL SVOCs by USEPA Method 8270D.
- Dissolved TAL metals by USEPA Method 6020B.
- Pesticides by USEPA Method 8081B.
- PCBs by USEPA Method 8082A.
- 1,4-Dioxane by USEPA Method 8270D.
- Per- and Polyfluoroalkyl Substances (PFAS) by USEPA Method 537.

VOCs, SVOCs, pesticides, and PCBs were either not detected or were detected at concentrations below the AWQS. Several metals (chromium, lead, manganese, and

sodium) were detected in exceedance of the AWQS in monitoring wells MW-2 and MW-3 only. Multiple PFAS compounds were detected in monitoring wells MW-2 and MW-3.

**Soil Vapor**

Three soil vapor probes were (SV-1 through SV-3) were installed to depths of 8 ft bgs, to approximate the depth of the new building cellar, as part of the soil vapor evaluation. All three soil vapor samples were collected on the 99 Granite parcel within the limits of the proposed new building.

VOC samples were collected in certified clean 6-liter Summa canisters over a period of 8 hours for VOC analysis utilizing USEPA Method TO-15. Prior to collection, each soil vapor sampling point was purged of three sample volumes using a hand pump. In addition, a tracer gas (helium) was used in accordance with NYSDOH protocols and monitored in the field via hand-held instrumentation to verify the integrity of the soil vapor probe seal prior to sampling.

Although not directly comparable, as no building existed on-site for the collection of indoor air samples, GEI re-evaluated the soil vapor analytical results and compared such to the NYSDOH Final Guidance on Soil Vapor Intrusion (October 2006, updated May 2017) and associated guidance values provided on Matrixes A through Matrix C for informational purposes. It should be noted that the NYSDOH guidance provides sub-slab soil vapor "mitigate" threshold concentrations for key compounds, which would apply regardless of corresponding indoor air concentrations.

Several petroleum and chlorinated VOCs were detected in all soil vapor samples; however, all VOCs were detected at low levels and well below NYSDOH Soil Vapor Intrusion and Soil Vapor/Indoor Air Matrix "mitigate" threshold guidance values.

## 2.4 Remedial Action Objectives (RAOs)

Based on the results of the RI and various preceding investigations summarized above, the following RAOs were established for the Site as listed in the NYSDEC-approved February 2022 RAWP, as follows:

### *Groundwater*

RAOs for Public Health Protection

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

RAOs for Environmental Protection

- Remove the source of ground or surface water contamination.

***Soil***

RAOs for Public Health Protection

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

RAOs for Environmental Protection

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

***Soil Vapor***

RAOs for Public Health Protection

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

## 2.5 Remaining Contamination

### 2.5.1 Soil

As described above, the majority of Site soil was remediated to the USCOs to meet Track 1 requirements; however, given that a NYCDEP sewer line is located along the eastern boundary of the Site, limiting excavation in this area, a small area at the eastern limits of the property was remediated to meet Track 4 requirements. Summarized in Appendix D and on Fig. 3, are the results of all soil samples collected that exceed the Unrestricted Use SCOs within the Track 4 area of the Site (endpoint soil sample locations EP-13 and EP-17) after completion of the remedial action.

Based on the results of the post-excavation verification soil sampling completed as part of the remediation of the Site, remediation of the Site resulted in removal of soil exhibiting contaminant concentrations above the USCOs from the vast majority of the Site.

As such, the BCP Track 1 standards have been met and no long-term IC/ECs are required to protect human health and the environment throughout the majority of the Site, with the exception of the Track 4 area.

As previously noted, a NYCDEP sewer line is located along the eastern boundary of the Site, which limited removal of all soil exhibiting contaminant concentrations in exceedance of the USCOs in this area. As such, limited PAHs (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, chrysene, and indeno[1,2,3-cd]pyrene), lead, and mercury concentrations above their respective USCOs remain within the Track 4 area, associated with endpoint soil sample locations EP-13 and EP-17.

The limits of the Track 4 area are depicted on Fig. 3. The top of the Track 4 area is located approximately 8 ft bgs, is approximately 5 feet in width, and approximately 82 feet in length. The Track 4 area is estimated to contain approximately 38 cubic yards of soil. Endpoint exceedances of the USCOs associated with the Tack 4 area are summarized on Fig. 3.

# 3.0 INSTITUTIONAL AND ENGINEERING CONTROL PLAN

## 3.1 General

Since remaining contamination exists at the Site in the Track 4 area, ICs/ECs are required to protect human health and the environment in the Track 4 area only. This IC/EC Plan describes the procedures for the implementation and management of all IC/ECs at the Site. The IC/EC Plan is one component of the SMP and is subject to revision by the NYSDEC project manager.

This plan provides:

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

## 3.2 Institutional Controls

Although not required by the February 2022 RAWP, ICs are in-place at the Site to: (1) implement, maintain and monitor ECs; (2) prevent future exposure to remaining contamination in the Track 4 area of the Site; and, (3) limit the use and development of the Track 4 area of the Site to Restricted Residential uses only. Adherence to these ICs in the Track 4 area of the Site is required by the Environmental Easement (recording document number 2023122200234001) and will be implemented under this SMP. ICs identified in the Environmental Easement may not be discontinued without an amendment to or extinguishment of the Environmental Easement. The IC boundaries are shown on Fig. 3. These ICs are:

- The property may be used for Unrestricted use, while the Track 4 area may be used for Restricted Residential use.
- All ECs must be operated and maintained as specified in this SMP.
- All ECs must be inspected at a frequency and in a manner defined in the SMP.
- The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the NYCDEP to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department.
- Groundwater and other environmental or public health monitoring must be performed as defined in this SMP.
- Data and information pertinent to Site management must be reported at the frequency and in a manner as defined in this SMP.
- All future activities that will disturb remaining contaminated material must be conducted in accordance with this SMP.
- Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in this SMP.
- Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in this SMP.
- Access to the Site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Environmental Easement.
- The potential for vapor intrusion must be evaluated for any buildings developed in the area within the IC boundaries noted on Fig. 3, and any potential impacts that are identified must be monitored or mitigated. Although not necessary based on the completed soil vapor evaluation, a vapor/moisture barrier was installed beneath the new building cellar slab and foundations in accordance with the manufacturer's specifications as an element of construction.
- Vegetable gardens and farming in the Track 4 area of the Site are prohibited.
- An evaluation shall be performed to determine the need for further investigation and remediation should large scale redevelopment occur, if any of the existing structures are demolished, or if the subsurface is otherwise made accessible.

## 3.3 Engineering Controls

### 3.3.1 Cover System (or Cap)

Exposure to remaining contamination at the Site is prevented by clean crushed stone placed over the Track 4 area. This cover is overlain by concrete at grade. The clean crushed stone also serves as a demarcation layer, providing a visual reference to the top of remaining contamination in the Track 4 area. The cover is intended to be a permanent control and the quality and integrity of this cover will be inspected at defined, regular intervals in accordance with this SMP in perpetuity. Fig. 3 presents the location of the cover.

The EWP provided in Appendix E outlines the procedures required to be implemented in the event the cover is breached, penetrated or temporarily removed. Procedures for the inspection of this cover are provided in the Monitoring Plan included in Section 4.0 of this SMP. Any work conducted pursuant to the EWP must also be conducted in accordance with the procedures defined in a Health and Safety Plan (HASP) and associated Community Air Monitoring Plan (CAMP), provided in Appendix F.

Any breach of the cover overlying the Track 4 area must be overseen by a PE who is licensed and registered in New York State or a qualified person who directly reports to a PE who is licensed and registered in New York State.

# 4.0 MONITORING PLAN

## 4.1 General

This Monitoring Plan describes the measures for evaluating the overall performance and effectiveness of the cover overlying the Track 4 area. This Monitoring Plan may only be revised with the approval of the NYSDEC project manager.

This Monitoring Plan describes the methods to be used for confirming that the cover overlying the Track 4 area continues to be effective in protecting public health and the environment.

To adequately address these issues, this Monitoring Plan provides information regarding annual inspection and periodic certification requirements for the Track 4 area.

Reporting requirements are provided in Section 7.0 of this SMP.

## 4.2 Track 4 Area Inspection

An inspection of the cover overlying the Track 4 area will be performed at a minimum of once per year. These periodic inspections must be conducted when the ground surface is visible (i.e., no snow cover). Inspections will be performed by a qualified environmental professional (QEP) as defined in 6 NYCRR Part 375, a PE who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State. Modification to the frequency or duration of the inspections will require approval from the NYSDEC project manager. An inspection of the cover overlying the Track 4 area will also be performed after all severe weather conditions that may affect the cover overlying the Track 4 area. During these inspections, an inspection form will be completed as provided in Appendix G – Site Management Forms.

The form will compile sufficient information to assess the following:

- Compliance with all ICs, including Site usage.
- An evaluation of the condition and continued effectiveness of the cover overlying the Track 4 area.
- General Site conditions at the time of the inspection.

- Whether stormwater management systems, such as basins and outfalls, are working as designed.
- Confirm that Site records are up to date.

Inspections will be conducted and documented according to the SMP schedule, regardless of the frequency of the PRR. The inspections will determine and document the following:

- Whether the cover overlying the Track 4 area continues to perform as designed.
- If the cover overlying the Track 4 area continues to be protective of human health and the environment.
- Compliance with requirements of this SMP and the Environmental Easement.
- If Site records are complete and up to date.

Reporting requirements are outlined in Section 7.0 of this SMP.

Inspections will also be performed in the event of an emergency. If an emergency, such as a natural disaster or an unforeseen failure of any of the cover overlying the Track 4 area occurs that reduces or has the potential to reduce its effectiveness, verbal notice to the NYSDEC project manager must be given by noon of the following day. In addition, an inspection of the cover overlying the Track 4 area will be conducted within 5 days of the event to verify its effectiveness by a QEP, as defined in 6 NYCCR Part 375. Written confirmation must be provided to the NYSDEC project manager within 7 days of the event that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public. The remedial party will submit follow-up status reports to the NYSDEC within 45 days of the event on actions taken to respond to any emergency event requiring ongoing responsive action, describing and documenting actions taken to restore the effectiveness of the ECs.

### 4.2.1 Monitoring Protocols

All monitoring activities will be recorded in a field book and an associated Site inspection form will be completed as provided in Appendix G - Site Management Forms.

# 5.0 OPERATION AND MAINTENANCE PLAN

## 5.1 General

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

# 6.0 PERIODIC ASSESSMENTS/EVALUATIONS

## 6.1 Climate Change Vulnerability Assessment

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

Given the small footprint of the Track 4 area and that this area will be covered in concrete, the Track 4 area is not considered to be vulnerable to adverse effects of severe storms brought on by climate change. However, surface damage within the Track 4 area will be evaluated and assessed during routine Site inspection and Site inspections completed following storm events, as necessary, as will be summarized in periodic review reporting:

## 6.2 Green Remediation Evaluation

NYSDEC's DER-31 Green Remediation requires that green remediation concepts and techniques be considered during all stages of the remedial program including Site management, with the goal of improving the sustainability of the cleanup and summarizing the net environmental benefit of any implemented green technology.

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

# 7.0. REPORTING REQUIREMENTS

## 7.1 Site Management Reports

All inspection and monitoring events for the Track 4 area will be recorded on the Site inspection form provided in Appendix G, which is subject to NYSDEC revision. All Site inspection and monitoring events will be conducted by a QEP as defined in 6 NYCRR Part 375, a PE who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State.

All applicable forms and other records generated during the reporting period will be provided in electronic format to the NYSDEC in accordance with the requirements of Table 2 and summarized in the PRR.

**Table 2. Schedule of Site Management Reports**

| Task/Report | Reporting Frequency* |
|---|---|
| Site Inspection Report | Annually |
| Periodic Review Report | First report 16 months after issuance of COC and annually thereafter, or as otherwise determined by the NYSDEC |

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

All Track 4 area inspection reports will include, at a minimum:

- Date of event or reporting period.
- Name, company, and position of person(s) conducting monitoring/inspection activities.
- Description of the activities performed.
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet).
- Copies of all Site inspection forms.

- Any observations, conclusions, or recommendations.
- A determination as to whether the Site and/or Track 4 area cover conditions have changed since the last reporting event.

Maintenance event reporting forms for any needed maintenance of the cover overlying the Track 4 area will include, at a minimum:

- Date of event.
- Name, company, and position of person(s) conducting Track 4 area cover maintenance activities.
- Description of Track 4 area cover maintenance activities performed.
- Any modifications to the Track 4 area cover.
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet).
- Other documentation such as copies of invoices for maintenance work, receipts for replacement equipment, etc., (attached to the checklist/form).

## 7.2 Periodic Review Report

The initial PRR will be submitted to the NYSDEC project manager beginning 16 months after the COC is issued. After submittal of the initial PRR, the next PRR will be submitted annually to the NYSDEC project manager or at another frequency as may be required by the NYSDEC project manager. In the event that the Site is subdivided into separate parcels with different ownership, such that the Track 4 area is subdivided, a single PRR will be prepared that addresses the Site described in Appendix A - Environmental Easement. The PRR will be prepared in accordance with NYSDEC's DER-10 and submitted within 30 days of the end of each certification period. The PRR will include:

- Identification, assessment and certification of all ECs/ICs required by the remedy for the Site.
- Results of the required annual Site inspections, fire inspections and severe condition inspections, if applicable.
- Description of any change of use, import of materials, or excavation that occurred during the certifying period.

- All applicable Site management forms and other records generated for the Site during the reporting period in the NYSDEC-approved electronic format, if not previously submitted.

- Identification of any wastes generated during the reporting period, along with waste characterization data, manifests, and disposal documentation.

- A Site evaluation, which includes the following:

  - Any new conclusions or observations based on inspections of the cover overlying the Track 4 area.
  - Recommendations regarding any necessary changes to the cover overlying the Track 4 area.
  - The overall performance and effectiveness of the cover overlying the Track 4 area.

### 7.2.1 Certification of Institutional and Engineering Controls

Following the last inspection of the reporting period, a PE licensed to practice and registered in New York State will prepare, and include in the PRR, the following certification as per the requirements of NYSDEC DER-10:

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

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

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

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

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

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

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

- *Use of the Site is compliant with the environmental easement.*

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

- *To the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the Site remedial program and generally accepted engineering practices.*

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

*I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, [name], of [business address], am certifying as [Owner/Remedial Party or Owner's/Remedial Party's Designated Site Representative]"*

The signed certification will be included in the PRR.

The PRR will be submitted, in electronic format, to the NYSDEC project manager and the NYSDOH project manager. The PRR may also need to be submitted in hard-copy format if requested by the NYSDEC project manager.

## 7.3 Corrective Measures Work Plan

If the cover overlying the Track 4 area is found to have failed, or if the periodic certification cannot be provided due to the failure of an IC/EC or failure to conduct Site management activities, a Corrective Measures Work Plan will be submitted to the NYSDEC project manager for approval. This plan will explain the failure and provide the details and schedule for performing work necessary to correct the failure. Unless an emergency condition exists, no work will be performed pursuant to the Corrective Measures Work Plan until it has been approved by the NYSDEC project manager.

## 8.0 REFERENCES

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

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

Lawrence Environmental Group, LLC - Phase I Environmental Site Assessment, December 10, 2013.

Liberty Environmental, Inc. - Soil Disposal Characterization Report for the 99 Granite Street Parcel, July 5, 2017.

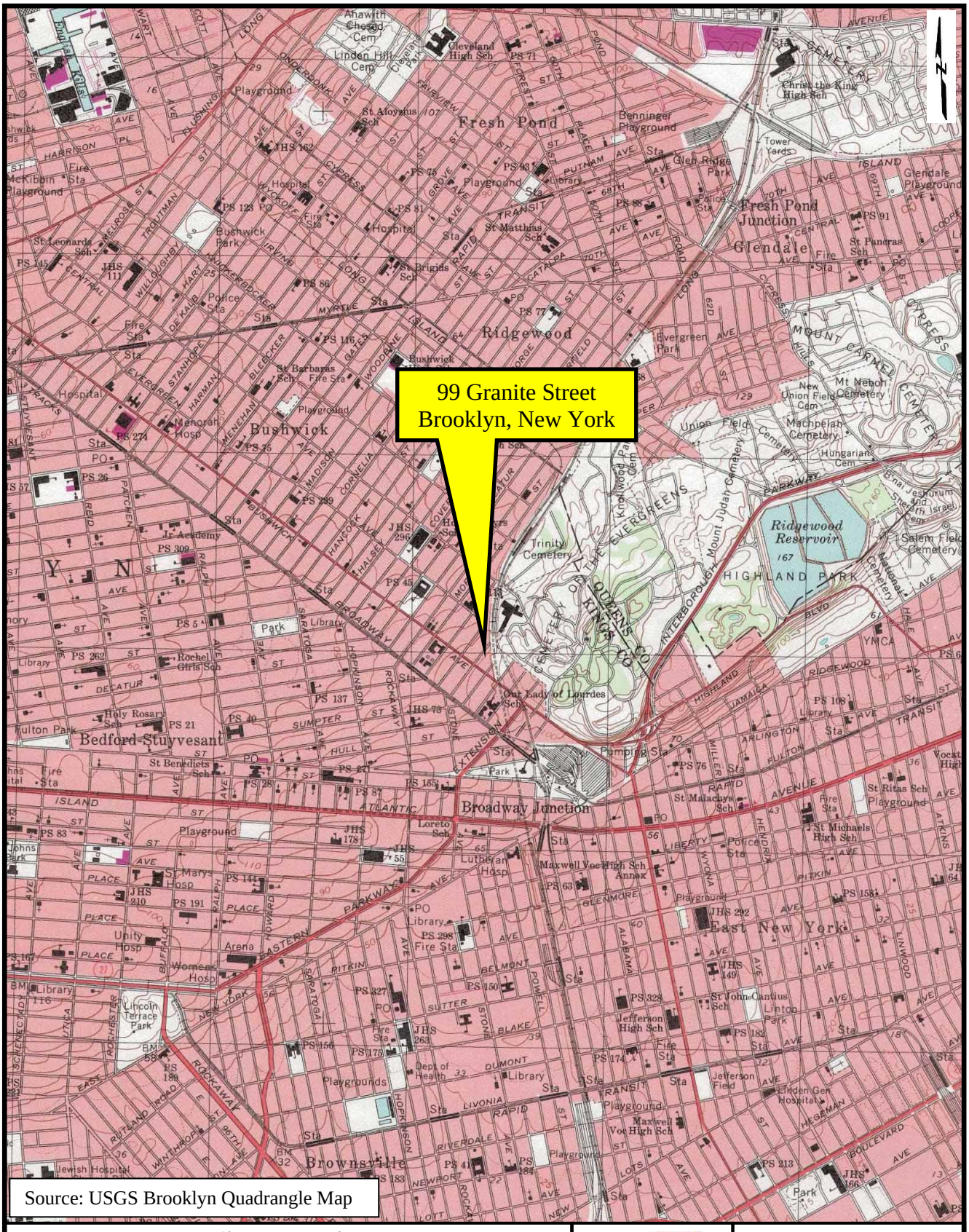
GEI Consultants, Inc., P.C. - Phase II Environmental Subsurface Investigation for the 99 Granite Street Parcel, October 25, 2017.

GEI Consultants, Inc., P.C. - Phase I Environmental Site Assessment for the 97 Granite Street Parcel, February 2019.

GEI Consultants, Inc., P.C. - Phase II Environmental Site Investigation for the 97 Granite Street Parcel, April 12, 2019.

GEI Consultants, Inc., P.C. - Remedial Investigation Report for the 99 Granite Street Site, April 2019 (revised January 2021, March 2021, and June 2021).

# FIGURES



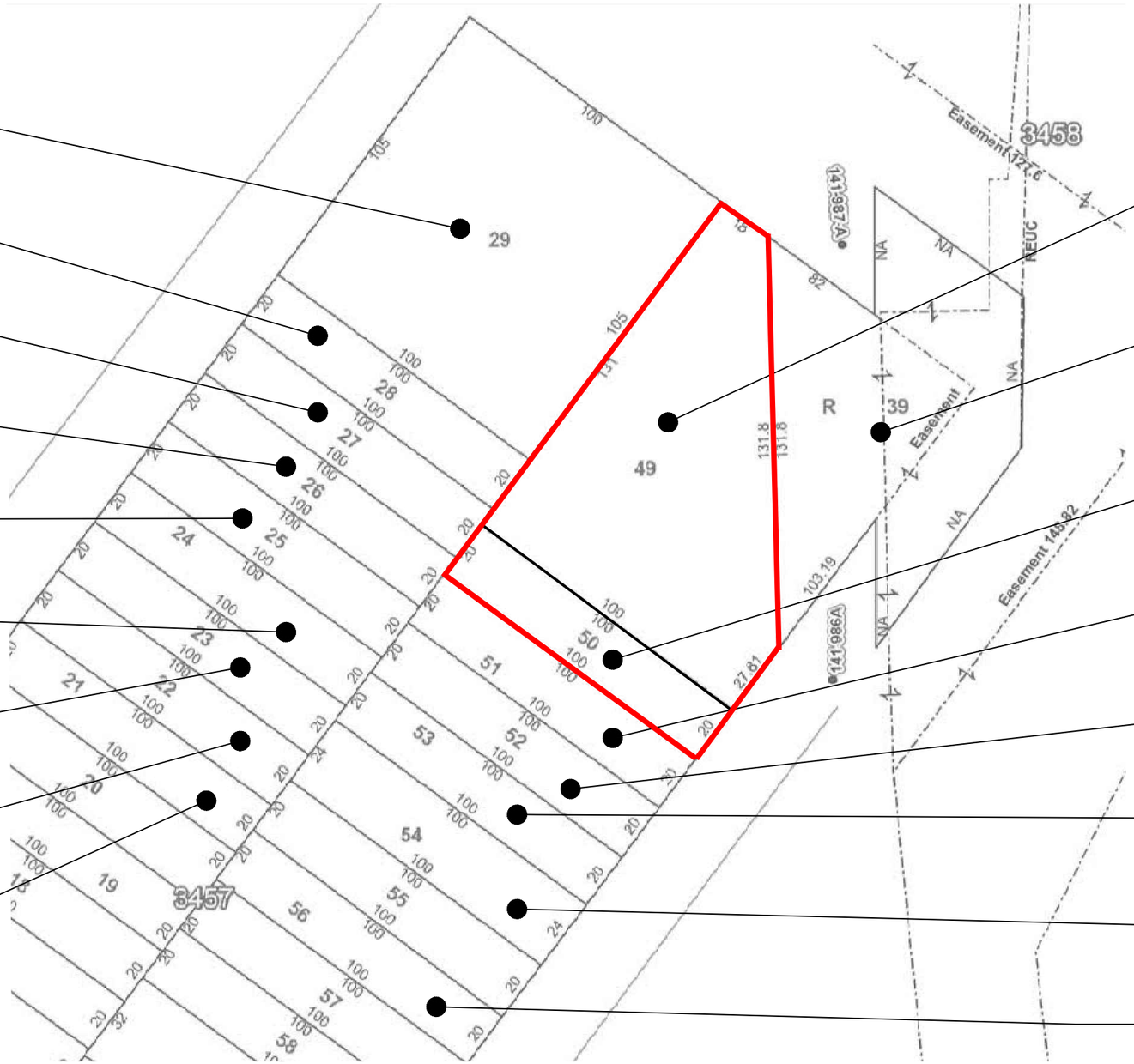

Site Management Plan
99 GRANITE STREET
BROOKLYN, NY

MEDFORD BER LLC
LYNBROOK, NY

GEI Consultants

SITE LOCATION MAP

Project 2000189 | October 2023 | Fig. 1




102 Pilling Street
Owner: New York Psycotherapy
Brooklyn, NY 11207
Block 3457, Lot 29

100 Pilling Street
Owner: Ricketts, Eula
Brooklyn, NY 11207
Block 3457, Lot 28

98 Pilling Street
Owner: Mary Carter
Brooklyn, NY 11207
Block 3457, Lot 27

96co Pilling Street
Owner: Custus, Joyce
Brooklyn, NY 11207
Block 3457, Lot 26

94 Pilling Street
Owner: McClellan Alphonso
Brooklyn, NY 11207
Block 3457, Lot 25

92 Pilling Street
Owner: 92 Pilling Street LLC
Brooklyn, NY 11207
Block 3457, Lot 24

90 Pilling Street
Owner: Moir Pamela
Brooklyn, NY 11207
Block 3457, Lot 23

88 Pilling Street
Owner: St. Leger Matthew
Brooklyn, NY 11207
Block 3457, Lot 22

86 Pilling Street
Owner: Foster Mildred
Brooklyn, NY 11207
Block 3457, Lot 21

Subject Property
99 Granite Street
Owner: Medford Bew, LLC
Brooklyn, NY 11207
Block 3457, Lot 49

Evergreen Avenue
Owner: Long Island Rail Road
Brooklyn, NY 11207
Block 3457, Lot 39

97 Granite Street
Owner: 97 Granite LLC
Brooklyn, NY 11207
Block 3457, Lot 50

95 Granite Street
Owner: Cooper Jeremiah
Brooklyn, NY 11207
Block 3457, Lot 51

93 Granite Street
Owner: Michael Richards
Brooklyn, NY 11207
Block 3457, Lot 52

91 Granite Street
Owner: Junior Walters
Brooklyn, NY 11207
Block 3457, Lot 53

89 Granite Street
Owner: Margarita M. Esquilin
Brooklyn, NY 11207
Block 3457, Lot 54

85 Granite Street
Owner: Efraim Menashek
Brooklyn, NY 11207
Block 3457, Lot 56

0 40 80
SCALE: 1" = 40'

***SOURCE:***

1. NYC DIGITAL TAX MAP DATED 5/8/2015

Site Management Plan
99 GRANITE STREET
BROOKLYN, NY

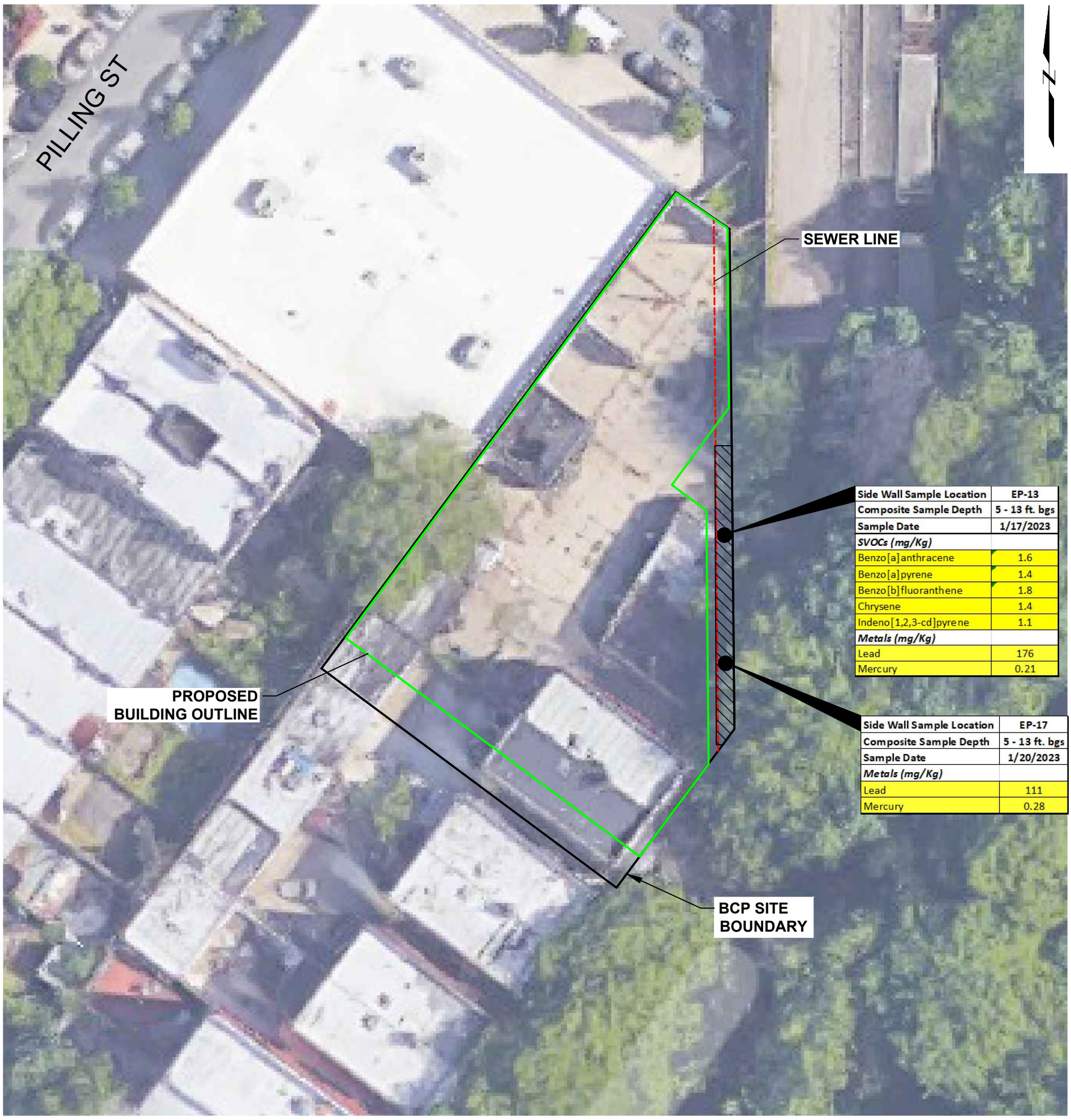
MEDFORD BER LLC
LYNBROOK, NY

GEI Consultants

SURROUNDING PROPERTY
TAX MAP

Project 2000189 | October 2023 | Fig. 2

\\gdc1v-fs01\ I:\Tech\Environmental Projects\PAR Group\99 Granite St Brooklyn\CAD\Figures\FIG - 2.dwg - 11/14/2017




| Side Wall Sample Location | EP-13 |
|---|---|
| Composite Sample Depth | 5 - 13 ft. bgs |
| Sample Date | 1/17/2023 |
| *SVOCs (mg/Kg)* | |
| Benzo[a]anthracene | 1.6 |
| Benzo[a]pyrene | 1.4 |
| Benzo[b]fluoranthene | 1.8 |
| Chrysene | 1.4 |
| Indeno[1,2,3-cd]pyrene | 1.1 |
| *Metals (mg/Kg)* | |
| Lead | 176 |
| Mercury | 0.21 |

| Side Wall Sample Location | EP-17 |
|---|---|
| Composite Sample Depth | 5 - 13 ft. bgs |
| Sample Date | 1/20/2023 |
| *Metals (mg/Kg)* | |
| Lead | 111 |
| Mercury | 0.28 |

NOTES:

ALL ENDPOINT SOIL SAMPLES EXHIBITED CONTAMINANT CONCENTRATIONS BELOW THE UNRESTRICED USE SCOS.

SIDE WALL SAMPLES EP-11, EP-13, AND EP-17 WERE COLLECTED IN ASSOCIATION WITH THE SEWER LINE EXTENDING ALONG/NEARBY THE EASTERN PROPERTY BOUNDARY.

mg/Kg: MILLIGRAMS/KILOGRAM
ft. bgs: FEET BELOW GROUND SURFACE
ug/Kg: MICROGRAMS/KILOGRAM
VOCs: VOLATILE ORGANIC COMPOUNDS
SVOCs: SEMIVOLATILE ORGANIC COMPOUNDS
NYSDEC: NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SCOs: SOIL CLEANUP OBJECTIVES
PFAS: PER AND POLYFLUOROALKYL SUBSTANCES
PFOA: PERFLUOROOCTANOIC ACID
PFOS: PERFLUOROOCTANESULFONIC ACID

EXCEEDS NYSDEC PART 375 UNRESTRICTED USE SCO

| Analyte | NYSDEC Unrestricted Use SCO |
|---|---|
| *SVOCs (mg/Kg)* | |
| Benzo[a]anthracene | 1 |
| Benzo[a]pyrene | 1 |
| Benzo[b]fluoranthene | 1 |
| Chrysene | 1 |
| Indeno[1,2,3-cd]pyrene | 0.5 |
| *Metals (mg/Kg)* | |
| Lead | 63 |
| Mercury | 0.18 |

LEGEND:

- APPROXIMATE CONFIRMATION ENDPOINT AND SIDE WALL SAMPLE LOCATION
- PROPOSED TRACK 4 AREA & COVER SYSTEM ENGINEERING CONTROL
- PROPOSED BUILDING OUTLINE
- SEWER LINE

0 30 60
SCALE, FEET

***SOURCE:***

1. MAP EXTRACTED FROM GOOGLE MAPS

Site Management Plan
99 GRANITE STREET
BROOKLYN, NY

MEDFORD BER LLC
LYNBROOK, NY

GEI Consultants

SITE LAYOUT, TRACK 4 AREA, REMAINING SOIL EXCEEDANCES, AND ENGINEERING CONTROLS

Project 2000189 | October 2023 | Fig. 3

CASILLAS, DAVID C:\Users\dcasillas\OneDrive - GEI Consultants, Inc\Desktop\MISC PROJECTS\Par Group\FIG - 3 (october).dwg - 10/10/2023

# APPENDIX A
# ENVIRONMENTAL EASEMENT

Department of Finance

December 27, 2023

CONNELL FOLEY LLP
875 THIRD AVENUE
21ST FLOOR. ATTN: CRISTINA DIAZ SALCEDO
NEW YORK, NY 10022

**RE: Submitted Transaction Successfully Recorded**

Dear CONNELL FOLEY LLP:

Document Identification Number 2023122200234001 which was submitted and intaken for Recording on 12/22/2023 12:14:50 PM, was successfully recorded on 12/27/2023 at 10:01 AM.

Below summarizes the status of the document(s).

Recording & Endorsement Cover Page(s) attached

2023122200234001

If you have questions or require further information, please send an email to acrishelp@finance.nyc.gov and someone will get back to you.

Thank you.

City Register

**NYC DEPARTMENT OF FINANCE**
**OFFICE OF THE CITY REGISTER**

This page is part of the instrument. The City Register will rely on the information provided by you on this page for purposes of indexing this instrument.The information on this page will control for indexing purposes in the event of any conflict with the rest of the document.

2023122200234001001EB3E4

**RECORDING AND ENDORSEMENT COVER PAGE** **PAGE 1 OF 10**

**Document ID: 2023122200234001** Document Date: 12-14-2023 Preparation Date: 12-22-2023
Document Type: EASEMENT
Document Page Count: 9

**PRESENTER:**
LANDSTAR TITLE AGENCY INC
55 CHERRY LANE
EU50933
CARLE PLACE, NY 11514
516-336-2020
LFREEDMAN@LANDSTARTITLE.NET

**RETURN TO:**
CONNELL FOLEY LLP
875 THIRD AVENUE
21ST FLOOR, ATTN: CRISTINA DIAZ SALCEDO
NEW YORK, NY 10022

**PROPERTY DATA**

| Borough | Block | Lot | Unit | Address |
|---|---|---|---|---|
| BROOKLYN | 3457 | 49 | Entire Lot | 99-101 GRANITE STREET |

**Property Type:** RESIDENTIAL VACANT LAND

**CROSS REFERENCE DATA**

CRFN_____ *or* DocumentID_____ *or* _____ Year_____ Reel____ Page_____ *or* File Number_____

**PARTIES**

**GRANTOR/SELLER:**
MEDFORD BER LLC
60 NORTH PROSPECT AVENUE
LYNBROOK, NY 11563

**GRANTEE/BUYER:**
NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION
625 BROADWAY
ALBANY, NY 12233

**FEES AND TAXES**

| **Mortgage :** | | |
|---|---|---|
| Mortgage Amount: | $ | 0.00 |
| Taxable Mortgage Amount: | $ | 0.00 |
| Exemption: | | |
| TAXES: County (Basic): | $ | 0.00 |
| City (Additional): | $ | 0.00 |
| Spec (Additional): | $ | 0.00 |
| TASF: | $ | 0.00 |
| MTA: | $ | 0.00 |
| NYCTA: | $ | 0.00 |
| Additional MRT: | $ | 0.00 |
| TOTAL: | $ | 0.00 |
| Recording Fee: | $ | 82.00 |
| Affidavit Fee: | $ | 0.00 |

| | | |
|---|---|---|
| Filing Fee: | $ | 100.00 |
| NYC Real Property Transfer Tax: | $ | 0.00 |
| NYS Real Estate Transfer Tax: | $ | 0.00 |

**RECORDED OR FILED IN THE OFFICE OF THE CITY REGISTER OF THE CITY OF NEW YORK**
Recorded/Filed 12-27-2023 10:01
City Register File No.(CRFN): **2023000334811**

*City Register Official Signature*

EV50933

County: Kings Site No: C224269 Brownfield Cleanup Agreement Index : C224269-02-18

B-3457
L-49

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

**THIS INDENTURE** made this AS OF 14th day of December, 2023 between Owner, Medford Ber LLC, having an office at 60 North Prospect Avenue, Lynbrook, New York 11563 (the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

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

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

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

**WHEREAS,** Grantor, is the owner of real property located at the address of 99-101 Granite Street in the City of New York, County of Kings and State of New York, known and designated on the tax map of the New York City Department of Finance as tax map parcel number: Block 3457 Lot 49, being the same as that property conveyed to Grantor by deed dated March 13, 2014 and recorded in the City Register of the City of New York as CRFN # 20140001111780. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 0.009 +/- acres (402 sq. ft.), and is hereinafter more fully described in the Land Title Survey dated October 11, 2023 prepared by William T. Whipple NYSPLS of Control Point Associates Inc. PC, which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

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

**NOW THEREFORE**, in consideration of the mutual covenants contained herein and the terms and conditions of Brownfield Cleanup Agreement Index Number: C224269-02-18, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement").

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

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

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

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

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

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

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

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

(6) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

(7) All future activities on the property that will disturb remaining

contaminated material must be conducted in accordance with the SMP;

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

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

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

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

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

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

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

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

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

Law.

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

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

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

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

(i) are in-place;

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

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

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

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

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

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

(7) the information presented is accurate and complete.

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

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

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

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

5. Enforcement

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

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

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

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

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

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

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

Parties shall address correspondence to:

Site Number: C224269
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

With a copy to:

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

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

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the

recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

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

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

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

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

**Remainder of Page Intentionally Left Blank**

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

Medford Ber LLC:

By: _____

Print Name: David Lwin

Title: Authorized Signatory Date: 11/24/23

**Grantor's Acknowledgment**

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

On the 24th day of November, in the year 2023, before me, the undersigned, personally appeared David Lwin, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

_____
Notary Public - State of New York

Daytona Frey
Notary Public, State of New York
No. 01FR6337225
Qualified in Nassau County
Commission Expires February 22, 2024

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

By: Andrew Guglielmi
Andrew O. Guglielmi, Director
Division of Environmental Remediation

**Grantee's Acknowledgment**

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

On the 1st day of December in the year 2023 before me, the undersigned, personally appeared Andrew O. Guglielmi, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

Cheryl Salem
Notary Public - State of New York

Cheryl A. Salem
Notary Public State of New York
Registration No. 01SA0002177
Qualified in Albany County
My Commission Expires March 3, 2027

## SCHEDULE "A" PROPERTY DESCRIPTION

ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND, SITUATED, LYING AND BEING IN THE BOROUGH OF BROOKLYN, COUNTY OF KINGS, CITY AND STATE OF NEW YORK, BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE NORTHWESTERLY SIDE OF GRANITE STREET DISTANT 465.14 FEET (465'-1 5/8") NORTHEASTERLY FROM THE CORNER FORMED BY THE INTERSECTION OF THE NORTHWESTERLY SIDE OF GRANITE STREET AND THE NORTHEASTERLY SIDE OF BUSHWICK AVENUE;

RUNNING THENCE, NORTH 04 DEGREES 07 MINUTES 36 SECONDS WEST, A DISTANCE OF 73.15 FEET TO A POINT;

RUNNING THENCE, NORTH 88 DEGREES 13 MINUTES 49 SECONDS EAST, A DISTANCE OF 7.16 FEET TO A POINT;

RUNNING THENCE, SOUTH 01 DEGREES 46 MINUTES 11 SECONDS EAST, A DISTANCE OF 67.87 FEET TO A POINT,

RUNNING THENCE, SOUTH 36 DEGREES 42 MINUTES 10 SECONDS WEST, A DISTANCE OF 6.67FEET TO THE POINT OR PLACE OF BEGINNING.

CONTAINING 402± SQUARE FEET OR 0.009± ACRES

FINANCE NEW • YORK
THE CITY OF NEW YORK DEPARTMENT OF FINANCE

# NYC RPT

NEW YORK CITY DEPARTMENT OF FINANCE

## REAL PROPERTY TRANSFER TAX RETURN

(Pursuant to Title 11, Chapter 21, NYC Administrative Code)

**TYPE OR PRINT LEGIBLY**

If the transfer involves more than one grantor or grantee or a partnership, the names, addresses and Social Security Numbers or Employer Identification Numbers of all grantors or grantees and general partners must be provided on Schedule 3, page 3.

R

### GRANTOR

● Name: Medford Ber LLC

● Grantor is a(n): (check one) ☐ individual ☐ partnership (must complete Schedule 3) ☐ corporation ☑ other: Limited Liability Company

● Telephone Number:

● Permanent mailing address after transfer (number and street): 60 North Prospect Avenue

● City and State: Lynbrook, NY

● Zip Code: 11563

● EMPLOYER IDENTIFICATION NUMBER: 45-3061040 OR ● SOCIAL SECURITY NUMBER:

DO NOT WRITE IN THIS SPACE
FOR OFFICE USE ONLY

● RETURN NUMBER ▲

● DEED SERIAL NUMBER ▲

● NYS REAL ESTATE TRANSFER TAX PAID ▲

### GRANTEE

● Name: N.Y.S. Department of Environmental Conservation

● Grantee is a(n): (check one) ☐ individual ☐ partnership (must complete Schedule 3) ☐ corporation ☑ other: Agency

● Telephone Number:

● Permanent mailing address after transfer (number and street): 625 Broadway

● City and State: Albany, NY

● Zip Code: 12233

● EMPLOYER IDENTIFICATION NUMBER: 14-6013200 OR ● SOCIAL SECURITY NUMBER:

### PROPERTY LOCATION

LIST EACH LOT SEPARATELY. ATTACH A RIDER IF ADDITIONAL SPACE IS REQUIRED

| ● Address (number and street) | Apt. No. | Borough | Block | Lot | # of Floors | Square Feet | ● Assessed Value of Property |
|---|---|---|---|---|---|---|---|
| 99-101 Granite Street | | Brooklyn | 3457 | 49 | 1 | 10,200 | $34,314 |
| | | | | | | | |
| | | | | | | | |

● DATE OF TRANSFER TO GRANTEE: _____

● PERCENTAGE OF INTEREST TRANSFERRED: 100 %

### CONDITION OF TRANSFER ▼ See Instructions

● Check (✓) all of the conditions that apply and fill out the appropriate schedules on pages 5-11 of this return. Additionally, Schedules1 and 2 must be completed for all transfers.

a. ☐ .....Arms length transfer
b. ☐ .....Transfer in exercise of option to purchase
c. ☐ .....Transfer from cooperative sponsor to cooperative corporation
d. ☐ .....Transfer by referee or receiver (complete Schedule A, page 5)
e. ☐ .....Transfer pursuant to marital settlement agreement or divorce decree
f. ☐ .....Deed in lieu of foreclosure (complete Schedule C, page 6)
g. ☐ .....Transfer pursuant to liquidation of an entity (complete Schedule D, page 6)
h. ☐ .....Transfer from principal to agent, dummy, strawman or conduit or vice-versa (complete Schedule E, page 7)
i. ☐ .....Transfer pursuant to trust agreement or will (attach a copy of trust agreement or will)
j. ☐ .....Gift transfer not subject to indebtedness
k. ☐ .....Gift transfer subject to indebtedness
l. ☐ .....Transfer to a business entity in exchange for an interest in the business entity (complete Schedule F, page 7)
m. ☐ .....Transfer to a governmental body
n. ☐ .....Correction deed
o. ☐ .....Transfer by or to a tax exempt organization (complete Schedule G, page 8).
p. ☐ .....Transfer of property partly within and partly without NYC
q. ☐ .....Transfer of successful bid pursuant to foreclosure
r. ☐ .....Transfer by borrower solely as security for a debt or a transfer by lender solely to return such security
s. ☐ .....Transfer wholly or partly exempt as a mere change of identity or form of ownership. Complete Schedule M, page 9)
t. ☐ .....Transfer to a REIT or to a corporation or partnership controlled by a REIT. (Complete Schedule R, pages 10 and 11)
u. ☐ .....Other transfer in connection with financing (describe): _____
v. ☑ .....Other (describe): Environmental Easement

**● TYPE OF PROPERTY (✓)**

a. ☐ ..... 1-3 family house
b. ☐ ..... Individual residential condominium unit
c. ☐ ..... Individual cooperative apartment
d. ☐ ..... Commercial condominium unit
e. ☐ ..... Commercial cooperative
f. ☐ ..... Apartment building
g. ☐ ..... Office building
h. ☐ ..... Industrial building
i. ☐ ..... Utility
j. ☑ ..... OTHER. (describe):
- Residential

**● TYPE OF INTEREST (✓)**

Check box at LEFT if you intend to record a document related to this transfer. Check box at RIGHT if you do not intend to record a document related to this transfer.

| REC. | | NON REC. |
|---|---|---|
| a. ☐ | Fee | ☐ |
| b. ☐ | Leasehold Grant | ☐ |
| c. ☐ | Leasehold Assignment or Surrender | ☐ |
| d. ☐ | Easement | ☑ |
| e. ☐ | Development Rights | ☐ |
| f. ☐ | Stock | ☐ |
| g. ☐ | Partnership Interest | ☐ |
| h. ☐ | OTHER. (describe): | ☐ |

## SCHEDULE 1 - DETAILS OF CONSIDERATION

COMPLETE THIS SCHEDULE FOR ALL TRANSFERS AFTER COMPLETING THE APPROPRIATE SCHEDULES ON PAGES 5 THROUGH 11. ENTER "ZERO" ON LINE 11 IF THE TRANSFER REPORTED WAS WITHOUT CONSIDERATION.

| | | |
|---|---|---|
| 1. Cash | 1. | $0.00 |
| 2. Purchase money mortgage | 2. | $0.00 |
| 3. Unpaid principal of pre-existing mortgage(s) | 3. | $0.00 |
| 4. Accrued interest on pre-existing mortgage(s) | 4. | $0.00 |
| 5. Accrued real estate taxes | 5. | $0.00 |
| 6. Amounts of other liens on property | 6. | $0.00 |
| 7. Value of shares of stock or of partnership interest received | 7. | $0.00 |
| 8. Value of real or personal property received in exchange | 8. | $0.00 |
| 9. Amount of Real Property Transfer Tax and/or other taxes or expenses of the grantor which are paid by the grantee | 9. | $0.00 |
| 10. Other (describe): _____ | 10. | $0.00 |
| 11. **TOTAL CONSIDERATION** (add lines 1 through 10 - must equal amount entered on line 1 of Schedule 2) (see instructions) | 11. | $0.00 |

**See instructions for special rules relating to transfers of cooperative units, liquidations, marital settlements and transfers of property to a business entity in return for an interest in the entity.**

## SCHEDULE 2 - COMPUTATION OF TAX

| | | Payment Enclosed |
|---|---|---|
| A. **Payment** | Pay amount shown on line 14 - *See Instructions* | $50.00 |

| | | | |
|---|---|---|---|
| 1 Total Consideration (from line 11, above) | 1. | $0.00 |
| 2. Excludable liens (see instructions) | 2. | $0.00 |
| 3. Consideration (Line 1 less line 2) | 3. | $0.00 |
| 4. Tax Rate (see instructions) | 4. | 0 % |
| 5. Percentage change in beneficial ownership *(see instructions)* | 5. | 100 % |
| 6. Taxable consideration (multiply line 3 by line 5) | 6. | $0.00 |
| 7. Tax (multiply line 6 by line 4) | 7. | $0.00 |
| 8. Credit (see instructions) | 8. | $0.00 |
| 9. Tax due (line 7 less line 8) (if the result is negative, enter zero) | 9. | $0.00 |
| 10. Interest (see instructions) | 10. | $0.00 |
| 11. Penalty (see instructions) | 11. | $0.00 |
| 12. Total tax due (add lines 9, 10 and 11) | 12. | $0.00 |
| 13. Filing Fee | 13. | 50 00 |
| 14. **Total Remittance Due** (line 12 plus line 13) | 14. | $50.00 |

## GRANTOR'S ATTORNEY

| Name of Attorney | | Telephone Number |
|---|---|---|
| George Duke, Esq. | | ( 212 ) 307-3700 |
| **Address (number and street)** | **City and State** | **Zip Code** |
| 875 Third Avenue | New York, New York | 10022 |

EMPLOYER IDENTIFICATION NUMBER - OR SOCIAL SECURITY NUMBER

## GRANTEE'S ATTORNEY

| Name of Attorney | | Telephone Number |
|---|---|---|
| | | ( ) |
| **Address (number and street)** | **City and State** | **Zip Code** |
| | | |

EMPLOYER IDENTIFICATION NUMBER - OR SOCIAL SECURITY NUMBER

## CERTIFICATION

I swear or affirm that this return, including any accompanying schedules, affidavits and attachments, has been examined by me and is, to the best of my knowledge, a true and complete return made in good faith, pursuant to Title 11, Chapter 21 of the Administrative Code and the regulations issued thereunder.

### GRANTOR

Sworn to and subscribed to before me on this 21 day of September, 2023.

Signature of Notary

Jennifer Santeiro
Notary Public, State of New York
No. 01SA5064796
Qualified in Nassau County
Commission Expires August 26, 2026

Notary's stamp or seal

45-3061040
EMPLOYER IDENTIFICATION NUMBER OR SOCIAL SECURITY NUMBER

Medford Ber LLC
Name of Grantor

Signature of Grantor

### GRANTEE

Sworn to and subscribed to before me on this 15th day of December, 2023.

Signature of Notary

Cheryl A. Salem
Notary Public State of New York
Registration No. 01SA0002177
Qualified in Albany County
My Commission Expires March 3, 2027

Notary's stamp or seal

14-6013200
EMPLOYER IDENTIFICATION NUMBER OR SOCIAL SECURITY NUMBER

N.Y.S. Department of Environmental Conservation
Name of Grantee

Signature of Grantee

**GRANTEE:** To ensure that your property and water/sewer tax bills are sent to the proper address you must complete the Registration forms included in this packet. Owner's Registration Cards can also be obtained by calling the Department of Finance at (718) 935-9500.

TP-584 (9/19)

Department of Taxation and Finance

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

*Recording office time stamp*

*See Form TP-584-I,* Instructions for Form TP-584, *before completing this form. Print or type.*

## Schedule A – Information relating to conveyance

| Grantor/Transferor | Name *(if individual, last, first, middle initial)* (☐ *mark an X if more than one grantor*) | | | Social Security number (SSN) |
|---|---|---|---|---|
| ☐ Individual | Medford Ber LLC | | | |
| ☐ Corporation | Mailing address | | | SSN |
| ☐ Partnership | 60 North Prospect Avenue | | | |
| ☐ Estate/Trust | City | State | ZIP code | Employer Identification Number (EIN) |
| ☐ Single member LLC | Lynbrook | NY | 11563 | 45-3061040 |
| ☒ Multi-member LLC | Single member's name if grantor is a single member LLC *(see instructions)* | | | Single member EIN or SSN |
| ☐ Other | | | | |

| Grantee/Transferee | Name *(if individual, last, first, middle initial)* (☐ *mark an X if more than one grantee*) | | | SSN |
|---|---|---|---|---|
| ☐ Individual | N.Y.S. DEPARTMENT OF ENVIRONMENTAL CONSERVATION | | | |
| ☐ Corporation | Mailing address | | | SSN |
| ☐ Partnership | 625 BROADWAY | | | |
| ☐ Estate/Trust | City | State | ZIP code | EIN 14-6013200 ~~83-3967201~~ CA |
| ☐ Single member LLC | ALBANY | NY | 12233 | |
| ☐ Multi-member LLC | Single member's name if grantee is a single member LLC *(see instructions)* | | | Single member EIN or SSN |
| ☒ Other | | | | |

Location and description of property conveyed

| Tax map designation – Section, block & lot *(include dots and dashes)* | SWIS code (six digits) | Street address | City, town, or village | County |
|---|---|---|---|---|
| -3457-49 | 610100 | 99-101 Granite Street | Brooklyn | Kings |

Type of property conveyed *(mark an X in applicable box)*

1 ☐ One- to three-family house
2 ☐ Residential cooperative
3 ☐ Residential condominium
4 ☐ Vacant land
5 ☐ Commercial/industrial
6 ☐ Apartment building
7 ☐ Office building
8 ☐ Four-family dwelling
9 ☒ Other Residential

Date of conveyance: ____ (month) ____ (day) ____ (year)

Percentage of real property conveyed which is residential real property 100 % *(see instructions)*

Condition of conveyance *(mark an X in all that apply)*

a. ☐ Conveyance of fee interest
b. ☐ Acquisition of a controlling interest (state percentage acquired _____ %)
c. ☐ Transfer of a controlling interest (state percentage transferred _____ %)
d. ☐ Conveyance to cooperative housing corporation
e. ☐ Conveyance pursuant to or in lieu of foreclosure or enforcement of security interest *(attach Form TP-584.1, Schedule E)*
f. ☐ Conveyance which consists of a mere change of identity or form of ownership or organization *(attach Form TP-584.1, Schedule F)*
g. ☐ Conveyance for which credit for tax previously paid will be claimed *(attach Form TP-584.1, Schedule G)*
h. ☐ Conveyance of cooperative apartment(s)
i. ☐ Syndication
j. ☐ Conveyance of air rights or development rights
k. ☐ Contract assignment
l. ☐ Option assignment or surrender
m. ☐ Leasehold assignment or surrender
n. ☐ Leasehold grant
o. ☐ Conveyance of an easement
p. ☐ Conveyance for which exemption from transfer tax claimed *(complete Schedule B, Part 3)*
q. ☐ Conveyance of property partly within and partly outside the state
r. ☐ Conveyance pursuant to divorce or separation
s. ☒ Other *(describe)* Environmental Easement

| *For recording officer's use* | Amount received | Date received | Transaction number |
|---|---|---|---|
| | Schedule B, Part 1 $ _____ | | |
| | Schedule B, Part 2 $ | | |

## Schedule B – Real estate transfer tax return (Tax Law Article 31)

**Part 1** – Computation of tax due

| | | | |
|---|---|---|---|
| 1 | Enter amount of consideration for the conveyance *(if you are claiming a total exemption from tax, mark an X in the Exemption claimed box, enter consideration and proceed to Part 3)* ☐ **Exemption claimed** | 1. | 0 00 |
| 2 | Continuing lien deduction *(see instructions if property is taken subject to mortgage or lien)* | 2. | 0 00 |
| 3 | Taxable consideration *(subtract line 2 from line 1)* | 3. | 0 00 |
| 4 | Tax: $2 for each $500, or fractional part thereof, of consideration on line 3 | 4. | 0 00 |
| 5 | Amount of credit claimed for tax previously paid *(see instructions and attach Form TP-584.1, Schedule G)* | 5. | 0 00 |
| 6 | Total tax due* *(subtract line 5 from line 4)* | 6. | 0 00 |

**Part 2** – Computation of additional tax due on the conveyance of residential real property for $1 million or more

| | | | |
|---|---|---|---|
| 1 | Enter amount of consideration for conveyance *(from Part 1, line 1)* | 1. | |
| 2 | Taxable consideration *(multiply line 1 by the percentage of the premises which is residential real property, as shown in Schedule A)* | 2. | |
| 3 | Total additional transfer tax due* *(multiply line 2 by 1% (.01))* | 3. | 0 00 |

**Part 3** – Explanation of exemption claimed on Part 1, line 1 *(mark an X in all boxes that apply)*

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

a. Conveyance is to the United Nations, the United States of America, New York State, or any of their instrumentalities, agencies, or political subdivisions (or any public corporation, including a public corporation created pursuant to agreement or compact with another state or Canada) ..... a ☐

b. Conveyance is to secure a debt or other obligation ..... b ☐

c. Conveyance is without additional consideration to confirm, correct, modify, or supplement a prior conveyance ..... c ☐

d. Conveyance of real property is without consideration and not in connection with a sale, including conveyances conveying realty as bona fide gifts ..... d ☐

e. Conveyance is given in connection with a tax sale ..... e ☐

f. Conveyance is a mere change of identity or form of ownership or organization where there is no change in beneficial ownership. (This exemption cannot be claimed for a conveyance to a cooperative housing corporation of real property comprising the cooperative dwelling or dwellings.) Attach Form TP-584.1, Schedule F ..... f ☐

g. Conveyance consists of deed of partition ..... g ☐

h. Conveyance is given pursuant to the federal Bankruptcy Act ..... h ☐

i. Conveyance consists of the execution of a contract to sell real property, without the use or occupancy of such property, or the granting of an option to purchase real property, without the use or occupancy of such property ..... i ☐

j. Conveyance of an option or contract to purchase real property with the use or occupancy of such property where the consideration is less than $200,000 and such property was used solely by the grantor as the grantor's personal residence and consists of a one-, two-, or three-family house, an individual residential condominium unit, or the sale of stock in a cooperative housing corporation in connection with the grant or transfer of a proprietary leasehold covering an individual residential cooperative apartment ..... j ☐

k. Conveyance is not a conveyance within the meaning of Tax Law, Article 31, § 1401(e) *(attach documents supporting such claim)* ..... k ☐

* The total tax (from Part 1, line 6 and Part 2, line 3 above) is due within 15 days from the date of conveyance. Make check(s) payable to the county clerk where the recording is to take place. For conveyances of real property within New York City, use Form TP-584-NYC. If a recording is not required, send this return and your check(s) made payable to the ***NYS Department of Taxation and Finance***, directly to the NYS Tax Department, RETT Return Processing, PO Box 5045, Albany NY 12205-0045. If not using U.S. Mail, see Publication 55, *Designated Private Delivery Services*.

## Schedule C – Credit Line Mortgage Certificate (Tax Law Article 11)

**Complete the following only if the interest being transferred is a fee simple interest.**
This is to certify that: *(mark an X in the appropriate box)*

1. ☐ The real property being sold or transferred is not subject to an outstanding credit line mortgage.

2. ☐ The real property being sold or transferred is subject to an outstanding credit line mortgage. However, an exemption from the tax is claimed for the following reason:

   a ☐ The transfer of real property is a transfer of a fee simple interest to a person or persons who held a fee simple interest in the real property (whether as a joint tenant, a tenant in common or otherwise) immediately before the transfer.

   b ☐ The transfer of real property is (A) to a person or persons related by blood, marriage or adoption to the original obligor or to one or more of the original obligors or (B) to a person or entity where 50% or more of the beneficial interest in such real property after the transfer is held by the transferor or such related person or persons (as in the case of a transfer to a trustee for the benefit of a minor or the transfer to a trust for the benefit of the transferor).

   c ☐ The transfer of real property is a transfer to a trustee in bankruptcy, a receiver, assignee, or other officer of a court.

   d ☐ The maximum principal amount secured by the credit line mortgage is $3 million or more, and the real property being sold or transferred is **not** principally improved nor will it be improved by a one- to six-family owner-occupied residence or dwelling.

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

   e ☐ Other *(attach detailed explanation)*.

3. ☐ The real property being transferred is presently subject to an outstanding credit line mortgage. However, no tax is due for the following reason:

   a ☐ A certificate of discharge of the credit line mortgage is being offered at the time of recording the deed.

   b ☐ A check has been drawn payable for transmission to the credit line mortgagee or mortgagee's agent for the balance due, and a satisfaction of such mortgage will be recorded as soon as it is available.

4. ☐ The real property being transferred is subject to an outstanding credit line mortgage recorded in _____ (insert liber and page or reel or other identification of the mortgage). The maximum principal amount of debt or obligation secured by the mortgage is _____. No exemption from tax is claimed and the tax of _____ is being paid herewith. *(Make check payable to county clerk where deed will be recorded.)*

## Signature (both the grantors and grantees must sign)

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

| Grantor signature | Title | Grantee signature | Title |
|---|---|---|---|
| | Authorized Signatory | Andrew Kluglein | Director of Remediation |
| | | | |

**Reminder:** Did you complete all of the required information in Schedules A, B, and C? Are you required to complete Schedule D? If you marked *e*, *f*, or *g* in Schedule A, did you complete Form TP-584.1? Have you attached your check(s) made payable to the county clerk where recording will take place? If no recording is required, send this return and your check(s), made payable to the ***NYS Department of Taxation and Finance,*** directly to the NYS Tax Department, RETT Return Processing, PO Box 5045, Albany NY 12205-0045. If not using U.S. Mail, see Publication 55, *Designated Private Delivery Services.*

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

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

**If the property is being conveyed by a referee pursuant to a foreclosure proceeding, proceed to Part 2, mark an *X* in the second box under *Exemption for nonresident transferors/sellers*, and sign at bottom.**

**Part 1** – New York State residents

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

### Certification of resident transferors/sellers

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

| Signature | Print full name | Date |
|---|---|---|
| Signature | Print full name | Date |
| Signature | Print full name | Date |
| Signature | Print full name | Date |

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

**Part 2** – Nonresidents of New York State

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

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

### Exemption for nonresident transferors/sellers

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

☐ The real property or cooperative unit being sold or transferred qualifies in total as the transferor's/seller's principal residence (within the meaning of Internal Revenue Code, section 121) from _____ (Date) to _____ (Date) *(see instructions)*.

☐ The transferor/seller is a mortgagor conveying the mortgaged property to a mortgagee in foreclosure, or in lieu of foreclosure with no additional consideration.

☐ The transferor or transferee is an agency or authority of the United States of America, an agency or authority of New York State, the Federal National Mortgage Association, the Federal Home Loan Mortgage Corporation, the Government National Mortgage Association, or a private mortgage insurance company.

| Signature | Print full name | Date |
|---|---|---|
| Signature | Print full name | Date |
| Signature | Print full name | Date |
| Signature | Print full name | Date |

# APPENDIX B
# SITE CONTACTS

| Name | Phone/Email Address |
|---|---|
| David Levine, Medford Ber LLC<br>Property Owner | 917.680.1822<br>dlevine@pargroup.com |
| Gary Rozmus P.E., GEI Consultants<br>Engineer of Record | 631.479.3510<br>grozmus@geiconsultants.com |
| Aaron Fischer, NYSDEC<br>Project Manager | 518.402.9805<br>aaron.fischer@dec.ny.gov |
| Heidi Dudek, NYSDEC<br>Project Manger's Supervisor | 518.402.9813<br>heidi.dudek@dec.ny.gov |
| Kelly Lewandowski, NYSDEC<br>Site Control | 518.402.9553<br>kelly.lewandowski@dec.ny.gov |
| Sarita Wagh, NYSDOH<br>Project Manager | 518.402.7817<br>sarita.wagh@health.ny.gov |

# APPENDIX C
# HISTORICAL DOCUMENTATION

LAWRENCE
ENVIRONMENTAL GROUP, LLC

# PHASE I ENVIRONMENTAL SITE ASSESSMENT

**SUBJECT PROPERTY:**
99-101 Granite Street
Brooklyn, NY 11207

**PREPARED FOR:**
**The Par Group**
60 North Prospect Avenue
Lynbrook, NY 11563

**PREPARED BY:**
**LAWRENCE ENVIRONMENTAL GROUP, LLC**
108 West 39th Street
Suite 500
New York, NY 10018

LEG Project No.: MSCCOM 199

**SURVEY DATE:**
November 22, 2013

**DATE OF ISSUE:**
December 10, 2013

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## *EXECUTIVE SUMMARY*

Lawrence Environmental Group, LLC (LEG) was retained by The Par Group to perform a Phase 1 Environmental Site Assessment (ESA) of 99-101 Granite Street, Brooklyn, NY (Property). This ESA was conducted in general conformance with ASTM International Standard Practice for Environmental Site Assessments E1527-05 for the purpose of identifying recognized environmental conditions (RECs) in connection with the Property.

The Property consists of an approximately 0.18-acre irregularly-shaped parcel of land, located on the west side of Granite Street in the borough of Brooklyn, Kings County, New York City, NY. The Property is improved with a 2-story rental apartment building with a basement which contains a total of two residential apartments units (99 Granite Street). In addition, the Property also contains a rear paved parking area containing a total of three brick masonry carport buildings, which are constructed on-grade (101 Granite Street).

The subject building features wood floor spans and wood roof decking, with brick masonry exterior walls. The roof is flat and surfaced with a modified bitumen membrane. Vertical access is provided via a single interior stairwell. The basement contains residential, storage, and mechanical areas. The ground-floor contains the entrance area and one residential unit. The second floor contains one residential unit. Interior finishes consist of a combination of ceramic tile, vinyl tile, roll-on vinyl, wood, and carpeted flooring, painted gypsum board and plaster walls, and painted gypsum board and plaster ceilings, as well as drop ceiling systems with lay-in ceiling panels.

Heat is provided by a central natural gas-fired low-pressure boiler located in the main basement area. Electricity is provided by Consolidated Edison of New York (ConEd). Natural gas is provided by National Grid. Domestic water, storm water, and sewer services are provided by the New York City Department of Environmental Protection (NYC DEP). Additional Property improvements include a concrete paved sidewalk at the Property frontage at Granite Street, and a paved driveway and paved rear parking area.

The Property is situated in a built-up urban mixed-use residential and commercial area in the borough of Brooklyn. Surrounding properties consist of a combination of 2- and 3-story dwellings, a 1-story commercial building, sub-grade railroad tracks, and a cemetery. The Property is located in an elevated area within the borough of Brooklyn. Groundwater flow

on-site and at the surrounding properties is to the south and east, is presumed to be to the southeast, towards Jamaica Bay. Groundwater flow at the surrounding properties to the north and west is presumed to be to the northwest, towards English Kills.

***CONCLUSIONS AND RECOMMENDATIONS***

LEG has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of E1527-05 of 99-101 Granite Street, Brooklyn, NY (Property). Any exceptions to, or deletions from, this practice are described in *Section 9.0* of this report. This assessment has revealed no evidence of recognized environmental conditions (RECs) in connection with the Property. However, the following issues of environmental concern were noted which warrant mention:

- Approximately 25 linear feet (LF) of aircell pipe insulation with cementitious pipe fitting insulation ranging from fair to poor condition was observed in the main basement area. In addition, an unquantified amount of friable and non-friable suspect ACM, including roll-on vinyl flooring, 9”x9” and 12”x12” vinyl floor tile, flooring mastic, gypsum board and joint compound, wall and ceiling plaster, lay-in ceiling panels, window caulking and glazing putty, and roofing materials was identified on site. These materials were generally in good condition. LEG recommends that a comprehensive asbestos survey be performed on site, in order to quantify all ACM within the subject buildings. Based on the results of the asbestos survey, further actions may be warranted, and costs incurred. Of note, according to USEPA regulations, ACM that is intact and in good condition may, in general, be managed safely in-place under an Asbestos Operations and Maintenance (O&M) program, until removal is dictated by renovation, demolition, or deteriorating material condition. In the interim, LEG recommends that the suspect ACM be maintained under an Asbestos O&M Program.

- An unquantified amount of damaged and chipping paint was observed in the first and second floors of the subject building. Given the date of construction of the subject building (pre-1978), lead-based paint (LBP) may be present. LEG therefore recommends that a comprehensive LBP survey be performed on-site. Based on the results of the LBP survey, further actions may be warranted, and costs incurred.

- Approximately 25 SF of dry petroleum staining was observed on the concrete flooring of the eastern carport area. The source of the staining appeared to be automobile parking in this area. LEG recommends that this staining, as well as any other dry petroleum staining on-site, be removed from car port areas as part of normal housekeeping practices.

- A large amount of water damaged solid waste and debris was observed in the rear carports. Of note, no mold was observed in these areas. However, LEG recommends that all solid waste be removed from these areas as part of normal housekeeping, in order to provide sanitary conditions, and to prevent potential mold growth on-site.

## *1.0 INTRODUCTION*

### 1.1.1 Recognized Environmental Conditions

The purpose of the Phase 1 Environmental Site Assessment is to identify, to the extent feasible, recognized environmental conditions (RECs) in connection with the Property. The methods and procedures used to perform this task follow ASTM International Standard E 1527-05, Standard Practice for Environmental Site Assessments: Phase 1 Environmental Site Assessment Process. A recognized environmental condition is defined as:

> "The presence or likely presence of any *hazardous substances* or *petroleum products* on a *property* under conditions that indicate an existing release, a past release, or a *material threat* of a release of any *hazardous substances* or *petroleum products* into structures on the *property* or into the ground, ground water, or surface water of the *property*. The term includes *hazardous substances* or *petroleum products* even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis are not recognized environmental conditions."

### 1.1.2 Historical Recognized Environmental Condition

As part of the Phase I Environmental Site Assessment, historical recognized environmental conditions (HRECs) in connection with the Property will be identified to the extent feasible. A historical recognized environmental condition is defined as:

> "An environmental condition which in the past would have been considered a recognized environmental condition, but which may or may not be considered a recognized environmental condition currently."

If a past release of any hazardous substances or petroleum products has occurred in connection with the Property and has been remediated, with such remediation accepted by the responsible regulatory agency (for example, as evidenced by the issuance of a No Further Action letter or equivalent), this condition shall be considered a "historical recognized environmental condition" and included in the findings section of the Phase I Environmental Site Assessment report.

### 1.2 Scope of Services

This ESA was conducted utilizing a standard of good commercial and customary practice that is consistent with ASTM International E1527-05. Any significant scope-of-work additions, deletions, or deviations to ASTM E1527-05 are noted in *Sections 9.0 and 10.0*. In general, the scope of this assessment consisted of:

- Reviewing readily available information and environmental data related to the Property;
- Interviewing readily available persons knowledgeable about the subject property;
- Reviewing readily available maps and records maintained by federal, state, and local regulatory agencies;
- Conducting a visual site inspection; and
- A review of available documentation of asbestos and lead-based paint surveys, if available.

The specific scope of this assessment included the following:

- A site reconnaissance to inspect on site conditions and assess the Property's location with respect to surrounding property uses and natural surface features. Photographs taken as part of the site reconnaissance are provided in *Appendix A;*
- A review of and interpretation of historical sources, where applicable, including (but not limited to): Sanborn Fire Insurance maps (*Appendix B*), the most recent topographic map available for review *(Appendix C*), a site vicinity map (*Appendix D*), and city directories, in order to identify previous activities on and in the vicinity of the Property;

- A review of published radon occurrence maps, included in *Appendix F*, to determine if the Property are located in an area with a propensity for elevated radon gas levels;
- Obtaining specialized knowledge or experience on the part of the user and owner;
- A review of readily available environmental databases maintained by the United States Environmental Protection Agency (USEPA), state, and local agencies within the approximate minimum search distances. The environmental database report was provided by Environmental Data Resources, Inc. (EDR) Milford, CT;
- A review of physical characteristics of the Property through a review of referenced sources for topographic, geologic, soils, and hydrologic data;
- A review of prior asbestos and lead survey reports, if available; and
- A review of other historical records, if available, in possession of the current owner, prospective purchaser, or consultants of the Property

### 1.3 Assumptions, Limitations, and Exceptions

The work conducted by LEG for this ESA was limited to those services described herein, and no other service beyond those explicitly stated should be inferred or are implied. The conclusions presented in this report are professional opinions based solely upon LEG's interpretations of the readily available historical information, conversations with personnel knowledgeable about the site, and other readily available information, as referenced in the report. These conclusions are intended exclusively for the purpose stated herein, at the site indicated, and for the project indicated.

This ESA report was prepared solely for the benefit of The Par Group. However, LEG will, upon written request from The Par Group, certify that lending institutions or other third parties who may acquire a security leasehold or fee interest in the Property, may rely on this ESA. The scope of services performed during this investigation may not be appropriate for other users, and any use or re-use of this document, or the findings or conclusions presented herein, is at the sole risk of said user.

This study is not intended to be a definitive investigation of possible contamination at the Property. No exploratory borings, soil or groundwater sampling, or laboratory analyses were performed at the Property as part of this ESA, and therefore, the conclusions set forth herein

are made without the benefit of such investigations. LEG is not responsible for consequences or conditions arising from facts that were unknown, concealed, withheld, or not fully disclosed at the time of the assessment.

The regulatory database report provided is based on an evaluation of the data collected and compiled by a contracted data research company. The report focuses on the Property and neighboring properties that could impact the Property. Neighboring properties listed in governmental environmental records are identified within specific search distances. The regulatory research is designed to meet the requirements of ASTM International E1527-05. The information provided in the regulatory database report is assumed to be correct and complete unless obviously contradicted by field observation or other reviewed sources. LEG makes no guarantee, express or implied, that any land title records reviewed represent a comprehensive or precise delineation of past property ownership or occupancy for legal purposes.

This report is intended to be used in its entirety. No excerpts may be taken to be representative of the findings of this assessment. Opinions expressed in this report apply to site conditions and features as they existed at the time of LEG's site visit and those reasonably foreseeable. They cannot necessarily apply to conditions and features of which LEG is unaware and has not had the opportunity to evaluate.

It should be recognized that even the most comprehensive ESA and scope of services may fail to detect environmental liabilities on a particular Property. Therefore, LEG cannot act as insurers, and cannot *certify* that the Property is free of environmental contamination, and no expressed or implied representation or warranty is included or intended in our reports, except that our services were performed, within the limits prescribed by The Par Group, with the customary thoroughness and competence of our profession.

## *2.0 SITE DESCRIPTION*

The subject building features wood floor spans and wood roof decking, with brick masonry exterior walls. The roof is flat and surfaced with a modified bitumen membrane. Vertical access is provided via a single interior stairwell. The basement contains residential, storage, and mechanical areas. The ground-floor contains the entrance area and one residential unit. The second floor contains one residential unit. Interior finishes consist of a combination of ceramic tile, vinyl tile, roll-on vinyl, wood, and carpeted flooring, painted

gypsum board and plaster walls, and painted gypsum board and plaster ceilings, as well as drop ceiling systems with lay-in ceiling panels.

Heat is provided by a central natural gas-fired low-pressure boiler, located in the main basement area. Electricity is provided by Consolidated Edison of New York (ConEd). Natural gas is provided by National Grid. Domestic water, storm water, and sewer services are provided by the New York City Department of Environmental Protection (NYC DEP). Additional Property improvements include a concrete paved sidewalk at the Property frontage at Granite Street, and a paved driveway and paved rear parking area.

The Property is situated in a built-up urban mixed-use residential and commercial area in the borough of Brooklyn. Surrounding properties consist of a combination of 2- and 3-story dwellings, a 1-story commercial building, sub-grade railroad tracks, and a cemetery. The Property is located in an elevated area within the borough of Brooklyn. Groundwater flow on-site and at the surrounding south and east properties is presumed to be to the southeast, towards Jamaica Bay. Groundwater flow at the surrounding properties to the north and west is presumed to be to the northwest, towards English Kills.

## *3.0 USER PROVIDED INFORMATION*

### 3.1 Historical Records

No historical records or documentation were provided by The Par Group.

### 3.2 Title Records

Although requested, no title records or documentation were provided by The Par Group.

### 3.3 Environmental Liens and Property User Specialized Knowledge or Experience

The Par Group did not provide any information regarding environmental liens, or any additional/specialized information.

### 3.4 Environmental Violations

The Par Group did not provide any information regarding environmental violations for the Property.

### 3.5 Lawsuits or Administrative Proceedings

The Par Group reportedly has no knowledge of any past, threatened, or pending lawsuits or administrative proceedings concerning a release or threatened release of any hazardous substance or petroleum products involving the Property.

### 3.6 Reason for Performing Phase 1

This Phase I ESA report was requested by The Par Group for informational purposes.

## *4.0 RECORDS REVIEW*

### 4.1 Standard Environmental Record Sources

#### 4.1.1 Previous Environmental Reports

Although requested, no previous environmental reports were provided to LEG for review.

#### 4.1.2 Federal Database Sites

An ASTM-compliant Phase I Radius Search Report was obtained from Environmental Data Resources, Inc., Milford, Connecticut. Due to the large size of the EDR Search Radius Map document, it is not included with this Phase I ESA. However, this document is available electronically upon request. The following Federal database listings were searched, if available:

- **NPL** - National Priority List
- **CERCLIS** - Comprehensive Environmental Response, Compensation, and Liability Information System
- **CERC-NFRAP** - CERCLIS No Further Remedial Action Planned
- **RCRA CORRACTS** - Resource Conservation and Recovery Act Corrective Action Report
- **RCRA-TSD** – RCRA Treatment, Storage, and/or Disposal Facilities
- **RCRA Gen -** RCRA Generator Facilities
- **ERNS** - Emergency Response Notification System

The Property is not listed on any federal EDR databases reviewed.

However, the following federal database information appears in the Environmental Data Resources (EDR) report:

**National Priorities List *(NPL)***

The National Priorities List (NPL) is the Environmental Protection Agency (EPA) database of uncontrolled or abandoned hazardous waste facilities identified for priority remedial actions under the Superfund Program.

No NPL facilities were identified within one mile of the Property.

***Federal CERCLIS List***

The Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) list is a compilation of facilities that the EPA has investigated or is currently investigating for a release or threatened release of hazardous substances.

No CERCLIS facilities were identified within a ½-mile of the Property.

***Federal CERCLIS NFRAP Sites List***

The CERCLIS No Further Remedial Action Planned (NFRAP) List is a compilation of facilities that the EPA has investigated and found to pose no threat to human health or the environment, under the CERCLA framework.

No adjoining CERCLIS NFRAP facilities were identified.

***Federal Resource Conservation and Recovery Act (RCRA) CORRACTS TSD Facilities List***

The EPA Resource Conservation and Recovery Act (RCRA) Program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Treatment, Storage and Disposal (TSD) database is a compilation by the EPA of reporting facilities which treat, store or dispose of hazardous waste. The CORRACTS database is the EPA's list of treatment storage or disposal facilities subject to corrective action under RCRA.

No RCRA CORRACTS TSD facilities were identified within one mile of the Property.

***Federal Resource Conservation and Recovery Act (RCRA) Non-CORRACTS TSD Facilities List***

The RCRA TSD database is a compilation by the EPA of reporting facilities that treat, store or dispose of hazardous waste.

No RCRA TSD facilities are listed within a ½-mile of the Property.

***Federal RCRA Generator List***

The RCRA program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Generators database is a compilation by the EPA of reporting facilities that generate hazardous waste.

No RCRA Generator facilities were listed on the adjoining properties.

***Federal Emergency Response Notification System (ERNS)***

The Emergency Response Notification System (ERNS) is a national database used to collect information or reported release of oil or hazardous substances.

No ERNS facilities were listed on the adjoining properties.

No additional federal regulatory database sites of concern were identified within the EDR radius search report.

### 4.1.3 State/Local Database Sites

The following New York State database listings were searched, if available:

- **SHWS -** State Hazardous Waste Sites (CERCLIS-equivalent)
- **SWLF –** Solid Waste Facilities/Landfill Sites
- **LTANKS** - Leaking Storage Tank Incident Reports
- **UST/HIST UST** – NYSDEC UST Registration and Historical Registration databases
- **AST** – NYSDEC AST Registration database

The Property is not listed on any state/local EDR databases reviewed.

However, the following state database information appears in the EDR radius report:

***State Hazardous Waste Sites (SHWS)***

The New York State Department of Environmental Conservation (NYSDEC) maintains a list of facilities considered to be actually or potentially contaminated and presenting a possible threat to human health and the environment.

One SHWS facility was identified within a ½-mile of the Property. This SHWS facility is located 4,678 feet to the west, and cross-gradient relative to the Property with respect to the assumed direction of groundwater flow. Therefore, given the hydrological location of this facility, the urban and developed nature of the surrounding area, and the distance of this facility from the Property, this SHWS facility is not considered to be an REC.

***Solid Waste/Landfill Facilities (SWLF)***

A database of SWLF is prepared by the NYSDEC.

Two SWLF facilities were identified within a ½-mile of the Property. Each of these facilities was found to be located in excess of 740 feet of the Property, and located either cross- or down-gradient relative to the Property. Therefore, given the hydrological location of these facilities, the urban and developed nature of the surrounding area, and the distance of these facilities from the Property, these two SWLF facilities are not considered to be an REC.

***State Leaking Underground Storage Tank List (LTANKS)***

The NYSDEC compiles lists of all leaks of hazardous substances from underground storage tanks.

Twelve LTANKS facilities were identified within a ½-mile of the Property. Each of these facilities was found to be located in excess of 740 feet of the Property, and listed as being "Closed" by the NYSDEC and/or located cross- or down-gradient relative to the Property. Therefore, given the remedial status and/or hydrological location of these facilities, the urban and developed nature of the surrounding area, and the distance of these facilities from the Property, these 12 LTANKS facilities are not considered to be an REC.

***State Underground Storage Tank List (UST)/State Historical Underground Storage Tank List (HIST UST)***

The NYSDEC compiles a list of registered and historically registered USTs.

No UST/HIST UST facilities were listed on the adjoining properties.

***State Aboveground Storage Tank List (AST)***

The NYSDEC maintains a list of registered ASTs.

No AST facilities were listed on the adjoining properties.

### 4.1.4 Additional and Supplemental Federal, State, and Local Database facilities

Additional and Supplemental Federal, State, and Local Database facilities include, but are not limited to:

- **Proposed NPL** - Proposed National Priority List Sites
- **De-listed NPL** - National Priority List Deletions
- **NPL Recovery** – Federal Superfund Liens
- **RAATS** - RCRA Administrative Action Tracking System
- **US Inst Control** – Sites with institutional Controls
- **DOD** - Department of Defense
- **FUDS** – Formerly Used Defense Sites
- **US BROWNFIELDS** – A Listing of Brownfield Sites
- **CONSENT** - Superfund (CERCLA) Consent Decrees
- **ROD** - Records Of Decision
- **UMTRA** - Uranium Mill Tailings Sites
- **ODI** - Open Dump Inventory
- **TRIS** - Toxic Chemical Release Inventory System
- **TSCA** - Toxic Substances Control Act
- **FTTS INSP** - FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
- **SSTS** - Section 7 Tracking Systems
- **ICIS -** Integrated Compliance Information System
- **PADS** - PCB Activity Database System
- **MLTS** - Material Licensing Tracking System
- **MINES** - Mines Master Index File
- **FINDS** - Facility Index System/Facility Identification Initiative Program Summary Report

- **NY MANIFEST** – List of “manifest” tracking documents
- **NPL Liens** - Federal Superfund Liens
- **INDIAN RESERV** - Indian Reservations
- **HSWDS** - Hazardous Substance Waste Disposal Site Inventory
- **SWRCY** - Registered Recycling Facility List
- **SWTIRE** - Registered Waste Tire Storage & Facility List
- **CBS UST** - Chemical Bulk Storage Database
- **MOSF UST** - Major Oil Storage Facilities Database
- **CBS AST** - Chemical Bulk Storage Database
- **HIST LTANKS** – Historical releases in New York State
- **NY SPILLS** - Chemical spills in New York State
- **NY HIST SPILLS** – Historical chemical spills in New York State
- **MOSF AST** - Major Oil Storage Facilities Database
- **ENG CONTROLS** - Registry of Engineering Controls
- **INST CONTROL** - Registry of Institutional Controls
- **VCP** - Voluntary Cleanup Agreements
- **BROWNFIELDS** - Brownfields Site List
- **DEL SHWS** - De-listed Registry Sites
- **E DESIGNATION** – NYC E DESIGNATION facilities
- **AIRS** - Air Emissions Data
- **SPDES** - State Pollutant Discharge Elimination System

The Property is not listed on any of the Additional/Supplemental Federal, State, or Local Database databases reviewed.

However, the following non-contiguous Additional/Supplemental State or Local Database and EDR facilities were identified within the study radii: 6 NY SPILLS facilities; 6 RCRA Non-GEN facilities; 10 NY MANIFEST facilities; 1 DRYCLEANERS facilities; 10 HIST AUTO STAT facilities, and 4 HIST CLEANERS facilities. Each of these facilities is located beyond the Property and adjoining properties, and either cross- or down-gradient with respect to the assumed direction of groundwater flow. Therefore, given the urban and developed nature of the surrounding area, the distance/non-contiguous location and hydrological location of these facilities, these Additional/Supplemental State or Local Database and EDR facilities are not considered to be an REC.

### 4.1.3 Orphans List

EDR provides an “orphans” list of facilities which are not mapped due to poor and /or inadequate address information. The Property and adjoining properties were not listed on the EDR orphan site list.

### 4.1.5 Local Regulatory Agency Findings

**County Recorder / Assessor**

LEG attempted to obtain information pertaining to environmentally-related liens or deed restrictions for the Property at the New York City Department of Tax Assessment website. No information regarding environmentally-related liens or deed restrictions was identified. According to the New York City Department of Tax Assessment website, the Property is known as Block 3457, Lots 35 and 49 for tax purposes, and is currently owned by Daniel Matias.

**Building Department**

Records from the New York City Department of Buildings (NYC DOB) were reviewed on the Property Profile Overview (PPO) on the NYC DOB website for evidence indicating the developmental history of the Property, and for the presence of documentation relative to USTs. Miscellaneous permits/actions were listed for the Property, dating from 1917 through the present, including a 1926 New Building application (for 101 Granite Street), and 1926 Certificate of Occupancy (CO) for 101 Granite Street for private garages. No additional actions/permits of environmental or historical significance were identified on the PPO.

**Fire Officials**

Records from the New York City Fire Department are available by written request and fee only, and results are not provided to the user for approximately 60 days from the date of receipt of the request by the NYCFD. As such, other sources were searched for information regarding current and Historical petroleum storage tanks at the Property. These records included state regulatory agency databases, Sanborn Fire Insurance maps, building department records, and historical city directories, which are discussed within the respective sections of this report.

### 4.2 Aerial Photography

Due to the extent of historical documentation obtained, as well as the dense urban nature of the surrounding area, LEG determined that aerial photographs would not produce sufficiently useful information to justify reviewing.

### 4.3 Sanborn Fire Insurance Maps

Sanborn Fire Insurance maps dated 1898, 1907, 1932/1933, 1951, 1962, 1965, 1968, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 2001, 2002, 2003, 2004, 2005, 2006, and 2007 were available for review, and were provided by EDR/Sanborn. Copies of the Sanborn maps are provided in Appendix B.

| | |
|---|---|
| **Date:** | 1888 |
| **Description:** | Undeveloped land is depicted on-site.<br>Surrounding properties to the north consist of railroad tracks. Surrounding properties consist to the south and west consist of undeveloped land. Surrounding properties to the east consist of railroad tracks and undeveloped land. |
| **Date:** | 1907 |
| **Description:** | Undeveloped land is depicted on-site.<br>Surrounding properties consist to the north consist of railroad tracks. Surrounding properties consist to the south consist of undeveloped land. Surrounding properties consist to the east consist of railroad tracks and a cemetery. Surrounding properties to the west consist of 2- and 3-story dwellings and undeveloped lots. |
| **Date:** | 1932 |
| **Description:** | A 2-story residential building with rear 1-story private garage/carports is depicted on-site (assumed to be the development observed on-site during LEG's site inspection). Of note, the eastern rear carport is mislabeled as "Dwelling".<br>Surrounding properties consist to the north consist of railroad tracks. Surrounding properties consist to the south consist of 2-story dwellings. Surrounding properties consist to the east consist of railroad tracks and a cemetery. Surrounding properties to the west consist of 2- and 3-story dwellings and a 1-story garage with one gasoline UST depicted. |
| **Date:** | 1951 - 1965 |
| **Description:** | A 2-story residential building with rear 1-story private garage/carports is depicted on-site (assumed to be the development observed on-site during LEG's site inspection).<br>Surrounding properties consist to the north consist of railroad tracks. Surrounding properties consist to the south consist of 2-story dwellings. |

| | |
|---|---|
| | Surrounding properties consist to the east consist of railroad tracks and a cemetery. Surrounding properties to the west consist of 2- and 3-story dwellings and a 1-story commercial building labeled “Steel Products Manufacturing”. |
| **Date:** | 1976 - 2007 |
| **Description:** | A 2-story residential building with rear 1-story private garage/carports is depicted on-site (assumed to be the development observed on-site during LEG’s site inspection).<br><br>Surrounding properties consist to the north consist of railroad tracks. Surrounding properties consist to the south consist of 2-story dwellings. Surrounding properties consist to the east consist of railroad tracks and a cemetery. Surrounding properties to the west consist of 2- and 3-story dwellings and an unlabeled 1-story warehouse. |

A 1-story garage with a gasoline UST of unknown capacity is depicted adjacent to the west (and down-gradient relative to the Property) at 102-112 Pilling Street on the 1932 Sanborn map. However, this facility was not identified on any of the regulatory databases reviewed, and no outstanding regulatory mandates were identified for this facility as part of LEG’s regulatory review. Therefore, given the lack of documented releases and/or regulatory mandates with regard to this historical adjoining facility, as well as this facility’s down-gradient location, this facility is not considered to be an REC.

No additional issues of concern were identified on-site on the Sanborn maps reviewed.

### 4.4 Topographic Map

The United States Geological Survey (USGS), Brooklyn, NY Quadrangle 7.5-Minute series topographic map was reviewed for this ESA. This map was published by the USGS in 1967 and photo-revised in 1979. According to the contour lines on the topographic map, the Property is located at approximately 89 feet above mean sea level (MSL). The Property is relatively flat. The immediate surrounding area to the north and west slopes sharply downward to the north and west. The surrounding area to the south and east slopes gently downward to the southeast.

### 4.5 City Directories

Historical city directories (including Polk directories and New York Telephone Address directories) were provided by EDR and reviewed for past names and businesses which were listed for the Property and the adjoining properties. City directories, dated 1934 to 2008, were reviewed. Only residential tenants/owners were listed for the Property and the

adjoining properties. No listings of concern were identified for the Property or the adjoining properties on the City Directories. A copy of the EDR City Directory is available upon the Client's request under separate cover.

### 4.6 Evaluation of Radon Risk Data

The USEPA has prepared a map to assist National, State, and local organizations to target their resources and to implement radon-resistant building codes. The map divides the country into three Radon Zones, Zone 1 being those areas with the average predicted indoor radon concentration in residential dwellings exceeding the EPA Action limit of 4.0 picoCuries per Liter (pCi/L). It is important to note that the EPA has found homes with elevated levels of radon in all three zones, and the EPA recommends site specific testing in order to determine radon levels at a specific location. However, the map does give a valuable indication of the propensity of radon gas accumulation in structures. The review of the EPA Map of Radon Zones places the Property in Zone 3, where average predicted radon levels are less than 2.0 pCi/L. Therefore, no further action is recommended at this time regarding radon on site. A copy of the radon map reviewed is provided in *Appendix F*.

### 4.7 Hydrology

Groundwater flow is typically topographically influenced, as shallow groundwater tends to originate in areas of topographic highs and flow toward areas of topographic lows, such as rivers, stream valleys, ponds, and wetlands. A broader, interconnected hydrogeologic network often governs groundwater flow at depth or in the bedrock aquifer. Groundwater depth and flow direction are also subject to hydrogeologic and anthropogenic variables such as precipitation, evaporation, extent of vegetation cover, and coverage by impervious surfaces. Other factors influencing groundwater include depth to bedrock, the presence of artificial fill, variability in local geology, and groundwater sources or sinks.

Groundwater in the New York City area is not used as a drinking water source. Potable water for the Property is provided by the City of New York Department of Environmental Protection (NYCDEP), and is derived from reservoirs in the Croton, Catskill, and Delaware watersheds. Groundwater is expected to be present at a depth of greater than 10-20 feet below ground surface (bgs). The NYSDEC groundwater classification is GA (fresh groundwater). Groundwater in both the unconsolidated deposits and in the bedrock is expected to flow to the east, towards the Harlem River. Groundwater flow in the fill may,

however, be influenced locally by the presence of underground man-made structures (pipes, foundations, subway tunnels, etc.).

The Property is located in an elevated area within the borough of Brooklyn. Groundwater flow on-site and at the surrounding south and east properties is presumed to be to the southeast, towards Jamaica Bay. Groundwater flow at the surrounding properties to the north and west is presumed to be to the northwest, towards English Kills.

### 4.8 Other Historical Records

Although requested, no previously prepared environmental reports such as Phase I or II Environmental Site Assessments, lead-based paint surveys, lead-in-water surveys, asbestos surveys, or geotechnical reports were provided for review.

### 4.9 Historical Use Summary

The following briefly summarizes the developmental history of the Property, based on City Directories, Sanborn Fire Insurance maps, and municipal records reviewed:

The Property was developed with the current improvements circa 1926 and has historically been utilized for residential purposes with associated automobile parking. In 1888 and 1907, the Property was undeveloped.

No environmentally significant historical usage or occupancy of the Property was identified during LEG's historical review.

## *5.0 SITE RECONNAISSANCE*

### 5.1 Methodology

Site reconnaissance was conducted to obtain information indicating the likelihood of identifying recognized environmental conditions (RECs) in connection with the Property. The site reconnaissance was conducted in a systematic manner by Jeremy Mushlin, EP, a representative of LEG, who visually and physically inspected selected interior and exterior areas of the Property on November 22, 2013. Weather conditions were overcast and raining, with temperatures in the 40$^{o}$Fs. The adjacent properties are privately owned and access was not attempted. Photo documentation is provided in *Appendix A*. No limiting conditions were encountered during LEG's site inspection.

## 5.2 General Site Setting

The Property is located in a built-up, mixed-use residential and commercial area in the borough of Brooklyn, Kings County, New York City, NY.

## 5.3 Exterior Observations

### 5.3.1 Industrial Usage

No current industrial usage was identified on the Property.

### 5.3.2 Pits, Ponds and Lagoons

No pits, ponds, or lagoons suspected of containing hazardous substances or petroleum products, were observed on the Property.

### 5.3.3 Unidentified Substances, Containers, Staining, or Stressed Vegetation

No unidentified substances, containers, staining, or stressed vegetation were observed at the exterior areas.

### 5.3.4 Odors

Property exteriors displayed no evidence or reports of foul odors being emitted from the grounds, drains, or walls.

### 5.3.5 Hazardous Substances and Petroleum Products in Connection with Identified Uses (Exterior)

No hazardous substances or petroleum products were observed at the building exteriors.

### 5.3.6 Indications of Polychlorinated Biphenyls (PCBs)(Exterior)

Older transformers and other electrical equipment could contain polychlorinated biphenyls (PCBs) at a level that subjects them to regulation by the U.S. EPA. PCBs in electrical equipment are controlled by United States Environmental Protection Agency regulations 40 CFR, Part 761. Under the regulations, there are three categories into which electrical equipment can be classified:

- Less than 50 parts per million (PPM) of PCBs – "*Non-PCB" transformer*
- 50 ppm-500 ppm – "*PCB-Contaminated" electrical equipment*
- Greater than 500 ppm – "*PCB" transformer*

No potential PCB-containing equipment (such as transformers, oil-filled switches, hoists, lifts, dock levelers, etc.) was observed at the Property's exterior during LEG's site reconnaissance.

### 5.3.7 Waste Handling

Solid waste generated by the residential tenants is picked up on a regular basis by the City of New York Department of Sanitation. In the interim, solid waste is stored in the building's service areas. No visual evidence of improper solid waste storage or disposal was observed on site.

## 5.4 Interior Observations

### 5.4.1 Indications of Polychlorinated Biphenyls (PCBs)(Interior)

No potential PCB-containing equipment was observed within the subject building during LEG's site reconnaissance.

### 5.4.2 Sumps

No stained sump pits or improper waste water disposal were observed on site.

### 5.4.3 Storage Tanks

No petroleum ASTs or USTs were identified on-site. The subject building is heated by a central, natural gas-fired low-pressure boiler.

### 5.4.4 Hazardous Substances and Petroleum Products in Connection with Identified Uses (Interior)

No evidence of the use of hazardous materials or petroleum products was observed on site.

However, Approximately 25 SF of dry petroleum staining was observed on the concrete flooring of the eastern carport area. The source of the staining appeared to be automobile

parking in this area. LEG recommends that this staining, as well as any other dry petroleum staining on-site, be removed from car port areas as part of normal housekeeping practices.

### 5.4.5 Asbestos

LEG conducted a limited, visual evaluation of interior, accessible areas for the presence of suspect asbestos containing materials (ACM) at the Property. The objective of this visual survey was to note the presence and condition of suspect ACM observed. Based on the date of construction of the Property (circa 1903), there is a potential that ACM was used in construction materials. In addition, the Occupational Safety and Health Administration (OSHA) regulation 29 CFR 1926.1101 requires certain construction materials to be *presumed* to contain asbestos for purposes of this regulation. All thermal systems insulation (TSI), surfacing material, and asphalt/vinyl present in a building constructed prior to 1981 that have not been appropriately tested are presumed asbestos containing material (PACM).

The survey consisted of noting observable materials (materials which were readily accessible and visible during the course of the site reconnaissance) that are commonly known to potentially contain asbestos. This activity was not designed to discover all sources of suspect ACM at the Property, to comply with any regulations and/or laws relative to planned disturbance of building materials (such as renovation or demolition), or for any other regulatory purpose. Rather, it is intended to give The Par Group an indication if significant (due to quantity, accessibility, or condition) potential sources of ACM are present at the Property. Additional sampling, inspection, and/or evaluation will be warranted for any other use. No building plans or specifications, which may be useful in determining areas likely to have used ACM, were made available for review.

Approximately 25 linear feet (LF) of aircell pipe insulation with cementitious pipe fitting insulation ranging from fair to poor condition was observed in the main basement area. In addition, an unquantified amount of friable and non-friable suspect ACM, including roll-on vinyl flooring, 9”x9” and 12”x12” vinyl floor tile, flooring mastic, gypsum board and joint compound, wall and ceiling plaster, lay-in ceiling panels, window caulking and glazing putty, and roofing materials was identified on site. These materials were generally in good condition. LEG recommends that a comprehensive asbestos survey be performed on site, in order to quantify all ACM within the subject buildings. Based on the results of the asbestos survey, further actions may be warranted, and costs incurred. Of note, according

to USEPA regulations, ACM that is intact and in good condition may, in general, be managed safely in-place under an Asbestos Operations and Maintenance (O&M) program, until removal is dictated by renovation, demolition, or deteriorating material condition. In the interim, LEG recommends that the suspect ACM be maintained under an Asbestos O&M Program.

### 5.4.6 Lead-Based Paint (LBP)

In accordance with the Scope of Services, LEG has conducted a limited visual evaluation to note the condition of painted surfaces at the Property. Due to the date of construction (pre-1978), lead-based paint may be present. The objective of this visual survey was to note the presence and condition various painted surfaces.

An unquantified amount of damaged and chipping paint was observed in the first and second floors of the subject building. Given the date of construction of the subject building (pre-1978), lead-based paint (LBP) may be present. LEG therefore recommends that a comprehensive LBP survey be performed on-site. Based on the results of the LBP survey, further actions may be warranted, and costs incurred.

The Property falls under the definition of *Target Housing,* and is regulated under Title X. The seller or renter of the Property will need to make available a federally approved lead hazard information pamphlet and must disclose known lead-based paint and/or lead-based paint hazards to purchasers and renters of the Property pursuant to the requirements of 24 CFR 35.92 and 40 CFR 745.113.

No NYC HPD LBP violations for the Property were identified on the NYC HPD website.

### 5.4.7 Mold

As part of this assessment, LEG performed a limited visual inspection for the significant presence of mold. Molds have been found to be potentially associated with a variety of health conditions in humans. Molds are decomposers of organic materials, thrive in damp environments, and produce tiny spores to reproduce. When mold spores land on a damp indoor surface, they may begin growing and digesting the substrate for sustenance. When excessive moisture or water accumulates indoors, mold growth will often occur on susceptible surfaces, particularly if the moisture problem remains undiscovered or unaddressed. As such, interior areas of buildings characterized by poor ventilation and high

humidity are the most common locations of mold growth. Building materials including drywall, wallpaper, baseboards, wood framing, insulation and carpeting often play host to such growth.

A large amount of water damaged solid waste and debris was observed in the rear carports. Of note, no mold was observed in these areas. However, LEG recommends that all solid waste be removed from these areas as part of normal housekeeping, in order to provide sanitary conditions, and to prevent potential mold growth on-site.

It should be noted that a comprehensive evaluation of any/all areas of water damage on-site is beyond the scope of this ESA report. This activity was not designed to discover all areas which may be affected by mold growth on the Property. Rather, it is intended to provide the Client with an indication if significant mold growth is present at the Property. . Of note, areas not observed as part of this limited assessment, such as inside pipe chases, HVAC systems, and behind enclosed walls and ceilings, may contain mold growth which was not visually accessible.

### 5.4.8 Lead in Drinking Water

Drinking water with lead concentrations greater than the USEPA Action Level for lead in drinking water of 15 ug/L (micrograms of lead per liter of water) can contribute to delays in physical and mental development in infants and children, and kidney problems or high blood pressure in adults. Common sources of lead in drinking water include the erosion of natural deposits and corrosion of household plumbing systems. Lead, a metal found in natural deposits, is commonly used in household plumbing materials and water service lines.

According to the New York City Department of Environmental Protection (NYC DEP) website, water quality in New York City meets and often exceeds local, state and federal standards for water quality, including those for lead and copper. New York City Water must comply with strictly enforced standards established by the United States Environmental Protection Agency, the New York State Health Department, and the NYCDEP. The City also is required to routinely monitor its system by testing the water both at the wellhead and within the distribution system for a wide range of parameters, including bacteria, inorganic chemicals such as nitrate, chloride, lead and volatile organic compounds, including benzene and trichloroethylene.

Based on the aforementioned information reviewed, lead in drinking water at the Property is not likely to constitute an REC. Of note, lead concentrations in lead in tap water may vary greatly depending on location, based on the age and condition of plumbing materials utilized. Water sampling was not conducted at the Property to verify water quality.

## *6.0 INTERVIEWS*

LEG interviewed Mr. Vinny Castro, representative for the owner of the Property. Mr. Castro had no knowledge of prior or current environmental lawsuits or environmental liens associated with the Property, and no RECs or issues of environmental concern were reported or noted by Mr. Castro.

No government officials were interviewed during the preparation of this Phase I ESA. Regulatory data was obtained directly from regulatory websites and the EDR database report, which was reviewed as part of LEG's due diligence inquiry for the Property.

## *7.0 OPINION*

This assessment has revealed no evidence of recognized environmental conditions (RECs) in connection with the Property.

## *8.0 CONCLUSIONS and RECOMMENDATIONS*

LEG has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of E1527-05 of 99-101 Granite Street, Brooklyn, NY (Property). Any exceptions to, or deletions from, this practice are described in *Section 9.0* of this report. This assessment has revealed no evidence of recognized environmental conditions (RECs) in connection with the Property. However, the following issue of environmental concern was noted which warrants mention:

- Approximately 25 SF of dry petroleum staining was observed on the concrete flooring of the eastern carport area. The source of the staining appeared to be automobile parking in this area. LEG recommends that this staining, as well as any other dry petroleum staining on-site, be removed from car port areas as part of normal housekeeping practices.

## *9.0 DEVIATIONS AND LIMITING CONDITIONS*

The findings and conclusions within contain all of the limitations inherent in these methodologies that are referred to in ASTM 1527-05 and the 40 Code of Federal Regulations (CFR) Part 312, Standards and Practices for All Appropriate Inquiries. Specific limitations and exceptions to this ESA are more specifically set forth below:

- LEG encountered data limitations by not interviewing past Property owners, tenants, and adjacent property owners, as none were available for comment, did not respond to requests to information, or did not exist. However, based on our review of the available municipal, regulatory, and historical information, the absence of information obtained from interviews with these individuals is not considered significant to the findings, conclusions, or recommendation of this assessment.
- Data gaps in excess of the recommended 5-year interval were encountered during LEG's historical review. However, based on the quantity of available information reviewed, these historical data gaps are not considered to be an issue of concern.

## *10.0 ADDITIONAL SERVICES*

The following additional services are recommended:

- Approximately 25 linear feet (LF) of aircell pipe insulation with cementitious pipe fitting insulation ranging from fair to poor condition was observed in the main basement area. In addition, an unquantified amount of friable and non-friable suspect ACM, including roll-on vinyl flooring, 9"x9" and 12"x12" vinyl floor tile, flooring mastic, gypsum board and joint compound, wall and ceiling plaster, lay-in ceiling panels, window caulking and glazing putty, and roofing materials was identified on site. These materials were generally in good condition. LEG recommends that a comprehensive asbestos survey be performed on site, in order to quantify all ACM within the subject buildings. Based on the results of the asbestos survey, further actions may be warranted, and costs incurred. Of note, according to USEPA regulations, ACM that is intact and in good condition may, in general, be managed safely in-place under an Asbestos Operations and Maintenance (O&M) program, until removal is dictated by renovation, demolition, or deteriorating material condition. In the interim, LEG recommends that the suspect ACM be maintained under an Asbestos O&M Program.

- An unquantified amount of damaged and chipping paint was observed in the first and second floors of the subject building. Given the date of construction of the subject building (pre-1978), lead-based paint (LBP) may be present. LEG therefore recommends that a comprehensive LBP survey be performed on-site. Based on the results of the LBP survey, further actions may be warranted, and costs incurred.

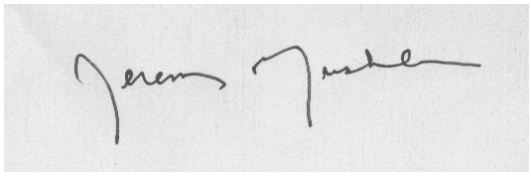
- A large amount of water damaged solid waste and debris was observed in the rear carports. Of note, no mold was observed in these areas. However, LEG recommends that all solid waste be removed from these areas as part of normal housekeeping, in order to provide sanitary conditions, and to prevent potential mold growth on-site.

## *11.0 REFERENCES*

The following references were relied upon in preparing this *Phase I Environmental Site Assessment:*


- EDR Radius Map with GeoCheck®
- EDR Sanborn® Map Report
- EDR City Directory Abstract
- Federal Emergency Management Agency, Federal Insurance Administration, National Flood Insurance Program website
- Google Earth
- USEPA Map of Radon Zones
- New York City Department of Buildings website
- New York City Department of Environmental Protection Drinking Water Supply and Quality Report
- New York City Department of Housing Preservation and Development website
- New York City Department of Tax Assessment website
- USGS 7.5 Minute Topographic Map, Central Park, NY Quadrangle

## *12.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS*



Jeremy Mushlin, EP
Senior Associate

Gerard L. Baril, CIH
Principal – Chief Science Officer
Certified Industrial Hygienist

## *13.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS*

Jeremy Mushlin has over fifteen years of experience in due diligence activities for commercial real estate transactions, spanning both environmental and structural disciplines. Experience includes the performance of Phase I Environmental Site Assessments (ESAs) of all property types, including residential, retail, commercial office, and industrial properties throughout the United States for a wide range of financial clients, attorneys, and real estate companies, with a special area of expertise in New York City five-boroughs environmental and structural issues.

Mr. Mushlin has a working familiarity with all common ESA and PCA scopes of work, including ASTM, Fannie Mae, and Freddie Mac. Mr. Mushlin is also a licensed New York State Asbestos Inspector, USEPA Lead Inspection, and New York City Asbestos Investigator. Mr. Mushlin also has extensive experience in the review of final reports and QA/QC. Experience also includes service as liaison between real financial entities and environmental agencies, and marketing/client duties. Mr. Mushlin's extensive experience in the New York City metro area provides LEG with a unique solution to the resolution of environmental and structural due diligence issues in the 5-boroughs area.

Gerard L. Baril is a Certified Industrial Hygienist with over thirty years of experience in the field of environmental health and safety management. Mr. Baril has provided both public and private sector organizations with comprehensive industrial hygiene and safety services, OSHA compliance audits, safety management evaluation, hazardous substance exposure analysis, job hazard analysis, accident investigation and analysis, environmental site assessments and management and employee training. Mr. Baril also specializes in indoor environmental quality (mold) and healthcare safety. Mr. Baril is certified by the New York State as an asbestos project monitor, inspector, management planner, and project designer. Mr. Baril is certified by the EPA as a lead risk assessor.

# APPENDICES

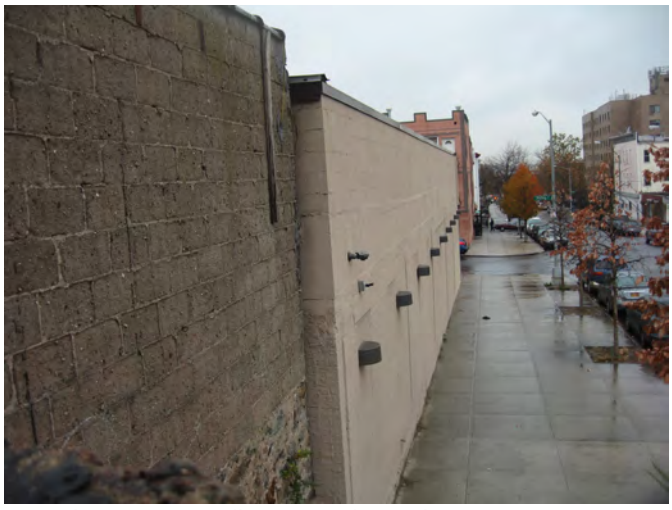
# APPENDIX A
Photographs

1. View of the Property

2. View of surrounding properties to the north

3. View of surrounding properties to the south


4. View of surrounding properties to the east



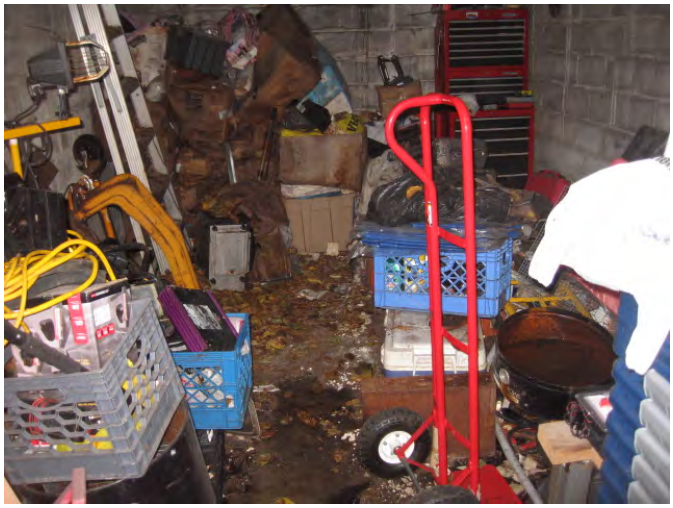
5. View of surrounding properties to the west

6. View of dry petroleum staining in the eastern car port

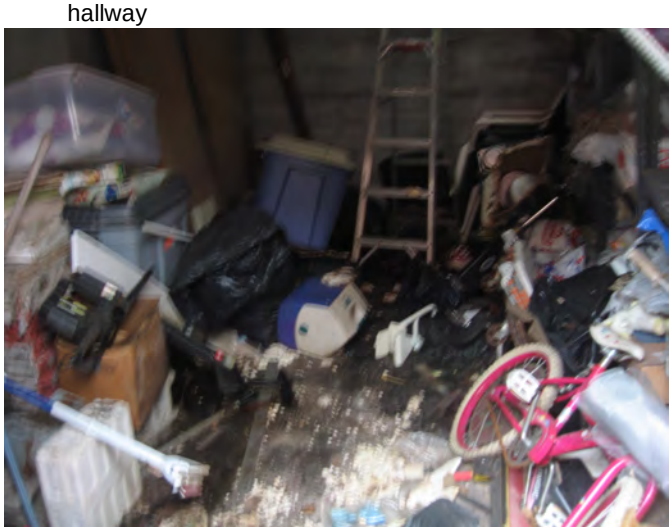
7. View of damaged suspect ACM aircell pipe insulation in the building basement

8. View of suspect ACM lay-in ceiling panels

9. View of damaged/chipping paint at the second floor hallway



10. View of a typical water damaged debris at carport interior



11. View of a typical water damaged debris at carport interior

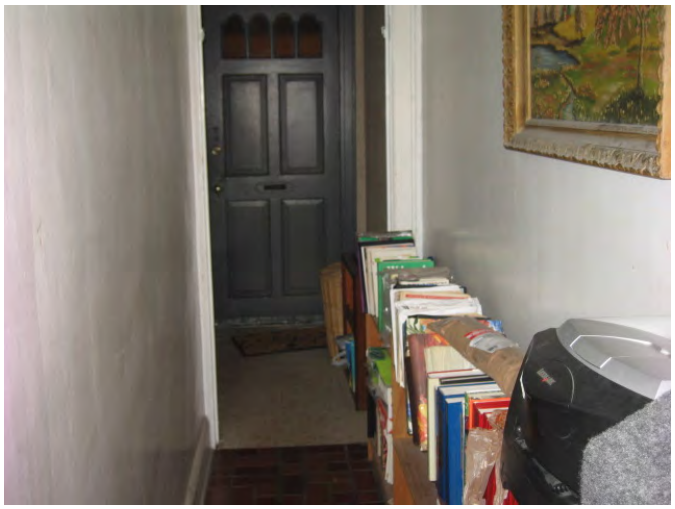
12. View of the rear parking area

13. View of the rear carports

14. View of the rear parking area

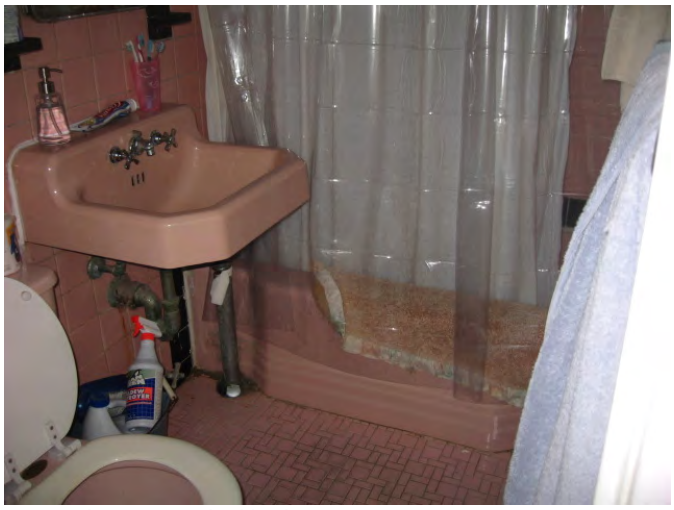
15. View of the subject building roof

16. View of the central boiler in the main basement area



17. View of the ground-floor entrance area

18. View of a typical kitchen area



19. View of a typical bathroom area

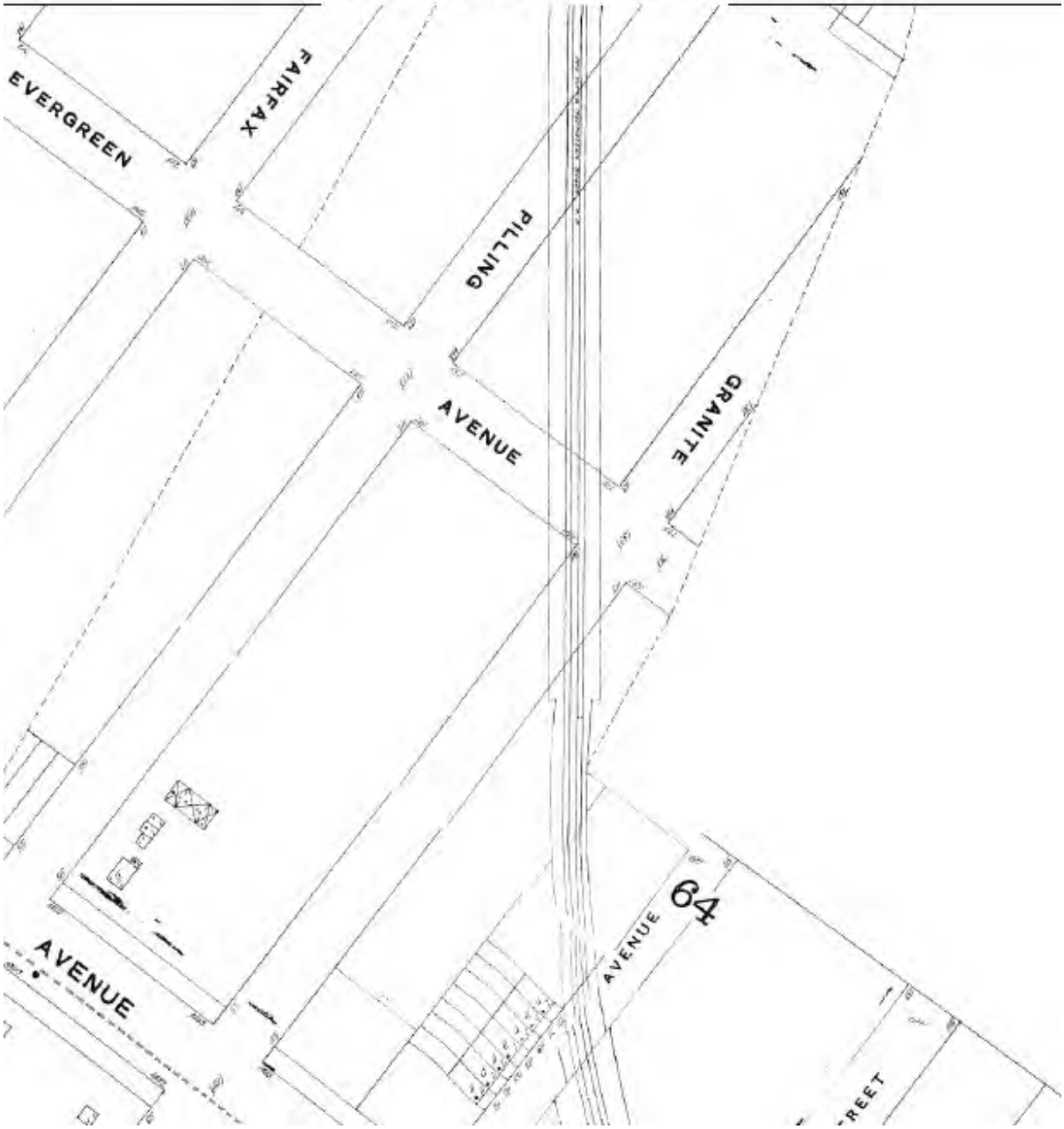
20. View of a typical radiator

21. View of a typical basement residential area

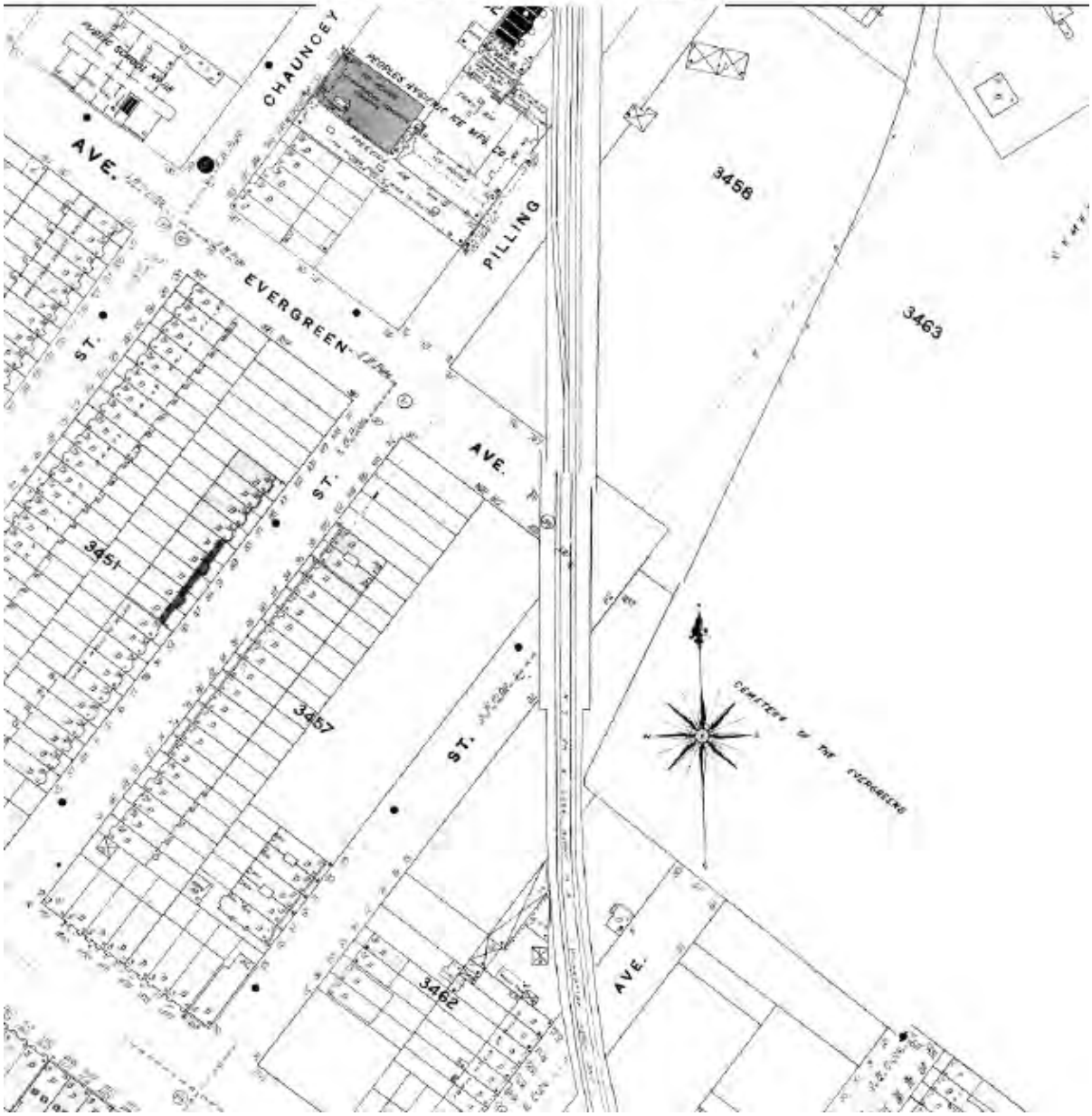
22. View of a typical living room

# APPENDIX B
# Sanborn Maps

## 1888 Certified Sanborn Map



## 1907 Certified Sanborn Map

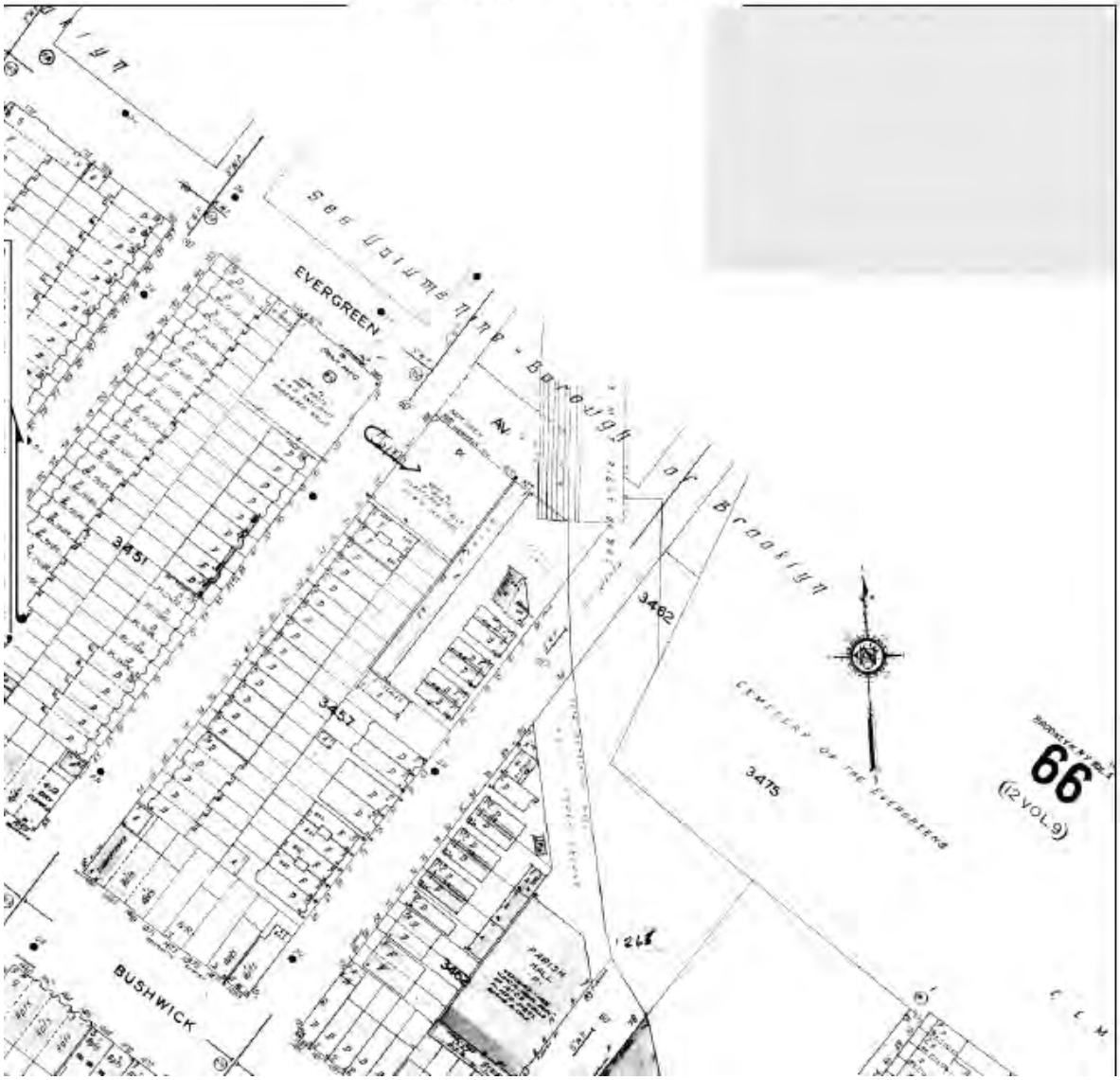


## 1932 Certified Sanborn Map

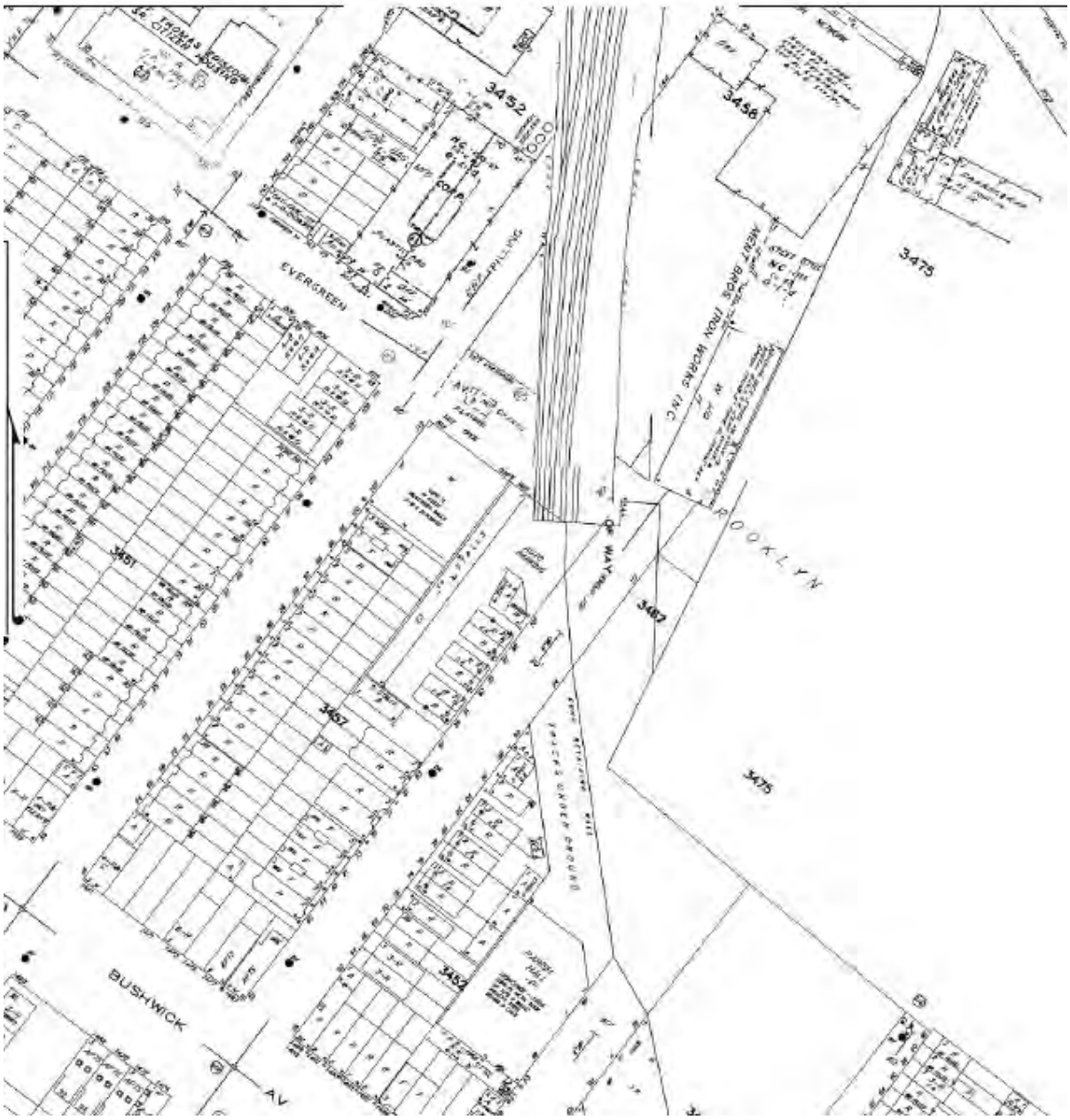
## 1951 Certified Sanborn Map

## 1965 Certified Sanborn Map

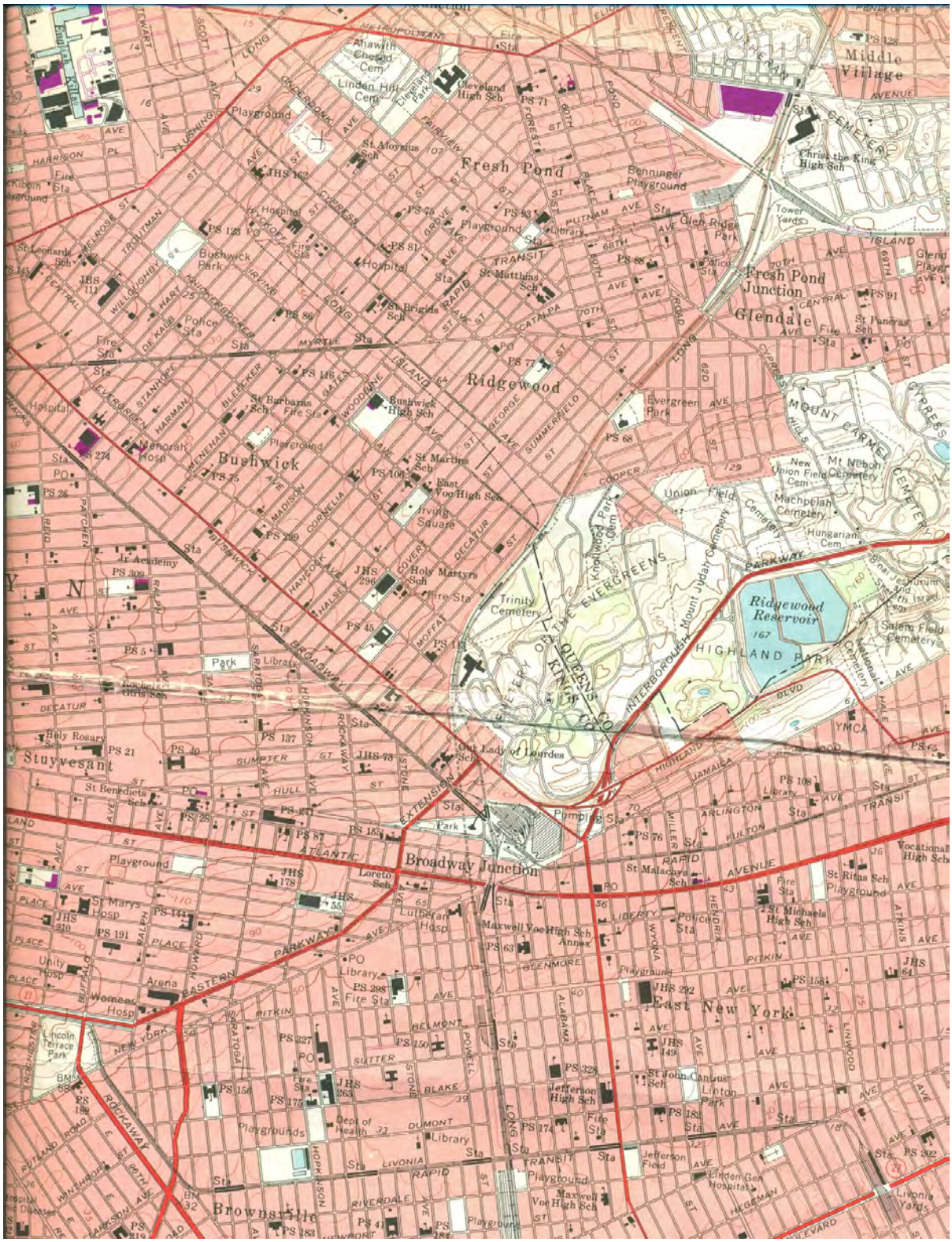
## 1976 Certified Sanborn Map



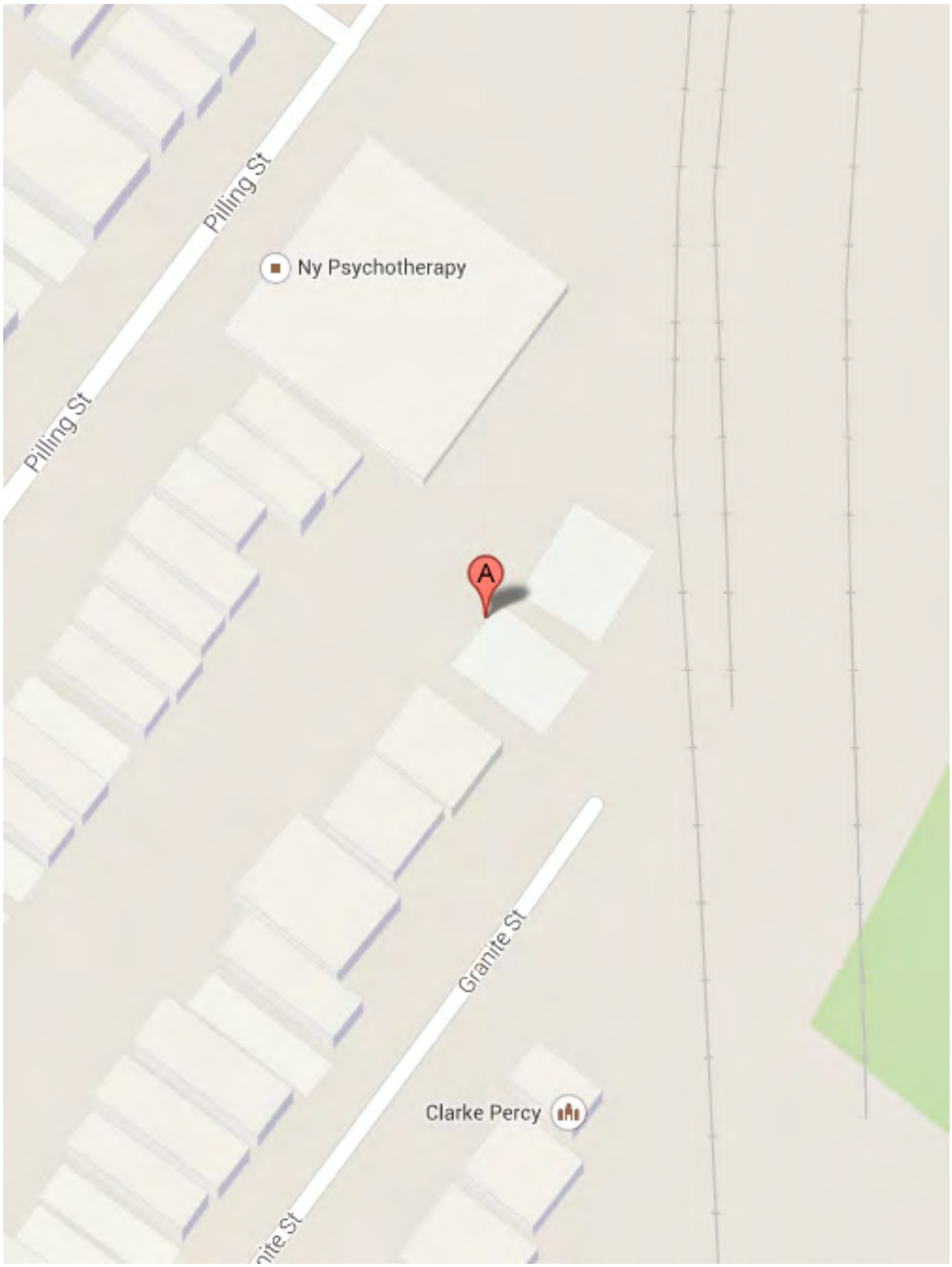
## 2007 Certified Sanborn Map



# APPENDIX C
# USGS
# Topographic Map


Middle Village
Fresh Pond
Fresh Pond Junction
Glendale
Ridgewood
Bushwick
Stuyvesant
Broadway Junction
East New York
Brownsville
Ridgewood Reservoir
HIGHLAND PARK
MOUNT CARMEL CEMETERY
Union Field Cemetery
Trinity Cemetery
Linden Hill Cem
Cleveland High Sch
Christ the King High Sch
Bushwick High Sch
Jefferson High Sch
Maxwell Voc High Sch
Lutheran Hosp
Woodhull Hosp
Unity Hosp
Linden Gen Hospital
Jefferson Field
Lincoln Terrace Park
Irving Square
Benninger Playground
Glen Ridge Park
Evergreen Park
Linton Park
Livonia Yards
Pumping Sta
Fire Sta
Police Sta
Library
Playground
Park
Cemetery
Hospital
Arena
Jr Academy
Voc High Sch
Annex
Dept of Health
Machpelah Cemetery
Hungarian Cem
Salem Field Cemetery
Knickerbocker Cem
Mt Nebo Union Field Cemetery
Mount Judah Cemetery
Our Lady of Lourdes
Holy Martyrs Sch
Holy Rosary Sch
St Barbara Sch
St Matthias Sch
St Malachys Sch
St Michaels High Sch
St Ritas Sch
St John Cantius Sch
St Aloysius Sch
St Leonard Sch
St Brigids Sch
St Benedicts Sch
St Martins Sch
St Marys Hosp
Loreto Sch
Jr Academy
Rockefeller Girls Sch
Vocational High Sch
Christ the King High Sch
Tower Yards
Livonia Yards
Ridgewood Reservoir
Knickerbocker Cem
Mt Nebo Union Field Cemetery
Machpelah Cemetery
Hungarian Cem
Salem Field Cemetery
Mount Judah Cemetery
Our Lady of Lourdes
Holy Martyrs Sch
Holy Rosary Sch
St Barbara Sch
St Matthias Sch
St Malachys Sch
St Michaels High Sch
St Ritas Sch
St John Cantius Sch
St Aloysius Sch
St Leonard Sch
St Brigids Sch
St Benedicts Sch
St Martins Sch
St Marys Hosp
Loreto Sch
Jr Academy
Rockefeller Girls Sch
Vocational High Sch
Christ the King High Sch
Tower Yards
Livonia Yards

# APPENDIX D
# Site Vicinity Map


Pilling St
Pilling St
Ny Psychotherapy
A
Granite St
Clarke Percy

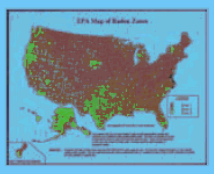
# APPENDIX E
# Google Earth View


99 Granite St, Brooklyn, NY 11207, USA

# APPENDIX F
Radon Map

# EPA Map of Radon Zones

## New York



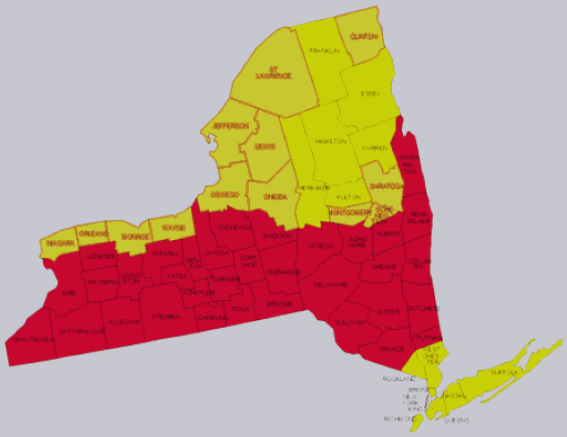
The purpose of this map is to assist National, State, and local organizations to target their resources and to implement radon-resistant building codes. This map is not intended to be used to determine if a home in a given zone should be tested for radon. Homes with elevated levels of radon have been found in all three zones. All homes should be tested regardless of geographic location. Important points to note:

- **All homes should test for radon**, regardless of geographic location or zone designation
- There are many thousands of individual homes with elevated radon levels in Zone 2 and 3. Elevated levels can be found in Zone 2 and Zone 3 counties.
- All users of the map should carefully review the map documentation for information on within-county variations in radon potential and supplement the map with locally available information before making any decisions.
- **The map is not to be used in lieu of testing during real estate transactions.**

The Map was developed using five factors to determine radon potential: indoor radon measurements; geology; aerial radioactivity; soil permeability; and, foundation type. Radon potential assessment is based on geologic provinces. Radon Index Matrix is the quantitative assessment of radon potential. Confidence Index Matrix shows the quantity and quality of the data used to assess radon potential. Geologic Provinces were adapted to county boundaries for the Map of Radon Zones.

Sections 307 and 309 of the Indoor Radon Abatement Act of 1988 (IRAA) directed EPA to list and identify areas of the U.S. with the potential for elevated indoor radon levels. EPA's Map of Radon Zones assigns each of the 3,141 counties in the U.S. to one of three zones based on radon potential:

| | |
|---|---|
| **Zone 1** counties have a predicted average indoor radon screening level greater than 4 pCi/L (pico curies per liter) (red zones) | Highest Potential |
| **Zone 2** counties have a predicted average indoor radon screening level between 2 and 4 pCi/L (orange zones) | Moderate Potential |
| **Zone 3** counties have a predicted average indoor radon screening level less than 2 pCi/L (yellow zones) | Low Potential |



**IMPORTANT:** Consult the EPA Map of Radon Zones document (EPA-402-R-93-071) before using this map. This document contains information on radon potential variations within counties. EPA also recommends that this map be supplemented with any available local data in order to further understand and predict the radon potential of a specific area. If you have questions about radon in water, see www.epa.gov/radon/rnwater.html or contact your State Radon Coordinator.

html>

# APPENDIX G

Supporting Documentation

Not Applicable to this Report

**END OF REPORT**

Liberty Environmental, Inc.
131 Varick Street, Suite 1022, New York, NY 10013 800-305-6019 Fax 212-242-3897 www.libertyenviro.com

July 5, 2017

Mr. Daniel Rosenfeld
The PAR Group
60 North Prospect Ave.
Lynbrook, NY 11563

**Re: Soil Disposal Characterization**
**99 Granite Street**
**Brooklyn, New York**
**Liberty Project No. 170284**

Dear Mr. Rosenfeld:

Liberty Environmental, Inc. (Liberty) is pleased to submit this summary report of the soil sampling and analysis at the above-referenced property located in Brooklyn, New York. We understand that the proposed development at the property will require excavation and off-site disposal of approximately 8,000 cubic yards of historical fill and soil. The purpose of this report is to provide a brief narrative of the sampling activities and observations with discussion of sampling results.

## SCOPE OF WORK

Liberty oversaw the advancement of 8 soil borings at the property using a Geoprobe direct-push apparatus. All borings were advanced to 20 feet below grade (the proposed basement depth). At each boring, the Liberty field scientist performed soil screening and logged soil classification observations. Based on field screening, 80 discrete soil samples were collected from the borings, and grouped into 8 subsets of 10 samples each. Each subset was a horizontal composite of a 2-foot depth interval from 0 to 2 feet, 2 to 4 feet, and so on to 18 to 20 feet. Each discrete grab sample was screened for the presence of volatile organic vapors using a photoionization detector (PID). One biased sample showing the highest PID deflection from each depth interval subset was collected for TCL volatile organic compounds (TCL VOCs) laboratory analysis. The 10 subset depth intervals were submitted as 10 8-point composite samples for analysis of diesel range organics (DRO), gasoline range organics (GRO), polycyclic aromatic hydrocarbons (PAHs), TOX, RCRA metals, TCLP metals, ignitability, corrosivity, reactivity, PCBs and pesticides.

Samples were collected using decontaminated sampling tools and placed into pre-cleaned, laboratory-supplied bottleware, preserved as necessary according to the analytical methods, placed into an iced cooler and delivered under chain-of-custody to a certified laboratory for analysis under standard laboratory turnaround. Laboratory analytical reports are attached.

## FIELD OBSERVATIONS AND ANALYTICAL RESULTS

Visual observations and soil classification using the Unified Soil Classification System (USCS) identified soil primarily consisting of brown to dark brown fine to coarse sand, with some silt and fine to coarse gravel, with increasing amounts of silt encountered toward 20 feet below ground surface (bgs). Historical fill, including red brick fragments and rubble, was observed from the surface to depths of up to 16 feet bgs. Field boring logs are attached.

Soil screening with the PID yielded no significant deflections and the majority of samples ranged between 0.0 and 0.1 ppm. However, boring GP-6 showed higher deflections including GP-6 (16-18') which exhibited a PID deflection of 28.9 ppm. GP-6 (16-18') was submitted for TCL VOC analysis as the biased sample from the 16 to 18-foot depth interval subset.

Each individual biased grab sample from its associated depth interval subset was submitted for TCL VOCs. Methylene Chloride and Acetone were the only analytes detected from the 10 individual grab samples. Methylene Chloride, a common laboratory contaminant, was detected in every individual grab sample (GP-5 (0-2'), GP-3 (2-4'), GP-5 (4-6'), GP-4 (6-8'), GP-6 (8-10'), GP-6 (10-12'), GP-7 (12-14'), GP-6 (14-16'), GP-6 (16-18'), and GP-20 (18-20')), ranging from 8.2 to 17.6 ug/kg, all of which are below the New York State Department of Environmental Conservation's Soil Cleanup Objectives (NYS DEC SCOs) Unrestricted Use standard of 50.0 ug/kg. Acetone, also a common laboratory contaminant, was detected in samples GP-6 (8-10') and GP-6 (16-18') at 16.3 and 20.5 ug/kg respectively, both below the NYS DEC SCOs Unrestricted Use standard of 50.0 ug/kg.

PCBs were not detected in any of the samples, and none of the corrosivity, ignitability, or reactivity analyses exceeded their respective hazardous waste thresholds. One metal, lead, exceeded its hazardous waste characteristic threshold of 5.0 mg/L in two of the ten composite samples – in the 8 to 10 foot interval and in the 10 to 12 foot interval. The excavated material from this soil horizon should be segregated and handled separately from the other non-hazardous excavated materials.

Multiple metals and PAHs were detected in the composite samples at various concentrations, and these will be reviewed by the disposal facility to determine whether they meet their acceptance criteria.

We appreciate the opportunity to submit this summary report, and look forward to serving you on this project. If you have any questions regarding this proposal, please feel free to call me at (800) 305-6019.

Sincerely,
**Liberty Environmental, Inc.**

James P. Cinelli, P.E., BCEE
Principal

Attachments: Laboratory Analysis Reports
Field Boring Logs

ALS Environmental

34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

July 2, 2017

Mr. Jim Cinelli
Liberty Environmental, Inc.
505 Penn Street
Suite 400
Reading, PA 19601

# Certificate of Analysis

| | | | |
|---|---|---|---|
| Project Name: | **2017-PROJECT 99 GRANITE** | Workorder: | **2241103** |
| Purchase Order: | **170284** | Workorder ID: | **LEI010\|99 Granite Street** |

Dear Mr. Cinelli:

Enclosed are the analytical results for samples received by the laboratory on Thursday, June 22, 2017.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Mr. Brad W Kintzer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.



ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Chad Sardashti , Ms. Jenn Frasso

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*

Brad W. Kintzer

Mr. Brad W Kintzer
Project Coordinator

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

## SAMPLE SUMMARY

Workorder: 2241103 LEI010|99 Granite Street

| Lab ID | Sample ID | Matrix | Date Collected | Date Received | Collected By |
|---|---|---|---|---|---|
| 2241103001 | Comp of Grabs GP (18-20') | Solid | 6/20/2017 09:18 | 6/22/2017 11:22 | Collected by Client |
| 2241103002 | GP-1 (18-20') | Solid | 6/20/2017 10:50 | 6/22/2017 11:22 | Collected by Client |

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

## SAMPLE SUMMARY

Workorder: 2241103 LEI010|99 Granite Street

**Notes**

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

**Standard Acronyms/Flags**

| | |
|---|---|
| J | Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte |
| U | Indicates that the analyte was Not Detected (ND) |
| N | Indicates presumptive evidence of the presence of a compound |
| MDL | Method Detection Limit |
| PQL | Practical Quantitation Limit |
| RDL | Reporting Detection Limit |
| ND | Not Detected - indicates that the analyte was Not Detected at the RDL |
| Cntr | Analysis was performed using this container |
| RegLmt | Regulatory Limit |
| LCS | Laboratory Control Sample |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| DUP | Sample Duplicate |
| %Rec | Percent Recovery |
| RPD | Relative Percent Difference |
| LOD | DoD Limit of Detection |
| LOQ | DoD Limit of Quantitation |
| DL | DoD Detection Limit |
| I | Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL) |
| (S) | Surrogate Compound |
| NC | Not Calculated |
| * | Result outside of QC limits |

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

## PROJECT SUMMARY

Workorder: 2241103 LEI010|99 Granite Street

**Sample Comments**

**Lab ID:** 2241103002 **Sample ID:** GP-1 (18-20') **Sample Type:** SAMPLE

This sample was collected in a soil jar for the volatile analysis. The sample was prepared by Method 5035 after the 48-hour holding time.

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

## ANALYTICAL RESULTS

Workorder: 2241103 LEI010|99 Granite Street

Lab ID: **2241103001** Date Collected: 6/20/2017 09:18 Matrix: Solid

Sample ID: **Comp of Grabs GP (18-20')** Date Received: 6/22/2017 11:22

| Parameters | Results | Flag | Units | RDL | Method | Prepared | By | Analyzed | By | Cntr |
|---|---|---|---|---|---|---|---|---|---|---|
| **SEMIVOLATILES** | | | | | | | | | | |
| Acenaphthene | ND | | ug/kg | 55.1 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:49 | DHF | A |
| Acenaphthylene | ND | | ug/kg | 55.1 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:49 | DHF | A |
| Anthracene | ND | | ug/kg | 55.1 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:49 | DHF | A |
| Benzo(a)anthracene | ND | | ug/kg | 55.1 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:49 | DHF | A |
| Benzo(a)pyrene | ND | | ug/kg | 55.1 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:49 | DHF | A |
| Benzo(b)fluoranthene | ND | | ug/kg | 55.1 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:49 | DHF | A |
| Benzo(g,h,i)perylene | ND | | ug/kg | 55.1 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:49 | DHF | A |
| Benzo(k)fluoranthene | ND | | ug/kg | 55.1 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:49 | DHF | A |
| Chrysene | ND | | ug/kg | 55.1 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:49 | DHF | A |
| Dibenzo(a,h)anthracene | ND | | ug/kg | 55.1 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:49 | DHF | A |
| Fluoranthene | ND | | ug/kg | 55.1 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:49 | DHF | A |
| Fluorene | ND | | ug/kg | 55.1 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:49 | DHF | A |
| Indeno(1,2,3-cd)pyrene | ND | | ug/kg | 55.1 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:49 | DHF | A |
| Naphthalene | ND | | ug/kg | 55.1 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:49 | DHF | A |
| Phenanthrene | ND | | ug/kg | 55.1 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:49 | DHF | A |
| Pyrene | ND | | ug/kg | 55.1 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:49 | DHF | A |
| *Surrogate Recoveries* | *Results* | *Flag* | *Units* | *Limits* | *Method* | *Prepared* | *By* | *Analyzed* | *By* | *Cntr* |
| 2-Fluorobiphenyl (S) | 88.7 | | % | 40 - 110 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:49 | DHF | A |
| Nitrobenzene-d5 (S) | 92.3 | | % | 38 - 112 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:49 | DHF | A |
| Terphenyl-d14 (S) | 97.2 | | % | 45 - 126 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:49 | DHF | A |
| **PCBs** | | | | | | | | | | |
| Total Polychlorinated Biphenyl | ND | | mg/kg | 0.036 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 10:18 | EGO | A |
| Aroclor-1016 | ND | | mg/kg | 0.036 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 10:18 | EGO | A |
| Aroclor-1221 | ND | | mg/kg | 0.036 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 10:18 | EGO | A |
| Aroclor-1232 | ND | | mg/kg | 0.036 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 10:18 | EGO | A |
| Aroclor-1242 | ND | | mg/kg | 0.036 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 10:18 | EGO | A |
| Aroclor-1248 | ND | | mg/kg | 0.036 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 10:18 | EGO | A |
| Aroclor-1254 | ND | | mg/kg | 0.036 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 10:18 | EGO | A |
| Aroclor-1260 | ND | | mg/kg | 0.036 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 10:18 | EGO | A |
| *Surrogate Recoveries* | *Results* | *Flag* | *Units* | *Limits* | *Method* | *Prepared* | *By* | *Analyzed* | *By* | *Cntr* |
| Decachlorobiphenyls (S) | 95.6 | | % | 49 - 115 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 10:18 | EGO | A |
| Tetrachloro-m-xylene (S) | 78.5 | | % | 27 - 137 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 10:18 | EGO | A |
| **PETROLEUM HC's** | | | | | | | | | | |
| Diesel Range Organics C10-C28 | ND | | mg/kg | 11.5 | SW846 8015D | 6/29/17 02:25 | VLM | 6/30/17 07:22 | BS | A |

ALS Environmental

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

## ANALYTICAL RESULTS

Workorder: 2241103 LEI010|99 Granite Street

Lab ID: **2241103001** Date Collected: 6/20/2017 09:18 Matrix: Solid

Sample ID: **Comp of Grabs GP (18-20')** Date Received: 6/22/2017 11:22

| Parameters | Results | Flag | Units | RDL | Method | Prepared | By | Analyzed | By | Cntr |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics | ND | | ug/kg | 9400 | SW846 8015D | 6/28/17 07:23 | DD | 6/28/17 19:01 | DD | A |
| *Surrogate Recoveries* | *Results* | *Flag* | *Units* | *Limits* | *Method* | *Prepared* | *By* | *Analyzed* | *By* | *Cntr* |
| o-Terphenyl (S) | 71.7 | | % | 38 - 118 | SW846 8015D | 6/29/17 02:25 | VLM | 6/30/17 07:22 | BS | A |
| *Surrogate Recoveries* | *Results* | *Flag* | *Units* | *Limits* | *Method* | *Prepared* | *By* | *Analyzed* | *By* | *Cntr* |
| a,a,a-Trifluorotoluene (S) | 118 | | % | 72 - 134 | SW846 8015D | 6/28/17 07:23 | DD | 6/28/17 19:01 | DD | A |
| **WET CHEMISTRY** | | | | | | | | | | |
| Composite Sample | See comment | 4 | | | In-House | | | 6/26/17 15:00 | MLM | H |
| Corrosivity as pH | 7.47 | 2,3 | pH_Units | | SW846 9045D | | | 6/30/17 02:58 | MSA | A |
| Cyanide, Reactive | ND | | ppm | 10 | SW-846 7.3CN | 6/29/17 13:00 | AHI | 6/30/17 12:10 | CTD | A |
| Ignitability | Not ignitable | 1 | | | SW846 1030 | | | 6/30/17 09:45 | SDL | A |
| Moisture | 10.4 | | % | 0.1 | S2540G-11 | | | 6/27/17 10:13 | JLG | |
| Sulfide, Reactive | 6.4 | | ppm | 6.2 | SW846 7.3 | 6/29/17 13:00 | AHI | 6/30/17 12:15 | AHI | A |
| Total Solids | 89.6 | | % | 0.1 | S2540G-11 | | | 6/27/17 10:13 | JLG | |
| **METALS** | | | | | | | | | | |
| Arsenic, Total | 2.4 | | mg/kg | 1.5 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:22 | ZMC | A1 |
| Barium, Total | 129 | | mg/kg | 2.5 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:22 | ZMC | A1 |
| Cadmium, Total | ND | | mg/kg | 0.51 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:22 | ZMC | A1 |
| Chromium, Total | 15.0 | | mg/kg | 1.0 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:22 | ZMC | A1 |
| Lead, Total | 4.8 | | mg/kg | 1.0 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:22 | ZMC | A1 |
| Mercury, Total | ND | | mg/kg | 0.055 | SW846 7471B | 6/27/17 01:55 | AXC | 6/27/17 04:59 | AXC | A2 |
| Selenium, Total | ND | | mg/kg | 2.5 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:22 | ZMC | A1 |
| Silver, Total | ND | | mg/kg | 1.0 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:22 | ZMC | A1 |
| **TCLP METALS** | | | | | | | | | | |
| Arsenic, Total | ND | | mg/L | 0.14 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 12:12 | SRT | A4 |
| Barium, Total | ND | | mg/L | 2.8 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 12:12 | SRT | A4 |
| Cadmium, Total | ND | | mg/L | 0.011 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 12:12 | SRT | A4 |
| Chromium, Total | ND | | mg/L | 0.028 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 12:12 | SRT | A4 |
| Lead, Total | 0.15 | | mg/L | 0.033 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 12:12 | SRT | A4 |
| Mercury, Total | ND | | mg/L | 0.0020 | SW846 7470A | 6/29/17 01:05 | AXC | 6/29/17 04:29 | AXC | A3 |
| Selenium, Total | ND | | mg/L | 0.11 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 12:12 | SRT | A4 |
| Silver, Total | ND | | mg/L | 0.022 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 12:12 | SRT | A4 |

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

## ANALYTICAL RESULTS

Workorder: 2241103 LEI010|99 Granite Street

Lab ID: **2241103001** Date Collected: 6/20/2017 09:18 Matrix: Solid

Sample ID: **Comp of Grabs GP (18-20')** Date Received: 6/22/2017 11:22

| Parameters | Results | Flag | Units | RDL | Method | Prepared | By | Analyzed | By | *Cntr* |
|---|---|---|---|---|---|---|---|---|---|---|

Mr. Brad W Kintzer
Project Coordinator

## ANALYTICAL RESULTS

Workorder: 2241103 LEI010|99 Granite Street

Lab ID: **2241103002** Date Collected: 6/20/2017 10:50 Matrix: Solid

Sample ID: **GP-1 (18-20')** Date Received: 6/22/2017 11:22

| Parameters | Results | Flag | Units | RDL | Method | Prepared | By | Analyzed | By | Cntr |
|---|---|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS** | | | | | | | | | | |
| Acetone | ND | | ug/kg | 10.2 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| Benzene | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| Bromochloromethane | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| Bromodichloromethane | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| Bromoform | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| Bromomethane | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| 2-Butanone | ND | | ug/kg | 10.2 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| Carbon Disulfide | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| Carbon Tetrachloride | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| Chlorobenzene | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| Chlorodibromomethane | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| Chloroethane | ND | | ug/kg | 5.1 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| Chloroform | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| Chloromethane | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| Cyclohexane | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/kg | 5.1 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| 1,2-Dibromoethane | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| 1,2-Dichlorobenzene | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| 1,3-Dichlorobenzene | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| 1,4-Dichlorobenzene | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| Dichlorodifluoromethane | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| 1,1-Dichloroethane | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| 1,2-Dichloroethane | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| 1,1-Dichloroethene | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| cis-1,2-Dichloroethene | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| trans-1,2-Dichloroethene | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| 1,2-Dichloropropane | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| cis-1,3-Dichloropropene | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| trans-1,3-Dichloropropene | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| 1,4-Dioxane | ND | | ug/kg | 76.7 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| Ethylbenzene | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| Freon 113 | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| 2-Hexanone | ND | | ug/kg | 10.2 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| Isopropylbenzene | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| Methyl acetate | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| Methyl cyclohexane | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

## ANALYTICAL RESULTS

Workorder: 2241103 LEI010|99 Granite Street

Lab ID: **2241103002** Date Collected: 6/20/2017 10:50 Matrix: Solid

Sample ID: **GP-1 (18-20')** Date Received: 6/22/2017 11:22

| Parameters | Results | Flag | Units | RDL | Method | Prepared | By | Analyzed | By | *Cntr* |
|---|---|---|---|---|---|---|---|---|---|---|
| Methyl t-Butyl Ether | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| 4-Methyl-2-Pentanone(MIBK) | ND | | ug/kg | 10.2 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| Methylene Chloride | 17.6 | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| Styrene | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| Tetrachloroethene | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| Toluene | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| Total Xylenes | ND | | ug/kg | 6.1 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| 1,2,3-Trichlorobenzene | ND | | ug/kg | 5.1 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| 1,2,4-Trichlorobenzene | ND | | ug/kg | 5.1 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| 1,1,1-Trichloroethane | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| 1,1,2-Trichloroethane | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| Trichloroethene | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| Trichlorofluoromethane | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| Vinyl Chloride | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| o-Xylene | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| mp-Xylene | ND | | ug/kg | 4.1 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| *Surrogate Recoveries* | *Results* | *Flag* | *Units* | *Limits* | *Method* | *Prepared* | *By* | *Analyzed* | *By* | *Cntr* |
| 1,2-Dichloroethane-d4 (S) | 89.2 | | % | 56 - 124 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| 4-Bromofluorobenzene (S) | 103 | | % | 51 - 128 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| Dibromofluoromethane (S) | 102 | | % | 62 - 123 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| Toluene-d8 (S) | 105 | | % | 59 - 131 | SW846 8260B | 6/24/17 00:48 | TMP | 6/26/17 19:38 | TMP | A2 |
| **WET CHEMISTRY** | | | | | | | | | | |
| Moisture | 9.0 | | % | 0.1 | S2540G-11 | | | 6/28/17 20:04 | VXF | |
| Total Solids | 91.0 | | % | 0.1 | S2540G-11 | | | 6/28/17 20:04 | VXF | |

Mr. Brad W Kintzer
Project Coordinator

**PARAMETER QUALIFIERS**

| Lab ID | # | Sample ID | Analytical Method | Analyte |
|---|---|---|---|---|
| **2241103001** | 1 | Comp of Grabs GP (18-20') | SW846 1030 | Ignitability |
| According to Pa/USEPA regulations, this sample is not considered to be ignitable. (Ref 40 CFR 261.21) | | | | |
| **2241103001** | 2 | Comp of Grabs GP (18-20') | SW846 9045D | Corrosivity as pH |
| The corrosivity analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory. | | | | |
| **2241103001** | 3 | Comp of Grabs GP (18-20') | SW846 9045D | Corrosivity as pH |
| The solid pH measured in water was 7.471 at 21.6 degrees C. | | | | |
| **2241103001** | 4 | Comp of Grabs GP (18-20') | In-House | Composite Sample |
| This sample was composited per the customers instructions. | | | | |

ALS Environmental
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Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

# CHAIN OF CUST / REQUEST FOR AN



COC# 103

ALL SHADED AREAS MUST BE COMPLE
SAMPLER, INSTRUCTIONS ON

1341-562 9043

Co. Name: Liberty Environmental
Contact (Report to): Jim Cirelli Phone: 610.375.9301
Address: 50 N. 5th Street
Fifth Floor
Reading PA 19601

Bill to (if different than Report to): PO#: 170284

Project Name/#: 99 Granite Street ALS Quote #: 581156

TAT: [X] Normal-Standard TAT is 10-12 business days. Date Required:
[ ] Rush-Subject to ALS approval and surcharges. Approved By:

Email? [X] -Y jcirelli@libertyenvira.com
Fax? [ ] -Y No.:

| | ***Container Type | ***Container Size | *** Preservative |
|---|---|---|---|
| A | CG | 4oz | none |
| A | | | |
| A | | | |

ANALYSES/METHOD REQUESTED

| Sample Description/Location (as it will appear on the lab report) | COC Comments | Sample Date | Military Time | *G or C | **Matrix | 8015DRO46; 8015GRO-HT | 1030IGNITS | 8082/3546 | 8260/5202/2 | 8270PAHLo | 9045CSCORR | CNR | RUSH 6022051 | SO28 | TURBIDITY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 GP-1 (18-20') | Sample Individual TCL VOC | 6/20/17 | 1050 | G | S | X | X | X | X | X | X | X | X | X | X |
| 2 GP-2 (18-20') | Sample broken Thermometer | | 1130 | | | | | | | | | | | | |
| 3 GP-3 (18-20') | 6/21/17 | | 1150 | | | | | | | | | | | | |
| 4 GP-4 (18-20') | Composite | | 1003 | | | | | | | | | | | | |
| 5 GP-5 (18-20') | Composite | | 1240 | | | | | | | | | | | | |
| 6 GP-6 (18-20') | Point | | 1215 | | | | | | | | | | | | |
| 7 GP-7 (18-20') | Point | | 0940 | | | | | | | | | | | | |
| 8 GP-8 (19-20') | 8 | | 0918 | | | | | | | | | | | | |

Enter Number of Containers Per Analysis

Receipt Information (completed by Sample Receiving)
Performed by:
Cooler Temp: 4
Therm. ID: 29
No. of Coolers:
Notes:

| | Correct containers? | Correct sample volume? | Correct preservation? | Headspace/Volatiles? | Circle appropriate Y or N. |
|---|---|---|---|---|---|
| | Y | Y | N | Y | |
| | N | N | N | N | N |
| | Y | Y | | Y | |

| | Custody seals Present? | (if present) Seals intact? | Received on Ice? | COC/Labels complete/accurate? | Container in good condition? |
|---|---|---|---|---|---|
| | Y | Y | | Y | |

SAMPLED BY (Please Print): Chad Sanderlin

Project Comments: * 2 analyses per box

| Relinquished By / Company Name | Date | Time | Received By / Company Name | Date | Time |
|---|---|---|---|---|---|
| 1 Liberty Environmental | 6/21/17 | 0930 | 2 | 6/22/17 | 1122 |
| 3 | | | 4 | | |
| 5 | | | 6 | | |
| 7 | | | 8 | | |
| 9 | | | 10 | | |

Data Deliverables: [ ] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [X] NY Full

EDDs Required? [X] If yes, format type: Excel

DOD Criteria Required?

SDWA Forms? ⇨ yes [ ] yes [ ] yes [ ] yes [ ] Other ⇦ Enter PWSID No.

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

ALS FIELD SERVICES
[ ] Pickup
[ ] Labor
[ ] Composite Sampling
[ ] Rental Equipment
[ ] Other:

* G=Grab; C=Composite
**Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

Rev 01-2013

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

July 2, 2017

Mr. Jim Cinelli
Liberty Environmental, Inc.
505 Penn Street
Suite 400
Reading, PA 19601

# Certificate of Analysis

| | | | |
|---|---|---|---|
| Project Name: | **2017-PROJECT 99 GRANITE** | Workorder: | **2241102** |
| Purchase Order: | **170284** | Workorder ID: | **LEI009\|99 Granite Street** |

Dear Mr. Cinelli:

Enclosed are the analytical results for samples received by the laboratory on Thursday, June 22, 2017.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Mr. Brad W Kintzer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.



ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Chad Sardashti , Ms. Jenn Frasso

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*

Mr. Brad W Kintzer
Project Coordinator

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

## SAMPLE SUMMARY

Workorder: 2241102 LEI009|99 Granite Street

| Lab ID | Sample ID | Matrix | Date Collected | Date Received | Collected By |
|---|---|---|---|---|---|
| 2241102001 | Comp of Grabs GP (16-18') | Solid | 6/20/2017 09:16 | 6/22/2017 11:22 | Collected by Client |
| 2241102002 | GP-6 (16-18') | Solid | 6/20/2017 12:11 | 6/22/2017 11:22 | Collected by Client |

ALS Environmental

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

## SAMPLE SUMMARY

Workorder: 2241102 LEI009|99 Granite Street

**Notes**

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

**Standard Acronyms/Flags**

| | |
|---|---|
| J | Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte |
| U | Indicates that the analyte was Not Detected (ND) |
| N | Indicates presumptive evidence of the presence of a compound |
| MDL | Method Detection Limit |
| PQL | Practical Quantitation Limit |
| RDL | Reporting Detection Limit |
| ND | Not Detected - indicates that the analyte was Not Detected at the RDL |
| Cntr | Analysis was performed using this container |
| RegLmt | Regulatory Limit |
| LCS | Laboratory Control Sample |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| DUP | Sample Duplicate |
| %Rec | Percent Recovery |
| RPD | Relative Percent Difference |
| LOD | DoD Limit of Detection |
| LOQ | DoD Limit of Quantitation |
| DL | DoD Detection Limit |
| I | Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL) |
| (S) | Surrogate Compound |
| NC | Not Calculated |
| * | Result outside of QC limits |

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## PROJECT SUMMARY

Workorder: 2241102 LEI009|99 Granite Street

**Sample Comments**

**Lab ID:** 2241102002 **Sample ID:** GP-6 (16-18') **Sample Type:** SAMPLE

This sample was collected in a soil jar for the volatile analysis. The sample was prepared by Method 5035 after the 48-hour holding time.

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## ANALYTICAL RESULTS

Workorder: 2241102 LEI009|99 Granite Street

Lab ID: **2241102001** Date Collected: 6/20/2017 09:16 Matrix: Solid

Sample ID: **Comp of Grabs GP (16-18')** Date Received: 6/22/2017 11:22

| Parameters | Results | Flag | Units | RDL | Method | Prepared | By | Analyzed | By | Cntr |
|---|---|---|---|---|---|---|---|---|---|---|
| **SEMIVOLATILES** | | | | | | | | | | |
| Acenaphthene | ND | | ug/kg | 53.3 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:23 | DHF | A |
| Acenaphthylene | ND | | ug/kg | 53.3 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:23 | DHF | A |
| Anthracene | ND | | ug/kg | 53.3 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:23 | DHF | A |
| Benzo(a)anthracene | 61.3 | | ug/kg | 53.3 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:23 | DHF | A |
| Benzo(a)pyrene | 58.4 | | ug/kg | 53.3 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:23 | DHF | A |
| Benzo(b)fluoranthene | 78.1 | | ug/kg | 53.3 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:23 | DHF | A |
| Benzo(g,h,i)perylene | ND | | ug/kg | 53.3 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:23 | DHF | A |
| Benzo(k)fluoranthene | ND | | ug/kg | 53.3 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:23 | DHF | A |
| Chrysene | 61.5 | | ug/kg | 53.3 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:23 | DHF | A |
| Dibenzo(a,h)anthracene | ND | | ug/kg | 53.3 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:23 | DHF | A |
| Fluoranthene | 124 | | ug/kg | 53.3 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:23 | DHF | A |
| Fluorene | ND | | ug/kg | 53.3 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:23 | DHF | A |
| Indeno(1,2,3-cd)pyrene | ND | | ug/kg | 53.3 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:23 | DHF | A |
| Naphthalene | ND | | ug/kg | 53.3 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:23 | DHF | A |
| Phenanthrene | 87.1 | | ug/kg | 53.3 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:23 | DHF | A |
| Pyrene | 123 | | ug/kg | 53.3 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:23 | DHF | A |
| *Surrogate Recoveries* | *Results* | *Flag* | *Units* | *Limits* | *Method* | *Prepared* | *By* | *Analyzed* | *By* | *Cntr* |
| 2-Fluorobiphenyl (S) | 86.1 | | % | 40 - 110 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:23 | DHF | A |
| Nitrobenzene-d5 (S) | 85.3 | | % | 38 - 112 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:23 | DHF | A |
| Terphenyl-d14 (S) | 92.6 | | % | 45 - 126 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 06:23 | DHF | A |
| **PCBs** | | | | | | | | | | |
| Total Polychlorinated Biphenyl | ND | | mg/kg | 0.034 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:55 | EGO | A |
| Aroclor-1016 | ND | | mg/kg | 0.034 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:55 | EGO | A |
| Aroclor-1221 | ND | | mg/kg | 0.034 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:55 | EGO | A |
| Aroclor-1232 | ND | | mg/kg | 0.034 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:55 | EGO | A |
| Aroclor-1242 | ND | | mg/kg | 0.034 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:55 | EGO | A |
| Aroclor-1248 | ND | | mg/kg | 0.034 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:55 | EGO | A |
| Aroclor-1254 | ND | | mg/kg | 0.034 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:55 | EGO | A |
| Aroclor-1260 | ND | | mg/kg | 0.034 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:55 | EGO | A |
| *Surrogate Recoveries* | *Results* | *Flag* | *Units* | *Limits* | *Method* | *Prepared* | *By* | *Analyzed* | *By* | *Cntr* |
| Decachlorobiphenyls (S) | 99.7 | | % | 49 - 115 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:55 | EGO | A |
| Tetrachloro-m-xylene (S) | 85.1 | | % | 27 - 137 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:55 | EGO | A |
| **PETROLEUM HC's** | | | | | | | | | | |
| Diesel Range Organics C10-C28 | ND | | mg/kg | 11.4 | SW846 8015D | 6/29/17 02:25 | VLM | 6/30/17 06:46 | BS | A |

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## ANALYTICAL RESULTS

Workorder: 2241102 LEI009|99 Granite Street

Lab ID: **2241102001** Date Collected: 6/20/2017 09:16 Matrix: Solid

Sample ID: **Comp of Grabs GP (16-18')** Date Received: 6/22/2017 11:22

| Parameters | Results | Flag | Units | RDL | Method | Prepared | By | Analyzed | By | Cntr |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics | ND | | ug/kg | 9830 | SW846 8015D | 6/28/17 07:22 | DD | 6/28/17 18:28 | DD | A |
| *Surrogate Recoveries* | *Results* | *Flag* | *Units* | *Limits* | *Method* | *Prepared* | *By* | *Analyzed* | *By* | *Cntr* |
| o-Terphenyl (S) | 75.2 | | % | 38 - 118 | SW846 8015D | 6/29/17 02:25 | VLM | 6/30/17 06:46 | BS | A |
| *Surrogate Recoveries* | *Results* | *Flag* | *Units* | *Limits* | *Method* | *Prepared* | *By* | *Analyzed* | *By* | *Cntr* |
| a,a,a-Trifluorotoluene (S) | 114 | | % | 72 - 134 | SW846 8015D | 6/28/17 07:22 | DD | 6/28/17 18:28 | DD | A |
| **WET CHEMISTRY** | | | | | | | | | | |
| Composite Sample | See comment | 4 | | | In-House | | | 6/26/17 15:00 | MLM | I |
| Corrosivity as pH | 7.94 | 2,3 | pH_Units | | SW846 9045D | | | 6/29/17 03:38 | MSA | A |
| Cyanide, Reactive | ND | | ppm | 10 | SW-846 7.3CN | 6/29/17 13:00 | AHI | 6/30/17 12:10 | CTD | A |
| Ignitability | Not ignitable | 1 | | | SW846 1030 | | | 6/30/17 09:45 | SDL | A |
| Moisture | 8.6 | | % | 0.1 | S2540G-11 | | | 6/27/17 10:13 | JLG | |
| Sulfide, Reactive | ND | | ppm | 6.2 | SW846 7.3 | 6/29/17 13:00 | AHI | 6/30/17 12:15 | AHI | A |
| Total Solids | 91.4 | | % | 0.1 | S2540G-11 | | | 6/27/17 10:13 | JLG | |
| **METALS** | | | | | | | | | | |
| Arsenic, Total | 2.1 | | mg/kg | 1.5 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:18 | ZMC | A1 |
| Barium, Total | 22.8 | | mg/kg | 2.5 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:18 | ZMC | A1 |
| Cadmium, Total | ND | | mg/kg | 0.51 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:18 | ZMC | A1 |
| Chromium, Total | 12.8 | | mg/kg | 1.0 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:18 | ZMC | A1 |
| Lead, Total | 9.8 | | mg/kg | 1.0 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:18 | ZMC | A1 |
| Mercury, Total | ND | | mg/kg | 0.050 | SW846 7471B | 6/27/17 01:55 | AXC | 6/27/17 04:58 | AXC | A2 |
| Selenium, Total | ND | | mg/kg | 2.5 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:18 | ZMC | A1 |
| Silver, Total | ND | | mg/kg | 1.0 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:18 | ZMC | A1 |
| **TCLP METALS** | | | | | | | | | | |
| Arsenic, Total | ND | | mg/L | 0.14 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 12:09 | SRT | A4 |
| Barium, Total | ND | | mg/L | 2.8 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 12:09 | SRT | A4 |
| Cadmium, Total | ND | | mg/L | 0.011 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 12:09 | SRT | A4 |
| Chromium, Total | ND | | mg/L | 0.028 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 12:09 | SRT | A4 |
| Lead, Total | 0.041 | | mg/L | 0.033 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 16:46 | SRT | A4 |
| Mercury, Total | ND | | mg/L | 0.0020 | SW846 7470A | 6/29/17 01:05 | AXC | 6/29/17 04:28 | AXC | A3 |
| Selenium, Total | ND | | mg/L | 0.11 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 12:09 | SRT | A4 |
| Silver, Total | ND | | mg/L | 0.022 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 12:09 | SRT | A4 |

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## ANALYTICAL RESULTS

Workorder: 2241102 LEI009|99 Granite Street

Lab ID: **2241102001** Date Collected: 6/20/2017 09:16 Matrix: Solid

Sample ID: **Comp of Grabs GP (16-18')** Date Received: 6/22/2017 11:22

| Parameters | Results | Flag | Units | RDL | Method | Prepared | By | Analyzed | By | *Cntr* |
|---|---|---|---|---|---|---|---|---|---|---|

Mr. Brad W Kintzer
Project Coordinator

## ANALYTICAL RESULTS

Workorder: 2241102 LEI009|99 Granite Street

Lab ID: **2241102002** Date Collected: 6/20/2017 12:11 Matrix: Solid

Sample ID: **GP-6 (16-18')** Date Received: 6/22/2017 11:22

| Parameters | Results | Flag | Units | RDL | Method | Prepared | By | Analyzed | By | *Cntr* |
|---|---|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS** | | | | | | | | | | |
| Acetone | 20.5 | | ug/kg | 10.8 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| Benzene | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| Bromochloromethane | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| Bromodichloromethane | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| Bromoform | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| Bromomethane | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| 2-Butanone | ND | | ug/kg | 10.8 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| Carbon Disulfide | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| Carbon Tetrachloride | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| Chlorobenzene | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| Chlorodibromomethane | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| Chloroethane | ND | | ug/kg | 5.4 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| Chloroform | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| Chloromethane | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| Cyclohexane | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/kg | 5.4 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| 1,2-Dibromoethane | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| 1,2-Dichlorobenzene | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| 1,3-Dichlorobenzene | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| 1,4-Dichlorobenzene | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| Dichlorodifluoromethane | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| 1,1-Dichloroethane | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| 1,2-Dichloroethane | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| 1,1-Dichloroethene | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| cis-1,2-Dichloroethene | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| trans-1,2-Dichloroethene | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| 1,2-Dichloropropane | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| cis-1,3-Dichloropropene | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| trans-1,3-Dichloropropene | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| 1,4-Dioxane | ND | | ug/kg | 80.9 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| Ethylbenzene | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| Freon 113 | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| 2-Hexanone | ND | | ug/kg | 10.8 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| Isopropylbenzene | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| Methyl acetate | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| Methyl cyclohexane | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |

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## ANALYTICAL RESULTS

Workorder: 2241102 LEI009|99 Granite Street

Lab ID: **2241102002** Date Collected: 6/20/2017 12:11 Matrix: Solid

Sample ID: **GP-6 (16-18')** Date Received: 6/22/2017 11:22

| Parameters | Results | Flag | Units | RDL | Method | Prepared | By | Analyzed | By | *Cntr* |
|---|---|---|---|---|---|---|---|---|---|---|
| Methyl t-Butyl Ether | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| 4-Methyl-2-Pentanone(MIBK) | ND | | ug/kg | 10.8 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| Methylene Chloride | 13.5 | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| Styrene | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| Tetrachloroethene | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| Toluene | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| Total Xylenes | ND | | ug/kg | 6.5 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| 1,2,3-Trichlorobenzene | ND | | ug/kg | 5.4 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| 1,2,4-Trichlorobenzene | ND | | ug/kg | 5.4 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| 1,1,1-Trichloroethane | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| 1,1,2-Trichloroethane | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| Trichloroethene | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| Trichlorofluoromethane | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| Vinyl Chloride | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| o-Xylene | ND | | ug/kg | 2.2 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| mp-Xylene | ND | | ug/kg | 4.3 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| *Surrogate Recoveries* | *Results* | *Flag* | *Units* | *Limits* | *Method* | *Prepared* | *By* | *Analyzed* | *By* | *Cntr* |
| 1,2-Dichloroethane-d4 (S) | 88.1 | | % | 56 - 124 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| 4-Bromofluorobenzene (S) | 99.2 | | % | 51 - 128 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| Dibromofluoromethane (S) | 102 | | % | 62 - 123 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| Toluene-d8 (S) | 103 | | % | 59 - 131 | SW846 8260B | 6/24/17 00:47 | TMP | 6/27/17 16:35 | TMP | A2 |
| **WET CHEMISTRY** | | | | | | | | | | |
| Moisture | 9.8 | | % | 0.1 | S2540G-11 | | | 6/28/17 20:04 | VXF | |
| Total Solids | 90.2 | | % | 0.1 | S2540G-11 | | | 6/28/17 20:04 | VXF | |

Mr. Brad W Kintzer
Project Coordinator

**PARAMETER QUALIFIERS**

| Lab ID | # | Sample ID | Analytical Method | Analyte |
|---|---|---|---|---|
| **2241102001** | 1 | Comp of Grabs GP (16-18') | SW846 1030 | Ignitability |
| According to Pa/USEPA regulations, this sample is not considered to be ignitable. (Ref 40 CFR 261.21) | | | | |
| **2241102001** | 2 | Comp of Grabs GP (16-18') | SW846 9045D | Corrosivity as pH |
| The corrosivity analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory. | | | | |
| **2241102001** | 3 | Comp of Grabs GP (16-18') | SW846 9045D | Corrosivity as pH |
| The solid pH measured in water was 7.940 at 21.5 degrees C. | | | | |
| **2241102001** | 4 | Comp of Grabs GP (16-18') | In-House | Composite Sample |
| This sample was composited per the customers instructions. | | | | |

ALS Environmental
34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F.717-944-1430

# CHAIN OF CU… REQUEST FOR…

ALL SHADED AREAS MUST BE CO… SAMPLER. INSTRUCTIO…

*2241102*

Page 1 of 1

COC# 107

(717) 2562 9643

Co. Name: Liberty Environmental
Contact (Report to): Jim Cirelli
Phone: 610 375 9301
Address: 50 N. 5th Street, Fifth Floor, Reading PA 19601

Bill to (if different than Report to):
PO#: 170284

Project Name/#: 99 Granite Street
ALS Quote #: 581156

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.
Date Required:
Approved By:

Email? [X] -Y jcirelli@libertyenvro.com
Fax? [ ] -Y No.:

| | ***Container Type | ***Container Size | ***Preservative |
|---|---|---|---|
| | CG | 40z | None |

**ANALYSES/METHOD REQUESTED**

| Sample Description/Location (as it will appear on the lab report) | COC Comments | Sample Date | Military Time | *G or C | **Matrix | 8015D GRO & 8015D DRO w/ SGC & SGD HT | 1030 IGNITS | 8082/3546 | 8260 5202L | 8270 PAH-6 | 9045 CORR | CNR | RCRA 6020 (SOIL) | SO2R | TURBIDITY & TURBIDITY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 GP-1 (16-18') | Sample | 6/20/17 | 1047 | G | S | X | X | X | X | X | X | X | X | X | X |
| 2 GP-2 (16-18') | Sample | | 1125 | | | | | | | | | | | | |
| 3 GP-3 (16-18') | Composite | | 1149 | | | | | | | | | | | | |
| 4 GP-4 (16-18') | Composite | | 1001 | | | | | | | | | | | | |
| 5 GP-5 (16-18') | Composite | | 1236 | | | | | | | | | | | | |
| 6 GP-6 (16-18') | Grab | Individual TCLP | 1241 | | | | | | X | | | | | | |
| 7 GP-7 (16-18') | Grab | | 0938 | | | | | | | | | | | | |
| 8 GP-8 (16-18') | Grab | | 0916 | | | | | | | | | | | | |

Enter Number of Containers Per Analysis

**Receipt Information** (completed by Sample Receiving)
Performed by: [illegible]
Cooler Temp: 8°C
Therm. ID: 291
No. of Coolers:
Notes:

| | Correct containers? | Correct sample volume? | Correct preservation? | Headspace/Volatiles? | Circle appropriate Y or N. |
|---|---|---|---|---|---|
| N | | | | | |
| Y | | | | | |

| | Custody seals Present? | (if present) Seals intact? | Received on ice? | COC/Labels complete/accurate? | Container in good condition? |
|---|---|---|---|---|---|
| N | | | | | |
| Y | | | | | |

SAMPLED BY (Please Print): Chad Sanderlin

Project Comments: *2 analyses per box

| Relinquished By / Company Name | Date | Time | Received By / Company Name | Date | Time |
|---|---|---|---|---|---|
| 1 C/S: Liberty Environmental | 6/21/17 | 0930 | 2 | 6/21/17 | 1130 |
| 3 | | | 4 | | |
| 5 | | | 6 | | |
| 7 | | | 8 | | |
| 9 | | | 10 | | |

Data Deliverables: [ ] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [X] NJ-Full (one)
EDDs Required? [X] If yes, format type: excell
DOD Criteria Required?

SDWA Forms? yes [ ] yes [ ] yes [ ]
State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]
Other
Enter PWSID No.

**ALS FIELD SERVICES**
[ ] Pickup
[ ] Labor
[ ] Composite Sampling
[ ] Rental Equipment
[ ] Other:

* G=Grab; C=Composite
**Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

Rev 01-2013

ALS Environmental

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

July 2, 2017

Mr. Jim Cinelli
Liberty Environmental, Inc.
505 Penn Street
Suite 400
Reading, PA 19601

# Certificate of Analysis

| | | | |
|---|---|---|---|
| Project Name: | **2017-PROJECT 99 GRANITE** | Workorder: | **2241101** |
| Purchase Order: | **170284** | Workorder ID: | **LEI008\|99 Granite Street** |

Dear Mr. Cinelli:

Enclosed are the analytical results for samples received by the laboratory on Thursday, June 22, 2017.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Mr. Brad W Kintzer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.



ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Chad Sardashti , Ms. Jenn Frasso

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*

Brad W. Kintzer

Mr. Brad W Kintzer
Project Coordinator

ALS Environmental

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

## SAMPLE SUMMARY

Workorder: 2241101 LEI008|99 Granite Street

| Lab ID | Sample ID | Matrix | Date Collected | Date Received | Collected By |
|---|---|---|---|---|---|
| 2241101001 | Comp of Grabs GP (14-16') | Solid | 6/20/2017 09:12 | 6/22/2017 11:22 | Collected by Client |
| 2241101002 | GP-6 (14-16') | Solid | 6/20/2017 12:04 | 6/22/2017 11:22 | Collected by Client |

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## SAMPLE SUMMARY

Workorder: 2241101 LEI008|99 Granite Street

**Notes**

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

**Standard Acronyms/Flags**

| | |
|---|---|
| J | Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte |
| U | Indicates that the analyte was Not Detected (ND) |
| N | Indicates presumptive evidence of the presence of a compound |
| MDL | Method Detection Limit |
| PQL | Practical Quantitation Limit |
| RDL | Reporting Detection Limit |
| ND | Not Detected - indicates that the analyte was Not Detected at the RDL |
| Cntr | Analysis was performed using this container |
| RegLmt | Regulatory Limit |
| LCS | Laboratory Control Sample |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| DUP | Sample Duplicate |
| %Rec | Percent Recovery |
| RPD | Relative Percent Difference |
| LOD | DoD Limit of Detection |
| LOQ | DoD Limit of Quantitation |
| DL | DoD Detection Limit |
| I | Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL) |
| (S) | Surrogate Compound |
| NC | Not Calculated |
| * | Result outside of QC limits |

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## PROJECT SUMMARY

Workorder: 2241101 LEI008|99 Granite Street

**Sample Comments**

**Lab ID:** 2241101002 **Sample ID:** GP-6 (14-16') **Sample Type:** SAMPLE

This sample was collected in a soil jar for the volatile analysis. The sample was prepared by Method 5035 after the 48-hour holding time.

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## ANALYTICAL RESULTS

Workorder: 2241101 LEI008|99 Granite Street

Lab ID: **2241101001** Date Collected: 6/20/2017 09:12 Matrix: Solid

Sample ID: **Comp of Grabs GP (14-16')** Date Received: 6/22/2017 11:22

| Parameters | Results | Flag | Units | RDL | Method | Prepared | By | Analyzed | By | Cntr |
|---|---|---|---|---|---|---|---|---|---|---|
| **SEMIVOLATILES** | | | | | | | | | | |
| Acenaphthene | ND | | ug/kg | 53.5 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:57 | DHF | A |
| Acenaphthylene | ND | | ug/kg | 53.5 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:57 | DHF | A |
| Anthracene | ND | | ug/kg | 53.5 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:57 | DHF | A |
| Benzo(a)anthracene | ND | | ug/kg | 53.5 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:57 | DHF | A |
| Benzo(a)pyrene | ND | | ug/kg | 53.5 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:57 | DHF | A |
| Benzo(b)fluoranthene | ND | | ug/kg | 53.5 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:57 | DHF | A |
| Benzo(g,h,i)perylene | ND | | ug/kg | 53.5 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:57 | DHF | A |
| Benzo(k)fluoranthene | ND | | ug/kg | 53.5 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:57 | DHF | A |
| Chrysene | ND | | ug/kg | 53.5 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:57 | DHF | A |
| Dibenzo(a,h)anthracene | ND | | ug/kg | 53.5 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:57 | DHF | A |
| Fluoranthene | ND | | ug/kg | 53.5 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:57 | DHF | A |
| Fluorene | ND | | ug/kg | 53.5 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:57 | DHF | A |
| Indeno(1,2,3-cd)pyrene | ND | | ug/kg | 53.5 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:57 | DHF | A |
| Naphthalene | ND | | ug/kg | 53.5 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:57 | DHF | A |
| Phenanthrene | ND | | ug/kg | 53.5 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:57 | DHF | A |
| Pyrene | ND | | ug/kg | 53.5 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:57 | DHF | A |
| *Surrogate Recoveries* | *Results* | *Flag* | *Units* | *Limits* | *Method* | *Prepared* | *By* | *Analyzed* | *By* | *Cntr* |
| 2-Fluorobiphenyl (S) | 76.7 | | % | 40 - 110 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:57 | DHF | A |
| Nitrobenzene-d5 (S) | 75.8 | | % | 38 - 112 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:57 | DHF | A |
| Terphenyl-d14 (S) | 87.4 | | % | 45 - 126 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:57 | DHF | A |
| **PCBs** | | | | | | | | | | |
| Total Polychlorinated Biphenyl | ND | | mg/kg | 0.034 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:43 | EGO | A |
| Aroclor-1016 | ND | | mg/kg | 0.034 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:43 | EGO | A |
| Aroclor-1221 | ND | | mg/kg | 0.034 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:43 | EGO | A |
| Aroclor-1232 | ND | | mg/kg | 0.034 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:43 | EGO | A |
| Aroclor-1242 | ND | | mg/kg | 0.034 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:43 | EGO | A |
| Aroclor-1248 | ND | | mg/kg | 0.034 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:43 | EGO | A |
| Aroclor-1254 | ND | | mg/kg | 0.034 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:43 | EGO | A |
| Aroclor-1260 | ND | | mg/kg | 0.034 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:43 | EGO | A |
| *Surrogate Recoveries* | *Results* | *Flag* | *Units* | *Limits* | *Method* | *Prepared* | *By* | *Analyzed* | *By* | *Cntr* |
| Decachlorobiphenyls (S) | 101 | | % | 49 - 115 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:43 | EGO | A |
| Tetrachloro-m-xylene (S) | 81.2 | | % | 27 - 137 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:43 | EGO | A |
| **PETROLEUM HC's** | | | | | | | | | | |
| Diesel Range Organics C10-C28 | ND | | mg/kg | 11.4 | SW846 8015D | 6/29/17 02:25 | VLM | 6/30/17 06:10 | BS | A |

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

## ANALYTICAL RESULTS

Workorder: 2241101 LEI008|99 Granite Street

Lab ID: **2241101001** Date Collected: 6/20/2017 09:12 Matrix: Solid

Sample ID: **Comp of Grabs GP (14-16')** Date Received: 6/22/2017 11:22

| Parameters | Results | Flag | Units | RDL | Method | Prepared | By | Analyzed | By | Cntr |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics | ND | | ug/kg | 10500 | SW846 8015D | 6/28/17 07:21 | DD | 6/28/17 17:56 | DD | A |
| *Surrogate Recoveries* | *Results* | *Flag* | *Units* | *Limits* | *Method* | *Prepared* | *By* | *Analyzed* | *By* | *Cntr* |
| o-Terphenyl (S) | 72.1 | | % | 38 - 118 | SW846 8015D | 6/29/17 02:25 | VLM | 6/30/17 06:10 | BS | A |
| *Surrogate Recoveries* | *Results* | *Flag* | *Units* | *Limits* | *Method* | *Prepared* | *By* | *Analyzed* | *By* | *Cntr* |
| a,a,a-Trifluorotoluene (S) | 119 | | % | 72 - 134 | SW846 8015D | 6/28/17 07:21 | DD | 6/28/17 17:56 | DD | A |
| **WET CHEMISTRY** | | | | | | | | | | |
| Composite Sample | See comment | 4 | | | In-House | | | 6/26/17 15:00 | MLM | I |
| Corrosivity as pH | 7.66 | 2,3 | pH_Units | | SW846 9045D | | | 6/29/17 03:35 | MSA | A |
| Cyanide, Reactive | ND | | ppm | 10 | SW-846 7.3CN | 6/29/17 13:00 | AHI | 6/30/17 12:10 | CTD | A |
| Ignitability | Not ignitable | 1 | | | SW846 1030 | | | 6/30/17 09:45 | SDL | A |
| Moisture | 7.1 | | % | 0.1 | S2540G-11 | | | 6/27/17 10:13 | JLG | |
| Sulfide, Reactive | ND | | ppm | 6.2 | SW846 7.3 | 6/29/17 13:00 | AHI | 6/30/17 12:15 | AHI | A |
| Total Solids | 92.9 | | % | 0.1 | S2540G-11 | | | 6/27/17 10:13 | JLG | |
| **METALS** | | | | | | | | | | |
| Arsenic, Total | 3.1 | | mg/kg | 1.6 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:14 | ZMC | A1 |
| Barium, Total | 26.2 | | mg/kg | 2.7 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:14 | ZMC | A1 |
| Cadmium, Total | ND | | mg/kg | 0.54 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:14 | ZMC | A1 |
| Chromium, Total | 19.2 | | mg/kg | 1.1 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:14 | ZMC | A1 |
| Lead, Total | 6.5 | | mg/kg | 1.1 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:14 | ZMC | A1 |
| Mercury, Total | ND | | mg/kg | 0.051 | SW846 7471B | 6/27/17 01:55 | AXC | 6/27/17 04:54 | AXC | A2 |
| Selenium, Total | ND | | mg/kg | 2.7 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:14 | ZMC | A1 |
| Silver, Total | ND | | mg/kg | 1.1 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:14 | ZMC | A1 |
| **TCLP METALS** | | | | | | | | | | |
| Arsenic, Total | ND | | mg/L | 0.14 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 12:05 | SRT | A4 |
| Barium, Total | ND | | mg/L | 2.8 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 12:05 | SRT | A4 |
| Cadmium, Total | ND | | mg/L | 0.011 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 12:05 | SRT | A4 |
| Chromium, Total | ND | | mg/L | 0.028 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 12:05 | SRT | A4 |
| Lead, Total | 0.057 | | mg/L | 0.033 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 12:05 | SRT | A4 |
| Mercury, Total | ND | | mg/L | 0.0020 | SW846 7470A | 6/29/17 01:05 | AXC | 6/29/17 04:27 | AXC | A3 |
| Selenium, Total | ND | | mg/L | 0.11 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 12:05 | SRT | A4 |
| Silver, Total | ND | | mg/L | 0.022 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 12:05 | SRT | A4 |

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

## ANALYTICAL RESULTS

Workorder: 2241101 LEI008|99 Granite Street

Lab ID: **2241101001** Date Collected: 6/20/2017 09:12 Matrix: Solid

Sample ID: **Comp of Grabs GP (14-16')** Date Received: 6/22/2017 11:22

| Parameters | Results | Flag | Units | RDL | Method | Prepared | By | Analyzed | By | *Cntr* |
|---|---|---|---|---|---|---|---|---|---|---|

Mr. Brad W Kintzer
Project Coordinator

ALS Environmental

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## ANALYTICAL RESULTS

Workorder: 2241101 LEI008|99 Granite Street

Lab ID: **2241101002** Date Collected: 6/20/2017 12:04 Matrix: Solid

Sample ID: **GP-6 (14-16')** Date Received: 6/22/2017 11:22

| Parameters | Results | Flag | Units | RDL | Method | Prepared | By | Analyzed | By | *Cntr* |
|---|---|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS** | | | | | | | | | | |
| Acetone | ND | | ug/kg | 10.2 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| Benzene | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| Bromochloromethane | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| Bromodichloromethane | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| Bromoform | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| Bromomethane | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| 2-Butanone | ND | | ug/kg | 10.2 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| Carbon Disulfide | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| Carbon Tetrachloride | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| Chlorobenzene | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| Chlorodibromomethane | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| Chloroethane | ND | | ug/kg | 5.1 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| Chloroform | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| Chloromethane | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| Cyclohexane | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/kg | 5.1 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| 1,2-Dibromoethane | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| 1,2-Dichlorobenzene | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| 1,3-Dichlorobenzene | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| 1,4-Dichlorobenzene | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| Dichlorodifluoromethane | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| 1,1-Dichloroethane | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| 1,2-Dichloroethane | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| 1,1-Dichloroethene | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| cis-1,2-Dichloroethene | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| trans-1,2-Dichloroethene | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| 1,2-Dichloropropane | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| cis-1,3-Dichloropropene | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| trans-1,3-Dichloropropene | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| 1,4-Dioxane | ND | | ug/kg | 76.8 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| Ethylbenzene | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| Freon 113 | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| 2-Hexanone | ND | | ug/kg | 10.2 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| Isopropylbenzene | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| Methyl acetate | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| Methyl cyclohexane | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

## ANALYTICAL RESULTS

Workorder: 2241101 LEI008|99 Granite Street

Lab ID: **2241101002** Date Collected: 6/20/2017 12:04 Matrix: Solid

Sample ID: **GP-6 (14-16')** Date Received: 6/22/2017 11:22

| Parameters | Results | Flag | Units | RDL | Method | Prepared | By | Analyzed | By | Cntr |
|---|---|---|---|---|---|---|---|---|---|---|
| Methyl t-Butyl Ether | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| 4-Methyl-2-Pentanone(MIBK) | ND | | ug/kg | 10.2 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| Methylene Chloride | 11.5 | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| Styrene | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| Tetrachloroethene | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| Toluene | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| Total Xylenes | ND | | ug/kg | 6.1 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| 1,2,3-Trichlorobenzene | ND | | ug/kg | 5.1 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| 1,2,4-Trichlorobenzene | ND | | ug/kg | 5.1 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| 1,1,1-Trichloroethane | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| 1,1,2-Trichloroethane | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| Trichloroethene | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| Trichlorofluoromethane | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| Vinyl Chloride | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| o-Xylene | ND | | ug/kg | 2.0 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| mp-Xylene | ND | | ug/kg | 4.1 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| *Surrogate Recoveries* | *Results* | *Flag* | *Units* | *Limits* | *Method* | *Prepared* | *By* | *Analyzed* | *By* | *Cntr* |
| 1,2-Dichloroethane-d4 (S) | 88.4 | | % | 56 - 124 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| 4-Bromofluorobenzene (S) | 101 | | % | 51 - 128 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| Dibromofluoromethane (S) | 102 | | % | 62 - 123 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| Toluene-d8 (S) | 106 | | % | 59 - 131 | SW846 8260B | 6/24/17 00:45 | TMP | 6/27/17 16:12 | TMP | A2 |
| **WET CHEMISTRY** | | | | | | | | | | |
| Moisture | 5.0 | | % | 0.1 | S2540G-11 | | | 6/28/17 20:04 | VXF | |
| Total Solids | 95.0 | | % | 0.1 | S2540G-11 | | | 6/28/17 20:04 | VXF | |

Mr. Brad W Kintzer
Project Coordinator

**PARAMETER QUALIFIERS**

| Lab ID | # | Sample ID | Analytical Method | Analyte |
|---|---|---|---|---|
| **2241101001** | 1 | Comp of Grabs GP (14-16') | SW846 1030 | Ignitability |
| According to Pa/USEPA regulations, this sample is not considered to be ignitable. (Ref 40 CFR 261.21) | | | | |
| **2241101001** | 2 | Comp of Grabs GP (14-16') | SW846 9045D | Corrosivity as pH |
| The corrosivity analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory. | | | | |
| **2241101001** | 3 | Comp of Grabs GP (14-16') | SW846 9045D | Corrosivity as pH |
| The solid pH measured in water was 7.656 at 21.5 degrees C. | | | | |
| **2241101001** | 4 | Comp of Grabs GP (14-16') | In-House | Composite Sample |
| This sample was composited per the customers instructions. | | | | |

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Middletown, PA 17057
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F. 717-944-1430

# CHAIN OF CUS / REQUEST FOR A

ALL SHADED AREAS MUST BE COMP
SAMPLER. INSTRUCTIONS

Page 1 of 1

COC# 9043

7341 2562

Co. Name: Liberty Environmental
Contact (Report to): Jim Grelli
Phone: 610.375.9301
Address: 50 N. 5th Street
Fifth Floor
Reading, PA 19601

Bill to (if different than Report to):
PO#: 170284

Project Name/#: 2017-99 Granite Street
ALS Quote #: 581156

TAT: [X] Normal-Standard TAT is 10-12 business days. Date Required:
[ ] Rush-Subject to ALS approval and surcharges. Approved By:

Email? [X] -Y jgrelli@libertyenviro.com
Fax? [ ] -Y No.:

| Sample Description/Location (as it will appear on the lab report) | COC Comments | Sample Date | Military Time | *G or C | **Matrix | 8015DRO46 | 8015GRO-HI | 1030 IGNITS | 8082/3546 | 8260S2012L | 8270PAH-6 | 9045SCSCORR | CNR: 3 TURFFEE | RCRA6020S1 | SO2R: 3 TURFFEE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 GP-1 (14-16') | 1 Sample | 6/20/17 | 1044 | G | S | X | X | X | X | X | X | X | X | X | X |
| 2 GP-2 (14-16') | 1 Sample | | 1121 | | | | | | | | | | | | |
| 3 GP-3 (14-16') | 1 Sample | | 1148 | | | | | | | | | | | | |
| 4 GP-4 (14-16') | 1 Sample | | 0959 | | | | | | | | | | | | |
| 5 GP-5 (14-16') | 1 Sample | | 1234 | | | | | | | | | | | | |
| 6 GP-6 (14-16') | 1 Sample | | 1204 | | | | | | | X | | | | | |
| 7 GP-7 (14-16') | 1 Sample | | 0936 | | | | | | | | | | | | |
| 8 GP-8 (14-16') | 1 Sample | | 0914 | | | | | | | | | | | | |

***Container Type: JAR
***Container Size: 4oz
***Preservative: NONE

ANALYSES/METHOD REQUESTED

Enter Number of Containers Per Analysis

Receipt Information (completed by Sample Receiving)
Performed by: dvm
Cooler Temp: 2°C
Therm. ID: 291
No. of Coolers:

Notes:

| | Correct containers? | Correct sample volume? | Correct preservation? | Headspace/Volatiles? | Circle appropriate Y or N. |
|---|---|---|---|---|---|
| N | | | | | |
| Y | | | | | |

| | Custody seals Present? | (if present) Seals intact? | Received on Ice? | COC/Labels complete/accurate? | Container in good condition? |
|---|---|---|---|---|---|
| N | | | | | |
| Y | | | | | |

SAMPLED BY (Please Print): Chad Sandenbuti

Project Comments: #2 analyses per box

| Relinquished By / Company Name | Date | Time | Received By / Company Name | Date | Time |
|---|---|---|---|---|---|
| 1 Liberty Environmental | 6/21/17 | 0930 | 2 | 6/22 | 1130 |
| 3 | | | 4 | | |
| 5 | | | 6 | | |
| 7 | | | 8 | | |
| 9 | | | 10 | | |

Data Deliverables: [ ] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [X] NY-Full
EDDs Required? [X] If yes, format type: Excel
DOD Criteria Required?

SDWA Forms? yes yes yes yes
State Samples Collected In? MD NJ NY PA
Other
EnviroWisdom

ALS FIELD SERVICES
[ ] Pickup
[ ] Labor
[ ] Composite Sampling
[ ] Rental Equipment
[ ] Other:

* G=Grab; C=Composite
**Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

Rev 01-2013

ALS Environmental

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

July 2, 2017

Mr. Jim Cinelli
Liberty Environmental, Inc.
505 Penn Street
Suite 400
Reading, PA 19601

# Certificate of Analysis

| | | | |
|---|---|---|---|
| Project Name: | **2017-PROJECT 99 GRANITE** | Workorder: | **2241099** |
| Purchase Order: | **170284** | Workorder ID: | **LEI007\|99 Granite Street** |

Dear Mr. Cinelli:

Enclosed are the analytical results for samples received by the laboratory on Thursday, June 22, 2017.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Mr. Brad W Kintzer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.



ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Chad Sardashti , Ms. Jenn Frasso

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*

Brad W. Kintzer

Mr. Brad W Kintzer
Project Coordinator

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

## SAMPLE SUMMARY

Workorder: 2241099 LEI007|99 Granite Street

| Lab ID | Sample ID | Matrix | Date Collected | Date Received | Collected By |
|---|---|---|---|---|---|
| 2241099001 | Comp of Grabs GP (12-14') | Solid | 6/20/2017 09:12 | 6/22/2017 11:22 | Collected by Client |
| 2241099002 | GP-7 (12-14') | Solid | 6/20/2017 09:34 | 6/22/2017 11:22 | Collected by Client |

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## SAMPLE SUMMARY

Workorder: 2241099 LEI007|99 Granite Street

**Notes**

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

**Standard Acronyms/Flags**

| | |
|---|---|
| J | Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte |
| U | Indicates that the analyte was Not Detected (ND) |
| N | Indicates presumptive evidence of the presence of a compound |
| MDL | Method Detection Limit |
| PQL | Practical Quantitation Limit |
| RDL | Reporting Detection Limit |
| ND | Not Detected - indicates that the analyte was Not Detected at the RDL |
| Cntr | Analysis was performed using this container |
| RegLmt | Regulatory Limit |
| LCS | Laboratory Control Sample |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| DUP | Sample Duplicate |
| %Rec | Percent Recovery |
| RPD | Relative Percent Difference |
| LOD | DoD Limit of Detection |
| LOQ | DoD Limit of Quantitation |
| DL | DoD Detection Limit |
| I | Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL) |
| (S) | Surrogate Compound |
| NC | Not Calculated |
| * | Result outside of QC limits |

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## PROJECT SUMMARY

Workorder: 2241099 LEI007|99 Granite Street

**Sample Comments**

**Lab ID:** 2241099002 **Sample ID:** GP-7 (12-14') **Sample Type:** SAMPLE

This sample was collected in a soil jar for the volatile analysis. The sample was prepared by Method 5035 after the 48-hour holding time.

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## ANALYTICAL RESULTS

Workorder: 2241099 LEI007|99 Granite Street

Lab ID: **2241099001** Date Collected: 6/20/2017 09:12 Matrix: Solid

Sample ID: **Comp of Grabs GP (12-14')** Date Received: 6/22/2017 11:22

| Parameters | Results | Flag | Units | RDL | Method | Prepared | By | Analyzed | By | Cntr |
|---|---|---|---|---|---|---|---|---|---|---|
| **SEMIVOLATILES** | | | | | | | | | | |
| Acenaphthene | ND | | ug/kg | 56.2 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:31 | DHF | A |
| Acenaphthylene | ND | | ug/kg | 56.2 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:31 | DHF | A |
| Anthracene | ND | | ug/kg | 56.2 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:31 | DHF | A |
| Benzo(a)anthracene | ND | | ug/kg | 56.2 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:31 | DHF | A |
| Benzo(a)pyrene | ND | | ug/kg | 56.2 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:31 | DHF | A |
| Benzo(b)fluoranthene | ND | | ug/kg | 56.2 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:31 | DHF | A |
| Benzo(g,h,i)perylene | ND | | ug/kg | 56.2 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:31 | DHF | A |
| Benzo(k)fluoranthene | ND | | ug/kg | 56.2 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:31 | DHF | A |
| Chrysene | ND | | ug/kg | 56.2 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:31 | DHF | A |
| Dibenzo(a,h)anthracene | ND | | ug/kg | 56.2 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:31 | DHF | A |
| Fluoranthene | ND | | ug/kg | 56.2 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:31 | DHF | A |
| Fluorene | ND | | ug/kg | 56.2 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:31 | DHF | A |
| Indeno(1,2,3-cd)pyrene | ND | | ug/kg | 56.2 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:31 | DHF | A |
| Naphthalene | ND | | ug/kg | 56.2 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:31 | DHF | A |
| Phenanthrene | ND | | ug/kg | 56.2 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:31 | DHF | A |
| Pyrene | ND | | ug/kg | 56.2 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:31 | DHF | A |
| *Surrogate Recoveries* | *Results* | *Flag* | *Units* | *Limits* | *Method* | *Prepared* | *By* | *Analyzed* | *By* | *Cntr* |
| 2-Fluorobiphenyl (S) | 82.5 | | % | 40 - 110 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:31 | DHF | A |
| Nitrobenzene-d5 (S) | 85.7 | | % | 38 - 112 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:31 | DHF | A |
| Terphenyl-d14 (S) | 94.8 | | % | 45 - 126 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:31 | DHF | A |
| **PCBs** | | | | | | | | | | |
| Total Polychlorinated Biphenyl | ND | | mg/kg | 0.035 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:32 | EGO | A |
| Aroclor-1016 | ND | | mg/kg | 0.035 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:32 | EGO | A |
| Aroclor-1221 | ND | | mg/kg | 0.035 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:32 | EGO | A |
| Aroclor-1232 | ND | | mg/kg | 0.035 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:32 | EGO | A |
| Aroclor-1242 | ND | | mg/kg | 0.035 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:32 | EGO | A |
| Aroclor-1248 | ND | | mg/kg | 0.035 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:32 | EGO | A |
| Aroclor-1254 | ND | | mg/kg | 0.035 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:32 | EGO | A |
| Aroclor-1260 | ND | | mg/kg | 0.035 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:32 | EGO | A |
| *Surrogate Recoveries* | *Results* | *Flag* | *Units* | *Limits* | *Method* | *Prepared* | *By* | *Analyzed* | *By* | *Cntr* |
| Decachlorobiphenyls (S) | 99.4 | | % | 49 - 115 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:32 | EGO | A |
| Tetrachloro-m-xylene (S) | 78.9 | | % | 27 - 137 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:32 | EGO | A |
| **PETROLEUM HC's** | | | | | | | | | | |
| Diesel Range Organics C10-C28 | ND | | mg/kg | 11.5 | SW846 8015D | 6/29/17 02:25 | VLM | 6/30/17 05:34 | BS | A |

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

## ANALYTICAL RESULTS

Workorder: 2241099 LEI007|99 Granite Street

Lab ID: **2241099001** Date Collected: 6/20/2017 09:12 Matrix: Solid

Sample ID: **Comp of Grabs GP (12-14')** Date Received: 6/22/2017 11:22

| Parameters | Results | Flag | Units | RDL | Method | Prepared | By | Analyzed | By | Cntr |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics | ND | | ug/kg | 10300 | SW846 8015D | 6/28/17 07:20 | DD | 6/28/17 17:24 | DD | A |
| *Surrogate Recoveries* | *Results* | *Flag* | *Units* | *Limits* | *Method* | *Prepared* | *By* | *Analyzed* | *By* | *Cntr* |
| o-Terphenyl (S) | 68.6 | | % | 38 - 118 | SW846 8015D | 6/29/17 02:25 | VLM | 6/30/17 05:34 | BS | A |
| *Surrogate Recoveries* | *Results* | *Flag* | *Units* | *Limits* | *Method* | *Prepared* | *By* | *Analyzed* | *By* | *Cntr* |
| a,a,a-Trifluorotoluene (S) | 118 | | % | 72 - 134 | SW846 8015D | 6/28/17 07:20 | DD | 6/28/17 17:24 | DD | A |
| **WET CHEMISTRY** | | | | | | | | | | |
| Composite Sample | See comment | 4 | | | In-House | | | 6/26/17 15:00 | MLM | I |
| Corrosivity as pH | 7.83 | 2,3 | pH_Units | | SW846 9045D | | | 6/29/17 03:31 | MSA | A |
| Cyanide, Reactive | ND | | ppm | 10 | SW-846 7.3CN | 6/29/17 13:00 | AHI | 6/30/17 12:10 | CTD | A |
| Ignitability | Not ignitable | 1 | | | SW846 1030 | | | 6/30/17 09:45 | SDL | A |
| Moisture | 11.1 | | % | 0.1 | S2540G-11 | | | 6/27/17 10:13 | JLG | |
| Sulfide, Reactive | ND | | ppm | 6.2 | SW846 7.3 | 6/29/17 13:00 | AHI | 6/30/17 12:15 | AHI | A |
| Total Solids | 88.9 | | % | 0.1 | S2540G-11 | | | 6/27/17 10:13 | JLG | |
| **METALS** | | | | | | | | | | |
| Arsenic, Total | 4.0 | | mg/kg | 1.5 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:10 | ZMC | A1 |
| Barium, Total | 33.1 | | mg/kg | 2.4 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:10 | ZMC | A1 |
| Cadmium, Total | ND | | mg/kg | 0.48 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:10 | ZMC | A1 |
| Chromium, Total | 14.4 | | mg/kg | 0.97 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:10 | ZMC | A1 |
| Lead, Total | 9.3 | | mg/kg | 0.97 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:10 | ZMC | A1 |
| Mercury, Total | ND | | mg/kg | 0.051 | SW846 7471B | 6/27/17 01:55 | AXC | 6/27/17 04:53 | AXC | A2 |
| Selenium, Total | ND | | mg/kg | 2.4 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:10 | ZMC | A1 |
| Silver, Total | ND | | mg/kg | 0.97 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:10 | ZMC | A1 |
| **TCLP METALS** | | | | | | | | | | |
| Arsenic, Total | ND | | mg/L | 0.14 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 12:01 | SRT | A4 |
| Barium, Total | ND | | mg/L | 2.8 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 12:01 | SRT | A4 |
| Cadmium, Total | ND | | mg/L | 0.011 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 12:01 | SRT | A4 |
| Chromium, Total | ND | | mg/L | 0.028 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 12:01 | SRT | A4 |
| Lead, Total | 1.3 | | mg/L | 0.033 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 12:01 | SRT | A4 |
| Mercury, Total | ND | | mg/L | 0.0020 | SW846 7470A | 6/29/17 01:05 | AXC | 6/29/17 04:26 | AXC | A3 |
| Selenium, Total | ND | | mg/L | 0.11 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 12:01 | SRT | A4 |
| Silver, Total | ND | | mg/L | 0.022 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 12:01 | SRT | A4 |

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

## ANALYTICAL RESULTS

Workorder: 2241099 LEI007|99 Granite Street

Lab ID: **2241099001** Date Collected: 6/20/2017 09:12 Matrix: Solid

Sample ID: **Comp of Grabs GP (12-14')** Date Received: 6/22/2017 11:22

| Parameters | Results | Flag | Units | RDL | Method | Prepared | By | Analyzed | By | *Cntr* |
|---|---|---|---|---|---|---|---|---|---|---|

Mr. Brad W Kintzer
Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 2241099 LEI007|99 Granite Street

Lab ID: **2241099002** Date Collected: 6/20/2017 09:34 Matrix: Solid

Sample ID: **GP-7 (12-14')** Date Received: 6/22/2017 11:22

| Parameters | Results | Flag | Units | RDL | Method | Prepared | By | Analyzed | By | *Cntr* |
|---|---|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS** | | | | | | | | | | |
| Acetone | ND | 4 | ug/kg | 9.4 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| Benzene | ND | 15 | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| Bromochloromethane | ND | | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| Bromodichloromethane | ND | 18 | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| Bromoform | ND | | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| Bromomethane | ND | | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| 2-Butanone | ND | 9 | ug/kg | 9.4 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| Carbon Disulfide | ND | | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| Carbon Tetrachloride | ND | 14 | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| Chlorobenzene | ND | 23 | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| Chlorodibromomethane | ND | | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| Chloroethane | ND | | ug/kg | 4.7 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| Chloroform | ND | 11 | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| Chloromethane | ND | | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| Cyclohexane | ND | 13 | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/kg | 4.7 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| 1,2-Dibromoethane | ND | | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| 1,2-Dichlorobenzene | ND | 32 | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| 1,3-Dichlorobenzene | ND | 29 | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| 1,4-Dichlorobenzene | ND | 31 | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| Dichlorodifluoromethane | ND | | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| 1,1-Dichloroethane | ND | 8 | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| 1,2-Dichloroethane | ND | | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| 1,1-Dichloroethene | ND | 5 | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| cis-1,2-Dichloroethene | ND | 10 | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| trans-1,2-Dichloroethene | ND | 6 | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| 1,2-Dichloropropane | ND | 16 | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| cis-1,3-Dichloropropene | ND | 19 | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| trans-1,3-Dichloropropene | ND | 21 | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| 1,4-Dioxane | ND | | ug/kg | 70.5 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| Ethylbenzene | ND | 24 | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| Freon 113 | ND | | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| 2-Hexanone | ND | | ug/kg | 9.4 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| Isopropylbenzene | ND | 28 | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| Methyl acetate | ND | 3 | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| Methyl cyclohexane | ND | 2 | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

## ANALYTICAL RESULTS

Workorder: 2241099 LEI007|99 Granite Street

Lab ID: **2241099002** Date Collected: 6/20/2017 09:34 Matrix: Solid

Sample ID: **GP-7 (12-14')** Date Received: 6/22/2017 11:22

| Parameters | Results | Flag | Units | RDL | Method | Prepared | By | Analyzed | By | *Cntr* |
|---|---|---|---|---|---|---|---|---|---|---|
| Methyl t-Butyl Ether | ND | 7 | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| 4-Methyl-2-Pentanone(MIBK) | ND | 20 | ug/kg | 9.4 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| Methylene Chloride | 16.3 | | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| Styrene | ND | 26 | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| Tetrachloroethene | ND | | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| Toluene | ND | 22 | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| Total Xylenes | ND | 30 | ug/kg | 5.6 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| 1,2,3-Trichlorobenzene | ND | 1 | ug/kg | 4.7 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| 1,2,4-Trichlorobenzene | ND | 33 | ug/kg | 4.7 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| 1,1,1-Trichloroethane | ND | 12 | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| 1,1,2-Trichloroethane | ND | | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| Trichloroethene | ND | 17 | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| Trichlorofluoromethane | ND | | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| Vinyl Chloride | ND | | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| o-Xylene | ND | 27 | ug/kg | 1.9 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| mp-Xylene | ND | 25 | ug/kg | 3.8 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| *Surrogate Recoveries* | *Results* | *Flag* | *Units* | *Limits* | *Method* | *Prepared* | *By* | *Analyzed* | *By* | *Cntr* |
| 1,2-Dichloroethane-d4 (S) | 96.3 | | % | 56 - 124 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| 4-Bromofluorobenzene (S) | 101 | | % | 51 - 128 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| Dibromofluoromethane (S) | 105 | | % | 62 - 123 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| Toluene-d8 (S) | 104 | | % | 59 - 131 | SW846 8260B | 6/24/17 00:44 | TMP | 6/26/17 18:51 | TMP | A2 |
| **WET CHEMISTRY** | | | | | | | | | | |
| Moisture | 6.1 | | % | 0.1 | S2540G-11 | | | 6/28/17 20:04 | VXF | |
| Total Solids | 93.9 | | % | 0.1 | S2540G-11 | | | 6/28/17 20:04 | VXF | |

Mr. Brad W Kintzer
Project Coordinator

**PARAMETER QUALIFIERS**

| Lab ID | # | Sample ID | Analytical Method | Analyte |
|---|---|---|---|---|
| **2241099001** | 1 | Comp of Grabs GP (12-14') | SW846 1030 | Ignitability |
| According to Pa/USEPA regulations, this sample is not considered to be ignitable. (Ref 40 CFR 261.21) | | | | |
| **2241099001** | 2 | Comp of Grabs GP (12-14') | SW846 9045D | Corrosivity as pH |
| The corrosivity analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory. | | | | |
| **2241099001** | 3 | Comp of Grabs GP (12-14') | SW846 9045D | Corrosivity as pH |
| The solid pH measured in water was 7.825 at 21.5 degrees C. | | | | |
| **2241099001** | 4 | Comp of Grabs GP (12-14') | In-House | Composite Sample |
| This sample was composited per the customers instructions. | | | | |
| **2241099002** | 1 | GP-7 (12-14') | SW846 8260B | 1,2,3-Trichlorobenzene |
| The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,2,3-Trichlorobenzene. The % Recovery was reported as 59.2 and the control limits were 68 to 129. | | | | |
| **2241099002** | 2 | GP-7 (12-14') | SW846 8260B | Methyl cyclohexane |
| The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 43.9 and the control limits were 70 to 130. | | | | |
| **2241099002** | 3 | GP-7 (12-14') | SW846 8260B | Methyl acetate |
| The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Methyl acetate. The % Recovery was reported as 190 and the control limits were 70 to 130. | | | | |
| **2241099002** | 4 | GP-7 (12-14') | SW846 8260B | Acetone |
| The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Acetone. The % Recovery was reported as 253 and the control limits were 58 to 146. | | | | |
| **2241099002** | 5 | GP-7 (12-14') | SW846 8260B | 1,1-Dichloroethene |
| The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 52.8 and the control limits were 59 to 139. | | | | |
| **2241099002** | 6 | GP-7 (12-14') | SW846 8260B | trans-1,2-Dichloroethene |
| The QC sample type MS for method SW846 8260B was outside the control limits for the analyte trans-1,2-Dichloroethene. The % Recovery was reported as 50.1 and the control limits were 66 to 133. | | | | |
| **2241099002** | 7 | GP-7 (12-14') | SW846 8260B | Methyl t-Butyl Ether |
| The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Methyl t-Butyl Ether. The % Recovery was reported as 61.6 and the control limits were 70 to 118. | | | | |
| **2241099002** | 8 | GP-7 (12-14') | SW846 8260B | 1,1-Dichloroethane |
| The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethane. The % Recovery was reported as 54.6 and the control limits were 74 to 131. | | | | |
| **2241099002** | 9 | GP-7 (12-14') | SW846 8260B | 2-Butanone |
| The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 2-Butanone. The % Recovery was reported as 198 and the control limits were 64 to 148. | | | | |
| **2241099002** | 10 | GP-7 (12-14') | SW846 8260B | cis-1,2-Dichloroethene |
| The QC sample type MS for method SW846 8260B was outside the control limits for the analyte cis-1,2-Dichloroethene. The % Recovery was reported as 60.5 and the control limits were 75 to 128. | | | | |
| **2241099002** | 11 | GP-7 (12-14') | SW846 8260B | Chloroform |
| The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Chloroform. The % Recovery was reported as 63.5 and the control limits were 73 to 126. | | | | |
| **2241099002** | 12 | GP-7 (12-14') | SW846 8260B | 1,1,1-Trichloroethane |
| The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,1,1-Trichloroethane. The % Recovery was reported as 44.7 and the control limits were 68 to 131. | | | | |
| **2241099002** | 13 | GP-7 (12-14') | SW846 8260B | Cyclohexane |
| The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 45.4 and the control limits were 62 to 143. | | | | |

## ANALYTICAL RESULTS

Workorder: 2241099 LEI007|99 Granite Street

| | | | | |
|---|---|---|---|---|
| **2241099002** | 14 | GP-7 (12-14') | SW846 8260B | Carbon Tetrachloride |

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Carbon Tetrachloride. The % Recovery was reported as 42.1 and the control limits were 64 to 136.

| | | | | |
|---|---|---|---|---|
| **2241099002** | 15 | GP-7 (12-14') | SW846 8260B | Benzene |

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Benzene. The % Recovery was reported as 57.9 and the control limits were 75 to 132.

| | | | | |
|---|---|---|---|---|
| **2241099002** | 16 | GP-7 (12-14') | SW846 8260B | 1,2-Dichloropropane |

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,2-Dichloropropane. The % Recovery was reported as 59 and the control limits were 78 to 131.

| | | | | |
|---|---|---|---|---|
| **2241099002** | 17 | GP-7 (12-14') | SW846 8260B | Trichloroethene |

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Trichloroethene. The % Recovery was reported as 58.3 and the control limits were 72 to 129.

| | | | | |
|---|---|---|---|---|
| **2241099002** | 18 | GP-7 (12-14') | SW846 8260B | Bromodichloromethane |

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Bromodichloromethane. The % Recovery was reported as 62.9 and the control limits were 74 to 127.

| | | | | |
|---|---|---|---|---|
| **2241099002** | 19 | GP-7 (12-14') | SW846 8260B | cis-1,3-Dichloropropene |

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte cis-1,3-Dichloropropene. The % Recovery was reported as 59.6 and the control limits were 76 to 123.

| | | | | |
|---|---|---|---|---|
| **2241099002** | 20 | GP-7 (12-14') | SW846 8260B | 4-Methyl-2-Pentanone(MIBK) |

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 4-Methyl-2-Pentanone(MIBK). The % Recovery was reported as 163 and the control limits were 64 to 143.

| | | | | |
|---|---|---|---|---|
| **2241099002** | 21 | GP-7 (12-14') | SW846 8260B | trans-1,3-Dichloropropene |

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte trans-1,3-Dichloropropene. The % Recovery was reported as 57.2 and the control limits were 77 to 123.

| | | | | |
|---|---|---|---|---|
| **2241099002** | 22 | GP-7 (12-14') | SW846 8260B | Toluene |

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Toluene. The % Recovery was reported as 53.1 and the control limits were 73 to 129.

| | | | | |
|---|---|---|---|---|
| **2241099002** | 23 | GP-7 (12-14') | SW846 8260B | Chlorobenzene |

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Chlorobenzene. The % Recovery was reported as 54.5 and the control limits were 76 to 125.

| | | | | |
|---|---|---|---|---|
| **2241099002** | 24 | GP-7 (12-14') | SW846 8260B | Ethylbenzene |

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Ethylbenzene. The % Recovery was reported as 49.7 and the control limits were 73 to 133.

| | | | | |
|---|---|---|---|---|
| **2241099002** | 25 | GP-7 (12-14') | SW846 8260B | mp-Xylene |

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte mp-Xylene. The % Recovery was reported as 52.1 and the control limits were 72 to 130.

| | | | | |
|---|---|---|---|---|
| **2241099002** | 26 | GP-7 (12-14') | SW846 8260B | Styrene |

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Styrene. The % Recovery was reported as 41 and the control limits were 77 to 130.

| | | | | |
|---|---|---|---|---|
| **2241099002** | 27 | GP-7 (12-14') | SW846 8260B | o-Xylene |

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte o-Xylene. The % Recovery was reported as 51.2 and the control limits were 75 to 129.

| | | | | |
|---|---|---|---|---|
| **2241099002** | 28 | GP-7 (12-14') | SW846 8260B | Isopropylbenzene |

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Isopropylbenzene. The % Recovery was reported as 39.5 and the control limits were 71 to 137.

## ANALYTICAL RESULTS

Workorder: 2241099 LEI007|99 Granite Street

| | | | | |
|---|---|---|---|---|
| **2241099002** | 29 | GP-7 (12-14') | SW846 8260B | 1,3-Dichlorobenzene |

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,3-Dichlorobenzene. The % Recovery was reported as 47.3 and the control limits were 72 to 127.

| | | | | |
|---|---|---|---|---|
| **2241099002** | 30 | GP-7 (12-14') | SW846 8260B | Total Xylenes |

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Total Xylenes. The % Recovery was reported as 51.8 and the control limits were 73 to 130.

| | | | | |
|---|---|---|---|---|
| **2241099002** | 31 | GP-7 (12-14') | SW846 8260B | 1,4-Dichlorobenzene |

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,4-Dichlorobenzene. The % Recovery was reported as 49 and the control limits were 72 to 126.

| | | | | |
|---|---|---|---|---|
| **2241099002** | 32 | GP-7 (12-14') | SW846 8260B | 1,2-Dichlorobenzene |

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,2-Dichlorobenzene. The % Recovery was reported as 49.6 and the control limits were 75 to 126.

| | | | | |
|---|---|---|---|---|
| **2241099002** | 33 | GP-7 (12-14') | SW846 8260B | 1,2,4-Trichlorobenzene |

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,2,4-Trichlorobenzene. The % Recovery was reported as 57.1 and the control limits were 63 to 132.

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Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

# CHAIN OF CU… REQUEST FOR…

ALL SHADED AREAS MUST BE CO… SAMPLER. INSTRUCTION…

*2241099*

Page 1 of 1

COC #: 090

9541 2562 9013

Co. Name: Liberty Environmental
Contact (Report to): Jon Cinelli
Phone: 6103759301
Address: 50 N. 5th Street, Fifth Floor, Reading, PA 19601

Bill to (if different than Report to):
PO#: 170284

Project Name/#: 99 Granite St
ALS Quote #: 581156

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.
Date Required:
Approved By:

Email? [X] -Y jcinelli@libertyenviro.com
Fax? [ ] -Y No.:

| | Container Type | Container Size | Preservative |
|---|---|---|---|
| | CG | 4oz | no ne |

ANALYSES/METHOD REQUESTED

| Sample Description/Location (as it will appear on the lab report) | COC Comments | Sample Date | Military Time | *G or C | **Matrix | 8015 DRO 46 & 8015GRO_HI | 1030 IGNITS | 8082/3546 | 8260S2012L | 8270PAH_6 | 9045CSCORR | CNR | RCRA-6020S1 | 502R | TCLPFEE & TCLPMETALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 GP-1 (12-14') | Sample | 6/20/17 | 1041 | G | S | X | X | X | X | X | X | X | X | X | X |
| 2 GP-2 (12-14') | | | 1118 | | | | | | | | | | | | |
| 3 GP-3 (12-14') | Composite | | 1146 | | | | | | | | | | | | |
| 4 GP-4 (12-14') | Lab | | 0957 | | | | | | | | | | | | |
| 5 GP-5 (12-14') | | | 1232 | | | | | | | | | | | | |
| 6 GP-6 (12-14') | 1-Point | | 1207 | | | | | | | | | | | | |
| 7 GP-7 (12-14') | 8- Individual TCLVOC | | 0934 | | | | | | X | | | | | | |
| 8 GP-8 (12-14') | | | 0912 | | | | | | | | | | | | |

Enter Number of Containers Per Analysis

Receipt Information (completed by Sample Receiving)
Performed by:
Cooler Temp: 4
Therm. ID: 241
No. of Coolers:
Notes:

| | Correct containers? | Correct sample volume? | Correct preservation? | Headspace/Volatiles? | Circle appropriate Y or N. |
|---|---|---|---|---|---|
| Y | Y | Y | Y | Y | |
| N | N | N | N | N | |

| | Custody seals Present? | (if present) Seals intact? | Received on Ice? | COC/Labels complete/accurate? | Container in good condition? |
|---|---|---|---|---|---|
| Y | | | Y | Y | Y |
| N | N | N | N | N | |

SAMPLED BY (Please Print): Chad Sandaski

Project Comments: * 2 analyses in box

| Relinquished By / Company Name | Date | Time | Received By / Company Name | Date | Time |
|---|---|---|---|---|---|
| 1 Liberty Environmental | 6/21/17 | 0930 | 2 | 6/22 | 1122 |
| 3 | | | 4 | | |
| 5 | | | 6 | | |
| 7 | | | 8 | | |
| 9 | | | 10 | | |

Data Deliverables: [ ] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [X] NY-Full (new)
EDDs Required? [X] If yes, format type: excel
DOD Criteria Required?

SDWA Forms? yes yes yes yes
State Samples Collected In? MD NJ NY PA
Other
Enter PWSID No.

ALS FIELD SERVICES
[ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite
** Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
*** Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

Rev 01-2013

ALS Environmental

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

July 2, 2017

Mr. Jim Cinelli
Liberty Environmental, Inc.
505 Penn Street
Suite 400
Reading, PA 19601

# Certificate of Analysis

| | | | |
|---|---|---|---|
| Project Name: | **2017-PROJECT 99 GRANITE** | Workorder: | **2241098** |
| Purchase Order: | **170284** | Workorder ID: | **LEI006\|99 Granite Street** |

Dear Mr. Cinelli:

Enclosed are the analytical results for samples received by the laboratory on Thursday, June 22, 2017.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Mr. Brad W Kintzer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.



ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Chad Sardashti , Ms. Jenn Frasso

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*

Brad W. Kintzer

Mr. Brad W Kintzer
Project Coordinator

ALS Environmental

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

## SAMPLE SUMMARY

Workorder: 2241098 LEI006|99 Granite Street

| Lab ID | Sample ID | Matrix | Date Collected | Date Received | Collected By |
|---|---|---|---|---|---|
| 2241098001 | Comp of Grabs GP (10-12') | Solid | 6/20/2017 09:10 | 6/22/2017 11:22 | Collected by Client |
| 2241098002 | GP-6 (10-12') | Solid | 6/20/2017 12:05 | 6/22/2017 11:22 | Collected by Client |

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## SAMPLE SUMMARY

Workorder: 2241098 LEI006|99 Granite Street

**Notes**

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

**Standard Acronyms/Flags**

| | |
|---|---|
| J | Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte |
| U | Indicates that the analyte was Not Detected (ND) |
| N | Indicates presumptive evidence of the presence of a compound |
| MDL | Method Detection Limit |
| PQL | Practical Quantitation Limit |
| RDL | Reporting Detection Limit |
| ND | Not Detected - indicates that the analyte was Not Detected at the RDL |
| Cntr | Analysis was performed using this container |
| RegLmt | Regulatory Limit |
| LCS | Laboratory Control Sample |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| DUP | Sample Duplicate |
| %Rec | Percent Recovery |
| RPD | Relative Percent Difference |
| LOD | DoD Limit of Detection |
| LOQ | DoD Limit of Quantitation |
| DL | DoD Detection Limit |
| I | Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL) |
| (S) | Surrogate Compound |
| NC | Not Calculated |
| * | Result outside of QC limits |

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## PROJECT SUMMARY

Workorder: 2241098 LEI006|99 Granite Street

**Sample Comments**

**Lab ID:** 2241098002 **Sample ID:** GP-6 (10-12') **Sample Type:** SAMPLE

This sample was collected in a soil jar for the volatile analysis. The sample was prepared by Method 5035 after the 48-hour holding time.

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## ANALYTICAL RESULTS

Workorder: 2241098 LEI006|99 Granite Street

Lab ID: **2241098001** Date Collected: 6/20/2017 09:10 Matrix: Solid

Sample ID: **Comp of Grabs GP (10-12')** Date Received: 6/22/2017 11:22

| Parameters | Results | Flag | Units | RDL | Method | Prepared | By | Analyzed | By | Cntr |
|---|---|---|---|---|---|---|---|---|---|---|
| **SEMIVOLATILES** | | | | | | | | | | |
| Acenaphthene | ND | | ug/kg | 53.9 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:05 | DHF | A |
| Acenaphthylene | ND | | ug/kg | 53.9 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:05 | DHF | A |
| Anthracene | ND | | ug/kg | 53.9 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:05 | DHF | A |
| Benzo(a)anthracene | 132 | | ug/kg | 53.9 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:05 | DHF | A |
| Benzo(a)pyrene | 142 | | ug/kg | 53.9 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:05 | DHF | A |
| Benzo(b)fluoranthene | 188 | | ug/kg | 53.9 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:05 | DHF | A |
| Benzo(g,h,i)perylene | 87.8 | | ug/kg | 53.9 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:05 | DHF | A |
| Benzo(k)fluoranthene | 68.1 | | ug/kg | 53.9 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:05 | DHF | A |
| Chrysene | 159 | | ug/kg | 53.9 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:05 | DHF | A |
| Dibenzo(a,h)anthracene | ND | | ug/kg | 53.9 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:05 | DHF | A |
| Fluoranthene | 326 | | ug/kg | 53.9 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:05 | DHF | A |
| Fluorene | ND | | ug/kg | 53.9 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:05 | DHF | A |
| Indeno(1,2,3-cd)pyrene | 82.8 | | ug/kg | 53.9 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:05 | DHF | A |
| Naphthalene | ND | | ug/kg | 53.9 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:05 | DHF | A |
| Phenanthrene | 285 | | ug/kg | 53.9 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:05 | DHF | A |
| Pyrene | 309 | | ug/kg | 53.9 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:05 | DHF | A |
| *Surrogate Recoveries* | *Results* | *Flag* | *Units* | *Limits* | *Method* | *Prepared* | *By* | *Analyzed* | *By* | *Cntr* |
| 2-Fluorobiphenyl (S) | 82 | | % | 40 - 110 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:05 | DHF | A |
| Nitrobenzene-d5 (S) | 89 | | % | 38 - 112 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:05 | DHF | A |
| Terphenyl-d14 (S) | 91.8 | | % | 45 - 126 | SW846 8270D | 6/28/17 06:40 | JTH | 6/29/17 05:05 | DHF | A |
| **PCBs** | | | | | | | | | | |
| Total Polychlorinated Biphenyl | ND | | mg/kg | 0.037 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:20 | EGO | A |
| Aroclor-1016 | ND | | mg/kg | 0.037 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:20 | EGO | A |
| Aroclor-1221 | ND | | mg/kg | 0.037 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:20 | EGO | A |
| Aroclor-1232 | ND | | mg/kg | 0.037 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:20 | EGO | A |
| Aroclor-1242 | ND | | mg/kg | 0.037 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:20 | EGO | A |
| Aroclor-1248 | ND | | mg/kg | 0.037 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:20 | EGO | A |
| Aroclor-1254 | ND | | mg/kg | 0.037 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:20 | EGO | A |
| Aroclor-1260 | ND | | mg/kg | 0.037 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:20 | EGO | A |
| *Surrogate Recoveries* | *Results* | *Flag* | *Units* | *Limits* | *Method* | *Prepared* | *By* | *Analyzed* | *By* | *Cntr* |
| Decachlorobiphenyls (S) | 94.5 | | % | 49 - 115 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:20 | EGO | A |
| Tetrachloro-m-xylene (S) | 80.6 | | % | 27 - 137 | SW846 8082A | 6/28/17 01:05 | CMA | 6/28/17 09:20 | EGO | A |
| **PETROLEUM HC's** | | | | | | | | | | |
| Diesel Range Organics C10-C28 | 31.0 | | mg/kg | 11.5 | SW846 8015D | 6/29/17 02:25 | VLM | 6/30/17 04:58 | BS | A |

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## ANALYTICAL RESULTS

Workorder: 2241098 LEI006|99 Granite Street

Lab ID: **2241098001** Date Collected: 6/20/2017 09:10 Matrix: Solid

Sample ID: **Comp of Grabs GP (10-12')** Date Received: 6/22/2017 11:22

| Parameters | Results | Flag | Units | RDL | Method | Prepared | By | Analyzed | By | Cntr |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics | ND | | ug/kg | 11200 | SW846 8015D | 6/28/17 07:19 | DD | 6/28/17 16:52 | DD | A |
| *Surrogate Recoveries* | *Results* | *Flag* | *Units* | *Limits* | *Method* | *Prepared* | *By* | *Analyzed* | *By* | *Cntr* |
| o-Terphenyl (S) | 71.9 | | % | 38 - 118 | SW846 8015D | 6/29/17 02:25 | VLM | 6/30/17 04:58 | BS | A |
| *Surrogate Recoveries* | *Results* | *Flag* | *Units* | *Limits* | *Method* | *Prepared* | *By* | *Analyzed* | *By* | *Cntr* |
| a,a,a-Trifluorotoluene (S) | 118 | | % | 72 - 134 | SW846 8015D | 6/28/17 07:19 | DD | 6/28/17 16:52 | DD | A |
| **WET CHEMISTRY** | | | | | | | | | | |
| Composite Sample | See comment | 4 | | | In-House | | | 6/26/17 15:00 | MLM | H |
| Corrosivity as pH | 8.19 | 2,3 | pH_Units | | SW846 9045D | | | 6/29/17 03:26 | MSA | A |
| Cyanide, Reactive | ND | | ppm | 10 | SW-846 7.3CN | 6/29/17 13:00 | AHI | 6/30/17 12:10 | CTD | A |
| Ignitability | Not ignitable | 1 | | | SW846 1030 | | | 6/30/17 09:45 | SDL | A |
| Moisture | 10.9 | | % | 0.1 | S2540G-11 | | | 6/27/17 10:13 | JLG | |
| Sulfide, Reactive | ND | | ppm | 6.2 | SW846 7.3 | 6/29/17 13:00 | AHI | 6/30/17 12:15 | AHI | A |
| Total Solids | 89.1 | | % | 0.1 | S2540G-11 | | | 6/27/17 10:13 | JLG | |
| **METALS** | | | | | | | | | | |
| Arsenic, Total | 3.8 | | mg/kg | 1.5 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:06 | ZMC | A1 |
| Barium, Total | 41.2 | | mg/kg | 2.5 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:06 | ZMC | A1 |
| Cadmium, Total | 0.96 | | mg/kg | 0.49 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:06 | ZMC | A1 |
| Chromium, Total | 16.5 | | mg/kg | 0.98 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:06 | ZMC | A1 |
| Lead, Total | 581 | | mg/kg | 0.98 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:06 | ZMC | A1 |
| Mercury, Total | 0.091 | | mg/kg | 0.051 | SW846 7471B | 6/27/17 01:55 | AXC | 6/27/17 04:52 | AXC | A2 |
| Selenium, Total | ND | | mg/kg | 2.5 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:06 | ZMC | A1 |
| Silver, Total | ND | | mg/kg | 0.98 | SW846 6020A | 6/27/17 01:00 | LXC | 6/28/17 02:06 | ZMC | A1 |
| **TCLP METALS** | | | | | | | | | | |
| Arsenic, Total | ND | | mg/L | 0.14 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 11:57 | SRT | A4 |
| Barium, Total | ND | | mg/L | 2.8 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 11:57 | SRT | A4 |
| Cadmium, Total | ND | | mg/L | 0.011 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 11:57 | SRT | A4 |
| Chromium, Total | ND | | mg/L | 0.028 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 11:57 | SRT | A4 |
| Lead, Total | 11.2 | | mg/L | 0.033 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 11:57 | SRT | A4 |
| Mercury, Total | ND | | mg/L | 0.0020 | SW846 7470A | 6/29/17 01:05 | AXC | 6/29/17 04:24 | AXC | A3 |
| Selenium, Total | ND | | mg/L | 0.11 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 11:57 | SRT | A4 |
| Silver, Total | ND | | mg/L | 0.022 | SW846 6010C | 6/29/17 04:40 | LXC | 6/29/17 11:57 | SRT | A4 |

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

## ANALYTICAL RESULTS

Workorder: 2241098 LEI006|99 Granite Street

Lab ID: **2241098001** Date Collected: 6/20/2017 09:10 Matrix: Solid

Sample ID: **Comp of Grabs GP (10-12')** Date Received: 6/22/2017 11:22

| Parameters | Results | Flag | Units | RDL | Method | Prepared | By | Analyzed | By | *Cntr* |
|---|---|---|---|---|---|---|---|---|---|---|

Mr. Brad W Kintzer
Project Coordinator

ALS Environmental

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

## ANALYTICAL RESULTS

Workorder: 2241098 LEI006|99 Granite Street

Lab ID: **2241098002** Date Collected: 6/20/2017 12:05 Matrix: Solid

Sample ID: **GP-6 (10-12')** Date Received: 6/22/2017 11:22

| Parameters | Results | Flag | Units | RDL | Method | Prepared | By | Analyzed | By | *Cntr* |
|---|---|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS** | | | | | | | | | | |
| Acetone | ND | | ug/kg | 11.5 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| Benzene | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| Bromochloromethane | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| Bromodichloromethane | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| Bromoform | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| Bromomethane | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| 2-Butanone | ND | | ug/kg | 11.5 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| Carbon Disulfide | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| Carbon Tetrachloride | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| Chlorobenzene | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| Chlorodibromomethane | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| Chloroethane | ND | | ug/kg | 5.8 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| Chloroform | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| Chloromethane | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| Cyclohexane | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/kg | 5.8 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| 1,2-Dibromoethane | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| 1,2-Dichlorobenzene | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| 1,3-Dichlorobenzene | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| 1,4-Dichlorobenzene | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| Dichlorodifluoromethane | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| 1,1-Dichloroethane | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| 1,2-Dichloroethane | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| 1,1-Dichloroethene | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| cis-1,2-Dichloroethene | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| trans-1,2-Dichloroethene | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| 1,2-Dichloropropane | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| cis-1,3-Dichloropropene | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| trans-1,3-Dichloropropene | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| 1,4-Dioxane | ND | | ug/kg | 86.4 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| Ethylbenzene | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| Freon 113 | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| 2-Hexanone | ND | | ug/kg | 11.5 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| Isopropylbenzene | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| Methyl acetate | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| Methyl cyclohexane | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

## ANALYTICAL RESULTS

Workorder: 2241098 LEI006|99 Granite Street

Lab ID: **2241098002** Date Collected: 6/20/2017 12:05 Matrix: Solid

Sample ID: **GP-6 (10-12')** Date Received: 6/22/2017 11:22

| Parameters | Results | Flag | Units | RDL | Method | Prepared | By | Analyzed | By | *Cntr* |
|---|---|---|---|---|---|---|---|---|---|---|
| Methyl t-Butyl Ether | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| 4-Methyl-2-Pentanone(MIBK) | ND | | ug/kg | 11.5 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| Methylene Chloride | 15.8 | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| Styrene | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| Tetrachloroethene | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| Toluene | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| Total Xylenes | ND | | ug/kg | 6.9 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| 1,2,3-Trichlorobenzene | ND | | ug/kg | 5.8 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| 1,2,4-Trichlorobenzene | ND | | ug/kg | 5.8 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| 1,1,1-Trichloroethane | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| 1,1,2-Trichloroethane | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| Trichloroethene | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| Trichlorofluoromethane | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| Vinyl Chloride | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| o-Xylene | ND | | ug/kg | 2.3 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| mp-Xylene | ND | | ug/kg | 4.6 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| *Surrogate Recoveries* | *Results* | *Flag* | *Units* | *Limits* | *Method* | *Prepared* | *By* | *Analyzed* | *By* | *Cntr* |
| 1,2-Dichloroethane-d4 (S) | 89.5 | | % | 56 - 124 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| 4-Bromofluorobenzene (S) | 99.1 | | % | 51 - 128 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| Dibromofluoromethane (S) | 103 | | % | 62 - 123 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| Toluene-d8 (S) | 105 | | % | 59 - 131 | SW846 8260B | 6/24/17 00:42 | TMP | 6/27/17 15:49 | TMP | A2 |
| **WET CHEMISTRY** | | | | | | | | | | |
| Moisture | 12.9 | | % | 0.1 | S2540G-11 | | | 6/28/17 20:04 | VXF | |
| Total Solids | 87.1 | | % | 0.1 | S2540G-11 | | | 6/28/17 20:04 | VXF | |

Mr. Brad W Kintzer
Project Coordinator

**PARAMETER QUALIFIERS**

| Lab ID | # | Sample ID | Analytical Method | Analyte |
|---|---|---|---|---|
| **2241098001** | 1 | Comp of Grabs GP (10-12') | SW846 1030 | Ignitability |
| According to Pa/USEPA regulations, this sample is not considered to be ignitable. (Ref 40 CFR 261.21) | | | | |
| **2241098001** | 2 | Comp of Grabs GP (10-12') | SW846 9045D | Corrosivity as pH |
| The corrosivity analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory. | | | | |
| **2241098001** | 3 | Comp of Grabs GP (10-12') | SW846 9045D | Corrosivity as pH |
| The solid pH measured in water was 8.190 at 21.4 degrees C. | | | | |
| **2241098001** | 4 | Comp of Grabs GP (10-12') | In-House | Composite Sample |
| This sample was composited per the customers instructions. | | | | |

ALS Environmental
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Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

# CHAIN OF C… REQUEST FOR…

ALL SHADED AREAS MUST BE C… SAMPLER. INSTRUCTIO…

*2241098*

Page 1 of 1

COC# 098

7311 2162 9003

Co. Name: Liberty Environmental
Contact (Report to): Jim Ciulli
Phone: 610.375.9301
Address: 50 N. 5th Stree
Fifth Floor
Reading, PA 19601

Bill to (if different than Report to):
PO#: 170284

Project Name/#: 99 Granite St.
ALS Quote #: 581156

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.
Date Required:
Approved By:

Email? [X] -Y jciulli@libertyenviro.com
Fax? [ ] -Y No.:

| Sample Description/Location (as it will appear on the lab report) | COC Comments | Sample Date | Military Time | *G or C | **Matrix |
|---|---|---|---|---|---|
| 1 GP-1 (10-12') | Sample | 6/21/17 | 1038 | G | S |
| 2 GP-2 (10-12') | Sample | | 1115 | | |
| 3 GP-3 (10-12') | Sample | | 1145 | | |
| 4 GP-4 (10-12') | Composite Sample | | 0955 | | |
| 5 GP-5 (10-12') | Composite Sample | | 1230 | | |
| 6 GP-6 (10-12') | Composite Sample Industrial TCLP | | 1205 | | |
| 7 GP-7 (10-12') | Composite Sample Boron TCLP | | 0932 | | |
| 8 GP-8 (10-12') | Composite Sample | | 0910 | | |

***Container Type: CG
***Container Size: 4oz
***Preservative: none

ANALYSES/METHOD REQUESTED

Enter Number of Containers Per Analysis

| 8015DRO 46 & 8015GRO-HI | 1030IGNITS | 8082/3546 | 8260S20124 | 8270PAH_6 | 9045SCSORR | CNR | RCRA6020SI | SO2R | TCLP FE TCLP MET |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

Receipt Information (completed by Sample Receiving)
Performed by: (MT)
Cooler Temp: 8
Therm. ID: 29
No. of Coolers:
Notes:

| | Correct containers? | Correct sample volume? | Correct preservation? | Headspace/Volatiles? | Circle appropriate Y or N. |
|---|---|---|---|---|---|
| N | | | | | |
| Y | | | | | |

| | Custody seals Present? | (if present) Seals intact? | Received on ice? | COC/Labels complete/accurate? | Container in good condition? |
|---|---|---|---|---|---|
| N | | | | | |
| Y | | | | | |

SAMPLED BY (Please Print): Chad Sanderson

Project Comments: Please run two analyses in box

| Relinquished By / Company Name | Date | Time | Received By / Company Name | Date | Time |
|---|---|---|---|---|---|
| 1 Chad Sanderson / Liberty Environmental | 6/21/17 | 0930 | 2 | 6/22 | 1120 |
| 3 | | | 4 | | |
| 5 | | | 6 | | |
| 7 | | | 8 | | |
| 9 | | | 10 | | |

Data Deliverables: [ ] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [X] NY-Full
EDDs Required? [X] If yes, format type: Excel
DOD Criteria Required?

SDWA Forms? yes yes yes yes
State Samples Collected in? MD NJ NY PA
Other
Entity # PWSID No.

ALS FIELD SERVICES
[ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite
**Matrix: Al=Air; DW=Drinking Water; GW=Groundwater; Oi=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

Rev 01-2013

# ATTACHMENT 1
# LABORATORY ANALYTICAL REPORTS

# ATTACHMENT 2
# FIELD BORING LOGS

Liberty Environmental, Inc.

**SOIL BORING LOG**

| | | |
|---|---|---|
| Project #: 1025 | Project Name: 99 Granite St | Driller: Steve B; Pete |
| Boring #: GP-1 | Date: 6/20/17 | Page: 1 of 1 |
| Method: GeoProbe 5' sleeves | Geologist: Chad Sardagnuti | Boring Location: |

| Depth (ft) | PID (ppm) | Recovery (ft) | Sample I.D. | Description | USCS | Remarks |
|---|---|---|---|---|---|---|
| 2 | 0.0 | | (0-2') 1025 | Dark Brown f-c SAND/f-c GRAVEL, little Silt, moist | SW/GW | Depth-to-first-water-bearing-zone: |
| 4 | 0.0 | 3' | (2-4') 1027 | | | Depth-to-bedrock: |
| 6 | 0.0 | | (4-6') 1030 | | | Depth-to-saturation: |
| 8 | 0.1 | 5' | (6-8') 1032 | Brown/Dark Brown f-m SAND/SILT, little C Gravel. Red Brick frag. moist | SM | |
| 10 | 0.0 | | (8-10') 1035 | | | |
| 12 | 0.0 | | (10-12') 1038 | | | |
| 14 | 0.0 | 4.5' | (12-14') 1041 | | | |
| 16 | 0.0 | | (14-16') 1044 | | | |
| 18 | 0.0 | 4' | (16-18') 1047 | | | |
| 1050 20 | 0.0 | | (18-20') 1050 ★ | | | |

★ Sample submitted for TCL VOCs

Liberty Environmental, Inc.

# SOIL BORING LOG

1055

| Project #: | Project Name: 99 Granite Street | Driller: Steve Bitetto |
|---|---|---|
| Boring #: GP-2 | Date: 6/20/17 | Page: 1 of 1 |
| Method: | Geologist: Chad Sadosky | Boring Location: |

| Depth (ft) | PID (ppm) | Recovery (ft) | Sample I.D. | Description | USCS | Remarks |
|---|---|---|---|---|---|---|
| 2 | 0.0 | | (0-2') 1100 | Brown/DkBrown f-c SAND, some | SW | Depth-to-first-water-bearing-zone: |
| 4 | 0.0 | 5' | (2-4') 1103 | f-c Gravel, little Silt, Red Brick Frag | | Depth-to-bedrock: |
| 6 | 0.1 | | (4-6') 1106 | | | Depth-to-saturation: |
| 8 | 0.0 | 4' | (6-8') 1109 | | | |
| 10 | 0.0 | | (8-10') 1112 | Brown/LtBrown f-m SAND, some Silt, little f-c Gravel, moist, Red Brick Frag | SM | |
| 12 | 0.0 | | (10-12') 1115 | | | |
| 14 | 0.0 | 4' | (12-14') 1118 | | | |
| 16 | 0.0 | | (14-16') 1121 | | | |
| 18 | 0.0 | 4' | (16-18') 1125 | Brown f-c SAND, some Silt, | SM | |
| 20 | 0.0 | | (18-20') 1130 | little f Gravel moist | | |
| 1130 | | | | | | |

1135

Liberty Environmental, Inc.

**SOIL BORING LOG**

| | | |
|---|---|---|
| Project #: | Project Name: 99 Granite Street | Driller: Steve Bitello |
| Boring #: GP-3 | Date: 6/20/17 | Page: |
| Method: GeoProbe | Geologist: Chad Sawdey/Ali | Boring Location: |

| Depth (ft) | PID (ppm) | Recovery (ft) | Sample I.D. | Description | USCS | Remarks |
|---|---|---|---|---|---|---|
| 2 | 0.0 | | (0-2') 1135 | Brown f-c SAND, some f-c Gravel, little Silt, Red Brick frag, MORT | SW | Depth-to-first-water-bearing-zone: |
| 4 | 0.0 | 4 | (2-4') 1137 ★ (4-6') | ★ submitted for TCL VOCs | | Depth-to-bedrock: |
| 6 | 0.0 | | 1139 (6-8') | | | Depth-to-saturation: |
| 8 | 0.0 | 4 | 1141 (8-10') | Brown/Dk Brown f-c SAND/SILT, little f-c Gravel, MORT | SM | |
| 10 | 0.0 | | 1143 (10-12') | | | |
| 12 | 0.0 | 3.5 | 1145 (12-14') | | | |
| 14 | 0.0 | | 1146 (14-16') | | | |
| 16 | 0.0 | | 1148 (16-18') | Lt Brown f-m SAND, some Silt, f-c Gravel, rubble, MORT | SM | |
| 18 | 0.1 | 4 | 1149 (18-20') | | | |
| 1150 20 | 0.0 | | 1150 | | | |

0945

Liberty Environmental, Inc.

**SOIL BORING LOG**

| | | | |
|---|---|---|---|
| Project #: | | Project Name: 99 Granite Street | Driller: Steve Bitetto |
| Boring #: GP-4 | | Date: 6/20/17 | Page: 1 of 1 |
| Method: GeoProbe | | Geologist: Chad Sardas, PE | Boring Location: |

| Depth (ft) | PID (ppm) | Recovery (ft) | Sample I.D. | Description | USCS | Remarks |
|---|---|---|---|---|---|---|
| 2 | 0.0 | | (0-2') 0945 | Brown / Dark Brown f-c SAND, some C-Gravel, little S, M. moist | SW | Depth-to-first-water-bearing-zone: |
| 4 | 0.0 | 3.5 | (2-4') 0947 | | | Depth-to-bedrock: |
| 6 | 0.0 | | (4-6') 0949 | Dk Brown / Red Brick Frag f-c SAND/GRAVEL | SW/GP | Depth-to-saturation: |
| 8 | 0.1 | 4 | (6-8') 0951 * | * Submitted for TCL VOCs | | |
| 10 | 0.0 | | (8-10') 0953 | | | |
| 12 | 0.0 | 5 | (10-12') 0955 | | | |
| 14 | 0.0 | | (12-14') 0957 | | | |
| 16 | 0.0 | 4 | (14-16') 0959 | | | |
| 18 | 0.0 | | (16-18') 1001 | | | |
| 1005 20 | 0.0 | | (18-20') 1003 | | | |

1220

**Liberty Environmental, Inc.**

**SOIL BORING LOG**

| | | |
|---|---|---|
| Project #: | Project Name: 99 Granite St | Driller: Steve Bitetto |
| Boring #: ~~GP-4~~ GP-5 | Date: 6/20/17 | Page: 1 of 1 |
| Method: Geoprobe | Geologist: Chad Sandquist | Boring Location: |

| Depth (ft) | PID (ppm) | Recovery (ft) | Sample I.D. | Description | USCS | Remarks |
|---|---|---|---|---|---|---|
| 2 | 0.0 | 5 | (0-2') 1220 * | Brown/Dk Brown f-c SAND/GRAVEL, little Silt, Red Brick, moist | SW/GW | Depth-to-first-water-bearing-zone: |
| 4 | 0.0 | | (2-4') 1222 | | | Depth-to-bedrock: |
| 6 | 0.1 | | (4-6') * 1224 | * Submitted (0-2') & (4-6') for TCL VOC | | Depth-to-saturation: |
| 8 | 0.0 | | (6-8') 1226 | Brown/Gray f-c SAND/GRAVEL, Rubble, Red Brick, little Silt, moist | SW/GW | |
| 10 | 0.0 | 4 | (8-10') 1228 | | | |
| 12 | 0.0 | | (10-12') 1230 | | | |
| 14 | 0.0 | | (12-14') 1232 | | | |
| 16 | 0.0 | 4 | (14-16') 1234 | Lt Brown f-c SAND, some SILT, little f-c Gravel, moist | SM | |
| 18 | 6.1 | | (16-18') 1236 | | | |
| 20 | 0.0 | 3 | (18-20') 1240 | | | |

1240

1155

**Liberty Environmental, Inc.**

**SOIL BORING LOG**

| | | |
|---|---|---|
| Project #: | Project Name: 99 Granite Str | Driller: Steve Bitetto |
| Boring #: GP-6 | Date: 6/20/17 | Page: 1 of 1 |
| Method: GeoProbe | Geologist: Chad Sadoski | Boring Location: |

| Depth (ft) | PID (ppm) | Recovery (ft) | Sample I.D. | Description | USCS | Remarks |
|---|---|---|---|---|---|---|
| 2 | 0.0 | | (0-2') 1155 | Brown/Dark Brown F-C SAND/GRAVEL, little Silt, Red Brick Frag, moist | SW/GW | Depth-to-first-water-bearing-zone: |
| 4 | 0.0 | 4' | (2-4') 1157 | | | Depth-to-bedrock: |
| 6 | 0.0 | | (4-6') 1159 | | | Depth-to-saturation: |
| 8 | 0.0 | | (6-8') 1201 | | | |
| 10 | 2.8 | | (8-10') 1203 ☆ | | | |
| 12 | 1.7 | 4.5' | (10-12') ☆ 1205 | Brown F-C SAND, little Silt/F Gravel, moist | SW | |
| 14 | 0.0 | | (12-14') 1207 | | | |
| 16 | 0.5 | 4' | (14-16') ☆ 1209 | | | |
| 18 | 28.9 | | (16-18') ☆ 1211 | | | |
| 20 | 0.0 | 5' | (18-20') 1215 | Brown SILT, some F-C Sand, little F-C Gravel, moist | ML | |
| 1215 | | | | ☆ Submitted for TCL VOCs | | |

0925

**Liberty Environmental, Inc.**

**SOIL BORING LOG**

| | | |
|---|---|---|
| Project #: | Project Name: 99 Granite Street | Driller: Steve Biletto |
| Boring #: GP-7 | Date: 6/20/17 | Page: 1 of 1 |
| Method: Geo Probe | Geologist: Chad S | Boring Location: |

| Depth (ft) | PID (ppm) | Recovery (ft) | Sample I.D. | Description | USCS | Remarks |
|---|---|---|---|---|---|---|
| 2 | 0.0 | | (0-2') 0925 | Brown f-c SAND, some Silt/f-c Gravel, Moist, Red Brick Frag | SM | Depth-to-first-water-bearing-zone: |
| 4 | 0.0 | 3' | (2-4') 0926 | | | Depth-to-bedrock: |
| 6 | 0.0 | | (4-6') 0928 | | | Depth-to-saturation: |
| 8 | 0.0 | | (6-8') 0929 | | | |
| 10 | 0.0 | 4' | (8-10') 0930 | Brown/Lt. Brown f-c SAND, some Silt, little f-c Gravel, Red Brick Frag. Moist | SM | |
| 12 | 0.0 | | (10-12') 0932 | | | |
| 14 | 0.1 | 5' | (12-14') 0934* | *Submitted for TCL VOC | | |
| 16 | 0.0 | | (14-16') 0936 | Brown f-m SAND/SILT, little f-c Gravel, moist | SM | |
| 18 | 0.0 | | (16-18') 0938 | | | |
| 20 | 0.1 | 4.5' | (18-20') 0940 | | | |

0940

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0900

**Liberty Environmental, Inc.**

**SOIL BORING LOG**

| | | |
|---|---|---|
| Project #: | Project Name: 99 Granite Street | Driller: Steve Biletto |
| Boring #: GP-8 | Date: 6/20/17 | Page: 1 of 1 |
| Method: GeoProbe | Geologist: Chad Sardagluti | Boring Location: |

| Depth (ft) | PID (ppm) | Recovery (ft) | Sample I.D. | Description | USCS | Remarks |
|---|---|---|---|---|---|---|
| 0900 2 | 0.0 | 3' | (0-2') 0900 | Dark Brown/Lt Brown f-c SAND/GRAVEL, little Silt, moist | SW/GW | Depth-to-first-water-bearing-zone: |
| 4 | 0.0 | | (2-4') 0902 | Lt Brown f-c SAND, some Gravel, little Silt | SW | Depth-to-bedrock: |
| 6 | 0.1 | 4' | (4-6') 0904 | | | Depth-to-saturation: |
| 8 | 0.0 | | (6-8') 0906 | Lt Brown SILT, some f-c Sand, little f-c Gravel | ML | |
| 10 | 0.0 | 3' | (8-10') 0908 | Brown f-c SAND, some Silt, little f-c Gravel, | SM | |
| 12 | 0.0 | | (10-12') 0910 | | | |
| 14 | 0.0 | 4' | (12-14') 0912 | | | |
| 16 | 0.0 | | (14-16') 0914 | | | |
| 18 | 0.0 | 5' | (16-18') 0916 | | | |
| 0920 20 | 0.0 | | (18-20') 0918 | | | |

GEI Consultants

Consulting Engineers and Scientists

October 25, 2017
GEI Project 1704281

VIA EMAIL: dlevine@pargroup.com

Mr. Dan Levine
The PAR GROUP
60 North Prospect Avenue
Lynbrook, New York 11563

**Re: Phase II Environmental Subsurface Investigation**
**99-101 Granite Street**
**Brooklyn, New York**

Dear Mr. Dan Levine:

This letter documents the scope, and presents the findings and conclusions of GEI Consultants, Inc., P. C.'s (GEI) Phase II Environmental Subsurface Investigation (ESI) for the above-referenced project site. The scope of work was conducted consistent with our proposal dated October 19th, 2017.

## Background

This report presents the scope of work, findings, conclusions and recommendations for the Phase II Environmental Subsurface Investigation (ESI) conducted by GEI Consultants, Inc., P. C. (GEI) in accordance with ASTM E 1903-11 for the project site located at 99 and 101 Granite Street, Brooklyn, New York, 11207 (site).

The site consists of an approximately 0.18-acre irregularly-shaped parcel of land, located on the west side of Granite Street in the borough of Brooklyn, Kings County, New York City, NY. Prior to construction activity, the site was improved with a 2-story rental apartment building with a basement which contains a total of two residential apartments units (99 Granite Street). In addition, the site also contained a rear paved parking area containing a total of three brick masonry carport buildings, which were constructed on-grade (101 Granite Street).

The site is situated in a built-up urban mixed-use residential and commercial area in the borough of Brooklyn. Surrounding properties consist of a combination of 2- and 3-story dwellings, a 1-story commercial building, sub-grade railroad tracks, and a cemetery. The site is in an elevated area within the borough of Brooklyn. Groundwater flow on-site and at the surrounding properties is to the south and east, is presumed to be to the southeast, towards Jamaica Bay. Groundwater flow at the surrounding properties to the north and west is presumed to be to the northwest, towards English Kills.



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A Phase I Environmental Site Assessment was conducted by Lawrence Environmental Group LLC (LEG) November of 2013. LEG identified the following recognized environmental conditions (RECs) in their Phase I Environmental Site Assessment Report:

- Approximately 25 linear feet (LF) of aircell pipe insulation with cementitious pipe fitting insulation ranging from fair to poor condition was observed in the main basement area. In addition, an unquantified amount of friable and non-friable suspect ACM, including roll-on vinyl flooring, 9”x9” and 12”x12” vinyl floor tile, flooring mastic, gypsum board and joint compound, wall and ceiling plaster, lay-in ceiling panels, window caulking and glazing putty, and roofing materials was identified on site. LEG recommended that a comprehensive asbestos survey be performed on site to quantify all ACM within the subject building.

- An unquantified amount of damaged and chipping paint was observed in the first and second floors of the subject building. Given the date of construction of the subject building (pre-1978), lead-based paint (LBP) may be present. LEG recommended that a comprehensive LBP survey be performed on-site.

- Approximately 25 SF of dry petroleum staining was observed on the concrete flooring of the eastern carport area. The source of the staining appeared to be automobile parking in this area. LEG recommended that this staining, as well as any other dry petroleum staining on-site, be removed from car port areas as part of normal housekeeping practices.

- A large amount of water damaged solid waste and debris was observed in the rear carports. Of note, no mold was observed in these areas. However, LEG recommended that all solid waste be removed from these areas as part of normal housekeeping, in order to provide sanitary conditions, and to prevent potential mold growth on-site.

## Scope of Work

The task conducted for this Phase II ESI consisted of the collection of subsurface soil.

### *Task 1 – Subsurface Sampling*

The Phase II ESI sampling program involved the advancement of three soil borings using the Geoprobe® direct push method of sampling. The investigation was conducted over the course of one day and included the sampling of subsurface soils from three locations.

The drilling for this phase of the investigation was conducted by Land, Air, Water Environmental Services LLC (LAWES) of Center Moriches, New York on October 20th, 2017. Prior to advancing the probe-holes, the drilling company notified New York’s one-call system, New York 811 to provide markouts for subsurface utility lines. The utilities were marked out in the public right-of-ways adjacent to the project site.

A total of three (3) soil test borings were conducted on the subject property and a total of six (6) soil samples will be collected. One (1) soil sample was collected from each boring location, at a

depth of 0 to 4 feet, 4 to 8 feet and 8 to 12 feet. The 0 to 4 and 4 to 8 feet samples were evaluated in the field and one composite sample from the two zones were sent for lab analysis. In addition, one (1) composite soil sample from each boring location at a depth 8 to 12 feet was sent to the lab for analysis.

All soil samples were inspected for impacts (e.g., staining and odor) and screened for volatile soil vapors using a photoionization detector (PID). One shallow composite soil sample, based on the field sample characterization and vapor screening findings and the deepest soil from each area of environmental concern if no impacts were identified, was selected for laboratory analysis. Soil sample descriptions and PID readings are provided in Attachment 1.

The soil samples were analyzed for target analyte list (TAL) metals and semi-volatile organic compounds (SVOCs) by USEPA 6010S and 6020S and by USEPA Method 8270C, respectively. The analyses were performed by a New York State Department of Health ELAP-approved laboratory.

## Findings

The findings for each area of environmental concern are presented below. The soil encountered in these borings were comprised of silty sand and had characteristics of historic urban fill.

The laboratory analytical results are summarized in the following attached tables:

**Table 1: Soil Analytical Results**

***SB-1***

The soil encountered in SB-1 comprised of silty sand and contained fragmented brick and concrete, ash and had black staining. No sensory impacts or PID readings were noted.

The soil from the 0 to 4-foot and 8 to 12-foot depth at SB-1 was collected for laboratory analyses. The analytical results from the 0-4-foot interval identified four SVOCs with concentrations exceeding New York State Department of Environmental Conservation (NYSDEC) in accordance with 6 NYCRR Part 375 restricted soil cleanup objectives (SCOs). Benzo[a]anthracene at 1.9 milligrams per kilogram (mg/Kg), Benzo[a]pyrene at 1.5 mg/Kg, benzo(k)flouranthene at 2 mg/Kg and Indeno[1,2,3-cd]pyrene at 0.84 mg/Kg. Chrysene was also detected above unrestricted residential SCOs at 1.6 mg/Kg. The analytical results from the 0-4-foot interval also identified concentrations of three metals above the NYSDEC unrestricted SCOs. Mercury at 0.33 mg/Kg, Chromium at 20 mg/Kg and Lead at 180 mg/Kg. The concentration of Chromium is also above the NYSDEC standard for the Protection of groundwater.

The analytical results from the 8-12-foot interval identified one metal, chromium, with a concentration exceeding the NYSDEC in accordance with 6 NYCRR Part 375 unrestricted SCOs and standard for the Protection of Groundwater. Chromium was detected with a concentration of 25 mg/Kg.

***SB-2***

The soil encountered in SB-2 comprised of silty sand and contained fragmented brick and concrete, ash and had black staining. No sensory impacts or PID readings were noted.

The soil from the 0 to 4-foot and 8 to 12-foot depth at SB-2 was collected for laboratory analyses. The analytical results from the 0-4-and 8-12-foot intervals identified one metal with a

concentration exceeding the NYSDEC in accordance with 6 NYCRR Part 375 unrestricted SCOs and standard for the Protection of groundwater. Chromium was detected with a concentration of 27 mg/Kg and 22 mg/Kg respectively. Additionally, two metals were identified exceeding the NYSDEC in accordance with 6 NYCRR Part 375 SCOs for unrestricted residential use in the 8-12-foot interval. Mercury and Lead were detected at 0.67 mg/Kg and 72 mg/Kg respectively.

***SB-3***

The soil encountered in SB-3 comprised of silty sand and contained fragmented brick and concrete, ash and had black staining. No sensory impacts were noted. PID readings were below 0.5 parts per million (ppm).

The soil from the 0 to 4-foot and 8 to 12-foot depth at SB-3 was collected for laboratory analyses. The analytical results from the 0-4-foot interval identified one metal with a concentration exceeding the NYSDEC in accordance with 6 NYCRR Part 375 SCOs for restricted residential use and two metals exceeding the NYSDEC SCOs for unrestricted use. Mercury at 1.4 mg/Kg, Chromium at 21 mg/Kg and Lead at 85 mg/Kg. The concentrations of Mercury and Chromium also exceeds the NYSDEC standard for the Protection of Groundwater.

The analytical results from the 8-12-foot interval identified two metals with a concentration exceeding the NYSDEC in accordance with 6 NYCRR Part 375 unrestricted SCOs and one metal exceeding the NYSDEC standard for the Protection of Groundwater. Chromium was detected with a concentration of 33 mg/Kg and exceeds both the NYSDEC SCOs for unrestricted residential use and the Protection of Groundwater. Mercury and Lead were detected at 0.19 mg/Kg and 110 mg/Kg respectively exceeding the NYSDEC SCO for unrestricted residential use.

## Summary of Findings and Conclusions

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

- The soil at SB-1 contains concentrations of SVOCs that exceeds the NYSDEC in accordance with 6 NYCRR Part 375 SCOs for restricted and unrestricted residential use.
- The soil at SB-1 contains concentrations of Metals that exceeds the NYSDEC in accordance with 6 NYCRR Part 375 SCOs for the Protection of Groundwater and unrestricted residential use
- The soil at SB-2 contains concentrations of Metals that exceeds the NYSDEC in accordance with 6 NYCRR Part 375 SCOs for Protection of Groundwater and unrestricted residential use.
- The soil at SB-3 contains concentrations of Metals that exceeds the NYSDEC in accordance with 6 NYCRR Part 375 SCOs for Protection of Groundwater and unrestricted residential use.

The exceedances of NYSDEC SCOs indicate the site may be a candidate for entrance into the BCP.

If you have any questions on this investigation, please do not hesitate to contact us.

Sincerely,

GEI CONSULTANTS, INC., P. C.

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Senior Consultant
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Senior Practice Leader
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# Tables

Result exceeds Part 375 Restricted

| | | | | CLIENT ID: | SB-1 (0-4) | | SB-1 (8-12) | | SB-2 (0-4) | | SB-2 (8-12) | | SB-3 (0-3) | | SB-3 (8-12) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | LAB ID: | AD00725-001 | | AD00725-002 | | AD00725-003 | | AD00725-004 | | AD00725-005 | | AD00725-006 | |
| | | | | COLLECTION DATE: | 10/20/2017 | | 10/20/2017 | | 10/20/2017 | | 10/20/2017 | | 10/20/2017 | | 10/20/2017 | |
| | | | | SAMPLE MATRIX: | Soil | | Soil | | Soil | | Soil | | Soil | | Soil | |
| | | | | SAMPLE UNITS: | mg/Kg | | mg/Kg | | mg/Kg | | mg/Kg | | mg/Kg | | mg/Kg | |
| | | | Part375 Restricted Residential | | | | | | | | | | | | | |
| **TestCode** | **CAS#** | **Analyte** | mg/Kg | | Result | RL | Result | RL | Result | RL | Result | RL | Result | RL | Result | RL |
| | | **Metals** | | | | | | | | | | | | | | |
| HG-SOIL | 7439-97-6 | Mercury | 0.81 | | 0.33 | 0.094 | ND | 0.088 | 0.13 | 0.097 | 0.67 | 0.097 | 1.4 | 0.092 | 0.19 | 0.095 |
| MET-TAL6010S | 7429-90-5 | Aluminum | NA | | 11,000 | 220 | 12,000 | 210 | 14,000 | 230 | 8,500 | 230 | 8,100 | 220 | 14,000 | 230 |
| MET-TAL6010S | 7440-39-3 | Barium | 400 | | 69 | 11 | 34 | 11 | 75 | 12 | 86 | 12 | 63 | 11 | 84 | 11 |
| MET-TAL6010S | 7440-70-2 | Calcium | NA | | 8,100 | 1,100 | 2,000 | 1,100 | 4,100 | 1,200 | 6,800 | 1,200 | 4,800 | 1,100 | 4,300 | 1,100 |
| MET-TAL6010S | 7440-47-3 | Chromium | 110 | | 20 | 5.6 | 25 | 5.3 | 27 | 5.8 | 22 | 5.8 | 21 | 5.5 | 33 | 5.7 |
| MET-TAL6010S | 7440-48-4 | Cobalt | NA | | 8.9 | 2.8 | 6.7 | 2.6 | 11 | 2.9 | 6.4 | 2.9 | 6.8 | 2.7 | 11 | 2.8 |
| MET-TAL6010S | 7440-50-8 | Copper | 270 | | 26 | 5.6 | 22 | 5.3 | 29 | 5.8 | 29 | 5.8 | 29 | 5.5 | 33 | 5.7 |
| MET-TAL6010S | 7439-89-6 | Iron | NA | | 72,000 | 220 | 27,000 | 210 | 36,000 | 230 | 21,000 | 230 | 27,000 | 220 | 39,000 | 230 |
| MET-TAL6010S | 7439-92-1 | Lead | 400 | | 180 | 5.6 | 44 | 5.3 | 48 | 5.8 | 72 | 5.8 | 85 | 5.5 | 110 | 5.7 |
| MET-TAL6010S | 7439-95-4 | Magnesium | NA | | 2,500 | 560 | 7,700 | 530 | 3,500 | 580 | 2,700 | 580 | 2,500 | 550 | 3,700 | 570 |
| MET-TAL6010S | 7439-96-5 | Manganese | 2,000 | | 640 | 11 | 680 | 11 | 550 | 12 | 550 | 12 | 420 | 11 | 740 | 11 |
| MET-TAL6010S | 7440-02-0 | Nickel | 310 | | 16 | 5.6 | 19 | 5.3 | 20 | 5.8 | 13 | 5.8 | 18 | 5.5 | 22 | 5.7 |
| MET-TAL6010S | 7440-09-7 | Potassium | NA | | 810 | 560 | 1,300 | 530 | 1,300 | 580 | 680 | 580 | 1,100 | 550 | 1,400 | 570 |
| MET-TAL6010S | 7440-23-5 | Sodium | NA | | ND | 280 | 280 | 260 | ND | 290 | ND | 290 | ND | 270 | ND | 280 |
| MET-TAL6010S | 7440-62-2 | Vanadium | NA | | 30 | 11 | 28 | 11 | 43 | 12 | 26 | 12 | 29 | 11 | 47 | 11 |
| MET-TAL6010S | 7440-66-6 | Zinc | 10,000 | | 57 | 11 | 59 | 11 | 58 | 12 | 64 | 12 | 56 | 11 | 73 | 11 |
| MET-TAL6020S | 7440-36-0 | Antimony | NA | | ND | 0.9 | ND | 0.84 | ND | 0.93 | ND | 0.93 | ND | 0.88 | ND | 0.91 |
| MET-TAL6020S | 7440-38-2 | Arsenic | 16 | | 3.9 | 0.22 | 2.9 | 0.21 | 9.3 | 0.23 | 3.5 | 0.23 | 4 | 0.22 | 3.9 | 0.23 |
| MET-TAL6020S | 7440-41-7 | Beryllium | 72 | | 0.33 | 0.22 | 0.4 | 0.21 | 0.39 | 0.23 | 0.35 | 0.23 | 0.28 | 0.22 | 0.37 | 0.23 |
| MET-TAL6020S | 7440-43-9 | Cadmium | 4.3 | | ND | 0.45 | ND | 0.42 | ND | 0.47 | ND | 0.47 | ND | 0.44 | ND | 0.45 |
| MET-TAL6020S | 7782-49-2 | Selenium | 180 | | ND | 2.2 | ND | 2.1 | ND | 2.3 | ND | 2.3 | ND | 2.2 | ND | 2.3 |
| MET-TAL6020S | 7440-22-4 | Silver | 180 | | ND | 0.22 | ND | 0.21 | ND | 0.23 | ND | 0.23 | ND | 0.22 | ND | 0.23 |
| MET-TAL6020S | 7440-28-0 | Thallium | NA | | ND | 0.45 | ND | 0.42 | ND | 0.47 | ND | 0.47 | ND | 0.44 | ND | 0.45 |
| | | **SemiVolatiles** | | | | | | | | | | | | | | |
| BNA-8270 | 92-52-4 | 1,1'-Biphenyl | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 95-94-3 | 1,2,4,5-Tetrachlorobenzene | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 58-90-2 | 2,3,4,6-Tetrachlorophenol | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 95-95-4 | 2,4,5-Trichlorophenol | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 88-06-2 | 2,4,6-Trichlorophenol | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 120-83-2 | 2,4-Dichlorophenol | NA | | ND | 0.028 | ND | 0.0088 | ND | 0.0097 | ND | 0.0097 | ND | 0.0092 | ND | 0.0095 |
| BNA-8270 | 105-67-9 | 2,4-Dimethylphenol | NA | | ND | 0.028 | ND | 0.0088 | ND | 0.0097 | ND | 0.0097 | ND | 0.0092 | ND | 0.0095 |
| BNA-8270 | 51-28-5 | 2,4-Dinitrophenol | NA | | ND | 0.56 | ND | 0.18 | ND | 0.19 | ND | 0.19 | ND | 0.18 | ND | 0.19 |
| BNA-8270 | 121-14-2 | 2,4-Dinitrotoluene | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 606-20-2 | 2,6-Dinitrotoluene | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 91-58-7 | 2-Chloronaphthalene | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 95-57-8 | 2-Chlorophenol | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 91-57-6 | 2-Methylnaphthalene | NA | | 0.19 | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 95-48-7 | 2-Methylphenol | 100 | | ND | 0.028 | ND | 0.0088 | ND | 0.0097 | ND | 0.0097 | ND | 0.0092 | ND | 0.0095 |
| BNA-8270 | 88-74-4 | 2-Nitroaniline | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 88-75-5 | 2-Nitrophenol | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 106-44-5 | 3&4-Methylphenol | 100 | | ND | 0.028 | ND | 0.0088 | ND | 0.0097 | ND | 0.0097 | ND | 0.0092 | ND | 0.0095 |
| BNA-8270 | 91-94-1 | 3,3'-Dichlorobenzidine | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 99-09-2 | 3-Nitroaniline | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 534-52-1 | 4,6-Dinitro-2-methylphenol | NA | | ND | 0.56 | ND | 0.18 | ND | 0.19 | ND | 0.19 | ND | 0.18 | ND | 0.19 |
| BNA-8270 | 101-55-3 | 4-Bromophenyl-phenylether | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 59-50-7 | 4-Chloro-3-methylphenol | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 106-47-8 | 4-Chloroaniline | NA | | ND | 0.028 | ND | 0.0088 | ND | 0.0097 | ND | 0.0097 | ND | 0.0092 | ND | 0.0095 |
| BNA-8270 | 7005-72-3 | 4-Chlorophenyl-phenylether | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 100-01-6 | 4-Nitroaniline | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 100-02-7 | 4-Nitrophenol | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 83-32-9 | Acenaphthene | 100 | | 0.68 | 0.11 | ND | 0.035 | ND | 0.039 | 0.043 | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 208-96-8 | Acenaphthylene | 100 | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 98-86-2 | Acetophenone | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 120-12-7 | Anthracene | 100 | | 0.99 | 0.11 | ND | 0.035 | ND | 0.039 | 0.13 | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 1912-24-9 | Atrazine | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 100-52-7 | Benzaldehyde | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 56-55-3 | Benzo[a]anthracene | 1 | | 1.9 | 0.11 | ND | 0.035 | 0.069 | 0.039 | 0.37 | 0.039 | 0.099 | 0.037 | 0.092 | 0.038 |
| BNA-8270 | 50-32-8 | Benzo[a]pyrene | 1 | | 1.5 | 0.11 | ND | 0.035 | 0.064 | 0.039 | 0.3 | 0.039 | 0.094 | 0.037 | 0.088 | 0.038 |
| BNA-8270 | 205-99-2 | Benzo[b]fluoranthene | 1 | | 2 | 0.11 | ND | 0.035 | 0.08 | 0.039 | 0.4 | 0.039 | 0.12 | 0.037 | 0.11 | 0.038 |
| BNA-8270 | 191-24-2 | Benzo[g,h,i]perylene | 100 | | 0.96 | 0.11 | ND | 0.035 | 0.05 | 0.039 | 0.19 | 0.039 | 0.073 | 0.037 | 0.06 | 0.038 |
| BNA-8270 | 207-08-9 | Benzo[k]fluoranthene | 3.9 | | 0.63 | 0.11 | ND | 0.035 | ND | 0.039 | 0.13 | 0.039 | 0.047 | 0.037 | 0.044 | 0.038 |
| BNA-8270 | 111-91-1 | bis(2-Chloroethoxy)methane | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 111-44-4 | bis(2-Chloroethyl)ether | NA | | ND | 0.028 | ND | 0.0088 | ND | 0.0097 | ND | 0.0097 | ND | 0.0092 | ND | 0.0095 |
| BNA-8270 | 108-60-1 | bis(2-Chloroisopropyl)ether | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 117-81-7 | bis(2-Ethylhexyl)phthalate | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 85-68-7 | Butylbenzylphthalate | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 105-60-2 | Caprolactam | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 86-74-8 | Carbazole | NA | | 0.5 | 0.11 | ND | 0.035 | ND | 0.039 | 0.057 | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 218-01-9 | Chrysene | 3.9 | | 1.6 | 0.11 | ND | 0.035 | 0.068 | 0.039 | 0.36 | 0.039 | 0.1 | 0.037 | 0.097 | 0.038 |
| BNA-8270 | 53-70-3 | Dibenzo[a,h]anthracene | 0.33 | | 0.25 | 0.11 | ND | 0.035 | ND | 0.039 | 0.054 | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 132-64-9 | Dibenzofuran | 59 | | 0.35 | 0.028 | ND | 0.0088 | ND | 0.0097 | 0.03 | 0.0097 | ND | 0.0092 | ND | 0.0095 |
| BNA-8270 | 84-66-2 | Diethylphthalate | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 131-11-3 | Dimethylphthalate | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 84-74-2 | Di-n-butylphthalate | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.0092 | ND | 0.0095 |
| BNA-8270 | 117-84-0 | Di-n-octylphthalate | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 206-44-0 | Fluoranthene | 100 | | 4.3 | 0.11 | ND | 0.035 | 0.12 | 0.039 | 0.73 | 0.039 | 0.19 | 0.037 | 0.18 | 0.038 |
| BNA-8270 | 86-73-7 | Fluorene | 100 | | 0.49 | 0.11 | ND | 0.035 | ND | 0.039 | 0.039 | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 118-74-1 | Hexachlorobenzene | 1.2 | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 87-68-3 | Hexachlorobutadiene | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 77-47-4 | Hexachlorocyclopentadiene | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 67-72-1 | Hexachloroethane | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 193-39-5 | Indeno[1,2,3-cd]pyrene | 0.5 | | 0.84 | 0.11 | ND | 0.035 | 0.041 | 0.039 | 0.17 | 0.039 | 0.06 | 0.037 | 0.053 | 0.038 |
| BNA-8270 | 78-59-1 | Isophorone | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 91-20-3 | Naphthalene | 100 | | 0.72 | 0.028 | ND | 0.0088 | ND | 0.0097 | 0.017 | 0.0097 | ND | 0.0092 | ND | 0.0095 |
| BNA-8270 | 98-95-3 | Nitrobenzene | 15 | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 621-64-7 | N-Nitroso-di-n-propylamine | NA | | ND | 0.028 | ND | 0.0088 | ND | 0.0097 | ND | 0.0097 | ND | 0.0092 | ND | 0.0095 |
| BNA-8270 | 86-30-6 | N-Nitrosodiphenylamine | NA | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 87-86-5 | Pentachlorophenol | 6.7 | | ND | 0.56 | ND | 0.18 | ND | 0.19 | ND | 0.19 | ND | 0.18 | ND | 0.19 |
| BNA-8270 | 85-01-8 | Phenanthrene | 100 | | 4 | 0.11 | ND | 0.035 | 0.066 | 0.039 | 0.59 | 0.039 | 0.12 | 0.037 | 0.11 | 0.038 |
| BNA-8270 | 108-95-2 | Phenol | 100 | | ND | 0.11 | ND | 0.035 | ND | 0.039 | ND | 0.039 | ND | 0.037 | ND | 0.038 |
| BNA-8270 | 129-00-0 | Pyrene | 100 | | 3.6 | 0.11 | ND | 0.035 | 0.13 | 0.039 | 0.73 | 0.039 | 0.19 | 0.037 | 0.17 | 0.038 |
| | | **Wet Chemistry** | | | | | | | | | | | | | | |
| %SOLIDS | PERSOL | % Solids | NA | | 89(Percent) | | 95(Percent) | | 86(Percent) | | 86(Percent) | | 91(Percent) | | 88(Percent) | |

# Figure

NOTES:
LIBERTY ENVIRONMENTAL INC.
COMPACTED SOILS FROM GP-1 TO GP-8 TO DEPTHS FROM 0-2, 2-4, 4-6, 6-8, 8-10, 10-12 12-14, 14-16, 16-18 AND 18-20.

THE COMPOSITE SAMPLE RESULTS ARE AS FOLLOWS:

0-2 EXCEEDED THE NYC DEC PART 375 RVSCORR FOR SVOCS

2-4 EXCEEDED THE NYC DEC PART 375 RVSCORR FOR SVOCS

4-6 EXCEEDED ARSENIC

6-8 EXCEEDED SVOCS

8-10 EXCEEDED HAZARDOUS LEVEL FOR LEAD

10-12 EXCEEDED HAZARDOUS LEVEL FOR LEAD


| | | | | SB-3 (0-3) AD00725-005 10/20/2017 Soil mg/Kg | |
|---|---|---|---|---|---|
| TestCode | CAS# | Analyte | Part375 Restricted Residential mg/Kg | Result | RL |
| | | **Metals** | | | |
| HG-SOIL | 7439-97-6 | Mercury | 0.81 | 1.4 | 0.092 |

| | | | | CLIENT ID | SB-1 (0-4) |
|---|---|---|---|---|---|
| | | | | LAB ID | AD00725-001 |
| | | | | COLLECTION DATE | 10/20/2017 |
| | | | | SAMPLE MATRIX | Soil |
| | | | | SAMPLE UNITS | mg/Kg |
| TestCode | CAS# | Analyte | Part375 Restricted Residential mg/Kg | Result | RL |
| | | **SemiVolatiles** | | | |
| BNA-8270 | 83-32-9 | Acenaphthene | 100 | 0.68 | 0.11 |
| BNA-8270 | 208-96-8 | Acenaphthylene | 100 | ND | 0.11 |
| BNA-8270 | 98-86-2 | Acetophenone | NA | ND | 0.11 |
| BNA-8270 | 120-12-7 | Anthracene | 100 | 0.99 | 0.11 |
| BNA-8270 | 1912-24-9 | Atrazine | NA | ND | 0.11 |
| BNA-8270 | 100-52-7 | Benzaldehyde | NA | ND | 0.11 |
| BNA-8270 | 56-55-3 | Benzo[a]anthracene | 1 | | 0.11 |
| BNA-8270 | 50-32-8 | Benzo[a]pyrene | 1 | | 0.11 |
| BNA-8270 | 205-99-2 | Benzo[b]fluoranthene | 1 | | 0.11 |
| BNA-8270 | 191-24-2 | Benzo[g,h,i]perylene | 100 | 0.96 | 0.11 |
| BNA-8270 | 207-08-9 | Benzo[k]fluoranthene | 3.9 | 0.63 | 0.11 |
| BNA-8270 | 111-91-1 | bis(2-Chloroethoxy)methane | NA | ND | 0.11 |
| BNA-8270 | 111-44-4 | bis(2-Chloroethyl)ether | NA | ND | 0.028 |
| BNA-8270 | 108-60-1 | bis(2-Chloroisopropyl)ether | NA | ND | 0.11 |
| BNA-8270 | 117-81-7 | bis(2-Ethylhexyl)phthalate | NA | ND | 0.11 |
| BNA-8270 | 85-68-7 | Butylbenzylphthalate | NA | ND | 0.11 |
| BNA-8270 | 105-60-2 | Caprolactam | NA | ND | 0.11 |
| BNA-8270 | 86-74-8 | Carbazole | NA | 0.5 | 0.11 |
| BNA-8270 | 218-01-9 | Chrysene | 3.9 | 1.6 | 0.11 |
| BNA-8270 | 53-70-3 | Dibenzo[a,h]anthracene | 0.33 | 0.25 | 0.11 |
| BNA-8270 | 132-64-9 | Dibenzofuran | 59 | 0.35 | 0.028 |
| BNA-8270 | 84-66-2 | Diethylphthalate | NA | ND | 0.11 |
| BNA-8270 | 131-11-3 | Dimethylphthalate | NA | ND | 0.11 |
| BNA-8270 | 84-74-2 | Di-n-butylphthalate | NA | ND | 0.11 |
| BNA-8270 | 117-84-0 | Di-n-octylphthalate | NA | ND | 0.11 |
| BNA-8270 | 206-44-0 | Fluoranthene | 100 | 4.3 | 0.11 |
| BNA-8270 | 86-73-7 | Fluorene | 100 | 0.49 | 0.11 |
| BNA-8270 | 118-74-1 | Hexachlorobenzene | 1.2 | ND | 0.11 |
| BNA-8270 | 87-68-3 | Hexachlorobutadiene | NA | ND | 0.11 |
| BNA-8270 | 77-47-4 | Hexachlorocyclopentadiene | NA | ND | 0.11 |
| BNA-8270 | 67-72-1 | Hexachloroethane | NA | ND | 0.11 |
| BNA-8270 | 193-39-5 | Indeno[1,2,3-cd]pyrene | 0.5 | | 0.11 |
| BNA-8270 | 78-59-1 | Isophorone | NA | ND | 0.11 |
| BNA-8270 | 91-20-3 | Naphthalene | 100 | 0.72 | 0.028 |
| BNA-8270 | 98-95-3 | Nitrobenzene | 15 | ND | 0.11 |
| BNA-8270 | 621-64-7 | N-Nitroso-di-n-propylamine | NA | ND | 0.028 |
| BNA-8270 | 86-30-6 | N-Nitrosodiphenylamine | NA | ND | 0.11 |
| BNA-8270 | 87-86-5 | Pentachlorophenol | 6.7 | ND | 0.56 |
| BNA-8270 | 85-01-8 | Phenanthrene | 100 | 4 | 0.11 |
| BNA-8270 | 108-95-2 | Phenol | 100 | ND | 0.11 |
| BNA-8270 | 129-00-0 | Pyrene | 100 | 3.6 | 0.11 |

LEGEND:

⊕ GP-1 GPRING PERFORMED BY LIBERTY ENVIRONMENTAL ON 6/20/2017

◒ SB-1 GPRING PERFORMED BY GEI CONSULTANTS ON 10/20/2017

***SOURCE:***

1. MAP EXTRACTED FROM GOOGLE MAPS

0 50 100

SCALE: 1" = 50'

| | | |
|---|---|---|
| 99 GRANITE ST. BROOKLYN, NY | GEI Consultants | GPRING LOCATIONS |
| PAR GROUP | Project 1204281 | NOVEMBER 2017 Fig. 1 |

\\gdc1v-fs01\ I:\Tech\Environmental Projects\PAR Group\99 Granite St Brooklyn\CAD\Figures\FIG - 1.dwg - 11/13/2017

# Attachment 1

# Hampton-Clarke Report Of Analysis

**Client:** GEI Consultants Inc. **HC Project #:** 7102030

**Project:** 99 Granite St.

**Sample ID: SB-1 (0-4)** **Collection Date: 10/20/2017**
**Lab#: AD00725-001** **Receipt Date: 10/20/2017**
**Matrix: Soil**

**% Solids SM2540G**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| **%Solids** | **1** | **percent** | | **89** |

**Mercury (Soil/Waste) 7471B**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| **Mercury** | **1** | **mg/kg** | **0.094** | **0.33** |

**Semivolatile Organics (no search) 8270**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| 1,1'-Biphenyl | 3 | mg/kg | 0.11 | ND |
| 1,2,4,5-Tetrachlorobenzene | 3 | mg/kg | 0.11 | ND |
| 2,3,4,6-Tetrachlorophenol | 3 | mg/kg | 0.11 | ND |
| 2,4,5-Trichlorophenol | 3 | mg/kg | 0.11 | ND |
| 2,4,6-Trichlorophenol | 3 | mg/kg | 0.11 | ND |
| 2,4-Dichlorophenol | 3 | mg/kg | 0.028 | ND |
| 2,4-Dimethylphenol | 3 | mg/kg | 0.028 | ND |
| 2,4-Dinitrophenol | 3 | mg/kg | 0.56 | ND |
| 2,4-Dinitrotoluene | 3 | mg/kg | 0.11 | ND |
| 2,6-Dinitrotoluene | 3 | mg/kg | 0.11 | ND |
| 2-Chloronaphthalene | 3 | mg/kg | 0.11 | ND |
| 2-Chlorophenol | 3 | mg/kg | 0.11 | ND |
| **2-Methylnaphthalene** | **3** | **mg/kg** | **0.11** | **0.19** |
| 2-Methylphenol | 3 | mg/kg | 0.028 | ND |
| 2-Nitroaniline | 3 | mg/kg | 0.11 | ND |
| 2-Nitrophenol | 3 | mg/kg | 0.11 | ND |
| 3&4-Methylphenol | 3 | mg/kg | 0.028 | ND |
| 3,3'-Dichlorobenzidine | 3 | mg/kg | 0.11 | ND |
| 3-Nitroaniline | 3 | mg/kg | 0.11 | ND |
| 4,6-Dinitro-2-methylphenol | 3 | mg/kg | 0.56 | ND |
| 4-Bromophenyl-phenylether | 3 | mg/kg | 0.11 | ND |
| 4-Chloro-3-methylphenol | 3 | mg/kg | 0.11 | ND |
| 4-Chloroaniline | 3 | mg/kg | 0.028 | ND |
| 4-Chlorophenyl-phenylether | 3 | mg/kg | 0.11 | ND |
| 4-Nitroaniline | 3 | mg/kg | 0.11 | ND |
| 4-Nitrophenol | 3 | mg/kg | 0.11 | ND |
| **Acenaphthene** | **3** | **mg/kg** | **0.11** | **0.68** |
| Acenaphthylene | 3 | mg/kg | 0.11 | ND |
| Acetophenone | 3 | mg/kg | 0.11 | ND |
| **Anthracene** | **3** | **mg/kg** | **0.11** | **0.99** |
| Atrazine | 3 | mg/kg | 0.11 | ND |
| Benzaldehyde | 3 | mg/kg | 0.11 | ND |
| **Benzo[a]anthracene** | **3** | **mg/kg** | **0.11** | **1.9** |
| **Benzo[a]pyrene** | **3** | **mg/kg** | **0.11** | **1.5** |
| **Benzo[b]fluoranthene** | **3** | **mg/kg** | **0.11** | **2.0** |
| **Benzo[g,h,i]perylene** | **3** | **mg/kg** | **0.11** | **0.96** |
| **Benzo[k]fluoranthene** | **3** | **mg/kg** | **0.11** | **0.63** |
| bis(2-Chloroethoxy)methane | 3 | mg/kg | 0.11 | ND |
| bis(2-Chloroethyl)ether | 3 | mg/kg | 0.028 | ND |
| bis(2-Chloroisopropyl)ether | 3 | mg/kg | 0.11 | ND |
| bis(2-Ethylhexyl)phthalate | 3 | mg/kg | 0.11 | ND |
| Butylbenzylphthalate | 3 | mg/kg | 0.11 | ND |
| Caprolactam | 3 | mg/kg | 0.11 | ND |
| **Carbazole** | **3** | **mg/kg** | **0.11** | **0.50** |
| **Chrysene** | **3** | **mg/kg** | **0.11** | **1.6** |
| **Dibenzo[a,h]anthracene** | **3** | **mg/kg** | **0.11** | **0.25** |
| **Dibenzofuran** | **3** | **mg/kg** | **0.028** | **0.35** |
| Diethylphthalate | 3 | mg/kg | 0.11 | ND |
| Dimethylphthalate | 3 | mg/kg | 0.11 | ND |

**Sample ID: SB-1 (0-4)** **Collection Date: 10/20/2017**
**Lab#: AD00725-001** **Receipt Date: 10/20/2017**
**Matrix: Soil**

| | | | | | |
|---|---|---|---|---|---|
| Di-n-butylphthalate | 3 | mg/kg | 0.11 | ND |
| Di-n-octylphthalate | 3 | mg/kg | 0.11 | ND |
| **Fluoranthene** | **3** | **mg/kg** | **0.11** | **4.3** |
| **Fluorene** | **3** | **mg/kg** | **0.11** | **0.49** |
| Hexachlorobenzene | 3 | mg/kg | 0.11 | ND |
| Hexachlorobutadiene | 3 | mg/kg | 0.11 | ND |
| Hexachlorocyclopentadiene | 3 | mg/kg | 0.11 | ND |
| Hexachloroethane | 3 | mg/kg | 0.11 | ND |
| **Indeno[1,2,3-cd]pyrene** | **3** | **mg/kg** | **0.11** | **0.84** |
| Isophorone | 3 | mg/kg | 0.11 | ND |
| **Naphthalene** | **3** | **mg/kg** | **0.028** | **0.72** |
| Nitrobenzene | 3 | mg/kg | 0.11 | ND |
| N-Nitroso-di-n-propylamine | 3 | mg/kg | 0.028 | ND |
| N-Nitrosodiphenylamine | 3 | mg/kg | 0.11 | ND |
| Pentachlorophenol | 3 | mg/kg | 0.56 | ND |
| **Phenanthrene** | **3** | **mg/kg** | **0.11** | **4.0** |
| Phenol | 3 | mg/kg | 0.11 | ND |
| **Pyrene** | **3** | **mg/kg** | **0.11** | **3.6** |

| Surrogate | Conc. | Spike | Low Limit | High Limit | Recovery | Flags |
|---|---|---|---|---|---|---|
| Terphenyl-d14 | 19.35 | 50 | 58 | 148 | 116 | |
| Phenol-d5 | 28.89 | 100 | 49 | 129 | 87 | |
| Nitrobenzene-d5 | 12.15 | 50 | 52 | 129 | 73 | |
| 2-Fluorophenol | 26.04 | 100 | 43 | 128 | 78 | |
| 2-Fluorobiphenyl | 13.72 | 50 | 58 | 125 | 82 | |
| 2,4,6-Tribromophenol | 35.92 | 100 | 54 | 145 | 108 | |

**TAL Metals 6010**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| **Aluminum** | **1** | **mg/kg** | **220** | **11000** |
| **Barium** | **1** | **mg/kg** | **11** | **69** |
| **Calcium** | **1** | **mg/kg** | **1100** | **8100** |
| **Chromium** | **1** | **mg/kg** | **5.6** | **20** |
| **Cobalt** | **1** | **mg/kg** | **2.8** | **8.9** |
| **Copper** | **1** | **mg/kg** | **5.6** | **26** |
| **Iron** | **1** | **mg/kg** | **220** | **72000** |
| **Lead** | **1** | **mg/kg** | **5.6** | **180** |
| **Magnesium** | **1** | **mg/kg** | **560** | **2500** |
| **Manganese** | **1** | **mg/kg** | **11** | **640** |
| **Nickel** | **1** | **mg/kg** | **5.6** | **16** |
| **Potassium** | **1** | **mg/kg** | **560** | **810** |
| Sodium | 1 | mg/kg | 280 | ND |
| **Vanadium** | **1** | **mg/kg** | **11** | **30** |
| **Zinc** | **1** | **mg/kg** | **11** | **57** |

**TAL Metals 6020**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| Antimony | 1 | mg/kg | 0.90 | ND |
| **Arsenic** | **1** | **mg/kg** | **0.22** | **3.9** |
| **Beryllium** | **1** | **mg/kg** | **0.22** | **0.33** |
| Cadmium | 1 | mg/kg | 0.45 | ND |
| Selenium | 1 | mg/kg | 2.2 | ND |
| Silver | 1 | mg/kg | 0.22 | ND |
| Thallium | 1 | mg/kg | 0.45 | ND |

**Sample ID: SB-1 (8-12)** **Collection Date: 10/20/2017**
**Lab#: AD00725-002** **Receipt Date: 10/20/2017**
**Matrix: Soil**

### % Solids SM2540G

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| **% Solids** | **1** | **percent** | | **95** |

### Mercury (Soil/Waste) 7471B

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| Mercury | 1 | mg/kg | 0.088 | ND |

### Semivolatile Organics (no search) 8270

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| 1,1'-Biphenyl | 1 | mg/kg | 0.035 | ND |
| 1,2,4,5-Tetrachlorobenzene | 1 | mg/kg | 0.035 | ND |
| 2,3,4,6-Tetrachlorophenol | 1 | mg/kg | 0.035 | ND |
| 2,4,5-Trichlorophenol | 1 | mg/kg | 0.035 | ND |
| 2,4,6-Trichlorophenol | 1 | mg/kg | 0.035 | ND |
| 2,4-Dichlorophenol | 1 | mg/kg | 0.0088 | ND |
| 2,4-Dimethylphenol | 1 | mg/kg | 0.0088 | ND |
| 2,4-Dinitrophenol | 1 | mg/kg | 0.18 | ND |
| 2,4-Dinitrotoluene | 1 | mg/kg | 0.035 | ND |
| 2,6-Dinitrotoluene | 1 | mg/kg | 0.035 | ND |
| 2-Chloronaphthalene | 1 | mg/kg | 0.035 | ND |
| 2-Chlorophenol | 1 | mg/kg | 0.035 | ND |
| 2-Methylnaphthalene | 1 | mg/kg | 0.035 | ND |
| 2-Methylphenol | 1 | mg/kg | 0.0088 | ND |
| 2-Nitroaniline | 1 | mg/kg | 0.035 | ND |
| 2-Nitrophenol | 1 | mg/kg | 0.035 | ND |
| 3&4-Methylphenol | 1 | mg/kg | 0.0088 | ND |
| 3,3'-Dichlorobenzidine | 1 | mg/kg | 0.035 | ND |
| 3-Nitroaniline | 1 | mg/kg | 0.035 | ND |
| 4,6-Dinitro-2-methylphenol | 1 | mg/kg | 0.18 | ND |
| 4-Bromophenyl-phenylether | 1 | mg/kg | 0.035 | ND |
| 4-Chloro-3-methylphenol | 1 | mg/kg | 0.035 | ND |
| 4-Chloroaniline | 1 | mg/kg | 0.0088 | ND |
| 4-Chlorophenyl-phenylether | 1 | mg/kg | 0.035 | ND |
| 4-Nitroaniline | 1 | mg/kg | 0.035 | ND |
| 4-Nitrophenol | 1 | mg/kg | 0.035 | ND |
| Acenaphthene | 1 | mg/kg | 0.035 | ND |
| Acenaphthylene | 1 | mg/kg | 0.035 | ND |
| Acetophenone | 1 | mg/kg | 0.035 | ND |
| Anthracene | 1 | mg/kg | 0.035 | ND |
| Atrazine | 1 | mg/kg | 0.035 | ND |
| Benzaldehyde | 1 | mg/kg | 0.035 | ND |
| Benzo[a]anthracene | 1 | mg/kg | 0.035 | ND |
| Benzo[a]pyrene | 1 | mg/kg | 0.035 | ND |
| Benzo[b]fluoranthene | 1 | mg/kg | 0.035 | ND |
| Benzo[g,h,i]perylene | 1 | mg/kg | 0.035 | ND |
| Benzo[k]fluoranthene | 1 | mg/kg | 0.035 | ND |
| bis(2-Chloroethoxy)methane | 1 | mg/kg | 0.035 | ND |
| bis(2-Chloroethyl)ether | 1 | mg/kg | 0.0088 | ND |
| bis(2-Chloroisopropyl)ether | 1 | mg/kg | 0.035 | ND |
| bis(2-Ethylhexyl)phthalate | 1 | mg/kg | 0.035 | ND |
| Butylbenzylphthalate | 1 | mg/kg | 0.035 | ND |
| Caprolactam | 1 | mg/kg | 0.035 | ND |
| Carbazole | 1 | mg/kg | 0.035 | ND |
| Chrysene | 1 | mg/kg | 0.035 | ND |
| Dibenzo[a,h]anthracene | 1 | mg/kg | 0.035 | ND |
| Dibenzofuran | 1 | mg/kg | 0.0088 | ND |
| Diethylphthalate | 1 | mg/kg | 0.035 | ND |
| Dimethylphthalate | 1 | mg/kg | 0.035 | ND |
| Di-n-butylphthalate | 1 | mg/kg | 0.035 | ND |
| Di-n-octylphthalate | 1 | mg/kg | 0.035 | ND |
| Fluoranthene | 1 | mg/kg | 0.035 | ND |
| Fluorene | 1 | mg/kg | 0.035 | ND |
| Hexachlorobenzene | 1 | mg/kg | 0.035 | ND |
| Hexachlorobutadiene | 1 | mg/kg | 0.035 | ND |
| Hexachlorocyclopentadiene | 1 | mg/kg | 0.035 | ND |
| Hexachloroethane | 1 | mg/kg | 0.035 | ND |

**Sample ID: SB-1 (8-12)** **Collection Date: 10/20/2017**
**Lab#: AD00725-002** **Receipt Date: 10/20/2017**
**Matrix: Soil**

| | | | | | |
|---|---|---|---|---|---|
| Indeno[1,2,3-cd]pyrene | 1 | mg/kg | 0.035 | ND | |
| Isophorone | 1 | mg/kg | 0.035 | ND | |
| Naphthalene | 1 | mg/kg | 0.0088 | ND | |
| Nitrobenzene | 1 | mg/kg | 0.035 | ND | |
| N-Nitroso-di-n-propylamine | 1 | mg/kg | 0.0088 | ND | |
| N-Nitrosodiphenylamine | 1 | mg/kg | 0.035 | ND | |
| Pentachlorophenol | 1 | mg/kg | 0.18 | ND | |
| Phenanthrene | 1 | mg/kg | 0.035 | ND | |
| Phenol | 1 | mg/kg | 0.035 | ND | |
| Pyrene | 1 | mg/kg | 0.035 | ND | |

| Surrogate | Conc. | Spike | Low Limit | High Limit | Recovery | Flags |
|---|---|---|---|---|---|---|
| Terphenyl-d14 | 65.05 | 50 | 58 | 148 | 130 | |
| Phenol-d5 | 83.31 | 100 | 49 | 129 | 83 | |
| Nitrobenzene-d5 | 39.36 | 50 | 52 | 129 | 79 | |
| 2-Fluorophenol | 79.65 | 100 | 43 | 128 | 80 | |
| 2-Fluorobiphenyl | 43.29 | 50 | 58 | 125 | 87 | |
| 2,4,6-Tribromophenol | 113.11 | 100 | 54 | 145 | 113 | |

**TAL Metals 6010**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| **Aluminum** | **1** | **mg/kg** | **210** | **12000** |
| **Barium** | **1** | **mg/kg** | **11** | **34** |
| **Calcium** | **1** | **mg/kg** | **1100** | **2000** |
| **Chromium** | **1** | **mg/kg** | **5.3** | **25** |
| **Cobalt** | **1** | **mg/kg** | **2.6** | **6.7** |
| **Copper** | **1** | **mg/kg** | **5.3** | **22** |
| **Iron** | **1** | **mg/kg** | **210** | **27000** |
| **Lead** | **1** | **mg/kg** | **5.3** | **44** |
| **Magnesium** | **1** | **mg/kg** | **530** | **7700** |
| **Manganese** | **1** | **mg/kg** | **11** | **680** |
| **Nickel** | **1** | **mg/kg** | **5.3** | **19** |
| **Potassium** | **1** | **mg/kg** | **530** | **1300** |
| **Sodium** | **1** | **mg/kg** | **260** | **280** |
| **Vanadium** | **1** | **mg/kg** | **11** | **28** |
| **Zinc** | **1** | **mg/kg** | **11** | **59** |

**TAL Metals 6020**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| Antimony | 1 | mg/kg | 0.84 | ND |
| **Arsenic** | **1** | **mg/kg** | **0.21** | **2.9** |
| **Beryllium** | **1** | **mg/kg** | **0.21** | **0.40** |
| Cadmium | 1 | mg/kg | 0.42 | ND |
| Selenium | 1 | mg/kg | 2.1 | ND |
| Silver | 1 | mg/kg | 0.21 | ND |
| Thallium | 1 | mg/kg | 0.42 | ND |

**Sample ID: SB-2 (0-4)** **Collection Date: 10/20/2017**
**Lab#: AD00725-003** **Receipt Date: 10/20/2017**
**Matrix: Soil**

**% Solids SM2540G**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| **% Solids** | **1** | **percent** | | **86** |

**Mercury (Soil/Waste) 7471B**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| **Mercury** | **1** | **mg/kg** | **0.097** | **0.13** |

**Semivolatile Organics (no search) 8270**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| 1,1'-Biphenyl | 1 | mg/kg | 0.039 | ND |
| 1,2,4,5-Tetrachlorobenzene | 1 | mg/kg | 0.039 | ND |
| 2,3,4,6-Tetrachlorophenol | 1 | mg/kg | 0.039 | ND |
| 2,4,5-Trichlorophenol | 1 | mg/kg | 0.039 | ND |
| 2,4,6-Trichlorophenol | 1 | mg/kg | 0.039 | ND |
| 2,4-Dichlorophenol | 1 | mg/kg | 0.0097 | ND |
| 2,4-Dimethylphenol | 1 | mg/kg | 0.0097 | ND |
| 2,4-Dinitrophenol | 1 | mg/kg | 0.19 | ND |
| 2,4-Dinitrotoluene | 1 | mg/kg | 0.039 | ND |
| 2,6-Dinitrotoluene | 1 | mg/kg | 0.039 | ND |
| 2-Chloronaphthalene | 1 | mg/kg | 0.039 | ND |
| 2-Chlorophenol | 1 | mg/kg | 0.039 | ND |
| 2-Methylnaphthalene | 1 | mg/kg | 0.039 | ND |
| 2-Methylphenol | 1 | mg/kg | 0.0097 | ND |
| 2-Nitroaniline | 1 | mg/kg | 0.039 | ND |
| 2-Nitrophenol | 1 | mg/kg | 0.039 | ND |
| 3&4-Methylphenol | 1 | mg/kg | 0.0097 | ND |
| 3,3'-Dichlorobenzidine | 1 | mg/kg | 0.039 | ND |
| 3-Nitroaniline | 1 | mg/kg | 0.039 | ND |
| 4,6-Dinitro-2-methylphenol | 1 | mg/kg | 0.19 | ND |
| 4-Bromophenyl-phenylether | 1 | mg/kg | 0.039 | ND |
| 4-Chloro-3-methylphenol | 1 | mg/kg | 0.039 | ND |
| 4-Chloroaniline | 1 | mg/kg | 0.0097 | ND |
| 4-Chlorophenyl-phenylether | 1 | mg/kg | 0.039 | ND |
| 4-Nitroaniline | 1 | mg/kg | 0.039 | ND |
| 4-Nitrophenol | 1 | mg/kg | 0.039 | ND |
| Acenaphthene | 1 | mg/kg | 0.039 | ND |
| Acenaphthylene | 1 | mg/kg | 0.039 | ND |
| Acetophenone | 1 | mg/kg | 0.039 | ND |
| Anthracene | 1 | mg/kg | 0.039 | ND |
| Atrazine | 1 | mg/kg | 0.039 | ND |
| Benzaldehyde | 1 | mg/kg | 0.039 | ND |
| **Benzo[a]anthracene** | **1** | **mg/kg** | **0.039** | **0.069** |
| **Benzo[a]pyrene** | **1** | **mg/kg** | **0.039** | **0.064** |
| **Benzo[b]fluoranthene** | **1** | **mg/kg** | **0.039** | **0.080** |
| **Benzo[g,h,i]perylene** | **1** | **mg/kg** | **0.039** | **0.050** |
| Benzo[k]fluoranthene | 1 | mg/kg | 0.039 | ND |
| bis(2-Chloroethoxy)methane | 1 | mg/kg | 0.039 | ND |
| bis(2-Chloroethyl)ether | 1 | mg/kg | 0.0097 | ND |
| bis(2-Chloroisopropyl)ether | 1 | mg/kg | 0.039 | ND |
| bis(2-Ethylhexyl)phthalate | 1 | mg/kg | 0.039 | ND |
| Butylbenzylphthalate | 1 | mg/kg | 0.039 | ND |
| Caprolactam | 1 | mg/kg | 0.039 | ND |
| Carbazole | 1 | mg/kg | 0.039 | ND |
| **Chrysene** | **1** | **mg/kg** | **0.039** | **0.068** |
| Dibenzo[a,h]anthracene | 1 | mg/kg | 0.039 | ND |
| Dibenzofuran | 1 | mg/kg | 0.0097 | ND |
| Diethylphthalate | 1 | mg/kg | 0.039 | ND |
| Dimethylphthalate | 1 | mg/kg | 0.039 | ND |
| Di-n-butylphthalate | 1 | mg/kg | 0.039 | ND |
| Di-n-octylphthalate | 1 | mg/kg | 0.039 | ND |
| **Fluoranthene** | **1** | **mg/kg** | **0.039** | **0.12** |
| Fluorene | 1 | mg/kg | 0.039 | ND |
| Hexachlorobenzene | 1 | mg/kg | 0.039 | ND |
| Hexachlorobutadiene | 1 | mg/kg | 0.039 | ND |
| Hexachlorocyclopentadiene | 1 | mg/kg | 0.039 | ND |
| Hexachloroethane | 1 | mg/kg | 0.039 | ND |

**Sample ID: SB-2 (0-4)** **Collection Date: 10/20/2017**
**Lab#: AD00725-003** **Receipt Date: 10/20/2017**
**Matrix: Soil**

| | | | | |
|---|---|---|---|---|
| **Indeno[1,2,3-cd]pyrene** | **1** | **mg/kg** | **0.039** | **0.041** |
| Isophorone | 1 | mg/kg | 0.039 | ND |
| Naphthalene | 1 | mg/kg | 0.0097 | ND |
| Nitrobenzene | 1 | mg/kg | 0.039 | ND |
| N-Nitroso-di-n-propylamine | 1 | mg/kg | 0.0097 | ND |
| N-Nitrosodiphenylamine | 1 | mg/kg | 0.039 | ND |
| Pentachlorophenol | 1 | mg/kg | 0.19 | ND |
| **Phenanthrene** | **1** | **mg/kg** | **0.039** | **0.066** |
| Phenol | 1 | mg/kg | 0.039 | ND |
| **Pyrene** | **1** | **mg/kg** | **0.039** | **0.13** |

| Surrogate | Conc. | Spike | Low Limit | High Limit | Recovery | Flags |
|---|---|---|---|---|---|---|
| Terphenyl-d14 | 65.99 | 50 | 58 | 148 | 132 | |
| Phenol-d5 | 75.23 | 100 | 49 | 129 | 75 | |
| Nitrobenzene-d5 | 26.10 | 50 | 52 | 129 | 52 | |
| 2-Fluorophenol | 57.61 | 100 | 43 | 128 | 58 | |
| 2-Fluorobiphenyl | 37.16 | 50 | 58 | 125 | 74 | |
| 2,4,6-Tribromophenol | 121.40 | 100 | 54 | 145 | 121 | |

**TAL Metals 6010**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| **Aluminum** | **1** | **mg/kg** | **230** | **14000** |
| **Barium** | **1** | **mg/kg** | **12** | **75** |
| **Calcium** | **1** | **mg/kg** | **1200** | **4100** |
| **Chromium** | **1** | **mg/kg** | **5.8** | **27** |
| **Cobalt** | **1** | **mg/kg** | **2.9** | **11** |
| **Copper** | **1** | **mg/kg** | **5.8** | **29** |
| **Iron** | **1** | **mg/kg** | **230** | **36000** |
| **Lead** | **1** | **mg/kg** | **5.8** | **48** |
| **Magnesium** | **1** | **mg/kg** | **580** | **3500** |
| **Manganese** | **1** | **mg/kg** | **12** | **550** |
| **Nickel** | **1** | **mg/kg** | **5.8** | **20** |
| **Potassium** | **1** | **mg/kg** | **580** | **1300** |
| Sodium | 1 | mg/kg | 290 | ND |
| **Vanadium** | **1** | **mg/kg** | **12** | **43** |
| **Zinc** | **1** | **mg/kg** | **12** | **58** |

**TAL Metals 6020**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| Antimony | 1 | mg/kg | 0.93 | ND |
| **Arsenic** | **1** | **mg/kg** | **0.23** | **9.3** |
| **Beryllium** | **1** | **mg/kg** | **0.23** | **0.39** |
| Cadmium | 1 | mg/kg | 0.47 | ND |
| Selenium | 1 | mg/kg | 2.3 | ND |
| Silver | 1 | mg/kg | 0.23 | ND |
| Thallium | 1 | mg/kg | 0.47 | ND |

**Sample ID: SB-2 (8-12)** **Collection Date: 10/20/2017**
**Lab#: AD00725-004** **Receipt Date: 10/20/2017**
**Matrix: Soil**

**% Solids SM2540G**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| **% Solids** | **1** | **percent** | | **86** |

**Mercury (Soil/Waste) 7471B**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| **Mercury** | **1** | **mg/kg** | **0.097** | **0.67** |

**Semivolatile Organics (no search) 8270**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| 1,1'-Biphenyl | 1 | mg/kg | 0.039 | ND |
| 1,2,4,5-Tetrachlorobenzene | 1 | mg/kg | 0.039 | ND |
| 2,3,4,6-Tetrachlorophenol | 1 | mg/kg | 0.039 | ND |
| 2,4,5-Trichlorophenol | 1 | mg/kg | 0.039 | ND |
| 2,4,6-Trichlorophenol | 1 | mg/kg | 0.039 | ND |
| 2,4-Dichlorophenol | 1 | mg/kg | 0.0097 | ND |
| 2,4-Dimethylphenol | 1 | mg/kg | 0.0097 | ND |
| 2,4-Dinitrophenol | 1 | mg/kg | 0.19 | ND |
| 2,4-Dinitrotoluene | 1 | mg/kg | 0.039 | ND |
| 2,6-Dinitrotoluene | 1 | mg/kg | 0.039 | ND |
| 2-Chloronaphthalene | 1 | mg/kg | 0.039 | ND |
| 2-Chlorophenol | 1 | mg/kg | 0.039 | ND |
| 2-Methylnaphthalene | 1 | mg/kg | 0.039 | ND |
| 2-Methylphenol | 1 | mg/kg | 0.0097 | ND |
| 2-Nitroaniline | 1 | mg/kg | 0.039 | ND |
| 2-Nitrophenol | 1 | mg/kg | 0.039 | ND |
| 3&4-Methylphenol | 1 | mg/kg | 0.0097 | ND |
| 3,3'-Dichlorobenzidine | 1 | mg/kg | 0.039 | ND |
| 3-Nitroaniline | 1 | mg/kg | 0.039 | ND |
| 4,6-Dinitro-2-methylphenol | 1 | mg/kg | 0.19 | ND |
| 4-Bromophenyl-phenylether | 1 | mg/kg | 0.039 | ND |
| 4-Chloro-3-methylphenol | 1 | mg/kg | 0.039 | ND |
| 4-Chloroaniline | 1 | mg/kg | 0.0097 | ND |
| 4-Chlorophenyl-phenylether | 1 | mg/kg | 0.039 | ND |
| 4-Nitroaniline | 1 | mg/kg | 0.039 | ND |
| 4-Nitrophenol | 1 | mg/kg | 0.039 | ND |
| **Acenaphthene** | **1** | **mg/kg** | **0.039** | **0.043** |
| Acenaphthylene | 1 | mg/kg | 0.039 | ND |
| Acetophenone | 1 | mg/kg | 0.039 | ND |
| **Anthracene** | **1** | **mg/kg** | **0.039** | **0.13** |
| Atrazine | 1 | mg/kg | 0.039 | ND |
| Benzaldehyde | 1 | mg/kg | 0.039 | ND |
| **Benzo[a]anthracene** | **1** | **mg/kg** | **0.039** | **0.37** |
| **Benzo[a]pyrene** | **1** | **mg/kg** | **0.039** | **0.30** |
| **Benzo[b]fluoranthene** | **1** | **mg/kg** | **0.039** | **0.40** |
| **Benzo[g,h,i]perylene** | **1** | **mg/kg** | **0.039** | **0.19** |
| **Benzo[k]fluoranthene** | **1** | **mg/kg** | **0.039** | **0.13** |
| bis(2-Chloroethoxy)methane | 1 | mg/kg | 0.039 | ND |
| bis(2-Chloroethyl)ether | 1 | mg/kg | 0.0097 | ND |
| bis(2-Chloroisopropyl)ether | 1 | mg/kg | 0.039 | ND |
| bis(2-Ethylhexyl)phthalate | 1 | mg/kg | 0.039 | ND |
| Butylbenzylphthalate | 1 | mg/kg | 0.039 | ND |
| Caprolactam | 1 | mg/kg | 0.039 | ND |
| **Carbazole** | **1** | **mg/kg** | **0.039** | **0.057** |
| **Chrysene** | **1** | **mg/kg** | **0.039** | **0.36** |
| **Dibenzo[a,h]anthracene** | **1** | **mg/kg** | **0.039** | **0.054** |
| **Dibenzofuran** | **1** | **mg/kg** | **0.0097** | **0.030** |
| Diethylphthalate | 1 | mg/kg | 0.039 | ND |
| Dimethylphthalate | 1 | mg/kg | 0.039 | ND |
| Di-n-butylphthalate | 1 | mg/kg | 0.039 | ND |
| Di-n-octylphthalate | 1 | mg/kg | 0.039 | ND |
| **Fluoranthene** | **1** | **mg/kg** | **0.039** | **0.73** |
| **Fluorene** | **1** | **mg/kg** | **0.039** | **0.039** |
| Hexachlorobenzene | 1 | mg/kg | 0.039 | ND |
| Hexachlorobutadiene | 1 | mg/kg | 0.039 | ND |
| Hexachlorocyclopentadiene | 1 | mg/kg | 0.039 | ND |
| Hexachloroethane | 1 | mg/kg | 0.039 | ND |

**Sample ID: SB-2 (8-12)** **Collection Date: 10/20/2017**
**Lab#: AD00725-004** **Receipt Date: 10/20/2017**
**Matrix: Soil**

| | | | | | |
|---|---|---|---|---|---|
| **Indeno[1,2,3-cd]pyrene** | **1** | **mg/kg** | **0.039** | **0.17** | |
| Isophorone | 1 | mg/kg | 0.039 | ND | |
| **Naphthalene** | **1** | **mg/kg** | **0.0097** | **0.017** | |
| Nitrobenzene | 1 | mg/kg | 0.039 | ND | |
| N-Nitroso-di-n-propylamine | 1 | mg/kg | 0.0097 | ND | |
| N-Nitrosodiphenylamine | 1 | mg/kg | 0.039 | ND | |
| Pentachlorophenol | 1 | mg/kg | 0.19 | ND | |
| **Phenanthrene** | **1** | **mg/kg** | **0.039** | **0.59** | |
| Phenol | 1 | mg/kg | 0.039 | ND | |
| **Pyrene** | **1** | **mg/kg** | **0.039** | **0.73** | |

| Surrogate | Conc. | Spike | Low Limit | High Limit | Recovery | Flags |
|---|---|---|---|---|---|---|
| Terphenyl-d14 | 63.61 | 50 | 58 | 148 | 127 | |
| Phenol-d5 | 84.28 | 100 | 49 | 129 | 84 | |
| Nitrobenzene-d5 | 39.90 | 50 | 52 | 129 | 80 | |
| 2-Fluorophenol | 81.43 | 100 | 43 | 128 | 81 | |
| 2-Fluorobiphenyl | 46.19 | 50 | 58 | 125 | 92 | |
| 2,4,6-Tribromophenol | 124.62 | 100 | 54 | 145 | 125 | |

**TAL Metals 6010**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| **Aluminum** | **1** | **mg/kg** | **230** | **8500** |
| **Barium** | **1** | **mg/kg** | **12** | **86** |
| **Calcium** | **1** | **mg/kg** | **1200** | **6800** |
| **Chromium** | **1** | **mg/kg** | **5.8** | **22** |
| **Cobalt** | **1** | **mg/kg** | **2.9** | **6.4** |
| **Copper** | **1** | **mg/kg** | **5.8** | **29** |
| **Iron** | **1** | **mg/kg** | **230** | **21000** |
| **Lead** | **1** | **mg/kg** | **5.8** | **72** |
| **Magnesium** | **1** | **mg/kg** | **580** | **2700** |
| **Manganese** | **1** | **mg/kg** | **12** | **550** |
| **Nickel** | **1** | **mg/kg** | **5.8** | **13** |
| **Potassium** | **1** | **mg/kg** | **580** | **680** |
| Sodium | 1 | mg/kg | 290 | ND |
| **Vanadium** | **1** | **mg/kg** | **12** | **26** |
| **Zinc** | **1** | **mg/kg** | **12** | **64** |

**TAL Metals 6020**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| Antimony | 1 | mg/kg | 0.93 | ND |
| **Arsenic** | **1** | **mg/kg** | **0.23** | **3.5** |
| **Beryllium** | **1** | **mg/kg** | **0.23** | **0.35** |
| Cadmium | 1 | mg/kg | 0.47 | ND |
| Selenium | 1 | mg/kg | 2.3 | ND |
| Silver | 1 | mg/kg | 0.23 | ND |
| Thallium | 1 | mg/kg | 0.47 | ND |

**Sample ID: SB-3 (0-3)** **Collection Date: 10/20/2017**
**Lab#: AD00725-005** **Receipt Date: 10/20/2017**
**Matrix: Soil**

**% Solids SM2540G**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| **% Solids** | **1** | **percent** | | **91** |

**Mercury (Soil/Waste) 7471B**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| **Mercury** | **1** | **mg/kg** | **0.092** | **1.4** |

**Semivolatile Organics (no search) 8270**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| 1,1'-Biphenyl | 1 | mg/kg | 0.037 | ND |
| 1,2,4,5-Tetrachlorobenzene | 1 | mg/kg | 0.037 | ND |
| 2,3,4,6-Tetrachlorophenol | 1 | mg/kg | 0.037 | ND |
| 2,4,5-Trichlorophenol | 1 | mg/kg | 0.037 | ND |
| 2,4,6-Trichlorophenol | 1 | mg/kg | 0.037 | ND |
| 2,4-Dichlorophenol | 1 | mg/kg | 0.0092 | ND |
| 2,4-Dimethylphenol | 1 | mg/kg | 0.0092 | ND |
| 2,4-Dinitrophenol | 1 | mg/kg | 0.18 | ND |
| 2,4-Dinitrotoluene | 1 | mg/kg | 0.037 | ND |
| 2,6-Dinitrotoluene | 1 | mg/kg | 0.037 | ND |
| 2-Chloronaphthalene | 1 | mg/kg | 0.037 | ND |
| 2-Chlorophenol | 1 | mg/kg | 0.037 | ND |
| 2-Methylnaphthalene | 1 | mg/kg | 0.037 | ND |
| 2-Methylphenol | 1 | mg/kg | 0.0092 | ND |
| 2-Nitroaniline | 1 | mg/kg | 0.037 | ND |
| 2-Nitrophenol | 1 | mg/kg | 0.037 | ND |
| 3&4-Methylphenol | 1 | mg/kg | 0.0092 | ND |
| 3,3'-Dichlorobenzidine | 1 | mg/kg | 0.037 | ND |
| 3-Nitroaniline | 1 | mg/kg | 0.037 | ND |
| 4,6-Dinitro-2-methylphenol | 1 | mg/kg | 0.18 | ND |
| 4-Bromophenyl-phenylether | 1 | mg/kg | 0.037 | ND |
| 4-Chloro-3-methylphenol | 1 | mg/kg | 0.037 | ND |
| 4-Chloroaniline | 1 | mg/kg | 0.0092 | ND |
| 4-Chlorophenyl-phenylether | 1 | mg/kg | 0.037 | ND |
| 4-Nitroaniline | 1 | mg/kg | 0.037 | ND |
| 4-Nitrophenol | 1 | mg/kg | 0.037 | ND |
| Acenaphthene | 1 | mg/kg | 0.037 | ND |
| Acenaphthylene | 1 | mg/kg | 0.037 | ND |
| Acetophenone | 1 | mg/kg | 0.037 | ND |
| Anthracene | 1 | mg/kg | 0.037 | ND |
| Atrazine | 1 | mg/kg | 0.037 | ND |
| Benzaldehyde | 1 | mg/kg | 0.037 | ND |
| **Benzo[a]anthracene** | **1** | **mg/kg** | **0.037** | **0.099** |
| **Benzo[a]pyrene** | **1** | **mg/kg** | **0.037** | **0.094** |
| **Benzo[b]fluoranthene** | **1** | **mg/kg** | **0.037** | **0.12** |
| **Benzo[g,h,i]perylene** | **1** | **mg/kg** | **0.037** | **0.073** |
| **Benzo[k]fluoranthene** | **1** | **mg/kg** | **0.037** | **0.047** |
| bis(2-Chloroethoxy)methane | 1 | mg/kg | 0.037 | ND |
| bis(2-Chloroethyl)ether | 1 | mg/kg | 0.0092 | ND |
| bis(2-Chloroisopropyl)ether | 1 | mg/kg | 0.037 | ND |
| bis(2-Ethylhexyl)phthalate | 1 | mg/kg | 0.037 | ND |
| Butylbenzylphthalate | 1 | mg/kg | 0.037 | ND |
| Caprolactam | 1 | mg/kg | 0.037 | ND |
| Carbazole | 1 | mg/kg | 0.037 | ND |
| **Chrysene** | **1** | **mg/kg** | **0.037** | **0.10** |
| Dibenzo[a,h]anthracene | 1 | mg/kg | 0.037 | ND |
| Dibenzofuran | 1 | mg/kg | 0.0092 | ND |
| Diethylphthalate | 1 | mg/kg | 0.037 | ND |
| Dimethylphthalate | 1 | mg/kg | 0.037 | ND |
| Di-n-butylphthalate | 1 | mg/kg | 0.0092 | ND |
| Di-n-octylphthalate | 1 | mg/kg | 0.037 | ND |
| **Fluoranthene** | **1** | **mg/kg** | **0.037** | **0.19** |
| Fluorene | 1 | mg/kg | 0.037 | ND |
| Hexachlorobenzene | 1 | mg/kg | 0.037 | ND |
| Hexachlorobutadiene | 1 | mg/kg | 0.037 | ND |
| Hexachlorocyclopentadiene | 1 | mg/kg | 0.037 | ND |
| Hexachloroethane | 1 | mg/kg | 0.037 | ND |

**Sample ID: SB-3 (0-3)** **Collection Date: 10/20/2017**
**Lab#: AD00725-005** **Receipt Date: 10/20/2017**
**Matrix: Soil**

| | | | | |
|---|---|---|---|---|
| **Indeno[1,2,3-cd]pyrene** | **1** | **mg/kg** | **0.037** | **0.060** |
| Isophorone | 1 | mg/kg | 0.037 | ND |
| Naphthalene | 1 | mg/kg | 0.0092 | ND |
| Nitrobenzene | 1 | mg/kg | 0.037 | ND |
| N-Nitroso-di-n-propylamine | 1 | mg/kg | 0.0092 | ND |
| N-Nitrosodiphenylamine | 1 | mg/kg | 0.037 | ND |
| Pentachlorophenol | 1 | mg/kg | 0.18 | ND |
| **Phenanthrene** | **1** | **mg/kg** | **0.037** | **0.12** |
| Phenol | 1 | mg/kg | 0.037 | ND |
| **Pyrene** | **1** | **mg/kg** | **0.037** | **0.19** |

| Surrogate | Conc. | Spike | Low Limit | High Limit | Recovery | Flags |
|---|---|---|---|---|---|---|
| Terphenyl-d14 | 59.84 | 50 | 58 | 148 | 120 | |
| Phenol-d5 | 72.50 | 100 | 49 | 129 | 73 | |
| Nitrobenzene-d5 | 31.51 | 50 | 52 | 129 | 63 | |
| 2-Fluorophenol | 71.05 | 100 | 43 | 128 | 71 | |
| 2-Fluorobiphenyl | 39.64 | 50 | 58 | 125 | 79 | |
| 2,4,6-Tribromophenol | 116.95 | 100 | 54 | 145 | 117 | |

**TAL Metals 6010**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| **Aluminum** | **1** | **mg/kg** | **220** | **8100** |
| **Barium** | **1** | **mg/kg** | **11** | **63** |
| **Calcium** | **1** | **mg/kg** | **1100** | **4800** |
| **Chromium** | **1** | **mg/kg** | **5.5** | **21** |
| **Cobalt** | **1** | **mg/kg** | **2.7** | **6.8** |
| **Copper** | **1** | **mg/kg** | **5.5** | **29** |
| **Iron** | **1** | **mg/kg** | **220** | **27000** |
| **Lead** | **1** | **mg/kg** | **5.5** | **85** |
| **Magnesium** | **1** | **mg/kg** | **550** | **2500** |
| **Manganese** | **1** | **mg/kg** | **11** | **420** |
| **Nickel** | **1** | **mg/kg** | **5.5** | **18** |
| **Potassium** | **1** | **mg/kg** | **550** | **1100** |
| Sodium | 1 | mg/kg | 270 | ND |
| **Vanadium** | **1** | **mg/kg** | **11** | **29** |
| **Zinc** | **1** | **mg/kg** | **11** | **56** |

**TAL Metals 6020**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| Antimony | 1 | mg/kg | 0.88 | ND |
| **Arsenic** | **1** | **mg/kg** | **0.22** | **4.0** |
| **Beryllium** | **1** | **mg/kg** | **0.22** | **0.28** |
| Cadmium | 1 | mg/kg | 0.44 | ND |
| Selenium | 1 | mg/kg | 2.2 | ND |
| Silver | 1 | mg/kg | 0.22 | ND |
| Thallium | 1 | mg/kg | 0.44 | ND |

**Sample ID: SB-3 (8-12)** **Collection Date: 10/20/2017**
**Lab#: AD00725-006** **Receipt Date: 10/20/2017**
**Matrix: Soil**

**% Solids SM2540G**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| **% Solids** | **1** | **percent** | | **88** |

**Mercury (Soil/Waste) 7471B**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| **Mercury** | **1** | **mg/kg** | **0.095** | **0.19** |

**Semivolatile Organics (no search) 8270**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| 1,1'-Biphenyl | 1 | mg/kg | 0.038 | ND |
| 1,2,4,5-Tetrachlorobenzene | 1 | mg/kg | 0.038 | ND |
| 2,3,4,6-Tetrachlorophenol | 1 | mg/kg | 0.038 | ND |
| 2,4,5-Trichlorophenol | 1 | mg/kg | 0.038 | ND |
| 2,4,6-Trichlorophenol | 1 | mg/kg | 0.038 | ND |
| 2,4-Dichlorophenol | 1 | mg/kg | 0.0095 | ND |
| 2,4-Dimethylphenol | 1 | mg/kg | 0.0095 | ND |
| 2,4-Dinitrophenol | 1 | mg/kg | 0.19 | ND |
| 2,4-Dinitrotoluene | 1 | mg/kg | 0.038 | ND |
| 2,6-Dinitrotoluene | 1 | mg/kg | 0.038 | ND |
| 2-Chloronaphthalene | 1 | mg/kg | 0.038 | ND |
| 2-Chlorophenol | 1 | mg/kg | 0.038 | ND |
| 2-Methylnaphthalene | 1 | mg/kg | 0.038 | ND |
| 2-Methylphenol | 1 | mg/kg | 0.0095 | ND |
| 2-Nitroaniline | 1 | mg/kg | 0.038 | ND |
| 2-Nitrophenol | 1 | mg/kg | 0.038 | ND |
| 3&4-Methylphenol | 1 | mg/kg | 0.0095 | ND |
| 3,3'-Dichlorobenzidine | 1 | mg/kg | 0.038 | ND |
| 3-Nitroaniline | 1 | mg/kg | 0.038 | ND |
| 4,6-Dinitro-2-methylphenol | 1 | mg/kg | 0.19 | ND |
| 4-Bromophenyl-phenylether | 1 | mg/kg | 0.038 | ND |
| 4-Chloro-3-methylphenol | 1 | mg/kg | 0.038 | ND |
| 4-Chloroaniline | 1 | mg/kg | 0.0095 | ND |
| 4-Chlorophenyl-phenylether | 1 | mg/kg | 0.038 | ND |
| 4-Nitroaniline | 1 | mg/kg | 0.038 | ND |
| 4-Nitrophenol | 1 | mg/kg | 0.038 | ND |
| Acenaphthene | 1 | mg/kg | 0.038 | ND |
| Acenaphthylene | 1 | mg/kg | 0.038 | ND |
| Acetophenone | 1 | mg/kg | 0.038 | ND |
| Anthracene | 1 | mg/kg | 0.038 | ND |
| Atrazine | 1 | mg/kg | 0.038 | ND |
| Benzaldehyde | 1 | mg/kg | 0.038 | ND |
| **Benzo[a]anthracene** | **1** | **mg/kg** | **0.038** | **0.092** |
| **Benzo[a]pyrene** | **1** | **mg/kg** | **0.038** | **0.088** |
| **Benzo[b]fluoranthene** | **1** | **mg/kg** | **0.038** | **0.11** |
| **Benzo[g,h,i]perylene** | **1** | **mg/kg** | **0.038** | **0.060** |
| **Benzo[k]fluoranthene** | **1** | **mg/kg** | **0.038** | **0.044** |
| bis(2-Chloroethoxy)methane | 1 | mg/kg | 0.038 | ND |
| bis(2-Chloroethyl)ether | 1 | mg/kg | 0.0095 | ND |
| bis(2-Chloroisopropyl)ether | 1 | mg/kg | 0.038 | ND |
| bis(2-Ethylhexyl)phthalate | 1 | mg/kg | 0.038 | ND |
| Butylbenzylphthalate | 1 | mg/kg | 0.038 | ND |
| Caprolactam | 1 | mg/kg | 0.038 | ND |
| Carbazole | 1 | mg/kg | 0.038 | ND |
| **Chrysene** | **1** | **mg/kg** | **0.038** | **0.097** |
| Dibenzo[a,h]anthracene | 1 | mg/kg | 0.038 | ND |
| Dibenzofuran | 1 | mg/kg | 0.0095 | ND |
| Diethylphthalate | 1 | mg/kg | 0.038 | ND |
| Dimethylphthalate | 1 | mg/kg | 0.038 | ND |
| Di-n-butylphthalate | 1 | mg/kg | 0.0095 | ND |
| Di-n-octylphthalate | 1 | mg/kg | 0.038 | ND |
| **Fluoranthene** | **1** | **mg/kg** | **0.038** | **0.18** |
| Fluorene | 1 | mg/kg | 0.038 | ND |
| Hexachlorobenzene | 1 | mg/kg | 0.038 | ND |
| Hexachlorobutadiene | 1 | mg/kg | 0.038 | ND |
| Hexachlorocyclopentadiene | 1 | mg/kg | 0.038 | ND |
| Hexachloroethane | 1 | mg/kg | 0.038 | ND |

**Sample ID: SB-3 (8-12)** **Collection Date: 10/20/2017**
**Lab#: AD00725-006** **Receipt Date: 10/20/2017**
**Matrix: Soil**

| | | | | |
|---|---|---|---|---|
| **Indeno[1,2,3-cd]pyrene** | **1** | **mg/kg** | **0.038** | **0.053** |
| Isophorone | 1 | mg/kg | 0.038 | ND |
| Naphthalene | 1 | mg/kg | 0.0095 | ND |
| Nitrobenzene | 1 | mg/kg | 0.038 | ND |
| N-Nitroso-di-n-propylamine | 1 | mg/kg | 0.0095 | ND |
| N-Nitrosodiphenylamine | 1 | mg/kg | 0.038 | ND |
| Pentachlorophenol | 1 | mg/kg | 0.19 | ND |
| **Phenanthrene** | **1** | **mg/kg** | **0.038** | **0.11** |
| Phenol | 1 | mg/kg | 0.038 | ND |
| **Pyrene** | **1** | **mg/kg** | **0.038** | **0.17** |

| Surrogate | Conc. | Spike | Low Limit | High Limit | Recovery | Flags |
|---|---|---|---|---|---|---|
| Terphenyl-d14 | 61.38 | 50 | 58 | 148 | 123 | |
| Phenol-d5 | 98.78 | 100 | 49 | 129 | 99 | |
| Nitrobenzene-d5 | 46.39 | 50 | 52 | 129 | 93 | |
| 2-Fluorophenol | 96.18 | 100 | 43 | 128 | 96 | |
| 2-Fluorobiphenyl | 50.99 | 50 | 58 | 125 | 102 | |
| 2,4,6-Tribromophenol | 123.66 | 100 | 54 | 145 | 124 | |

**TAL Metals 6010**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| **Aluminum** | **1** | **mg/kg** | **230** | **14000** |
| **Barium** | **1** | **mg/kg** | **11** | **84** |
| **Calcium** | **1** | **mg/kg** | **1100** | **4300** |
| **Chromium** | **1** | **mg/kg** | **5.7** | **33** |
| **Cobalt** | **1** | **mg/kg** | **2.8** | **11** |
| **Copper** | **1** | **mg/kg** | **5.7** | **33** |
| **Iron** | **1** | **mg/kg** | **230** | **39000** |
| **Lead** | **1** | **mg/kg** | **5.7** | **110** |
| **Magnesium** | **1** | **mg/kg** | **570** | **3700** |
| **Manganese** | **1** | **mg/kg** | **11** | **740** |
| **Nickel** | **1** | **mg/kg** | **5.7** | **22** |
| **Potassium** | **1** | **mg/kg** | **570** | **1400** |
| Sodium | 1 | mg/kg | 280 | ND |
| **Vanadium** | **1** | **mg/kg** | **11** | **47** |
| **Zinc** | **1** | **mg/kg** | **11** | **73** |

**TAL Metals 6020**

| Analyte | DF | Units | RL | Result |
|---|---|---|---|---|
| Antimony | 1 | mg/kg | 0.91 | ND |
| **Arsenic** | **1** | **mg/kg** | **0.23** | **3.9** |
| **Beryllium** | **1** | **mg/kg** | **0.23** | **0.37** |
| Cadmium | 1 | mg/kg | 0.45 | ND |
| Selenium | 1 | mg/kg | 2.3 | ND |
| Silver | 1 | mg/kg | 0.23 | ND |
| Thallium | 1 | mg/kg | 0.45 | ND |

# Hampton-Clarke, Inc. (WBE/DBE/SBE)

175 Route 46 West and 2 Madison Road, Fairfield, New Jersey 07004
Ph: 800-426-9992 | 973-244-9770 Fax: 973-244-9787 | 973-439-1458
Service Center: 137-D Gaither Drive, Mount Laurel, New Jersey 08054
Ph (Service Center): 856-780-6057 Fax: 856-780-6056

Hampton-Clarke WBE/DBE/SBE 800-426-9992

A Women-Owned, Disadvantaged, Small Business Enterprise

NELAC/NJ #07071 | PA #68-00463 | NY #11408 | CT #PH-0671 | KY #90124 | DE HSCA Approved

## CHAIN OF CUSTODY RECORD

Project # (Lab Use Only): 7102030

Page 1 of 1

### 3) Reporting Requirements (Please Circle)

| Turnaround | Report Type | Electronic Data Deliv. |
|---|---|---|
| When Available: | Summary | NJ Hazsite |
| 1 Business Day (100%)* | Results + QC (Waste) | Excel Reg. NJ (NY) / PA |
| 2 Business Days (75%)* | Reduced: | EnviroData |
| 3 Business Days (50%)* | [ ] NJ [ ] NY | EQuIS: |
| 4 Business Days (35%)* | [ ] PA [ ] Other___ | [ ] 4-File [ ] EZ |
| 5 Business Days (25%) | NJ Full (NY ASP CatB) | [ ] NYDEC |
| 8 Business Days (Stand.) | NY ASP CatA | [ ] Region 2 or 5 |
| Other: | | Other: |

* Expedited TAT Not Always Available. Please Check with Lab.

### Customer Information

1a) Customer: GEI Consultants
Address: 110 Walt Whitman Rd Huntington Station, NY, 11746
1b) Email/Cell/Fax/Ph: bbradshaw@geiconsultants
1c) Send Invoice to: gciPayables@geiconsultants
1d) Send Report to: datagroup@geiconsultants

### Project Information

2a) Project: 99 Grantc St.
2b) Project Mgr: Ed Bradshaw
2c) Project Location (City/State): Brooklyn New York
2d) Quote/PO # (If Applicable): 1704261 GEI Proj#

FOR LAB USE ONLY

Batch # A100725

===> Check If Contingent ===>



7) Analysis (specify methods & parameter lists)

<=== Check If Contingent <===

| Lab Sample # | 4) Customer Sample ID | 5) Matrix | 6) Sample Date | 6) Sample Time | Sample Type: Composite (C) | Sample Type: Grab (G) | SVOC-TCL | TAL Metals | 8) # of Bottles: None | MeOH | En Core | NaOH | HCl | H2SO4 | HNO3 | Other: | 9) Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 001 | SB-1 (0-4) | S | 10/20/17 | 0845 | X | | X | X | 1 | | | | | | | | |
| 002 | SB-1 (6-12) | S | 10/20/17 | 0855 | X | | X | X | 1 | | | | | | | | |
| 003 | SB-2 (0-4) | S | 10/20/17 | 0915 | X | | X | X | 1 | | | | | | | | |
| 004 | SB-2 (6-12) | S | 10/20/17 | 0920 | X | | X | X | 1 | | | | | | | | |
| 005 | SB-3 (0-3) | S | 10/20/17 | 0945 | X | | X | X | 1 | | | | | | | | |
| 006 | SB-3 (6-12) | S | 10/20/17 | 0955 | X | | X | X | 1 | | | | | | | | |

| 10) Relinquished by: | Accepted by: | Date | Time |
|---|---|---|---|
| | | 10/20/17 | 16:30 |
| | | 10/20/17 | 19:15 |

11) Sampler (print name): Rich Crockett Date: 10/20/17

Additional Notes

### Comments, Notes, Special Requirements, HAZARDS

Indicate if low-level methods required to meet current groundwater standards (SPLP for soil):
- [ ] BN or BNA (8270D SIM)
- [ ] VOC (8260C SIM or 8011)
- [ ] SPLP (BN, BNA, Metals)
- [ ] 1,4 Dioxane

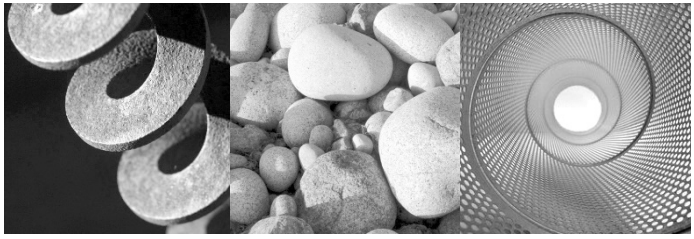
For NJ LSRP projects, indicate which standards need to be met:
- [ ] NJDEP GWQS
- [ ] NJDEP SRS
- [ ] NJDEP SPLP
- [ ] Other (specify):

Check if applicable:
- [ ] Project-Specific Reporting Limits
- [ ] High Contaminant Concentrations
- [ ] NJ LSRP Project (also check boxes above/right)

Cooler Temperature: 5.0

Please note NUMBERED items. If not completed your analytical work may be delayed.
A fee of $5/sample will be assessed for storage should sample not be activated for any analysis.

Internal use: sampling plan (check box) HC [ ] or client [ ] FSP#



GEI Consultants

Consulting
Engineers and
Scientists

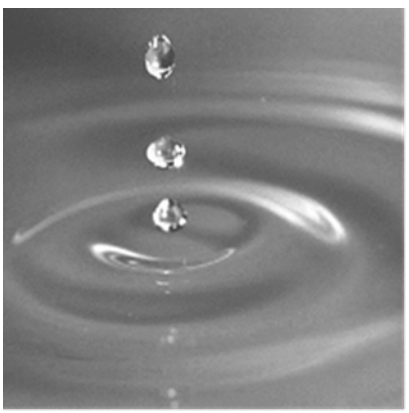
# Phase I Environmental Site Assessment

97 Granite Street
Brooklyn, New York 11207

**Prepared For:**
The PAR Group
Attn.: Mr. Dan Rosenfeld
60 North Prospect Avenue
Lynbrook, New York 11563

**Prepared By:**
GEI Consultants, Inc., P. C.
110 Walt Whitman Road, Suite 204
Huntington Station, New York 11746
631.760.9300

January 2019
Project No.: 1900299



Richard Fasciani
Project Manager

Edward Bradshaw
Senior Practice Leader

Errol Kitt
Vice President

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EB/RF:kmh
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# Executive Summary

On behalf of the PAR Group, GEI Consultants, Inc., P. C. (GEI) conducted a Phase I Environmental Site Assessment (ESA) of the site located at 97 Granite Street, Brooklyn, New York. This site is identified in this report as the "project site."

The project site is located on the west side of Granite Street, between Evergreen Avenue and Bushwick Avenue, in Brooklyn, New York (**Figures 1** and **2**). The New York City Tax Map identification numbers associated with the project site are Block 3457, Lot 50. The address associated with the Tax Map numbers is 97 Granite Street.

The project site is currently occupied by a two-story (with basement) single-family building with a detached two car garage behind the building. The project site is zoned residential (R6) with no commercial overlay. The New York City Department of Finance Building Classification is A5-1, Family Dwelling. The total lot area of the project site is approximately 2,500 square feet and is rectangular in shape. At the time of GEI's site inspection, the building was vacant. The basement area was finished and contains residential space. In addition to the residential space, the basement contained a small storage room with a 250-gallon aboveground oil tank, the electric and gas meters, and a room containing an oil-fired boiler and natural gas-fired hot water tank.

GEI's analysis of historical information indicates that the current building and garage on the project site was constructed prior to 1932. Based upon the information obtained, the building has been utilized as a residential building since its construction. Based upon the information obtained by GEI, there have been no uses identified within the building that would be considered a recognized environmental condition (REC) to the project site.

Review of historical Sanborn maps and visual observations made during GEI's informal neighborhood reconnaissance indicated adjacent and neighboring properties have historically been developed and occupied by residential properties.

The project site is connected to the City of New York municipal water supply system, as well as the municipal sewer system.

The project site is not listed on any federal or state regulatory agency databases. However, an adjacent property, 99-101 Granite Street was found to be on the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) database. Given this sites proximity, as well as similar development dates of the adjacent property, there is a possibility that the soils underneath the subject property will exhibit similar contaminants. This information is considered a REC.

During GEI's site inspection, potential asbestos-containing thermal insulation was observed in the basement. Since the building is planned to be demolished, a pre-demolition asbestos survey should be conducted.

The main objective of the Phase I ESA is to determine whether there are any RECs, historical environmental conditions (HRECs), and controlled environmental conditions (CRECs) associated with the project site. RECs are defined in American Society for Testing of Materials (ASTM) Standard Practice E 1527-13 as the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property.

Based on GEI's review of historical information, the lone REC for the site is the site's proximity to an adjacent site that has been entered into the NYSDEC's BCP. It is GEI's recommendation that a subsurface soil and groundwater investigation be conducted to determine if contamination from the adjacent site has impacted the subject property.

# 1. Introduction

## 1.1 Purpose

GEI Consultants, Inc., P. C. (GEI) has prepared this Phase I Environmental Site Assessment (ESA) Report, in general compliance with the scope and limitations of ASTM International (ASTM) Standard Practice E 1527-13. This Phase I ESA involved and was limited to: research into the history of uses of the project site, checks with appropriate government and regulatory agencies, a visual inspection of the project site, and an informal survey of adjacent/contiguous and nearby properties to determine the presence of recognized environmental conditions (RECs), historical environmental conditions (HRECs), and controlled environmental conditions (CRECs). These are defined under ASTM E 1527-13, as follows:

***Recognized Environmental Conditions (RECs)***

"… the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment."

***Historical Recognized Environmental Conditions (HRECs)***

"… a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted uses criteria established by a regulatory authority, without subjecting the property to any required controls (e.g., property use restrictions, activity and use limitations [AULs], institutional controls, or engineering controls)."

***Controlled Recognized Environmental Conditions (CRECs)***

"… a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls).

An evaluation of business environmental risk associated with the parcel(s) of land may necessitate investigation beyond that identified in this Phase I ESA.

This Phase I ESA provides information regarding the potential presence of hazardous substances and/or petroleum products for the parcel of land located at 97 Granite Street, Brooklyn, New York, which will be referred to in this report as the "project site."

GEI was retained by The PAR Group to prepare this Phase I ESA of the project site. The scope of the Phase I ESA is described as follows:

- Conduct a municipal, state, and federal database and regulatory file review of the project site and relevant adjoining properties;
- Assess potential environmental receptors (i.e., groundwater, surface water, and water supplies);
- Describe site topography and hydrogeology;
- Perform site reconnaissance to assess visible signs of potential environmental impairment;
- Summarize the findings relative to the potential presence of hazardous substances or petroleum products at the project site; and
- Recommend additional investigations at the project site, if necessary.

## 1.2 Limitations and Exceptions

This Phase I ESA was prepared in accordance with GEI's proposal dated January 2019. It is noted that the scope of services did not include the assessment of considerations not within the scope of the ASTM Phase I ESA standard (i.e., non-scope considerations). These include Lead in Drinking Water, Wetlands, Regulatory Compliance, Cultural and Historic Risks, Industrial Hygiene, Health and Safety, Ecological Resources, Endangered Species, Indoor Air Quality, Biological Agents, and High Voltage Power Lines.

## 1.3 Environmental Professional Statement

GEI declares that to the best of our knowledge and belief, we meet the definition of Environmental Professional as defined in Section 312.10 of 40 CFR 312, and we have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the project site. Furthermore, GEI has developed and performed all appropriate inquiry (AAI) in conformance with the standards and practices set

forth in 40 CFR Part 312. Copies of the resumes for the personnel who participated in the preparation of this report can be found in **Appendix A**.

## 1.4 Data Gaps

No significant data gaps were identified that would impact our ability to identify RECs.

## 1.5 Site Location and Legal Description

The project site is located on the west side of Granite Street, between Evergreen Avenue and Bushwick Avenue, in Brooklyn, New York (**Figures 1** and **2**). The New York City Tax Map identification numbers associated with the project site are Block 3457, Lot 50. The address associated with the Tax Map numbers is 97 Granite Street.

## 1.6 Previous Environmental Reports

No previous environmental reports for the project site have been supplied to GEI during this Phase I ESA.

### *1.6.1 Property Ownership*

According to Mr. Mehdi Kezadri, the site is currently owned by his father and stated that he has owned the site for approximately 10 years.

### *1.6.2 Adjacent Land Use*

Adjacent land use is an important consideration in the evaluation of property conditions, given that the groundwater and surface water flow create possible pathways for contaminant migration. The area surrounding the project site consists of commercial/industrial properties. Adjacent land use is as follows:

- North – vacant land (99-101 Granite Street is currently owned by The PAR Group and is in the New York State Department of Environmental Conservation [NYSDEC] Brownfield Cleanup Program [BCP]).
- East – vacant land and the tunnel for the New York City Transit [NYCT] L Train.
- South – (across Granite Street) two-story residential buildings.
- West – Two-story residential buildings.

# 2. Physical Setting

## 2.1 Topography and Drainage

The project site is mapped on the United States Geological Survey (USGS) Brooklyn Quadrangle topographic map (**Figure 1**). The general elevation for the area where the project site is located is depicted as approximately 90-100 feet above mean sea level.

From observations made during GEI's site reconnaissance, the topography of the project site is fairly level.

According to Google Earth Pro, the general elevation for the project site at street level is depicted as approximately 103 feet above mean sea level.

## 2.2 Flood Plain Information

The project site lies in Zone X, an area of minimal flooding, on the Federal Emergency Management Act (FEMA) Flood Insurance Rate Map 3604970217F. The project site is not within a flood hazard area.

## 2.3 Site Hydrogeology/Groundwater Flow

There are no surface water bodies located on or adjoining the project site.

According to the USGS Hydrologic Conditions Maps for Long Island, NY, 2013, groundwater is expected to be encountered at an approximate depth of 35-50 feet below land surface. Additionally, regional groundwater flow direction is likely in a west/northwesterly direction towards Newtown Creek.

Site-specific hydrogeology can only be determined through a specific program of drilling to confirm groundwater depth, direction, and composition of the soil/rock matrix. No such drilling program was undertaken as part of this Phase I ESA.

## 2.4 Water Supply

Potable water for the project site is provided by the City of New York. No on-site water supply wells were observed.

# 3. User-Provided Information

"User" is defined in ASTM E1527-13 as "the party seeking to use Practice E1527 to complete an environmental site assessment of the property. A user may include, without limitation, a potential purchaser of the property, a potential tenant of the property, an owner of the property, a lender, or property manager." ASTM E1527-13 further describes that according to the "All Appropriate Inquiries" Final Rule (40 CFR Part 312) that tasks be performed "by or on behalf of a party seeking to qualify for Limited Liability Protection (LLP) to Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) liability." Additionally, the environmental professional conducting the Phase I ESA shall request that the user provide results to tasks detailed in ASTM E1527-13 Section 6, "as such information can assist the environmental professional in identifying recognized environmental conditions" associated with the project site.

Based upon the above, a User Questionnaire was completed by Mr. Dan Rosenfeld, a member of the ownership entity, for characterizing relative environmental risks for commercial purposes, as part of a client's regulatory requirement for conducting AAI to support any one of the three legal defenses against CERCLA liability, or other stated purposes. The User Questionnaire is included in **Appendix B**. The following pertinent information is documented within this Questionnaire.

- Mr. Rosenfeld stated that the purpose of this Phase I ESA is for the purchase of the property, and to the best of his knowledge, he is not aware of any environmental issues that would result in a property value reduction.
- Mr. Rosenfeld stated that he is unaware of any environmental cleanup liens against the project site that is filed or recorded under federal, tribal, state, or local law. In addition, Mr. Rosenfeld stated that he is unaware of any AULs, such as engineering controls, land use restrictions, or institutional controls that are in place at the project site and/or have been filed or recorded in a registry under federal, tribal, state, or local law.
- Mr. Rosenfeld stated that he does not have any specialized knowledge or experience regarding any chemicals and/or processes used by current occupants of the project site or adjoining properties. Additionally, Mr. Rosenfeld stated that, based on his knowledge and experience related to the project site, there are no obvious indicators that point to the presence or likely presence of contamination at the project site.

# 4. Site History

Primary sources for the history of New York City (NYC) sites include historical fire insurance/real estate maps, topographic maps, historical aerial and street photos, as well as the available records of the New York City Department of Buildings (NYCDOB) concerning permits for new buildings, certificates of occupancy, alterations, demolitions, and other changes at the project site and address directories.

## 4.1 Historical Maps

Historical Sanborn fire insurance maps were reviewed (**Appendix C**). These maps are another source for the history of structures on the project site and may indicate property use and the presence of buried gasoline tanks.

| Year of Historical Sanborn Maps | Property Use |
|---|---|
| 1907 | **Site:** The project site is shown to vacant land with the Manhattan Branch of the Long Island RR to the north/northeast and aboveground.<br>**Surrounding Properties:** The adjacent and nearby properties are depicted as being developed with two- and three-story residential dwellings. |
| 1932 | **Site:** This map shows the building at the project site as it appears today, as a two-story residential building with six units. The railroad is now shown to be in a tunnel.<br>**Surrounding Properties:** The adjacent and nearby properties are depicted as being developed with two- and three-story residential dwellings. |
| 1951 | **Site:** No significant changes to the project site are noted from the previous 1932 map.<br>**Surrounding Properties:** No significant changes are noted from the previous 1932 map. However, redevelopment of properties that were depicted to the north indicate a manufacturer of steel products. |
| 1962, 1965, 1976, 1978, 1979, 1980, 1982, 1987, 1988, 1991, 1992, 1993, 1995 | **Site:** No significant changes to the project site are noted from the previous 1951 map.<br>**Surrounding Properties:** No significant changes are noted from the previous 1951 map. |

## 4.2 Street View Photographs

Based upon a review of historical street view photographs dated 2013 and 2014 obtained from Google Maps, the building appears as it does today.

## 4.3 Building Department Information

GEI reviewed readily available information relating to the Block and Lot numbers associated with the project site supplied by the NYCDOB, Building Information Search website and is described in the table below:

| Block and Lot | Associated Address/Building Number | Building Department Information |
|---|---|---|
| Block 3457, Lot 50 | 97 Granite Street Building Number 3080352 | No Certificate of Occupancy (CO) is recorded against this property. Historically, alteration permits have been issued as far back as 1934 for this property. There were no permits or information within the historical NYCDOB records that would be considered a REC to the project site. |

Additionally, the website information includes a notation that the project site is not part of an E-Designated area of New York City, designated for environmental restrictions requiring special activities coordinated through the NYC Office of Environmental Remediation.

## 4.4 Interview

During the Phase I ESA, Mr. Mehdi Kezadri, the site contact and owner's representative, stated that no renovations of the building have taken place since his father owned the building. The building, since his father's ownership has been heated by oil.

## 4.5 Summary of Site History

GEI's analysis of historical information indicates that the building on the project site was constructed sometime prior to 1932. Based upon the information obtained, the building has always been utilized as a residential building. Based upon the information obtained, there have been no uses identified within the building that would be considered a REC to the project site.

## 4.6 Summary of Historical Use for Adjoining Properties

Review of historical Sanborn maps and visual observations made during GEI's informal neighborhood reconnaissance indicated adjacent and neighboring properties have historically been primarily developed and occupied by residential properties.

# 5. Environmental Records Review

GEI obtained and evaluated the readily available and most recent environmental regulatory agency database records provided by Toxics Targeting, Inc. of Ithaca, New York (**Appendix D**). This report was designed to assist parties seeking to meet the search requirements of the ASTM Standard Practice for Environmental Site Assessments (E 1527-13).

GEI's review of available and most recent federal and state agency database records for the project site, adjacent/contiguous properties, and surrounding neighborhood was completed according to the requirements set forth in ASTM E 1527-13, Section 8. The search distances reviewed for this assessment generally meet or exceed the minimum search distances according to the requirements set forth in ASTM E 1527-13, Section 8.2.1. Any deviations from the minimum search distances are addressed in the individual database discussions presented below.

**Federal Regulatory Database Search**

*Superfund Sites*

The United States Environmental Protection Agency (USEPA) National Priorities List (NPL) identifies confirmed hazardous waste sites that are ranked for clean-up under the Federal Superfund program. This program was authorized by the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 ("CERCLA" or "Superfund"), as amended by the Superfund Amendments and Reauthorization Act of 1986 ("SARA") and Small Business Liability Relief and Brownfields Revitalization Act of 2002 ("Brownfields Amendments").

The project site is not identified within this database. One USEPA NPL site was identified within an approximate 1-mile radius of the project site. However, this site is located over an approximate 1/2-mile radius from the project site and the report within the database states "The results of the surveys and soil analysis suggest that there is no off−site exposure to the surrounding community from radiological contaminants located on-site." Therefore, based upon the distance from the project site, this USEPA NPL site is considered unlikely to have the potential to significantly impact the environmental integrity of the project site.

*CERCLIS Sites*

The USEPA CERCLA Information System (CERCLIS), which is a comprehensive database and management system that inventories, and tracks sites addressed or needing to be addressed by the Superfund program. Sites that USEPA decides do not warrant further

evaluation are given a "No Further Remedial Action Planned (NFRAP)" designation by USEPA, which means that no further action under CERCLA is presently anticipated for that site. A "NFRAP" designation does not necessarily indicate that there is no hazard associated with the site only that, based on available information, USEPA does not plan further investigation at this time.

The project site is not listed within this database. No CERLIS sites were identified within an approximate 1-mile radius of the project site.

*RCRA Corrective Action Activity*

The Resource Conservation and Recovery Act (RCRA) Corrective Action Sites (CORRACTS) database lists hazardous waste facilities with RCRA corrective action activity reported by the USEPA.

The project site is not identified within this database. No CORRACT sites were identified within an approximate 1-mile radius of the project site.

*RCRA Treatment/Storage/Disposal Facilities*

The RCRA Treatment/Storage/Disposal Facilities (TSDF) database includes facilities that treat, store, and/or dispose of hazardous wastes, or have engaged in these activities in the past. TSDF operators, as with hazardous waste transporters and generators, are regulated under the RCRA.

The project site is not identified within this database. No RCRA TSDF sites were identified within an approximate 1-mile radius of the project site.

*RCRA Hazardous Waste Generators*

RCRA Hazardous Waste Generators are regulated by the federal government under the RCRA. RCRA facilities are permitted by the USEPA, RCRA Division, to generate hazardous waste as part of business operations and dispose of the waste legally. These facilities generally abide by USEPA regulations for storage, handling, and disposal of hazardous materials. RCRA Hazardous Waste Generator sites are not permitted to store any hazardous wastes at any time for more than 90 days, reducing the potential risk of a spill. A review of the Hazardous Waste Generator database is useful to assess the kinds of hazardous materials/wastes that are handled, stored, and/or transported in the vicinity of the project site, as well as on the project site. With the exception of those identified on or adjacent/ contiguous to the project site, the presence of hazardous waste generators or transporters in the immediate vicinity does not necessarily imply risk of contamination to the project site.

The project site is not listed within this database. However, a Consolidated Edison (Con Ed) Service Box (#16749) located on a property to over 600 feet to the west, at 700 Chauncey Street, appears in the database under USEPA Facility ID NYP004739520. According to information in the database, 2,500 gallons of ignitable waste was generated at this location in 1990. No additional hazardous waste activity is listed at this location. It is likely that this was the result of a one-time generation of hazardous waste as part of maintenance or repair operations and is not an on-going operation that generates hazardous waste. Therefore, it is considered unlikely that the Con Ed Service Box would have impacted the project site.

*Federal Institutional and Engineering Control Registries*

These registries consist of sites with institutional controls (administrative measures such as land use restrictions, deed restrictions and post remediation requirements intended to prevent exposure to contaminants remaining on-site), and engineering controls (physical methods to create pathway elimination for substances to enter environmental media or effect human health).

The project site was not identified within these databases.

*Emergency Response Notification System*

USEPA's Emergency Response Notification System (ERNS) database contains information from Federal agencies on CERCLA hazardous substance releases or spills in quantities greater than the reportable quantity.

The project site is not identified within this database.

*Civil and Administrative Enforcement Docket*

USEPA's Civil and Administrative Enforcement Docket is a database that tracks civil judiciary cases filed on behalf of USEPA by the U.S. Department of Justice.

The project site is not identified within this database. No sites within a 1/2-mile radius are listed on this database.

**New York State Regulatory Database Search**

*Inactive Hazardous Waste Disposal Sites*

NYSDEC's Inactive Hazardous Waste Disposal (IHWD) Site Registry contains information concerning potentially hazardous waste sites in New York State. The list of NYSDEC IHWD Sites contains summary information pertaining to those facilities that are deemed hazardous and requiring response actions regulated by the NYSDEC under the State's Superfund Program.

The project site is not identified within the database. Three IHWD sites are listed within an approximate 1-mile radius of the project site. All of these IHWD sites are located over an approximate 1/2-mile radius from the project site. Therefore, based upon the distance from the project site, their hydraulic groundwater relationship to the site, and/or status/ characteristics of these IHWD sites, none are considered likely to have the potential to significantly impact the environmental integrity of the project site.

*Hazardous Substance Waste Disposal Sites*

NYSDEC maintains a database of waste disposal sites that may pose threats to public health or the environment but cannot be remediated using monies from the Hazardous Waste Remediation Fund.

The project site is not listed on this database. No NYSDEC Hazardous Substance Waste Disposal sites are listed within an approximate 1/2-mile radius of the project site.

*Brownfields Sites*

The New York State Brownfields database is a listing of sites that are abandoned, idled or under-used industrial and commercial sites in New York State, where expansion or redevelopment is complicated by real or perceived environmental contamination.

The project site is not listed on this database. One Brownfield site is adjacent to the subject property, 99-101 Granite Street, is listed on this database. Given the proximity to this site, it is anticipated that similar contaminants can be found in the soils at the subject property.

*Solid Waste Facilities*

A review of the NYSDEC database of solid waste facilities (including, but not limited to, landfills, incinerators, transfer stations, recycling centers) determined that the project site was not identified within this database.

There is one solid waste facility site listed within an approximate 1/4-mile radius of the project site. This site is located over 1/4-mile from the project site and at this distance, they are considered unlikely to have the potential to significantly impact the environmental integrity of the project site.

*NYSDEC Spill Log Database*

The NYSDEC maintains a database of spills of hazardous materials, including petroleum products, reported to the agency according to its regulatory requirements. Parties found responsible for these spills are required to respond by notifying the NYSDEC's Spill Hotline, obtain a Spill Number, and eliminate the source of the spill and perform the necessary

cleanup of contamination in surface and subsurface soils and groundwater. The responsible party is required to report its response actions to an assigned NYSDEC case manager and meet the applicable NYSDEC cleanup criteria for the media impacted by the spill before the NYSDEC will render a determination of "no further action" and at such time, the NYSDEC will "close" the spill number. Spill numbers listed as "active" indicate that the spill incident is either still undergoing remediation or awaiting completion of paperwork for closure. The NYSDEC Spills database records spills of unknown substances, regulated chemicals, petroleum spills, and spills due to tank failures and tank tightness test failures.

The project site is not listed in this database.

There are 112 NYSDEC spill incidents identified within an approximate 1/2-mile radius of the project site, of which 107 have been closed. The remaining spill incidents are listed as "active" within the NYSDEC Spills database (**Appendix D**). Based upon a review of this spill, due to such factors as the intervening development (e.g., roadways, gas and electrical conduits, underground sewer systems, basements of adjoining and nearby buildings, etc.) between the project site and this "active" spill incident, groundwater flow direction, the spill status, the distance between the spill source and the project site, the quantities of material spilled, and the resources affected, this "active" spill incident is deemed unlikely to have impacted the environmental integrity of the project site.

*NYSDEC Petroleum Bulk Storage Database*

NYSDEC maintains registration records for facilities that have petroleum storage capacities more than 1,100 gallons and less than 400,000 gallons. These facilities are documented within the NYSDEC Petroleum Bulk Storage (PBS) and Fire Department of the City of New York (FDNY) databases.

The project site and adjoining properties are not listed in this database.

*Major Oil Storage Facilities*

A check was made of the NYSDEC Major Oil Storage Facilities (MOSF) database, which lists all facilities (onshore facilities or vessels) with petroleum storage capacities of 400,000 gallons or greater.

The project site was not identified within this database. No NYSDEC MOSF sites were identified within an approximate 1/8-mile radius of the project site.

*Chemical Bulk Storage Facilities*

A check was made of the NYSDEC Chemical Bulk Storage (CBS) database. CBS facilities store regulated hazardous substances in aboveground tanks with capacities of 185 gallons or greater, and/or in underground tanks of any size.

The project site and adjoining properties were not listed in this database. No CBS sites are located within a 1/8-mile radius.

## 5.1 New York City Regulatory Database Records

### *5.1.1 New York City Historic Utility Facilities*

A check was made of the New York City Historic Utility Facilities database which is an inventory of selected power generation stations, manufactured gas plants, gas storage facilities, maintenance yards, and other gas and electric utility sites identified within various historic documents, maps, and annual reports of New York utility companies. A majority of these sites operated between the 1890s and 1940s.

The project site and adjoining properties were not identified within this database. No Historic Utility Facilities are located within a 1/8-mile radius.

### *5.1.2 New York City "E" Designated Sites*

A check was made of the New York City Environmental Quality Review (CEQR) - E Designation Site database, which lists parcels assigned a special environmental ("E") designation under the CEQR process. An "E" designation requires specific protocols that must be followed during redevelopment.

The project site is not depicted as an "E" designated property.

# 6. Interviews

## 6.1 Interviews

See Section 4.4 for information regarding information provided by Mr. Mehdi Kezadri, the owners representative and site contact.

# 7. Site Reconnaissance

The objective of the site reconnaissance is to evaluate the project site to assess the presence or potential presence of a release of hazardous substances or petroleum products to identify RECs. The project site was inspected on November 19, 2018 by GEI environmental professional, Mr. Edward Bradshaw. Weather conditions at the time of the site reconnaissance were sunny, with an ambient temperature of 30° Fahrenheit. Photographs documenting the project site are provided in **Appendix E**. GEI's access to the project site was provided by Mr. Mehdi Kezadri, the owners representative.

## 7.1 Building Description and Observations

### *7.1.1 Building Description*

The project site is currently occupied by a two-story (with basement) single-family building with a detached two car garage behind the building. The project site is zoned residential (R6) with no commercial overlay. The New York City Department of Finance Building Classification is A5-1, Family Dwelling. The total lot area of the project site is approximately 2,500 square feet and is rectangular in shape. At the time of GEI's site inspection, the building was vacant. The basement area was finished and contains residential space. In addition to the residential space, the basement contained a small storage room with a 250-gallon aboveground oil tank, the electric and gas meters, and a room containing an oil-fired boiler and natural gas-fired hot water tank.

### *7.1.2 Building Heating and Cooling*

Heat provided by individual natural oil-fired boiler and window unit air conditioners.

### *7.1.3 Observed Interior Stains or Corrosion*

At the time of the site reconnaissance, no staining or corrosion was noted.

### *7.1.4 Observed Interior Drains, Sumps, or Pools of Liquid*

Interior drainage systems (bathroom, sinks, etc.) were observed. No sumps or interior drains were observed in the basement. The building is connected to the municipal sewer system.

### *7.1.5 Waste Water*

Other than sanitary waste water, there were no other types of operations observed that would generate waste water. Sanitary waste water is discharged to the municipal sewer system.

### *7.1.6 Waste Generation, Storage and Disposal*

Other than residential wastes that are collected weekly by the City of New York Department of Sanitation, no other wastes are being generated at the project site.

## 7.2 Property Exterior Description and Observation

### *7.2.1 Property Description*

The lot area of the project site is 2,500 square feet and is primarily rectangular. A portion of the project site not occupied by the building consists of a concrete covered rear yard.

Based on observations made during the site reconnaissance, no changes to the structure or building use has occurred at the project site since the most recent historical Sanborn map dated 1995, as listed in Section 4.1.

### *7.2.2 Pits, Ponds, and Lagoons*

No pits, ponds, or lagoons are present on the project site or were observed during the site reconnaissance.

### *7.2.3 Odors and Stressed Vegetation*

No unusual odors were detected during the site reconnaissance. No areas of stressed vegetation exist on the project site.

### *7.2.4 Stained Soil or Pavement*

No significant areas of staining or impacted/deteriorated surfaces were observed.

### *7.2.5 Monitoring Wells*

No monitoring wells were observed.

### *7.2.6 Exterior Drains*

No exterior drains were observed.

### *7.2.7 Septic Systems*

There are no known septic systems associated with the project site.

## 7.3 Chemical Substance Use/Storage

No chemicals were observed stored on the project site.

## 7.4 On-Site Storage Tanks

### *7.4.1 Underground Storage Tanks*

No underground storage tanks were observed on the project site.

### *7.4.2 Aboveground Storage Tanks*

A single 250-gallon aboveground storage tank was observed in the basement of the project site.

## 7.5 Polychlorinated Biphenyl-Containing (PCB) Equipment

No polychlorinated biphenyl (PCB)-containing fluid-filled electrical equipment was observed on the project site.

## 7.6 Non-Scope Considerations

### *7.6.1 Suspected Asbestos-Containing Insulation Materials*

As part of this Phase I ESA, GEI performed a limited visual survey within accessible areas of the project site to identify the presence of suspected asbestos-containing insulation materials. Accessible areas included those areas of the subject building made available by the site contact on the date of GEI's site visit (i.e., unlocked areas which are deemed safe and which building occupants have access to).

This limited visual survey was conducted for overview purposes only. It is not to be used as a complete asbestos inspection. No sampling or laboratory analysis of suspected asbestos-containing materials (SACM) identified within the subject building for confirmation of the presence of asbestos, or destructive activities into inaccessible areas (e.g., behind plaster or sheetrock walls, ceilings, pipe chases, etc.) were performed during this Phase I ESA.

Based upon our observations, suspect asbestos-containing insulation materials were observed in the basement of the building.

### *7.6.2 Lead-Based Paint*

Consumer sale of lead-based paint (containing over .06 percent metallic lead) was banned by the United States Consumer Products Safety Commission in 1977. Given that the subject building has not been renovated, it is likely that the painted surfaces would contain lead.

### *7.6.3 Mold*

No visual evidence of extreme, large and/or significant areas of mold spore growth was noted at the time of GEI's site visit.

### *7.6.4 Radon*

Radon, a naturally occurring radioactive gas, is the product of the decay of radium. It is found most frequently in relatively high concentrations in rock formations containing uranium, granite, shale, phosphate, and pitchblende. Radon may also be found in soils contaminated with industrial waste from uranium and phosphate mining. Radon as a gas can move through the soil and water, and into the atmosphere, and is a potential health concern if confined in sufficiently high concentrations in indoor environments. The USEPA has set an "action level" of 4.0 picocuries per liter for continuous long-term exposure to radon gas. If radon gas is measured above this level, USEPA suggests follow-up testing and remediation measures.

According to data compiled by the Bureau of Radiation Protection, New York State Department of Health, New York City (Kings County) has one of the lowest average levels of basement radon measurements in New York State. The latest statistics indicate an average of 0.9 -1.7 picocuries/liter for New York City, compared to a statewide average of 5.6. Based on these low average levels for New York City, it is unlikely that radon gas levels at the project site exceed the USEPA action level of 4.0 picocuries per liter, and therefore radon testing is not recommended.

# 8. Vapor Intrusion Screening

GEI has performed a Tier 1 Vapor Encroachment Screening for the property.

Toxic, volatile substances that are spilled on the ground or released into the subsurface may migrate in the subsurface environment and eventually enter buildings as a gas or vapor by seeping through cracks in basements, foundations, sewer lines and other openings. Vapor flow toward and into a building can be influenced by several factors, including atmospheric pressure changes and building depressurization due to operation of exhaust fans or heating units within the building. The flow rate of vapors into a building often is difficult to predict but generally will depend on factors such as subsurface conditions (e.g., soil properties and contaminant characteristics), building design and condition (e.g., cracks and conduits), and differentials in air pressure across the building foundation. Upon entry into a structure, vapors normally mix with the existing air through the natural or mechanical ventilation of the building. Concentrations of indoor vapors may accumulate to a point where the health of occupants (e.g., residents, workers) in those buildings could be at risk.

Vapor intrusion (also referred to as VI) is the general term given to migration of vapors from a contaminant source in the subsurface into indoor air. Vapor intrusion can occur in a wide variety of building configurations (e.g., buildings with basement, crawlspace, or slab-on-grade foundations). Volatile organic compounds (VOCs) are the category of chemicals of greatest potential concern for this pathway, which among other things includes constituents of gasoline (e.g., benzene) and other petroleum fuels, as well as dry cleaning fluids (e.g., tetrachloroethylene [PCE]) and industrial degreasers and solvents (e.g., trichloroethylene [TCE]). Other vapor-forming chemicals of potential interest include certain semi-volatile organic compounds (SVOCs), certain pesticides, and mercury.

GEI utilized the information collected in this Phase I ESA (e.g., standard environmental records, historical sources, general physical setting information, etc.) to assist in determining if there are known or suspect sources of contamination at the project site (on-site), as well as within the area of concern (AOC). As per Section 8.3.2, of the ASTM E 2600-10 Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions, the AOC is the approximate minimum search distance between the boundary of the project site and the suspect source of contamination. Therefore, for VOCs chemicals of concern (COCs), it is 1/3-mile and for petroleum hydrocarbon COCs it is 1/10-mile.

<u>On-site Vapor Encroachment Condition (VEC)</u>

Based on our evaluation of current and past property uses, as well as our review of available property records during this Phase I ESA, we concluded that a vapor intrusion concern

(VIC), defined as the presence or likely presence of contaminated vapors in the subsurface caused by the release of vapors from contaminated soil and groundwater at or near the property, is unlikely to exist.

Off-site Vapor Encroachment Condition

The regulatory agency database indicated suspect sources for petroleum contamination within 1/10-mile of the property and suspect sources for non-petroleum contamination/VOCs within 1/3-mile of the property. GEI has concluded that a vapor intrusion condition is unlikely to exist.

It should be noted that the vapor migration/intrusion pathway is very complex and can vary considerably within a site. It should be noted that this "screening" is not an absolute and definitive methodology for confirming vapor migration/intrusion impacts. Site-specific impacts from vapor migration/intrusion can only be determined through a specific testing program. No such testing program was undertaken as part of this Phase I ESA.

# 9. Findings & Opinions

GEI has prepared this Phase I ESA at the request of Empire National Bank. This assessment was performed in conformance with the scope and limitations of ASTM Standard Practice E 1527-13.

## 9.1 Recognized Environmental Conditions

The objective of this assessment was to evaluate the property for evidence of *recognized environmental conditions* (RECs). A REC is defined in ASTM E1527-13 as "the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property."

- The project site is not listed on any federal or state regulatory agency databases. However, an adjacent property, 99-101 Granite Street was found to be on the NYSDEC BCP database. Given this site's proximity, as well as similar development dates of the adjacent property, there is a possibility that the soils underneath the subject property will exhibit similar contaminants. This information is considered a REC.

## 9.2 Historical Recognized Environmental Conditions

A *historical recognized environmental condition* (HREC) is defined as "a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls)."

- GEI did not identify HRECs in connection with the project site.

## 9.3 Controlled Recognized Environmental Conditions

*Controlled Recognized Environmental Conditions* (CRECs) are those RECs that have been addressed to the satisfaction of the regulatory agency but require the ongoing use of engineering or institutional controls in order to remain in compliance.

- GEI did not identify CRECs in connection with the project site.

## 9.4 Non-ASTM Environmental Concerns

During GEI's site inspection, potential asbestos-containing thermal insulation was observed in the basement. Since the building is planned to be demolished, a pre-demolition asbestos survey should be conducted.

# 10. Conclusions and Recommendations

We have performed a *Phase I Environmental Site Assessment* in general conformance with the scope and limitations of ASTM Practice E 1527-13 of the project site located at 110 Cooper Street, Brooklyn, New York (the "project site"). Exceptions to, or deletions from, this practice (if any) are described in Sections 1.1 and 1.2 of this report.

The project site is not listed on any federal or state regulatory agency databases. However, an adjacent property, 99-101 Granite Street was found to be on the NYSDEC BCP database. Given this site's proximity, as well as similar development dates of the adjacent property, there is a possibility that the soils underneath the subject property will exhibit similar contaminants. This information is considered a REC.

During GEI's site inspection, potential asbestos-containing thermal insulation was observed in the basement. Since the building is planned to be demolished, a pre-demolition asbestos survey should be conducted.

Based on GEI's review of historical information, the lone REC for the site is the site's proximity to an adjacent site that has been entered into the NYSDEC's BCP. It is GEI's recommendation that a subsurface soil and groundwater investigation be conducted to determine if contamination from the adjacent site has impacted the subject property.

# 11. Limitations and Deviations

This Phase I ESA was conducted and prepared on behalf of The PAR Group. No other entity may rely upon the results of the Phase I ESA or contents of this report for any reasons or purpose.

The purpose of this Phase I ESA is to evaluate whether hazardous substances or petroleum products may be present at the site. The opinion(s) provided is based on the information described in this report. Because no soil or groundwater samples were collected or chemically analyzed as part of this evaluation, no specific opinions are made based on soil or groundwater quality. Future investigations or information that was not available to GEI may result in modification of the findings of this report.

In preparing this report, GEI relied on file information provided by State and local officials, and information and representations made available to GEI at the time of the report. If this information is incomplete or inaccurate, GEI is not responsible.

GEI performed this Phase I ESA in accordance with generally accepted practices of engineers and/or scientists providing similar services at the same time, in the same locale, and under like circumstances. No other warranty, expressed or implied, is made as to the professional opinions included by GEI in this report.

Per Section 4.6 of ASTM E1527-13, "an environmental site assessment meeting or exceeding this practice and completed less than 180 days prior to date of acquisition of the property or (for transactions not involving an acquisition) the date of the intended transaction is presumed to be valid."

The scope of services for this project did not include the following list of "additional issues" that are non-scope considerations that are outside the scope of the ASTM Phase I practice: Lead in Drinking Water, Wetlands, Regulatory Compliance, Cultural and Historic Risks, Industrial Hygiene, Health and Safety, Ecological Resources, Endangered Species, Indoor Air Quality, and High Voltage Power Lines.

ASTM E1527-13 states that the User of an environmental site assessment may include, without limitation, a potential purchaser of the subject property, a potential tenant of the subject property, an owner of the subject property, a lender, or the manager of the subject property. Per Section 6 of the ASTM E 1527-13 Standard, User Responsibilities, the User of this assessment has specific obligations for performing tasks during this assessment that will help identify the possibility of recognized environmental conditions in connection with the property. Failure by the User to fully comply with the requirements may impact their ability to use this report to help qualify for Landowner Liability Protections (LLPs) under CERCLA.

GEI makes no representations or warranties regarding a User's qualification for protection under any Federal, State, or local laws, rules or regulations.

No significant deviations from ASTM 1527-13 occurred during the preparation of this Phase I ESA and no additional services were provided as part of this Phase I ESA.

# 12. References

The following documents, publications, maps, etc. were used as source materials for this Phase I Environmental Site Assessment:

American Society for Testing and Materials (ASTM) 2013, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process," ASTM Designation E 1527-13

ASTM E 2600-10, "Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions"

Federal Emergency Management Agency (http://msc.fema.gov/portal)

Google Maps (www.google/maps)

New York City Department of Buildings (http://a810-bisweb.nyc.gov/bisweb/bispi00.jsp)

New York State Department of Health (https://www.health.ny.gov/environmental/radiological/radon/county.htm)

New York State Department of Environmental Conservation (NYSDEC), Petroleum Bulk Storage (http://www.dec.ny.gov/docs/remediation_hudson_pdf/pbsrecordkeeping4.pdf)

New York City Department of Finance (http://www1.nyc.gov/site/finance/taxes/acris.page)

OasisNYC.net, Oasis Map (http://oasisnyc.com).

# Figures

# Appendix A

## Resumes

# Appendix B

## User Questionnaire

# Appendix C

## Historical Sanborn Maps

# Appendix D

## Regulatory Agency Database Report

# Appendix E

## Site Photographs

GEI Consultants

Consulting
Engineers and
Scientists

April 12, 2019

VIA EMAIL: dlevine@pargroup.com

Mr. Dan Levine
The PAR GROUP
60 North Prospect Avenue
Lynbrook, New York 11563

**Re: Phase II Environmental Subsurface Investigation**
**97 Granite Street**
**Brooklyn, New York**

Dear Mr. Dan Levine:

This letter documents the scope, and presents the findings and conclusions of GEI Consultants, Inc., P. C.'s (GEI) Phase II Environmental Subsurface Investigation (ESI) for the above-referenced project site. The scope of work was conducted consistent with our proposal dated February 15, 2019.

## Background

This report presents the scope of work, findings, conclusions and recommendations for the Phase II Environmental Subsurface Investigation (ESI) conducted by GEI Consultants, Inc., P. C. (GEI) in accordance with ASTM E 1903-11 for the project site located at 97 Granite Street, Brooklyn, New York, 11207 (site).

The project site is currently occupied by a two-story (with basement) single-family building with a detached two car garage behind the building. The project site is zoned residential (R6) with no commercial overlay. The New York City Department of Finance Building Classification is A5-1, Family Dwelling. The total lot area of the project site is approximately 2,500 square feet and is rectangular in shape. At the time of GEI's site inspection, the building was vacant. The basement area was finished and contains residential space. In addition to the residential space, the basement contained a small storage room with a 250-gallon aboveground oil tank, the electric and gas meters, and a room containing an oil-fired boiler and natural gas-fired hot water tank.

GEI's analysis of historical information indicates that the current building and garage on the project site was constructed prior to 1932. Based upon the information obtained, the building has been utilized as a residential building since its construction. Based upon the information obtained by GEI, there have been no uses identified within the building that would be considered a recognized environmental condition (REC) to the project site.

Review of historical Sanborn maps and visual observations made during GEI's informal neighborhood reconnaissance indicated adjacent and neighboring properties have historically been developed and occupied by residential properties.



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The project site is connected to the City of New York municipal water supply system, as well as the municipal sewer system.

The project site is not listed on any federal or state regulatory agency databases. However, an adjacent property, 99-101 Granite Street was found to be on the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) database. Given this sites proximity, as well as similar development dates of the adjacent property, there is a possibility that the soils underneath the subject property will exhibit similar contaminants. This information is considered a REC.

During GEI's site inspection, potential asbestos-containing thermal insulation was observed in the basement. Since the building is planned to be demolished, a pre-demolition asbestos survey should be conducted.

Based on GEI's review of historical information, the lone REC for the site is the site's proximity to an adjacent site that has been entered into the NYSDEC's BCP. It is GEI's recommendation that a subsurface soil and groundwater investigation be conducted to determine if contamination from the adjacent site has impacted the subject property.

## Scope of Work

The task conducted for this Phase II ESI consisted of the collection of subsurface soil.

### *Task 1 – Subsurface Sampling*

The Phase II ESI sampling program involved the advancement of two soil borings using the Geoprobe® direct push method of sampling. The investigation was conducted over the course of one day and included the sampling of subsurface soils from three locations. Prior to advancing the probe-holes, the drilling company notified New York's one-call system, New York 811 to provide markouts for subsurface utility lines. The utilities were marked out in the public right-of-ways adjacent to the project site.

A total of two (2) soil test borings were conducted on the subject property and two (2) soil samples were collected. One (1) soil sample was collected from each boring location, at a depth of 0 to 4 feet, 4 to 8 feet. The 0 to 4 and 4 to 8 feet samples were evaluated in the field and one composite sample from the two zones were sent for lab analysis. `

All soil samples were inspected for impacts (e.g., staining and odor) and screened for volatile soil vapors using a photoionization detector (PID). One shallow composite soil sample, based on the field sample characterization and vapor screening findings and the deepest soil from each area of environmental concern if no impacts were identified, was selected for laboratory analysis.

The soil samples were analyzed for target analyte list (TAL) metals, volatile organic compounds (VOCs) by USEPA 8260, pesticides by USEPA 8081, polychlorinated biphenyls (PCBs) by USEPA 8080, and semi-volatile organic compounds (SVOCs) by USEPA 6010S and 6020S and by USEPA Method 8270C, respectively. The analyses were performed by a New York State Department of Health ELAP-approved laboratory.

## Findings

The findings for each area of environmental concern are presented below. The soil encountered in these borings were comprised of silty sand and had characteristics of historic urban fill.

The laboratory analytical results are summarized in the following attached tables:

**Table 1: Soil Analytical Results**

***97SB-1***

The soil encountered in SB-1 comprised of silty sand and contained fragmented brick and concrete. No sensory impacts or PID readings were noted.

The soil from the 0 to 4-foot and 4 to 8-foot depth at 97SB-1 was collected for laboratory analyses. The analytical results from the 0-8-foot interval did not identify any VOCs, SVOCs, pesticides or PCBs in the soil at 97SB-1. The analytical results from the 0-8-foot interval identified concentrations of four metals above the NYSDEC unrestricted SCOs. Mercury at 0.255 mg/Kg, Copper at 77.1 mg/K, zinc at 394 mg/KGg and Lead at 119 mg/Kg.

***97SB-2***

The soil encountered in 97SB-2 comprised of silty sand and contained fragmented brick and concrete. No sensory impacts or PID readings were noted.

The soil from the 0 to 8-foot depth at SB-2 was collected for laboratory analyses. The analytical results from this intervals identified five metals with a concentration exceeding the 6 NYCRR Part 375 unrestricted SCOs. Arsenic was detected with a concentration of 24.6 mg/Kg, copper at 166 mg/Kg, lead at 481 mg/Kg, nickel at 42 mg/Kg and zinc at 599 mg/Kg. Additionally, two metals, arsenic and lead, were identified exceeding the NYSDEC in accordance with 6 NYCRR Part 375 SCOs for the Protection of Groundwater.

## Summary of Findings and Conclusions

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

- The soil at 97SB-1 contains concentrations of metals that exceeds the NYSDEC in accordance with 6 NYCRR Part 375 SCOs for restricted and unrestricted residential use.

The soil at 97SB-2 contains concentrations of metals that exceeds the NYSDEC in accordance with 6 NYCRR Part 375 SCOs for unrestricted residential use. Two metals, arsenic and lead also exceed the 6 NYCRR Part 375 SCOs for the Protection of Groundwater.

The exceedances of NYSDEC SCOs, and their similarity to the contaminants found on the adjacent BCP site, indicate the site may be a candidate for entrance into the NYSDEC BCP. This site, 97 Granite Street, can/should be added to the existing NYSDEC BCP Site 99 Granite Street (BCP Site No.: C22469) as an amendment to the BCP agreement.

If you have any questions on this investigation, please do not hesitate to contact us.

Sincerely,

GEI CONSULTANTS, INC., P. C.

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# Tables

# TABLE 1
## Soil Analytical Data

| Sample ID<br>York ID<br>Sampling Date<br>Client Matrix | | NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives | NYSDEC Part 375 Restricted Use Soil Cleanup Objectives-Protection of GW | 97SB1<br>19C1024-01<br>3/22/2019 4:40:00 PM<br>Soil | |
|---|---|---|---|---|---|
| **Compound** | **CAS Number** | | | Result | Q |
| **Volatile Organics, 8260 - Comprehensive** | | mg/Kg | mg/Kg | mg/Kg | |
| **Dilution Factor** | | | | 1 | |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | ~ | ~ | 0.00440 | U |
| 1,1,1-Trichloroethane | 71-55-6 | 0.68 | 0.68 | 0.00440 | U |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | ~ | ~ | 0.00440 | U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 76-13-1 | ~ | ~ | 0.00440 | U |
| 1,1,2-Trichloroethane | 79-00-5 | ~ | ~ | 0.00440 | U |
| 1,1-Dichloroethane | 75-34-3 | 0.27 | 0.27 | 0.00440 | U |
| 1,1-Dichloroethylene | 75-35-4 | 0.33 | 0.33 | 0.00440 | U |
| 1,2,3-Trichlorobenzene | 87-61-6 | ~ | ~ | 0.00440 | U |
| 1,2,3-Trichloropropane | 96-18-4 | ~ | ~ | 0.00440 | U |
| 1,2,4-Trichlorobenzene | 120-82-1 | ~ | ~ | 0.00440 | U |
| 1,2,4-Trimethylbenzene | 95-63-6 | 3.6 | 3.6 | 0.00440 | U |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | ~ | ~ | 0.00440 | U |
| 1,2-Dibromoethane | 106-93-4 | ~ | ~ | 0.00440 | U |
| 1,2-Dichlorobenzene | 95-50-1 | 1.1 | 1.1 | 0.00440 | U |
| 1,2-Dichloroethane | 107-06-2 | 0.02 | 0.02 | 0.00440 | U |
| 1,2-Dichloropropane | 78-87-5 | ~ | ~ | 0.00440 | U |
| 1,3,5-Trimethylbenzene | 108-67-8 | 8.4 | 8.4 | 0.00440 | U |
| 1,3-Dichlorobenzene | 541-73-1 | 2.4 | 2.4 | 0.00440 | U |
| 1,4-Dichlorobenzene | 106-46-7 | 1.8 | 1.8 | 0.00440 | U |
| 1,4-Dioxane | 123-91-1 | 0.1 | 0.1 | 0.0890 | U |
| 2-Butanone | 78-93-3 | 0.12 | 0.12 | 0.00440 | U |
| 2-Hexanone | 591-78-6 | ~ | ~ | 0.00440 | U |
| 4-Methyl-2-pentanone | 108-10-1 | ~ | ~ | 0.00440 | U |
| Acetone | 67-64-1 | 0.05 | 0.05 | 0.0160 | J |
| Acrolein | 107-02-8 | ~ | ~ | 0.00890 | U |
| Acrylonitrile | 107-13-1 | ~ | ~ | 0.00440 | U |
| Benzene | 71-43-2 | 0.06 | 0.06 | 0.00440 | U |
| Bromochloromethane | 74-97-5 | ~ | ~ | 0.00440 | U |
| Bromodichloromethane | 75-27-4 | ~ | ~ | 0.00440 | U |
| Bromoform | 75-25-2 | ~ | ~ | 0.00440 | U |
| Bromomethane | 74-83-9 | ~ | ~ | 0.00440 | U |
| Carbon disulfide | 75-15-0 | ~ | ~ | 0.00440 | U |
| Carbon tetrachloride | 56-23-5 | 0.76 | 0.76 | 0.00440 | U |
| Chlorobenzene | 108-90-7 | 1.1 | 1.1 | 0.00440 | U |
| Chloroethane | 75-00-3 | ~ | ~ | 0.00440 | U |
| Chloroform | 67-66-3 | 0.37 | 0.37 | 0.00440 | U |
| Chloromethane | 74-87-3 | ~ | ~ | 0.00440 | U |
| cis-1,2-Dichloroethylene | 156-59-2 | 0.25 | 0.25 | 0.00440 | U |
| cis-1,3-Dichloropropylene | 10061-01-5 | ~ | ~ | 0.00440 | U |
| Cyclohexane | 110-82-7 | ~ | ~ | 0.00440 | U |
| Dibromochloromethane | 124-48-1 | ~ | ~ | 0.00440 | U |
| Dibromomethane | 74-95-3 | ~ | ~ | 0.00440 | U |
| Dichlorodifluoromethane | 75-71-8 | ~ | ~ | 0.00440 | U |
| Ethyl Benzene | 100-41-4 | 1 | 1 | 0.00440 | U |
| Hexachlorobutadiene | 87-68-3 | ~ | ~ | 0.00440 | U |
| Isopropylbenzene | 98-82-8 | ~ | ~ | 0.00440 | U |
| Methyl acetate | 79-20-9 | ~ | ~ | 0.00440 | U |
| Methyl tert-butyl ether (MTBE) | 1634-04-4 | 0.93 | 0.93 | 0.00440 | U |
| Methylcyclohexane | 108-87-2 | ~ | ~ | 0.00440 | U |
| Methylene chloride | 75-09-2 | 0.05 | 0.05 | 0.00890 | U |

# TABLE 1
## Soil Analytical Data

| Sample ID<br>York ID<br>Sampling Date<br>Client Matrix | | NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives | NYSDEC Part 375 Restricted Use Soil Cleanup Objectives-Protection of GW | 97SB1<br>19C1024-01<br>3/22/2019 4:40:00 PM<br>Soil | |
|---|---|---|---|---|---|
| **Compound** | **CAS Number** | | | Result | Q |
| n-Butylbenzene | 104-51-8 | 12 | 12 | 0.00440 | U |
| n-Propylbenzene | 103-65-1 | 3.9 | 3.9 | 0.00440 | U |
| o-Xylene | 95-47-6 | ~ | ~ | 0.00440 | U |
| p- & m- Xylenes | 179601-23-1 | ~ | ~ | 0.00890 | U |
| p-Isopropyltoluene | 99-87-6 | ~ | ~ | 0.00440 | U |
| sec-Butylbenzene | 135-98-8 | 11 | 11 | 0.00440 | U |
| Styrene | 100-42-5 | ~ | ~ | 0.00440 | U |
| tert-Butyl alcohol (TBA) | 75-65-0 | ~ | ~ | 0.00440 | U |
| tert-Butylbenzene | 98-06-6 | 5.9 | 5.9 | 0.00440 | U |
| Tetrachloroethylene | 127-18-4 | 1.3 | 1.3 | 0.00440 | U |
| Toluene | 108-88-3 | 0.7 | 0.7 | 0.00440 | U |
| trans-1,2-Dichloroethylene | 156-60-5 | 0.19 | 0.19 | 0.00440 | U |
| trans-1,3-Dichloropropylene | 10061-02-6 | ~ | ~ | 0.00440 | U |
| trans-1,4-dichloro-2-butene | 110-57-6 | ~ | ~ | 0.00440 | U |
| Trichloroethylene | 79-01-6 | 0.47 | 0.47 | 0.00440 | U |
| Trichlorofluoromethane | 75-69-4 | ~ | ~ | 0.00440 | U |
| Vinyl Chloride | 75-01-4 | 0.02 | 0.02 | 0.00440 | U |
| Xylenes, Total | 1330-20-7 | 0.26 | 1.6 | 0.0130 | U |
| **SVOA, 8270 MASTER** | | mg/Kg | mg/Kg | mg/Kg | |
| **Dilution Factor** | | | | 2 | |
| 1,1-Biphenyl | 92-52-4 | ~ | ~ | 0.0479 | U |
| 1,2,4,5-Tetrachlorobenzene | 95-94-3 | ~ | ~ | 0.0956 | U |
| 1,2,4-Trichlorobenzene | 120-82-1 | ~ | ~ | 0.0479 | U |
| 1,2-Dichlorobenzene | 95-50-1 | 1.1 | 1.1 | 0.0479 | U |
| 1,2-Diphenylhydrazine (as Azobenzene) | 122-66-7 | ~ | ~ | 0.0479 | U |
| 1,3-Dichlorobenzene | 541-73-1 | 2.4 | 2.4 | 0.0479 | U |
| 1,4-Dichlorobenzene | 106-46-7 | 1.8 | 1.8 | 0.0479 | U |
| 2,3,4,6-Tetrachlorophenol | 58-90-2 | ~ | ~ | 0.0956 | U |
| 2,4,5-Trichlorophenol | 95-95-4 | ~ | ~ | 0.0479 | U |
| 2,4,6-Trichlorophenol | 88-06-2 | ~ | ~ | 0.0479 | U |
| 2,4-Dichlorophenol | 120-83-2 | ~ | ~ | 0.0479 | U |
| 2,4-Dimethylphenol | 105-67-9 | ~ | ~ | 0.0479 | U |
| 2,4-Dinitrophenol | 51-28-5 | ~ | ~ | 0.0956 | U |
| 2,4-Dinitrotoluene | 121-14-2 | ~ | ~ | 0.0479 | U |
| 2,6-Dinitrotoluene | 606-20-2 | ~ | ~ | 0.0479 | U |
| 2-Chloronaphthalene | 91-58-7 | ~ | ~ | 0.0479 | U |
| 2-Chlorophenol | 95-57-8 | ~ | ~ | 0.0479 | U |
| 2-Methylnaphthalene | 91-57-6 | ~ | ~ | 0.0479 | U |
| 2-Methylphenol | 95-48-7 | 0.33 | 0.33 | 0.0479 | U |
| 2-Nitroaniline | 88-74-4 | ~ | ~ | 0.0956 | U |
| 2-Nitrophenol | 88-75-5 | ~ | ~ | 0.0479 | U |
| 3- & 4-Methylphenols | 65794-96-9 | ~ | ~ | 0.0479 | U |
| 3,3-Dichlorobenzidine | 91-94-1 | ~ | ~ | 0.0479 | U |
| 3-Nitroaniline | 99-09-2 | ~ | ~ | 0.0956 | U |
| 4,6-Dinitro-2-methylphenol | 534-52-1 | ~ | ~ | 0.0956 | U |
| 4-Bromophenyl phenyl ether | 101-55-3 | ~ | ~ | 0.0479 | U |
| 4-Chloro-3-methylphenol | 59-50-7 | ~ | ~ | 0.0479 | U |
| 4-Chloroaniline | 106-47-8 | ~ | ~ | 0.0479 | U |
| 4-Chlorophenyl phenyl ether | 7005-72-3 | ~ | ~ | 0.0479 | U |
| 4-Nitroaniline | 100-01-6 | ~ | ~ | 0.0956 | U |
| 4-Nitrophenol | 100-02-7 | ~ | ~ | 0.0956 | U |
| Acenaphthene | 83-32-9 | 20 | 98 | 0.0479 | U |

# TABLE 1
## Soil Analytical Data

| Sample ID<br>York ID<br>Sampling Date<br>Client Matrix | | NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives | NYSDEC Part 375 Restricted Use Soil Cleanup Objectives-Protection of GW | 97SB1<br>19C1024-01<br>3/22/2019 4:40:00 PM<br>Soil | |
|---|---|---|---|---|---|
| **Compound** | **CAS Number** | | | Result | Q |
| Acenaphthylene | 208-96-8 | 100 | 107 | 0.0479 | U |
| Acetophenone | 98-86-2 | ~ | ~ | 0.0479 | U |
| Aniline | 62-53-3 | ~ | ~ | 0.191 | U |
| Anthracene | 120-12-7 | 100 | 1000 | 0.0479 | U |
| Atrazine | 1912-24-9 | ~ | ~ | 0.0479 | U |
| Benzaldehyde | 100-52-7 | ~ | ~ | 0.0479 | U |
| Benzidine | 92-87-5 | ~ | ~ | 0.191 | U |
| Benzo(a)anthracene | 56-55-3 | 1 | 1 | 0.0948 | JD |
| Benzo(a)pyrene | 50-32-8 | 1 | 22 | 0.0963 | D |
| Benzo(b)fluoranthene | 205-99-2 | 1 | 1.7 | 0.0925 | JD |
| Benzo(g,h,i)perylene | 191-24-2 | 100 | 1000 | 0.0673 | JD |
| Benzo(k)fluoranthene | 207-08-9 | 0.8 | 1.7 | 0.0787 | JD |
| Benzoic acid | 65-85-0 | ~ | ~ | 0.0479 | U |
| Benzyl alcohol | 100-51-6 | ~ | ~ | 0.0479 | U |
| Benzyl butyl phthalate | 85-68-7 | ~ | ~ | 0.0479 | U |
| Bis(2-chloroethoxy)methane | 111-91-1 | ~ | ~ | 0.0479 | U |
| Bis(2-chloroethyl)ether | 111-44-4 | ~ | ~ | 0.0479 | U |
| Bis(2-chloroisopropyl)ether | 108-60-1 | ~ | ~ | 0.0479 | U |
| Bis(2-ethylhexyl)phthalate | 117-81-7 | ~ | ~ | 0.0734 | JD |
| Caprolactam | 105-60-2 | ~ | ~ | 0.0956 | U |
| Carbazole | 86-74-8 | ~ | ~ | 0.0479 | U |
| Chrysene | 218-01-9 | 1 | 1 | 0.0971 | D |
| Dibenzo(a,h)anthracene | 53-70-3 | 0.33 | 1000 | 0.0479 | U |
| Dibenzofuran | 132-64-9 | 7 | 210 | 0.0479 | U |
| Diethyl phthalate | 84-66-2 | ~ | ~ | 0.0479 | U |
| Dimethyl phthalate | 131-11-3 | ~ | ~ | 0.0479 | U |
| Di-n-butyl phthalate | 84-74-2 | ~ | ~ | 0.0479 | U |
| Di-n-octyl phthalate | 117-84-0 | ~ | ~ | 0.0479 | U |
| Fluoranthene | 206-44-0 | 100 | 1000 | 0.146 | D |
| Fluorene | 86-73-7 | 30 | 386 | 0.0479 | U |
| Hexachlorobenzene | 118-74-1 | 0.33 | 3.2 | 0.0479 | U |
| Hexachlorobutadiene | 87-68-3 | ~ | ~ | 0.0479 | U |
| Hexachlorocyclopentadiene | 77-47-4 | ~ | ~ | 0.0479 | U |
| Hexachloroethane | 67-72-1 | ~ | ~ | 0.0479 | U |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.5 | 8.2 | 0.0864 | JD |
| Isophorone | 78-59-1 | ~ | ~ | 0.0479 | U |
| Naphthalene | 91-20-3 | 12 | 12 | 0.0479 | U |
| Nitrobenzene | 98-95-3 | ~ | ~ | 0.0479 | U |
| N-Nitrosodimethylamine | 62-75-9 | ~ | ~ | 0.0479 | U |
| N-nitroso-di-n-propylamine | 621-64-7 | ~ | ~ | 0.0479 | U |
| N-Nitrosodiphenylamine | 86-30-6 | ~ | ~ | 0.0479 | U |
| Pentachlorophenol | 87-86-5 | 0.8 | 0.8 | 0.0479 | U |
| Phenanthrene | 85-01-8 | 100 | 1000 | 0.0566 | JD |
| Phenol | 108-95-2 | 0.33 | 0.33 | 0.0479 | U |
| Pyrene | 129-00-0 | 100 | 1000 | 0.137 | D |
| **Pesticides, 8081 target list** | | mg/Kg | mg/Kg | mg/Kg | |
| **Dilution Factor** | | | | 5 | |
| 4,4'-DDD | 72-54-8 | 0.0033 | 14 | 0.00189 | U |
| 4,4'-DDE | 72-55-9 | 0.0033 | 17 | 0.00189 | U |
| 4,4'-DDT | 50-29-3 | 0.0033 | 136 | 0.00189 | U |
| Aldrin | 309-00-2 | 0.005 | 0.19 | 0.00189 | U |
| alpha-BHC | 319-84-6 | 0.02 | 0.02 | 0.00189 | U |

# TABLE 1
## Soil Analytical Data

| Sample ID<br>York ID<br>Sampling Date<br>Client Matrix | | NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives | NYSDEC Part 375 Restricted Use Soil Cleanup Objectives-Protection of GW | 97SB1<br>19C1024-01<br>3/22/2019 4:40:00 PM<br>Soil | |
|---|---|---|---|---|---|
| **Compound** | **CAS Number** | | | Result | Q |
| alpha-Chlordane | 5103-71-9 | 0.094 | 2.9 | 0.00189 | U |
| beta-BHC | 319-85-7 | 0.036 | 0.09 | 0.00189 | U |
| Chlordane, total | 57-74-9 | ~ | ~ | 0.0378 | U |
| delta-BHC | 319-86-8 | 0.04 | 0.25 | 0.00189 | U |
| Dieldrin | 60-57-1 | 0.005 | 0.1 | 0.00189 | U |
| Endosulfan I | 959-98-8 | 2.4 | 102 | 0.00189 | U |
| Endosulfan II | 33213-65-9 | 2.4 | 102 | 0.00189 | U |
| Endosulfan sulfate | 1031-07-8 | 2.4 | 1000 | 0.00189 | U |
| Endrin | 72-20-8 | 0.014 | 0.06 | 0.00189 | U |
| Endrin aldehyde | 7421-93-4 | ~ | ~ | 0.00189 | U |
| Endrin ketone | 53494-70-5 | ~ | ~ | 0.00189 | U |
| gamma-BHC (Lindane) | 58-89-9 | 0.1 | 0.1 | 0.00189 | U |
| gamma-Chlordane | 5566-34-7 | ~ | ~ | 0.00189 | U |
| Heptachlor | 76-44-8 | 0.042 | 0.38 | 0.00189 | U |
| Heptachlor epoxide | 1024-57-3 | ~ | ~ | 0.00189 | U |
| Methoxychlor | 72-43-5 | ~ | ~ | 0.00946 | U |
| Toxaphene | 8001-35-2 | ~ | ~ | 0.0957 | U |
| **Metals, Target Analyte** | | mg/Kg | mg/Kg | mg/Kg | |
| **Dilution Factor** | | | | 1 | |
| Aluminum | 7429-90-5 | ~ | ~ | 6,580 | |
| Antimony | 7440-36-0 | ~ | ~ | 2.890 | U |
| Arsenic | 7440-38-2 | 13 | 16 | 7.920 | |
| Barium | 7440-39-3 | 350 | 820 | 102 | |
| Beryllium | 7440-41-7 | 7.2 | 47 | 0.125 | |
| Cadmium | 7440-43-9 | 2.5 | 7.5 | 0.842 | |
| Calcium | 7440-70-2 | ~ | ~ | 22,500 | |
| Chromium | 7440-47-3 | ~ | ~ | 9.640 | |
| Cobalt | 7440-48-4 | ~ | ~ | 7.960 | |
| Copper | 7440-50-8 | 50 | 1720 | **77.100** | |
| Iron | 7439-89-6 | ~ | ~ | 13,500 | |
| Lead | 7439-92-1 | 63 | 450 | **119** | |
| Magnesium | 7439-95-4 | ~ | ~ | 1,860 | |
| Manganese | 7439-96-5 | 1600 | 2000 | 330 | |
| Nickel | 7440-02-0 | 30 | 130 | 26.100 | |
| Potassium | 7440-09-7 | ~ | ~ | 629 | |
| Selenium | 7782-49-2 | 3.9 | 4 | 2.890 | U |
| Silver | 7440-22-4 | 2 | 8.3 | 0.577 | U |
| Sodium | 7440-23-5 | ~ | ~ | 92.600 | |
| Thallium | 7440-28-0 | ~ | ~ | 2.890 | U |
| Vanadium | 7440-62-2 | ~ | ~ | 20 | |
| Zinc | 7440-66-6 | 109 | 2480 | **394** | |
| **Mercury by 7473** | | mg/Kg | mg/Kg | mg/Kg | |
| **Dilution Factor** | | | | 1 | |
| Mercury | 7439-97-6 | 0.18 | 0.73 | **0.255** | |
| **Total Solids** | | | | % | |
| **Dilution Factor** | | | | 1 | |
| % Solids | solids | ~ | ~ | 86.600 | |
| **Polychlorinated Biphenyls (PCB)** | | mg/Kg | mg/Kg | mg/Kg | |
| **Dilution Factor** | | | | 1 | |
| Aroclor 1016 | 12674-11-2 | ~ | ~ | 0.0191 | U |
| Aroclor 1221 | 11104-28-2 | ~ | ~ | 0.0191 | U |
| Aroclor 1232 | 11141-16-5 | ~ | ~ | 0.0191 | U |

# TABLE 1
## Soil Analytical Data

| Sample ID<br>York ID<br>Sampling Date<br>Client Matrix | | NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives | NYSDEC Part 375 Restricted Use Soil Cleanup Objectives-Protection of GW | 97SB1<br>19C1024-01<br>3/22/2019 4:40:00 PM<br>Soil | |
|---|---|---|---|---|---|
| Compound | CAS Number | | | Result | Q |
| Aroclor 1242 | 53469-21-9 | ~ | ~ | 0.0191 | U |
| Aroclor 1248 | 12672-29-6 | ~ | ~ | 0.0191 | U |
| Aroclor 1254 | 11097-69-1 | ~ | ~ | 0.0191 | U |
| Aroclor 1260 | 11096-82-5 | ~ | ~ | 0.0191 | U |
| Total PCBs | 1336-36-3 | 0.1 | 3.2 | 0.0191 | U |

**NOTES:**
Any Regulatory Exceedences are color coded by Regulation

**Q is the Qualifier Column with definitions as follows:**
D=result is from an analysis that required a dilution
J=analyte detected at or above the MDL (method detection limit) but below the RL (Reporting Limit) - data is estimated
U=analyte not detected at or above the level indicated
B=analyte found in the analysis batch blank
E=result is estimated and cannot be accurately reported due to levels encountered or interferences
P=this flag is used for pesticide and PCB (Aroclor) target compounds when there is a % difference for detected concentrations that exceed
NT=this indicates the analyte was not a target for this sample
~=this indicates that no regulatory limit has been established for this analyte

# TABLE 1
## Soil Analytical Data

| Sample ID<br>York ID<br>Sampling Date<br>Client Matrix | | NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives | NYSDEC Part 375 Restricted Use Soil Cleanup Objectives-Protection of GW | 97SB2<br>19C1024-02<br>3/22/2019 5:15:00 PM<br>Soil | |
|---|---|---|---|---|---|
| **Compound** | **CAS Number** | | | Result | Q |
| **Volatile Organics, 8260 - Comprehensive** | | mg/Kg | mg/Kg | mg/Kg | |
| **Dilution Factor** | | | | 1 | |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | ~ | ~ | 0.00210 | U |
| 1,1,1-Trichloroethane | 71-55-6 | 0.68 | 0.68 | 0.00210 | U |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | ~ | ~ | 0.00210 | U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 76-13-1 | ~ | ~ | 0.00210 | U |
| 1,1,2-Trichloroethane | 79-00-5 | ~ | ~ | 0.00210 | U |
| 1,1-Dichloroethane | 75-34-3 | 0.27 | 0.27 | 0.00210 | U |
| 1,1-Dichloroethylene | 75-35-4 | 0.33 | 0.33 | 0.00210 | U |
| 1,2,3-Trichlorobenzene | 87-61-6 | ~ | ~ | 0.00210 | U |
| 1,2,3-Trichloropropane | 96-18-4 | ~ | ~ | 0.00210 | U |
| 1,2,4-Trichlorobenzene | 120-82-1 | ~ | ~ | 0.00210 | U |
| 1,2,4-Trimethylbenzene | 95-63-6 | 3.6 | 3.6 | 0.00210 | U |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | ~ | ~ | 0.00210 | U |
| 1,2-Dibromoethane | 106-93-4 | ~ | ~ | 0.00210 | U |
| 1,2-Dichlorobenzene | 95-50-1 | 1.1 | 1.1 | 0.00210 | U |
| 1,2-Dichloroethane | 107-06-2 | 0.02 | 0.02 | 0.00210 | U |
| 1,2-Dichloropropane | 78-87-5 | ~ | ~ | 0.00210 | U |
| 1,3,5-Trimethylbenzene | 108-67-8 | 8.4 | 8.4 | 0.00210 | U |
| 1,3-Dichlorobenzene | 541-73-1 | 2.4 | 2.4 | 0.00210 | U |
| 1,4-Dichlorobenzene | 106-46-7 | 1.8 | 1.8 | 0.00210 | U |
| 1,4-Dioxane | 123-91-1 | 0.1 | 0.1 | 0.0420 | U |
| 2-Butanone | 78-93-3 | 0.12 | 0.12 | 0.00210 | U |
| 2-Hexanone | 591-78-6 | ~ | ~ | 0.00210 | U |
| 4-Methyl-2-pentanone | 108-10-1 | ~ | ~ | 0.00210 | U |
| Acetone | 67-64-1 | 0.05 | 0.05 | 0.00510 | J |
| Acrolein | 107-02-8 | ~ | ~ | 0.00420 | U |
| Acrylonitrile | 107-13-1 | ~ | ~ | 0.00210 | U |
| Benzene | 71-43-2 | 0.06 | 0.06 | 0.00210 | U |
| Bromochloromethane | 74-97-5 | ~ | ~ | 0.00210 | U |
| Bromodichloromethane | 75-27-4 | ~ | ~ | 0.00210 | U |
| Bromoform | 75-25-2 | ~ | ~ | 0.00210 | U |
| Bromomethane | 74-83-9 | ~ | ~ | 0.00210 | U |
| Carbon disulfide | 75-15-0 | ~ | ~ | 0.00210 | U |
| Carbon tetrachloride | 56-23-5 | 0.76 | 0.76 | 0.00210 | U |
| Chlorobenzene | 108-90-7 | 1.1 | 1.1 | 0.00210 | U |
| Chloroethane | 75-00-3 | ~ | ~ | 0.00210 | U |
| Chloroform | 67-66-3 | 0.37 | 0.37 | 0.00210 | U |
| Chloromethane | 74-87-3 | ~ | ~ | 0.00210 | U |
| cis-1,2-Dichloroethylene | 156-59-2 | 0.25 | 0.25 | 0.00210 | U |
| cis-1,3-Dichloropropylene | 10061-01-5 | ~ | ~ | 0.00210 | U |
| Cyclohexane | 110-82-7 | ~ | ~ | 0.00210 | U |
| Dibromochloromethane | 124-48-1 | ~ | ~ | 0.00210 | U |
| Dibromomethane | 74-95-3 | ~ | ~ | 0.00210 | U |
| Dichlorodifluoromethane | 75-71-8 | ~ | ~ | 0.00210 | U |
| Ethyl Benzene | 100-41-4 | 1 | 1 | 0.00210 | U |
| Hexachlorobutadiene | 87-68-3 | ~ | ~ | 0.00210 | U |
| Isopropylbenzene | 98-82-8 | ~ | ~ | 0.00210 | U |
| Methyl acetate | 79-20-9 | ~ | ~ | 0.00210 | U |
| Methyl tert-butyl ether (MTBE) | 1634-04-4 | 0.93 | 0.93 | 0.00210 | U |
| Methylcyclohexane | 108-87-2 | ~ | ~ | 0.00210 | U |
| Methylene chloride | 75-09-2 | 0.05 | 0.05 | 0.00420 | U |

# TABLE 1
## Soil Analytical Data

| Sample ID<br>York ID<br>Sampling Date<br>Client Matrix | | NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives | NYSDEC Part 375 Restricted Use Soil Cleanup Objectives-Protection of GW | 97SB2<br>19C1024-02<br>3/22/2019 5:15:00 PM<br>Soil | |
|---|---|---|---|---|---|
| **Compound** | **CAS Number** | | | Result | Q |
| n-Butylbenzene | 104-51-8 | 12 | 12 | 0.00210 | U |
| n-Propylbenzene | 103-65-1 | 3.9 | 3.9 | 0.00210 | U |
| o-Xylene | 95-47-6 | ~ | ~ | 0.00210 | U |
| p- & m- Xylenes | 179601-23-1 | ~ | ~ | 0.00420 | U |
| p-Isopropyltoluene | 99-87-6 | ~ | ~ | 0.00210 | U |
| sec-Butylbenzene | 135-98-8 | 11 | 11 | 0.00210 | U |
| Styrene | 100-42-5 | ~ | ~ | 0.00210 | U |
| tert-Butyl alcohol (TBA) | 75-65-0 | ~ | ~ | 0.00210 | U |
| tert-Butylbenzene | 98-06-6 | 5.9 | 5.9 | 0.00210 | U |
| Tetrachloroethylene | 127-18-4 | 1.3 | 1.3 | 0.00210 | U |
| Toluene | 108-88-3 | 0.7 | 0.7 | 0.00210 | U |
| trans-1,2-Dichloroethylene | 156-60-5 | 0.19 | 0.19 | 0.00210 | U |
| trans-1,3-Dichloropropylene | 10061-02-6 | ~ | ~ | 0.00210 | U |
| trans-1,4-dichloro-2-butene | 110-57-6 | ~ | ~ | 0.00210 | U |
| Trichloroethylene | 79-01-6 | 0.47 | 0.47 | 0.00210 | U |
| Trichlorofluoromethane | 75-69-4 | ~ | ~ | 0.00210 | U |
| Vinyl Chloride | 75-01-4 | 0.02 | 0.02 | 0.00210 | U |
| Xylenes, Total | 1330-20-7 | 0.26 | 1.6 | 0.00620 | U |
| **SVOA, 8270 MASTER** | | mg/Kg | mg/Kg | mg/Kg | |
| **Dilution Factor** | | | | 2 | |
| 1,1-Biphenyl | 92-52-4 | ~ | ~ | 0.0470 | U |
| 1,2,4,5-Tetrachlorobenzene | 95-94-3 | ~ | ~ | 0.0939 | U |
| 1,2,4-Trichlorobenzene | 120-82-1 | ~ | ~ | 0.0470 | U |
| 1,2-Dichlorobenzene | 95-50-1 | 1.1 | 1.1 | 0.0470 | U |
| 1,2-Diphenylhydrazine (as Azobenzene) | 122-66-7 | ~ | ~ | 0.0470 | U |
| 1,3-Dichlorobenzene | 541-73-1 | 2.4 | 2.4 | 0.0470 | U |
| 1,4-Dichlorobenzene | 106-46-7 | 1.8 | 1.8 | 0.0470 | U |
| 2,3,4,6-Tetrachlorophenol | 58-90-2 | ~ | ~ | 0.0939 | U |
| 2,4,5-Trichlorophenol | 95-95-4 | ~ | ~ | 0.0470 | U |
| 2,4,6-Trichlorophenol | 88-06-2 | ~ | ~ | 0.0470 | U |
| 2,4-Dichlorophenol | 120-83-2 | ~ | ~ | 0.0470 | U |
| 2,4-Dimethylphenol | 105-67-9 | ~ | ~ | 0.0470 | U |
| 2,4-Dinitrophenol | 51-28-5 | ~ | ~ | 0.0939 | U |
| 2,4-Dinitrotoluene | 121-14-2 | ~ | ~ | 0.0470 | U |
| 2,6-Dinitrotoluene | 606-20-2 | ~ | ~ | 0.0470 | U |
| 2-Chloronaphthalene | 91-58-7 | ~ | ~ | 0.0470 | U |
| 2-Chlorophenol | 95-57-8 | ~ | ~ | 0.0470 | U |
| 2-Methylnaphthalene | 91-57-6 | ~ | ~ | 0.0470 | U |
| 2-Methylphenol | 95-48-7 | 0.33 | 0.33 | 0.0470 | U |
| 2-Nitroaniline | 88-74-4 | ~ | ~ | 0.0939 | U |
| 2-Nitrophenol | 88-75-5 | ~ | ~ | 0.0470 | U |
| 3- & 4-Methylphenols | 65794-96-9 | ~ | ~ | 0.0470 | U |
| 3,3-Dichlorobenzidine | 91-94-1 | ~ | ~ | 0.0470 | U |
| 3-Nitroaniline | 99-09-2 | ~ | ~ | 0.0939 | U |
| 4,6-Dinitro-2-methylphenol | 534-52-1 | ~ | ~ | 0.0939 | U |
| 4-Bromophenyl phenyl ether | 101-55-3 | ~ | ~ | 0.0470 | U |
| 4-Chloro-3-methylphenol | 59-50-7 | ~ | ~ | 0.0470 | U |
| 4-Chloroaniline | 106-47-8 | ~ | ~ | 0.0470 | U |
| 4-Chlorophenyl phenyl ether | 7005-72-3 | ~ | ~ | 0.0470 | U |
| 4-Nitroaniline | 100-01-6 | ~ | ~ | 0.0939 | U |
| 4-Nitrophenol | 100-02-7 | ~ | ~ | 0.0939 | U |
| Acenaphthene | 83-32-9 | 20 | 98 | 0.0470 | U |

# TABLE 1
## Soil Analytical Data

| Sample ID<br>York ID<br>Sampling Date<br>Client Matrix | | NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives | NYSDEC Part 375 Restricted Use Soil Cleanup Objectives-Protection of GW | 97SB2<br>19C1024-02<br>3/22/2019 5:15:00 PM<br>Soil | |
|---|---|---|---|---|---|
| **Compound** | **CAS Number** | | | Result | Q |
| Acenaphthylene | 208-96-8 | 100 | 107 | 0.0470 | U |
| Acetophenone | 98-86-2 | ~ | ~ | 0.0470 | U |
| Aniline | 62-53-3 | ~ | ~ | 0.188 | U |
| Anthracene | 120-12-7 | 100 | 1000 | 0.0470 | U |
| Atrazine | 1912-24-9 | ~ | ~ | 0.0470 | U |
| Benzaldehyde | 100-52-7 | ~ | ~ | 0.0470 | U |
| Benzidine | 92-87-5 | ~ | ~ | 0.188 | U |
| Benzo(a)anthracene | 56-55-3 | 1 | 1 | 0.156 | D |
| Benzo(a)pyrene | 50-32-8 | 1 | 22 | 0.162 | D |
| Benzo(b)fluoranthene | 205-99-2 | 1 | 1.7 | 0.154 | D |
| Benzo(g,h,i)perylene | 191-24-2 | 100 | 1000 | 0.111 | D |
| Benzo(k)fluoranthene | 207-08-9 | 0.8 | 1.7 | 0.137 | D |
| Benzoic acid | 65-85-0 | ~ | ~ | 0.0470 | U |
| Benzyl alcohol | 100-51-6 | ~ | ~ | 0.0470 | U |
| Benzyl butyl phthalate | 85-68-7 | ~ | ~ | 0.0470 | U |
| Bis(2-chloroethoxy)methane | 111-91-1 | ~ | ~ | 0.0470 | U |
| Bis(2-chloroethyl)ether | 111-44-4 | ~ | ~ | 0.0470 | U |
| Bis(2-chloroisopropyl)ether | 108-60-1 | ~ | ~ | 0.0470 | U |
| Bis(2-ethylhexyl)phthalate | 117-81-7 | ~ | ~ | 0.0983 | D |
| Caprolactam | 105-60-2 | ~ | ~ | 0.0939 | U |
| Carbazole | 86-74-8 | ~ | ~ | 0.0470 | U |
| Chrysene | 218-01-9 | 1 | 1 | 0.153 | D |
| Dibenzo(a,h)anthracene | 53-70-3 | 0.33 | 1000 | 0.0470 | U |
| Dibenzofuran | 132-64-9 | 7 | 210 | 0.0470 | U |
| Diethyl phthalate | 84-66-2 | ~ | ~ | 0.0470 | U |
| Dimethyl phthalate | 131-11-3 | ~ | ~ | 0.0470 | U |
| Di-n-butyl phthalate | 84-74-2 | ~ | ~ | 0.0470 | U |
| Di-n-octyl phthalate | 117-84-0 | ~ | ~ | 0.0470 | U |
| Fluoranthene | 206-44-0 | 100 | 1000 | 0.242 | D |
| Fluorene | 86-73-7 | 30 | 386 | 0.0470 | U |
| Hexachlorobenzene | 118-74-1 | 0.33 | 3.2 | 0.0470 | U |
| Hexachlorobutadiene | 87-68-3 | ~ | ~ | 0.0470 | U |
| Hexachlorocyclopentadiene | 77-47-4 | ~ | ~ | 0.0470 | U |
| Hexachloroethane | 67-72-1 | ~ | ~ | 0.0470 | U |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.5 | 8.2 | 0.134 | D |
| Isophorone | 78-59-1 | ~ | ~ | 0.0470 | U |
| Naphthalene | 91-20-3 | 12 | 12 | 0.0470 | U |
| Nitrobenzene | 98-95-3 | ~ | ~ | 0.0470 | U |
| N-Nitrosodimethylamine | 62-75-9 | ~ | ~ | 0.0470 | U |
| N-nitroso-di-n-propylamine | 621-64-7 | ~ | ~ | 0.0470 | U |
| N-Nitrosodiphenylamine | 86-30-6 | ~ | ~ | 0.0470 | U |
| Pentachlorophenol | 87-86-5 | 0.8 | 0.8 | 0.0470 | U |
| Phenanthrene | 85-01-8 | 100 | 1000 | 0.0683 | JD |
| Phenol | 108-95-2 | 0.33 | 0.33 | 0.0470 | U |
| Pyrene | 129-00-0 | 100 | 1000 | 0.240 | D |
| **Pesticides, 8081 target list** | | mg/Kg | mg/Kg | mg/Kg | |
| **Dilution Factor** | | | | 5 | |
| 4,4'-DDD | 72-54-8 | 0.0033 | 14 | 0.00186 | U |
| 4,4'-DDE | 72-55-9 | 0.0033 | 17 | 0.00186 | U |
| 4,4'-DDT | 50-29-3 | 0.0033 | 136 | 0.00186 | U |
| Aldrin | 309-00-2 | 0.005 | 0.19 | 0.00186 | U |
| alpha-BHC | 319-84-6 | 0.02 | 0.02 | 0.00186 | U |

# TABLE 1
## Soil Analytical Data

| Sample ID<br>York ID<br>Sampling Date<br>Client Matrix | | NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives | NYSDEC Part 375 Restricted Use Soil Cleanup Objectives-Protection of GW | 97SB2<br>19C1024-02<br>3/22/2019 5:15:00 PM<br>Soil | |
|---|---|---|---|---|---|
| **Compound** | **CAS Number** | | | Result | Q |
| alpha-Chlordane | 5103-71-9 | 0.094 | 2.9 | 0.00186 | U |
| beta-BHC | 319-85-7 | 0.036 | 0.09 | 0.00186 | U |
| Chlordane, total | 57-74-9 | ~ | ~ | 0.0371 | U |
| delta-BHC | 319-86-8 | 0.04 | 0.25 | 0.00186 | U |
| Dieldrin | 60-57-1 | 0.005 | 0.1 | 0.00186 | U |
| Endosulfan I | 959-98-8 | 2.4 | 102 | 0.00186 | U |
| Endosulfan II | 33213-65-9 | 2.4 | 102 | 0.00186 | U |
| Endosulfan sulfate | 1031-07-8 | 2.4 | 1000 | 0.00186 | U |
| Endrin | 72-20-8 | 0.014 | 0.06 | 0.00186 | U |
| Endrin aldehyde | 7421-93-4 | ~ | ~ | 0.00186 | U |
| Endrin ketone | 53494-70-5 | ~ | ~ | 0.00186 | U |
| gamma-BHC (Lindane) | 58-89-9 | 0.1 | 0.1 | 0.00186 | U |
| gamma-Chlordane | 5566-34-7 | ~ | ~ | 0.00186 | U |
| Heptachlor | 76-44-8 | 0.042 | 0.38 | 0.00186 | U |
| Heptachlor epoxide | 1024-57-3 | ~ | ~ | 0.00186 | U |
| Methoxychlor | 72-43-5 | ~ | ~ | 0.00928 | U |
| Toxaphene | 8001-35-2 | ~ | ~ | 0.0940 | U |
| **Metals, Target Analyte** | | mg/Kg | mg/Kg | mg/Kg | |
| **Dilution Factor** | | | | 1 | |
| Aluminum | 7429-90-5 | ~ | ~ | 7,110 | |
| Antimony | 7440-36-0 | ~ | ~ | 5.530 | |
| Arsenic | 7440-38-2 | 13 | 16 | **24.600** | |
| Barium | 7440-39-3 | 350 | 820 | 85.100 | |
| Beryllium | 7440-41-7 | 7.2 | 47 | 0.0570 | U |
| Cadmium | 7440-43-9 | 2.5 | 7.5 | 2.070 | |
| Calcium | 7440-70-2 | ~ | ~ | 31,200 | |
| Chromium | 7440-47-3 | ~ | ~ | 33.700 | |
| Cobalt | 7440-48-4 | ~ | ~ | 8.820 | |
| Copper | 7440-50-8 | 50 | 1720 | **166** | |
| Iron | 7439-89-6 | ~ | ~ | 35,600 | |
| Lead | 7439-92-1 | 63 | 450 | **481** | |
| Magnesium | 7439-95-4 | ~ | ~ | 2,560 | |
| Manganese | 7439-96-5 | 1600 | 2000 | 316 | |
| Nickel | 7440-02-0 | 30 | 130 | **42** | |
| Potassium | 7440-09-7 | ~ | ~ | 683 | |
| Selenium | 7782-49-2 | 3.9 | 4 | 2.840 | U |
| Silver | 7440-22-4 | 2 | 8.3 | 0.568 | U |
| Sodium | 7440-23-5 | ~ | ~ | 103 | |
| Thallium | 7440-28-0 | ~ | ~ | 2.840 | U |
| Vanadium | 7440-62-2 | ~ | ~ | 33.500 | |
| Zinc | 7440-66-6 | 109 | 2480 | **599** | |
| **Mercury by 7473** | | mg/Kg | mg/Kg | mg/Kg | |
| **Dilution Factor** | | | | 1 | |
| Mercury | 7439-97-6 | 0.18 | 0.73 | 0.116 | |
| **Total Solids** | | | | % | |
| **Dilution Factor** | | | | 1 | |
| % Solids | solids | ~ | ~ | 88 | |
| **Polychlorinated Biphenyls (PCB)** | | mg/Kg | mg/Kg | mg/Kg | |
| **Dilution Factor** | | | | 1 | |
| Aroclor 1016 | 12674-11-2 | ~ | ~ | 0.0187 | U |
| Aroclor 1221 | 11104-28-2 | ~ | ~ | 0.0187 | U |
| Aroclor 1232 | 11141-16-5 | ~ | ~ | 0.0187 | U |

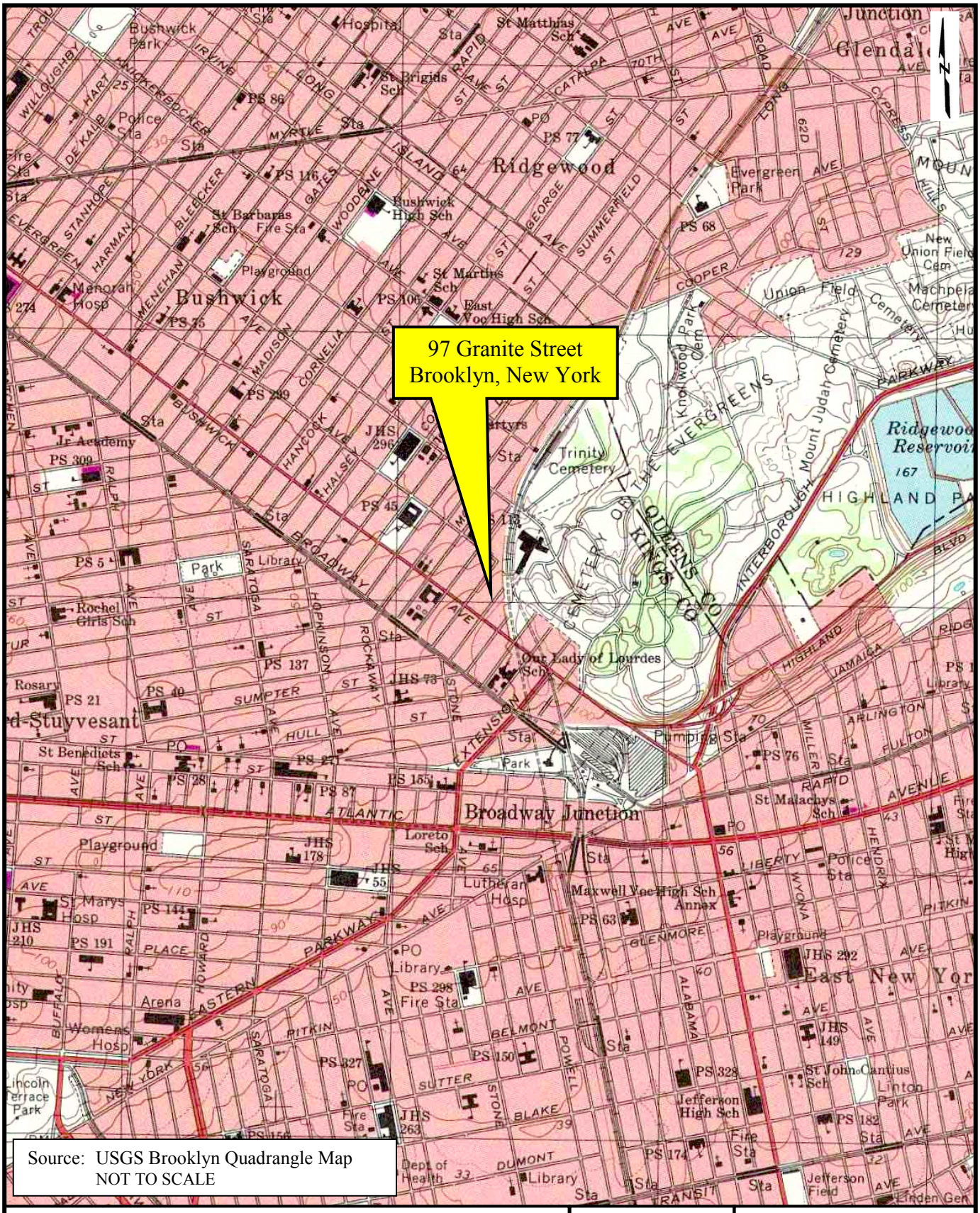
# TABLE 1
## Soil Analytical Data

| Sample ID<br>York ID<br>Sampling Date<br>Client Matrix | | NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives | NYSDEC Part 375 Restricted Use Soil Cleanup Objectives-Protection of GW | 97SB2<br>19C1024-02<br>3/22/2019 5:15:00 PM<br>Soil | |
|---|---|---|---|---|---|
| Compound | CAS Number | | | Result | Q |
| Aroclor 1242 | 53469-21-9 | ~ | ~ | 0.0187 | U |
| Aroclor 1248 | 12672-29-6 | ~ | ~ | 0.0187 | U |
| Aroclor 1254 | 11097-69-1 | ~ | ~ | 0.0187 | U |
| Aroclor 1260 | 11096-82-5 | ~ | ~ | 0.0187 | U |
| Total PCBs | 1336-36-3 | 0.1 | 3.2 | 0.0187 | U |

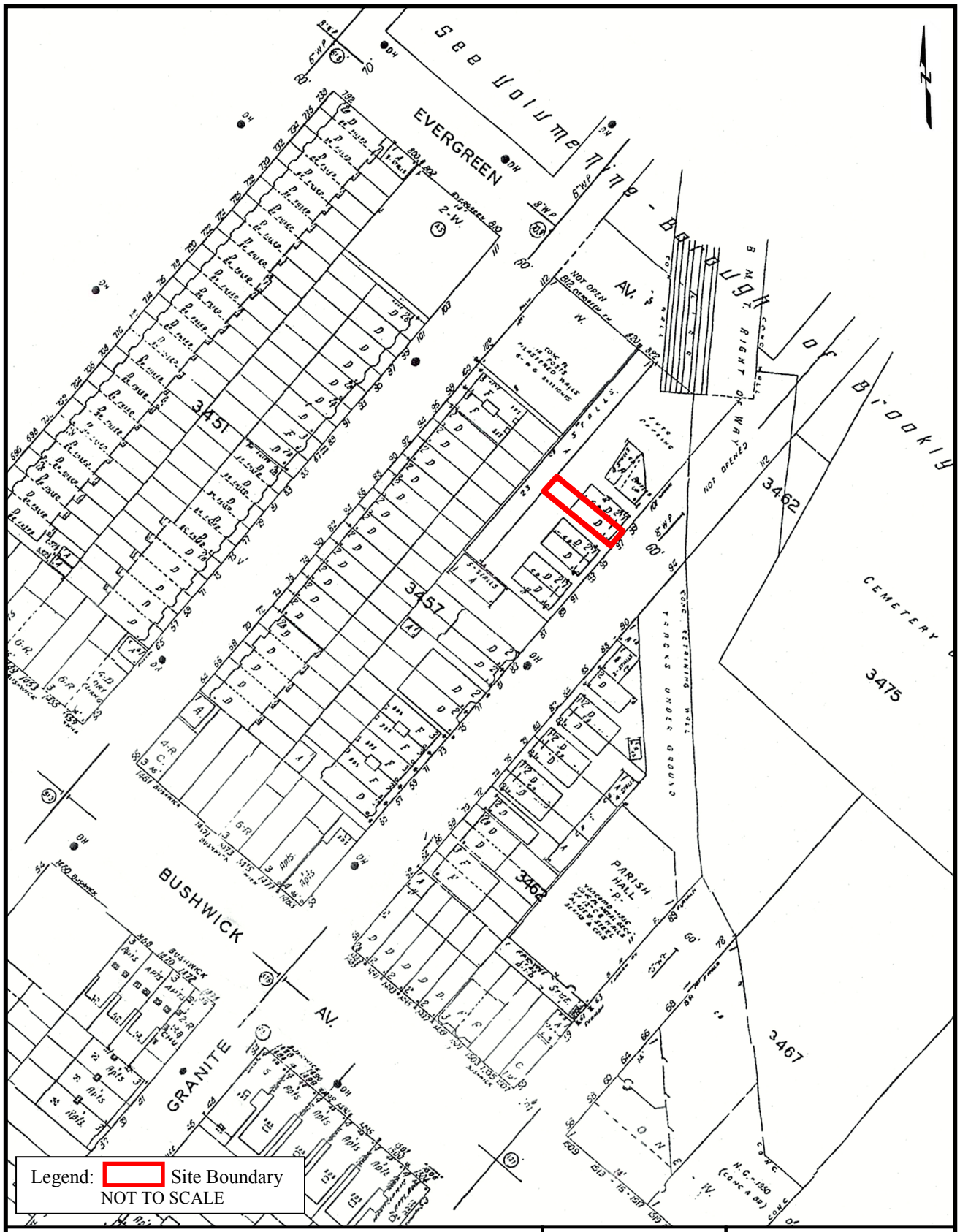
**NOTES:**
Any Regulatory Exceedences are color coded by Regulation

**Q is the Qualifier Column with definitions as follows:**
D=result is from an analysis that required a dilution
J=analyte detected at or above the MDL (method detection limit) but below the RL (Reporting Limit) - data is est
U=analyte not detected at or above the level indicated
B=analyte found in the analysis batch blank
E=result is estimated and cannot be accurately reported due to levels encountered or interferences
P=this flag is used for pesticide and PCB (Aroclor) target compounds when there is a % difference for detected cc method dictated limits be
NT=this indicates the analyte was not a target for this sample
~=this indicates that no regulatory limit has been established for this analyte

# Figure




| | | |
|---|---|---|
| 97 GRANITE STREET, BROOKLYN, NEW YORK | GEI Consultants | **SITE LOCATION MAP** |
| THE PAR GROUP<br>LYNBROOK, NEW YORK | Project 1900299 | February 2019 Fig 1 |




| | | |
|---|---|---|
| 97 GRANITE STREET, BROOKLYN, NEW YORK | GEI Consultants | **1995 SANBORN MAP** |
| THE PAR GROUP<br>LYNBROOK, NEW YORK | Project 1900299 | February 2019 Fig 2 |


LEGEND:

B-1 SOIL BORING LOCATION

PROPERTY BOUNDARY

0 50 100

SCALE: 1" = 50'

***SOURCE:***

1. MAP EXTRACTED FROM GOOGLE MAPS

| | | |
|---|---|---|
| 97 GRANITE ST.<br>BROOKLYN, NY | GEI Consultants | SOIL BORING LOCATIONS |
| THE PAR GROUP<br>LYNBROOK, NEW YORK | Project: 1900299 | APRIL 2019 Fig. 3 |

\\HTS2L-TLICA C:\Users\tlicata\OneDrive - GEI Consultants, Inc\Desktop\99 granite st\97 granite st\FIG - 3.dwg - 4/12/2019

# Attachment 1

# Technical Report

prepared for:

**GEI Consultants, Inc**
110 Walt Whitman Road, Suite 204
Huntington Station NY, 11746
**Attention: Ed Bradshaw**

Report Date: 04/03/2019
**Client Project ID: 97 Granite**
York Project (SDG) No.: 19C1024

Report Date: 04/03/2019
Client Project ID: 97 Granite
York Project (SDG) No.: 19C1024

**GEI Consultants, Inc**
110 Walt Whitman Road, Suite 204
Huntington Station NY, 11746
Attention: Ed Bradshaw

## Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on March 25, 2019 with a temperature of 4.8 C. The project was identified as your project: **97 Granite**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

| York Sample ID | Client Sample ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| 19C1024-01 | 97SB1 | Soil | 03/22/2019 | 03/25/2019 |
| 19C1024-02 | 97SB2 | Soil | 03/22/2019 | 03/25/2019 |

## General Notes for York Project (SDG) No.: 19C1024

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

**Approved By:** 

**Date:** 04/03/2019

Benjamin Gulizia
Laboratory Director

## Sample Information

**Client Sample ID:** 97SB1 **York Sample ID:** 19C1024-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 19C1024 | 97 Granite | Soil | March 22, 2019 4:40 pm | 03/25/2019 |

**Volatile Organics, 8260 - Comprehensive**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP | | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 106-93-4 | 1,2-Dibromoethane | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 107-06-2 | 1,2-Dichloroethane | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 78-87-5 | 1,2-Dichloropropane | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 123-91-1 | 1,4-Dioxane | ND | | ug/kg dry | 89 | 180 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | | |

## Sample Information

**Client Sample ID:** 97SB1 **York Sample ID:** 19C1024-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 19C1024 | 97 Granite | Soil | March 22, 2019 4:40 pm | 03/25/2019 |

### Volatile Organics, 8260 - Comprehensive

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 78-93-3 | 2-Butanone | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 591-78-6 | 2-Hexanone | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 108-10-1 | 4-Methyl-2-pentanone | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 67-64-1 | **Acetone** | **16** | CCV-E , J | ug/kg dry | 8.9 | 18 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 107-02-8 | Acrolein | ND | | ug/kg dry | 8.9 | 18 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 107-13-1 | Acrylonitrile | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 71-43-2 | Benzene | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 74-97-5 | Bromochloromethane | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PAL | | |
| 75-27-4 | Bromodichloromethane | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 75-25-2 | Bromoform | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 74-83-9 | Bromomethane | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 75-15-0 | Carbon disulfide | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 56-23-5 | Carbon tetrachloride | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 108-90-7 | Chlorobenzene | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 75-00-3 | Chloroethane | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 67-66-3 | Chloroform | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 74-87-3 | Chloromethane | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 10061-01-5 | cis-1,3-Dichloropropylene | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 110-82-7 | Cyclohexane | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PAL | | |
| 124-48-1 | Dibromochloromethane | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PAL | | |

## Sample Information

**Client Sample ID:** 97SB1 **York Sample ID:** 19C1024-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 19C1024 | 97 Granite | Soil | March 22, 2019 4:40 pm | 03/25/2019 |

**Volatile Organics, 8260 - Comprehensive**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 74-95-3 | Dibromomethane | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 07:00<br>NELAC-NY10854,NELAC-NY12058,NJDEP,PAL | 03/27/2019 14:07 | LLJ |
| 75-71-8 | Dichlorodifluoromethane | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 07:00<br>NELAC-NY10854,NELAC-NY12058,NJDEP,PAL | 03/27/2019 14:07 | LLJ |
| 100-41-4 | Ethyl Benzene | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 07:00<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:07 | LLJ |
| 87-68-3 | Hexachlorobutadiene | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 07:00<br>NELAC-NY10854,NELAC-NY12058,NJDEP,PAL | 03/27/2019 14:07 | LLJ |
| 98-82-8 | Isopropylbenzene | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 07:00<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:07 | LLJ |
| 79-20-9 | Methyl acetate | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 07:00<br>NELAC-NY10854,NELAC-NY12058,NJDEP,PAL | 03/27/2019 14:07 | LLJ |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 07:00<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:07 | LLJ |
| 108-87-2 | Methylcyclohexane | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 07:00<br>NELAC-NY10854,NELAC-NY12058,NJDEP,PAL | 03/27/2019 14:07 | LLJ |
| 75-09-2 | Methylene chloride | ND | | ug/kg dry | 8.9 | 18 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 07:00<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:07 | LLJ |
| 104-51-8 | n-Butylbenzene | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 07:00<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:07 | LLJ |
| 103-65-1 | n-Propylbenzene | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 07:00<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:07 | LLJ |
| 95-47-6 | o-Xylene | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 07:00<br>CTDOH,NELAC-NY10854,NELAC-NY12058,PA | 03/27/2019 14:07 | LLJ |
| 179601-23-1 | p- & m- Xylenes | ND | | ug/kg dry | 8.9 | 18 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 07:00<br>CTDOH,NELAC-NY10854,NELAC-NY12058,PA | 03/27/2019 14:07 | LLJ |
| 99-87-6 | p-Isopropyltoluene | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 07:00<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:07 | LLJ |
| 135-98-8 | sec-Butylbenzene | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 07:00<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:07 | LLJ |
| 100-42-5 | Styrene | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 07:00<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:07 | LLJ |
| 75-65-0 | tert-Butyl alcohol (TBA) | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 07:00<br>NELAC-NY10854,NELAC-NY12058,NJDEP,PAL | 03/27/2019 14:07 | LLJ |
| 98-06-6 | tert-Butylbenzene | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 07:00<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:07 | LLJ |
| 127-18-4 | Tetrachloroethylene | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 07:00<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:07 | LLJ |
| 108-88-3 | Toluene | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 07:00<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:07 | LLJ |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 07:00<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:07 | LLJ |

## Sample Information

**Client Sample ID:** 97SB1 **York Sample ID:** 19C1024-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 19C1024 | 97 Granite | Soil | March 22, 2019 4:40 pm | 03/25/2019 |

### Volatile Organics, 8260 - Comprehensive

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10061-02-6 | trans-1,3-Dichloropropylene | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | | |
| 110-57-6 | * trans-1,4-dichloro-2-butene | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: CTDOH | | | |
| 79-01-6 | Trichloroethylene | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | | |
| 75-69-4 | Trichlorofluoromethane | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | | |
| 75-01-4 | Vinyl Chloride | ND | | ug/kg dry | 4.4 | 8.9 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | | |
| 1330-20-7 | Xylenes, Total | ND | | ug/kg dry | 13 | 27 | 1 | EPA 8260C | 03/27/2019 07:00 | 03/27/2019 14:07 | LLJ |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 17060-07-0 | *Surrogate: SURR: 1,2-Dichloroethane-d4* | *108 %* | *77-125* |
| 2037-26-5 | *Surrogate: SURR: Toluene-d8* | *111 %* | *85-120* |
| 460-00-4 | *Surrogate: SURR: p-Bromofluorobenzene* | *105 %* | *76-130* |

### SVOA, 8270 Comprehensive

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 92-52-4 | 1,1-Biphenyl | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: NELAC-NY10854,NJDEP,PADEP | | | |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | ND | | mg/kg dry | 0.0956 | 0.191 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: NELAC-NY10854,NJDEP,PADEP | | | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: NELAC-NY10854,PADEP | | | |
| 122-66-7 | 1,2-Diphenylhydrazine (as Azobenzene) | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: NELAC-NY10854,NJDEP,PADEP | | | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: NELAC-NY10854,PADEP | | | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: NELAC-NY10854,PADEP | | | |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | ND | | mg/kg dry | 0.0956 | 0.191 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: NELAC-NY10854,NJDEP,PADEP | | | |
| 95-95-4 | 2,4,5-Trichlorophenol | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 88-06-2 | 2,4,6-Trichlorophenol | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |

## Sample Information

**Client Sample ID:** 97SB1 **York Sample ID:** 19C1024-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 19C1024 | 97 Granite | Soil | March 22, 2019 4:40 pm | 03/25/2019 |

**SVOA, 8270 Comprehensive** **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 120-83-2 | 2,4-Dichlorophenol | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 105-67-9 | 2,4-Dimethylphenol | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 51-28-5 | 2,4-Dinitrophenol | ND | | mg/kg dry | 0.0956 | 0.191 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 121-14-2 | 2,4-Dinitrotoluene | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 606-20-2 | 2,6-Dinitrotoluene | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 91-58-7 | 2-Chloronaphthalene | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 95-57-8 | 2-Chlorophenol | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 91-57-6 | 2-Methylnaphthalene | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 95-48-7 | 2-Methylphenol | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 88-74-4 | 2-Nitroaniline | ND | | mg/kg dry | 0.0956 | 0.191 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 88-75-5 | 2-Nitrophenol | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 65794-96-9 | 3- & 4-Methylphenols | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 91-94-1 | 3,3-Dichlorobenzidine | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | |
| 99-09-2 | 3-Nitroaniline | ND | | mg/kg dry | 0.0956 | 0.191 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | ND | | mg/kg dry | 0.0956 | 0.191 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 101-55-3 | 4-Bromophenyl phenyl ether | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 59-50-7 | 4-Chloro-3-methylphenol | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 106-47-8 | 4-Chloroaniline | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 100-01-6 | 4-Nitroaniline | ND | | mg/kg dry | 0.0956 | 0.191 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 100-02-7 | 4-Nitrophenol | ND | | mg/kg dry | 0.0956 | 0.191 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |

## Sample Information

**Client Sample ID:** 97SB1 **York Sample ID:** 19C1024-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 19C1024 | 97 Granite | Soil | March 22, 2019 4:40 pm | 03/25/2019 |

**SVOA, 8270 Comprehensive** **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 83-32-9 | Acenaphthene | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 208-96-8 | Acenaphthylene | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 98-86-2 | Acetophenone | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | |
| 62-53-3 | Aniline | ND | | mg/kg dry | 0.191 | 0.383 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | |
| 120-12-7 | Anthracene | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 1912-24-9 | Atrazine | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | |
| 100-52-7 | Benzaldehyde | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | |
| 92-87-5 | Benzidine | ND | | mg/kg dry | 0.191 | 0.383 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,PADEP | | |
| 56-55-3 | **Benzo(a)anthracene** | **0.0948** | J | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 50-32-8 | **Benzo(a)pyrene** | **0.0963** | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 205-99-2 | **Benzo(b)fluoranthene** | **0.0925** | J | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 191-24-2 | **Benzo(g,h,i)perylene** | **0.0673** | J | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 207-08-9 | **Benzo(k)fluoranthene** | **0.0787** | J | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 65-85-0 | Benzoic acid | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | |
| 100-51-6 | Benzyl alcohol | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | |
| 85-68-7 | Benzyl butyl phthalate | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 111-91-1 | Bis(2-chloroethoxy)methane | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 111-44-4 | Bis(2-chloroethyl)ether | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 108-60-1 | Bis(2-chloroisopropyl)ether | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 117-81-7 | **Bis(2-ethylhexyl)phthalate** | **0.0734** | J | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 105-60-2 | Caprolactam | ND | | mg/kg dry | 0.0956 | 0.191 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | |
| 86-74-8 | Carbazole | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |

## Sample Information

**Client Sample ID:** 97SB1 **York Sample ID:** 19C1024-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 19C1024 | 97 Granite | Soil | March 22, 2019 4:40 pm | 03/25/2019 |

**SVOA, 8270 Comprehensive**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 218-01-9 | **Chrysene** | **0.0971** | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 53-70-3 | Dibenzo(a,h)anthracene | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 132-64-9 | Dibenzofuran | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 84-66-2 | Diethyl phthalate | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 131-11-3 | Dimethyl phthalate | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 84-74-2 | Di-n-butyl phthalate | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 117-84-0 | Di-n-octyl phthalate | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 206-44-0 | **Fluoranthene** | **0.146** | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 86-73-7 | Fluorene | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | |
| 118-74-1 | Hexachlorobenzene | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 87-68-3 | Hexachlorobutadiene | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 77-47-4 | Hexachlorocyclopentadiene | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 67-72-1 | Hexachloroethane | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 193-39-5 | **Indeno(1,2,3-cd)pyrene** | **0.0864** | J | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 78-59-1 | Isophorone | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 91-20-3 | Naphthalene | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 98-95-3 | Nitrobenzene | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 62-75-9 | N-Nitrosodimethylamine | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 621-64-7 | N-nitroso-di-n-propylamine | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 86-30-6 | N-Nitrosodiphenylamine | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 87-86-5 | Pentachlorophenol | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 85-01-8 | **Phenanthrene** | **0.0566** | J | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |

## Sample Information

**Client Sample ID:** 97SB1 **York Sample ID:** 19C1024-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 19C1024 | 97 Granite | Soil | March 22, 2019 4:40 pm | 03/25/2019 |

### SVOA, 8270 Comprehensive

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 108-95-2 | Phenol | ND | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 129-00-0 | **Pyrene** | **0.137** | | mg/kg dry | 0.0479 | 0.0956 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 08:36 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 367-12-4 | *Surrogate: SURR: 2-Fluorophenol* | *75.5 %* | *20-108* |
| 4165-62-2 | *Surrogate: SURR: Phenol-d5* | *72.2 %* | *23-114* |
| 4165-60-0 | *Surrogate: SURR: Nitrobenzene-d5* | *89.3 %* | *22-108* |
| 321-60-8 | *Surrogate: SURR: 2-Fluorobiphenyl* | *74.1 %* | *21-113* |
| 118-79-6 | *Surrogate: SURR: 2,4,6-Tribromophenol* | *94.1 %* | *19-110* |
| 1718-51-0 | *Surrogate: SURR: Terphenyl-d14* | *85.5 %* | *24-116* |

### Pesticides, 8081 target list

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 72-54-8 | 4,4'-DDD | ND | | ug/kg dry | 1.89 | 5 | EPA 8081B | 04/01/2019 08:21 | 04/01/2019 22:34 | CM |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 72-55-9 | 4,4'-DDE | ND | | ug/kg dry | 1.89 | 5 | EPA 8081B | 04/01/2019 08:21 | 04/01/2019 22:34 | CM |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 50-29-3 | 4,4'-DDT | ND | | ug/kg dry | 1.89 | 5 | EPA 8081B | 04/01/2019 08:21 | 04/01/2019 22:34 | CM |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 309-00-2 | Aldrin | ND | | ug/kg dry | 1.89 | 5 | EPA 8081B | 04/01/2019 08:21 | 04/01/2019 22:34 | CM |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 319-84-6 | alpha-BHC | ND | | ug/kg dry | 1.89 | 5 | EPA 8081B | 04/01/2019 08:21 | 04/01/2019 22:34 | CM |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 5103-71-9 | alpha-Chlordane | ND | | ug/kg dry | 1.89 | 5 | EPA 8081B | 04/01/2019 08:21 | 04/01/2019 22:34 | CM |
| | | | | | | | Certifications: | NELAC-NY10854,NJDEP | | |
| 319-85-7 | beta-BHC | ND | | ug/kg dry | 1.89 | 5 | EPA 8081B | 04/01/2019 08:21 | 04/01/2019 22:34 | CM |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 57-74-9 | Chlordane, total | ND | | ug/kg dry | 37.8 | 5 | EPA 8081B | 04/01/2019 08:21 | 04/01/2019 22:34 | CM |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 319-86-8 | delta-BHC | ND | | ug/kg dry | 1.89 | 5 | EPA 8081B | 04/01/2019 08:21 | 04/01/2019 22:34 | CM |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 60-57-1 | Dieldrin | ND | | ug/kg dry | 1.89 | 5 | EPA 8081B | 04/01/2019 08:21 | 04/01/2019 22:34 | CM |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 959-98-8 | Endosulfan I | ND | | ug/kg dry | 1.89 | 5 | EPA 8081B | 04/01/2019 08:21 | 04/01/2019 22:34 | CM |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 33213-65-9 | Endosulfan II | ND | | ug/kg dry | 1.89 | 5 | EPA 8081B | 04/01/2019 08:21 | 04/01/2019 22:34 | CM |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854 | | |

## Sample Information

**Client Sample ID:** 97SB1 **York Sample ID:** 19C1024-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 19C1024 | 97 Granite | Soil | March 22, 2019 4:40 pm | 03/25/2019 |

### Pesticides, 8081 target list

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 1031-07-8 | Endosulfan sulfate | ND | | ug/kg dry | 1.89 | 5 | EPA 8081B | 04/01/2019 08:21 | 04/01/2019 22:34 | CM |
| | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 72-20-8 | Endrin | ND | | ug/kg dry | 1.89 | 5 | EPA 8081B | 04/01/2019 08:21 | 04/01/2019 22:34 | CM |
| | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7421-93-4 | Endrin aldehyde | ND | | ug/kg dry | 1.89 | 5 | EPA 8081B | 04/01/2019 08:21 | 04/01/2019 22:34 | CM |
| | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 53494-70-5 | Endrin ketone | ND | | ug/kg dry | 1.89 | 5 | EPA 8081B | 04/01/2019 08:21 | 04/01/2019 22:34 | CM |
| | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 58-89-9 | gamma-BHC (Lindane) | ND | | ug/kg dry | 1.89 | 5 | EPA 8081B | 04/01/2019 08:21 | 04/01/2019 22:34 | CM |
| | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 5566-34-7 | gamma-Chlordane | ND | | ug/kg dry | 1.89 | 5 | EPA 8081B | 04/01/2019 08:21 | 04/01/2019 22:34 | CM |
| | | | | | | | Certifications: NELAC-NY10854,NJDEP | | | |
| 76-44-8 | Heptachlor | ND | | ug/kg dry | 1.89 | 5 | EPA 8081B | 04/01/2019 08:21 | 04/01/2019 22:34 | CM |
| | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 1024-57-3 | Heptachlor epoxide | ND | | ug/kg dry | 1.89 | 5 | EPA 8081B | 04/01/2019 08:21 | 04/01/2019 22:34 | CM |
| | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 72-43-5 | Methoxychlor | ND | | ug/kg dry | 9.46 | 5 | EPA 8081B | 04/01/2019 08:21 | 04/01/2019 22:34 | CM |
| | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 8001-35-2 | Toxaphene | ND | | ug/kg dry | 95.7 | 5 | EPA 8081B | 04/01/2019 08:21 | 04/01/2019 22:34 | CM |
| | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 2051-24-3 | *Surrogate: Decachlorobiphenyl* | *72.4 %* | *30-150* |
| 877-09-8 | *Surrogate: Tetrachloro-m-xylene* | *63.4 %* | *30-150* |

### Polychlorinated Biphenyls (PCB)

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg dry | 0.0191 | 1 | EPA 8082A | 04/01/2019 08:21 | 04/01/2019 17:50 | SR |
| | | | | | | | Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | | | |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg dry | 0.0191 | 1 | EPA 8082A | 04/01/2019 08:21 | 04/01/2019 17:50 | SR |
| | | | | | | | Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | | | |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg dry | 0.0191 | 1 | EPA 8082A | 04/01/2019 08:21 | 04/01/2019 17:50 | SR |
| | | | | | | | Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | | | |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg dry | 0.0191 | 1 | EPA 8082A | 04/01/2019 08:21 | 04/01/2019 17:50 | SR |
| | | | | | | | Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | | | |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg dry | 0.0191 | 1 | EPA 8082A | 04/01/2019 08:21 | 04/01/2019 17:50 | SR |
| | | | | | | | Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | | | |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg dry | 0.0191 | 1 | EPA 8082A | 04/01/2019 08:21 | 04/01/2019 17:50 | SR |
| | | | | | | | Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | | | |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg dry | 0.0191 | 1 | EPA 8082A | 04/01/2019 08:21 | 04/01/2019 17:50 | SR |
| | | | | | | | Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | | | |

## Sample Information

**Client Sample ID:** 97SB1 **York Sample ID:** 19C1024-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 19C1024 | 97 Granite | Soil | March 22, 2019 4:40 pm | 03/25/2019 |

### Polychlorinated Biphenyls (PCB)

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 1336-36-3 | * Total PCBs | ND | | mg/kg dry | 0.0191 | 1 | EPA 8082A<br>Certifications: | 04/01/2019 08:21 | 04/01/2019 17:50 | SR |

| Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|
| 877-09-8 *Surrogate: Tetrachloro-m-xylene* | *78.5 %* | *30-140* |
| 2051-24-3 *Surrogate: Decachlorobiphenyl* | *83.0 %* | *30-140* |

### Metals, Target Analyte

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3050B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | **Aluminum** | **6580** | | mg/kg dry | 5.77 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:37 | KML |
| 7440-36-0 | Antimony | ND | | mg/kg dry | 2.89 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:37 | KML |
| 7440-38-2 | **Arsenic** | **7.92** | | mg/kg dry | 1.73 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:37 | KML |
| 7440-39-3 | **Barium** | **102** | | mg/kg dry | 2.89 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:37 | KML |
| 7440-41-7 | **Beryllium** | **0.125** | | mg/kg dry | 0.058 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:37 | KML |
| 7440-43-9 | **Cadmium** | **0.842** | | mg/kg dry | 0.346 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:37 | KML |
| 7440-70-2 | **Calcium** | **22500** | | mg/kg dry | 5.77 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:37 | KML |
| 7440-47-3 | **Chromium** | **9.64** | | mg/kg dry | 0.577 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:37 | KML |
| 7440-48-4 | **Cobalt** | **7.96** | | mg/kg dry | 0.462 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:37 | KML |
| 7440-50-8 | **Copper** | **77.1** | | mg/kg dry | 2.31 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:37 | KML |
| 7439-89-6 | **Iron** | **13500** | | mg/kg dry | 28.9 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:37 | KML |
| 7439-92-1 | **Lead** | **119** | | mg/kg dry | 0.577 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:37 | KML |
| 7439-95-4 | **Magnesium** | **1860** | | mg/kg dry | 5.77 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:37 | KML |
| 7439-96-5 | **Manganese** | **330** | | mg/kg dry | 0.577 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:37 | KML |
| 7440-02-0 | **Nickel** | **26.1** | | mg/kg dry | 1.15 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:37 | KML |
| 7440-09-7 | **Potassium** | **629** | | mg/kg dry | 5.77 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:37 | KML |
| 7782-49-2 | Selenium | ND | | mg/kg dry | 2.89 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:37 | KML |

## Sample Information

**Client Sample ID:** 97SB1 **York Sample ID:** 19C1024-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 19C1024 | 97 Granite | Soil | March 22, 2019 4:40 pm | 03/25/2019 |

### Metals, Target Analyte

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3050B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 7440-22-4 | Silver | ND | | mg/kg dry | 0.577 | 1 | EPA 6010D | 03/26/2019 09:13 | 03/26/2019 16:37 | KML |
| | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-23-5 | **Sodium** | **92.6** | | mg/kg dry | 57.7 | 1 | EPA 6010D | 03/26/2019 09:13 | 03/26/2019 16:37 | KML |
| | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-28-0 | Thallium | ND | | mg/kg dry | 2.89 | 1 | EPA 6010D | 03/26/2019 09:13 | 03/26/2019 16:37 | KML |
| | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-62-2 | **Vanadium** | **20.0** | | mg/kg dry | 1.15 | 1 | EPA 6010D | 03/26/2019 09:13 | 03/26/2019 16:37 | KML |
| | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 7440-66-6 | **Zinc** | **394** | | mg/kg dry | 2.89 | 1 | EPA 6010D | 03/26/2019 09:13 | 03/26/2019 16:37 | KML |
| | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |

### Mercury by 7473

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | **Mercury** | **0.255** | | mg/kg dry | 0.0346 | 1 | EPA 7473 | 03/29/2019 09:08 | 03/29/2019 13:38 | SY |
| | | | | | | | Certifications: CTDOH,NJDEP,NELAC-NY10854,PADEP | | | |

### Total Solids

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: % Solids Prep

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| solids | *** % Solids** | **86.6** | | % | 0.100 | 1 | SM 2540G | 03/29/2019 10:34 | 03/29/2019 15:34 | TJM |
| | | | | | | | Certifications: CTDOH | | | |

## Sample Information

**Client Sample ID:** 97SB2 **York Sample ID:** 19C1024-02

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 19C1024 | 97 Granite | Soil | March 22, 2019 5:15 pm | 03/25/2019 |

### Volatile Organics, 8260 - Comprehensive

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C | 03/27/2019 14:33 | 03/27/2019 14:37 | LLJ |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C | 03/27/2019 14:33 | 03/27/2019 14:37 | LLJ |
| | | | | | | | | Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | | |

## Sample Information

**Client Sample ID:** 97SB2 **York Sample ID:** 19C1024-02

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 19C1024 | 97 Granite | Soil | March 22, 2019 5:15 pm | 03/25/2019 |

### Volatile Organics, 8260 - Comprehensive

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:37 | LLJ |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:37 | LLJ |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:37 | LLJ |
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:37 | LLJ |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:37 | LLJ |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33<br>NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | 03/27/2019 14:37 | LLJ |
| 96-18-4 | 1,2,3-Trichloropropane | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33<br>NELAC-NY10854,NELAC-NY12058,NJDEP | 03/27/2019 14:37 | LLJ |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33<br>NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | 03/27/2019 14:37 | LLJ |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:37 | LLJ |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:37 | LLJ |
| 106-93-4 | 1,2-Dibromoethane | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:37 | LLJ |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:37 | LLJ |
| 107-06-2 | 1,2-Dichloroethane | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:37 | LLJ |
| 78-87-5 | 1,2-Dichloropropane | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:37 | LLJ |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:37 | LLJ |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:37 | LLJ |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:37 | LLJ |
| 123-91-1 | 1,4-Dioxane | ND | | ug/kg dry | 42 | 83 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33<br>NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | 03/27/2019 14:37 | LLJ |
| 78-93-3 | 2-Butanone | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:37 | LLJ |
| 591-78-6 | 2-Hexanone | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:37 | LLJ |
| 108-10-1 | 4-Methyl-2-pentanone | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:37 | LLJ |

## Sample Information

**Client Sample ID:** 97SB2 **York Sample ID:** 19C1024-02

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 19C1024 | 97 Granite | Soil | March 22, 2019 5:15 pm | 03/25/2019 |

### Volatile Organics, 8260 - Comprehensive

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 67-64-1 | **Acetone** | **5.1** | CCV-E, J | ug/kg dry | 4.2 | 8.3 | 1 | EPA 8260C<br>Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:33 | 03/27/2019 14:37 | LLJ |
| 107-02-8 | Acrolein | ND | | ug/kg dry | 4.2 | 8.3 | 1 | EPA 8260C<br>Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:33 | 03/27/2019 14:37 | LLJ |
| 107-13-1 | Acrylonitrile | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:33 | 03/27/2019 14:37 | LLJ |
| 71-43-2 | Benzene | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:33 | 03/27/2019 14:37 | LLJ |
| 74-97-5 | Bromochloromethane | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | 03/27/2019 14:33 | 03/27/2019 14:37 | LLJ |
| 75-27-4 | Bromodichloromethane | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:33 | 03/27/2019 14:37 | LLJ |
| 75-25-2 | Bromoform | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:33 | 03/27/2019 14:37 | LLJ |
| 74-83-9 | Bromomethane | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:33 | 03/27/2019 14:37 | LLJ |
| 75-15-0 | Carbon disulfide | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:33 | 03/27/2019 14:37 | LLJ |
| 56-23-5 | Carbon tetrachloride | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:33 | 03/27/2019 14:37 | LLJ |
| 108-90-7 | Chlorobenzene | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:33 | 03/27/2019 14:37 | LLJ |
| 75-00-3 | Chloroethane | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:33 | 03/27/2019 14:37 | LLJ |
| 67-66-3 | Chloroform | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:33 | 03/27/2019 14:37 | LLJ |
| 74-87-3 | Chloromethane | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:33 | 03/27/2019 14:37 | LLJ |
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:33 | 03/27/2019 14:37 | LLJ |
| 10061-01-5 | cis-1,3-Dichloropropylene | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:33 | 03/27/2019 14:37 | LLJ |
| 110-82-7 | Cyclohexane | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | 03/27/2019 14:33 | 03/27/2019 14:37 | LLJ |
| 124-48-1 | Dibromochloromethane | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | 03/27/2019 14:33 | 03/27/2019 14:37 | LLJ |
| 74-95-3 | Dibromomethane | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | 03/27/2019 14:33 | 03/27/2019 14:37 | LLJ |
| 75-71-8 | Dichlorodifluoromethane | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI | 03/27/2019 14:33 | 03/27/2019 14:37 | LLJ |
| 100-41-4 | Ethyl Benzene | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | 03/27/2019 14:33 | 03/27/2019 14:37 | LLJ |

## Sample Information

**Client Sample ID:** 97SB2 **York Sample ID:** 19C1024-02

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 19C1024 | 97 Granite | Soil | March 22, 2019 5:15 pm | 03/25/2019 |

**Volatile Organics, 8260 - Comprehensive**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 87-68-3 | Hexachlorobutadiene | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33 | 03/27/2019 14:37<br>NELAC-NY10854,NELAC-NY12058,NJDEP,PAL | LLJ |
| 98-82-8 | Isopropylbenzene | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33 | 03/27/2019 14:37<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | LLJ |
| 79-20-9 | Methyl acetate | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33 | 03/27/2019 14:37<br>NELAC-NY10854,NELAC-NY12058,NJDEP,PAL | LLJ |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33 | 03/27/2019 14:37<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | LLJ |
| 108-87-2 | Methylcyclohexane | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33 | 03/27/2019 14:37<br>NELAC-NY10854,NELAC-NY12058,NJDEP,PAL | LLJ |
| 75-09-2 | Methylene chloride | ND | | ug/kg dry | 4.2 | 8.3 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33 | 03/27/2019 14:37<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | LLJ |
| 104-51-8 | n-Butylbenzene | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33 | 03/27/2019 14:37<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | LLJ |
| 103-65-1 | n-Propylbenzene | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33 | 03/27/2019 14:37<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | LLJ |
| 95-47-6 | o-Xylene | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33 | 03/27/2019 14:37<br>CTDOH,NELAC-NY10854,NELAC-NY12058,PA | LLJ |
| 179601-23-1 | p- & m- Xylenes | ND | | ug/kg dry | 4.2 | 8.3 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33 | 03/27/2019 14:37<br>CTDOH,NELAC-NY10854,NELAC-NY12058,PA | LLJ |
| 99-87-6 | p-Isopropyltoluene | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33 | 03/27/2019 14:37<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | LLJ |
| 135-98-8 | sec-Butylbenzene | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33 | 03/27/2019 14:37<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | LLJ |
| 100-42-5 | Styrene | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33 | 03/27/2019 14:37<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | LLJ |
| 75-65-0 | tert-Butyl alcohol (TBA) | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33 | 03/27/2019 14:37<br>NELAC-NY10854,NELAC-NY12058,NJDEP,PAL | LLJ |
| 98-06-6 | tert-Butylbenzene | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33 | 03/27/2019 14:37<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | LLJ |
| 127-18-4 | Tetrachloroethylene | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33 | 03/27/2019 14:37<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | LLJ |
| 108-88-3 | Toluene | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33 | 03/27/2019 14:37<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | LLJ |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33 | 03/27/2019 14:37<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | LLJ |
| 10061-02-6 | trans-1,3-Dichloropropylene | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33 | 03/27/2019 14:37<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | LLJ |
| 110-57-6 | * trans-1,4-dichloro-2-butene | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33 | 03/27/2019 14:37<br>CTDOH | LLJ |
| 79-01-6 | Trichloroethylene | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C<br>Certifications: | 03/27/2019 14:33 | 03/27/2019 14:37<br>CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | LLJ |

## Sample Information

**Client Sample ID:** 97SB2 **York Sample ID:** 19C1024-02

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 19C1024 | 97 Granite | Soil | March 22, 2019 5:15 pm | 03/25/2019 |

### Volatile Organics, 8260 - Comprehensive

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 75-69-4 | Trichlorofluoromethane | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C | 03/27/2019 14:33 | 03/27/2019 14:37 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 75-01-4 | Vinyl Chloride | ND | | ug/kg dry | 2.1 | 4.2 | 1 | EPA 8260C | 03/27/2019 14:33 | 03/27/2019 14:37 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |
| 1330-20-7 | Xylenes, Total | ND | | ug/kg dry | 6.2 | 12 | 1 | EPA 8260C | 03/27/2019 14:33 | 03/27/2019 14:37 | LLJ |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJ | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 17060-07-0 | *Surrogate: SURR: 1,2-Dichloroethane-d4* | *109 %* | *77-125* |
| 2037-26-5 | *Surrogate: SURR: Toluene-d8* | *108 %* | *85-120* |
| 460-00-4 | *Surrogate: SURR: p-Bromofluorobenzene* | *102 %* | *76-130* |

### SVOA, 8270 Comprehensive

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 92-52-4 | 1,1-Biphenyl | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | ND | | mg/kg dry | 0.0939 | 0.187 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | NELAC-NY10854,PADEP | | |
| 122-66-7 | 1,2-Diphenylhydrazine (as Azobenzene) | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | NELAC-NY10854,PADEP | | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | NELAC-NY10854,PADEP | | |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | ND | | mg/kg dry | 0.0939 | 0.187 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | |
| 95-95-4 | 2,4,5-Trichlorophenol | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 88-06-2 | 2,4,6-Trichlorophenol | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 120-83-2 | 2,4-Dichlorophenol | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 105-67-9 | 2,4-Dimethylphenol | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 51-28-5 | 2,4-Dinitrophenol | ND | | mg/kg dry | 0.0939 | 0.187 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |

## Sample Information

**Client Sample ID:** 97SB2 **York Sample ID:** 19C1024-02

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 19C1024 | 97 Granite | Soil | March 22, 2019 5:15 pm | 03/25/2019 |

**SVOA, 8270 Comprehensive** **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 121-14-2 | 2,4-Dinitrotoluene | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 606-20-2 | 2,6-Dinitrotoluene | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 91-58-7 | 2-Chloronaphthalene | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 95-57-8 | 2-Chlorophenol | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 91-57-6 | 2-Methylnaphthalene | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 95-48-7 | 2-Methylphenol | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 88-74-4 | 2-Nitroaniline | ND | | mg/kg dry | 0.0939 | 0.187 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 88-75-5 | 2-Nitrophenol | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 65794-96-9 | 3- & 4-Methylphenols | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 91-94-1 | 3,3-Dichlorobenzidine | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | |
| 99-09-2 | 3-Nitroaniline | ND | | mg/kg dry | 0.0939 | 0.187 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | ND | | mg/kg dry | 0.0939 | 0.187 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 101-55-3 | 4-Bromophenyl phenyl ether | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 59-50-7 | 4-Chloro-3-methylphenol | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 106-47-8 | 4-Chloroaniline | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 100-01-6 | 4-Nitroaniline | ND | | mg/kg dry | 0.0939 | 0.187 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 100-02-7 | 4-Nitrophenol | ND | | mg/kg dry | 0.0939 | 0.187 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 83-32-9 | Acenaphthene | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 208-96-8 | Acenaphthylene | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 98-86-2 | Acetophenone | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | |

## Sample Information

**Client Sample ID:** 97SB2 **York Sample ID:** 19C1024-02

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 19C1024 | 97 Granite | Soil | March 22, 2019 5:15 pm | 03/25/2019 |

**SVOA, 8270 Comprehensive**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 62-53-3 | Aniline | ND | | mg/kg dry | 0.188 | 0.376 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | |
| 120-12-7 | Anthracene | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 1912-24-9 | Atrazine | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | |
| 100-52-7 | Benzaldehyde | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | |
| 92-87-5 | Benzidine | ND | | mg/kg dry | 0.188 | 0.376 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,PADEP | | |
| 56-55-3 | **Benzo(a)anthracene** | **0.156** | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 50-32-8 | **Benzo(a)pyrene** | **0.162** | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 205-99-2 | **Benzo(b)fluoranthene** | **0.154** | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 191-24-2 | **Benzo(g,h,i)perylene** | **0.111** | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 207-08-9 | **Benzo(k)fluoranthene** | **0.137** | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 65-85-0 | Benzoic acid | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | |
| 100-51-6 | Benzyl alcohol | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | |
| 85-68-7 | Benzyl butyl phthalate | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 111-91-1 | Bis(2-chloroethoxy)methane | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 111-44-4 | Bis(2-chloroethyl)ether | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 108-60-1 | Bis(2-chloroisopropyl)ether | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 117-81-7 | **Bis(2-ethylhexyl)phthalate** | **0.0983** | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 105-60-2 | Caprolactam | ND | | mg/kg dry | 0.0939 | 0.187 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | |
| 86-74-8 | Carbazole | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 218-01-9 | **Chrysene** | **0.153** | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 53-70-3 | Dibenzo(a,h)anthracene | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 132-64-9 | Dibenzofuran | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |

## Sample Information

**Client Sample ID:** 97SB2 **York Sample ID:** 19C1024-02

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 19C1024 | 97 Granite | Soil | March 22, 2019 5:15 pm | 03/25/2019 |

### SVOA, 8270 Comprehensive

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 84-66-2 | Diethyl phthalate | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 131-11-3 | Dimethyl phthalate | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 84-74-2 | Di-n-butyl phthalate | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 117-84-0 | Di-n-octyl phthalate | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 206-44-0 | **Fluoranthene** | **0.242** | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 86-73-7 | Fluorene | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | NELAC-NY10854,NJDEP,PADEP | | |
| 118-74-1 | Hexachlorobenzene | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 87-68-3 | Hexachlorobutadiene | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 77-47-4 | Hexachlorocyclopentadiene | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 67-72-1 | Hexachloroethane | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 193-39-5 | **Indeno(1,2,3-cd)pyrene** | **0.134** | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 78-59-1 | Isophorone | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 91-20-3 | Naphthalene | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 98-95-3 | Nitrobenzene | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 62-75-9 | N-Nitrosodimethylamine | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 621-64-7 | N-nitroso-di-n-propylamine | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 86-30-6 | N-Nitrosodiphenylamine | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 87-86-5 | Pentachlorophenol | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 85-01-8 | **Phenanthrene** | **0.0683** | J | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 108-95-2 | Phenol | ND | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |
| 129-00-0 | **Pyrene** | **0.240** | | mg/kg dry | 0.0470 | 0.0939 | 2 | EPA 8270D | 04/01/2019 21:03 | 04/03/2019 09:08 | SR |
| | | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NJDEP,PADEP | | |

| Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|

## Sample Information

**Client Sample ID:** 97SB2 **York Sample ID:** 19C1024-02

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 19C1024 | 97 Granite | Soil | March 22, 2019 5:15 pm | 03/25/2019 |

### SVOA, 8270 Comprehensive

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 367-12-4 | *Surrogate: SURR: 2-Fluorophenol* | *68.6 %* | | | *20-108* | | | | | | |
| 4165-62-2 | *Surrogate: SURR: Phenol-d5* | *66.4 %* | | | *23-114* | | | | | | |
| 4165-60-0 | *Surrogate: SURR: Nitrobenzene-d5* | *80.1 %* | | | *22-108* | | | | | | |
| 321-60-8 | *Surrogate: SURR: 2-Fluorobiphenyl* | *66.2 %* | | | *21-113* | | | | | | |
| 118-79-6 | *Surrogate: SURR: 2,4,6-Tribromophenol* | *82.9 %* | | | *19-110* | | | | | | |
| 1718-51-0 | *Surrogate: SURR: Terphenyl-d14* | *75.0 %* | | | *24-116* | | | | | | |

### Pesticides, 8081 target list

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 72-54-8 | 4,4'-DDD | ND | | ug/kg dry | 1.86 | 5 | EPA 8081B<br>Certifications: | 04/01/2019 08:21<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 04/01/2019 22:49 | CM |
| 72-55-9 | 4,4'-DDE | ND | | ug/kg dry | 1.86 | 5 | EPA 8081B<br>Certifications: | 04/01/2019 08:21<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 04/01/2019 22:49 | CM |
| 50-29-3 | 4,4'-DDT | ND | | ug/kg dry | 1.86 | 5 | EPA 8081B<br>Certifications: | 04/01/2019 08:21<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 04/01/2019 22:49 | CM |
| 309-00-2 | Aldrin | ND | | ug/kg dry | 1.86 | 5 | EPA 8081B<br>Certifications: | 04/01/2019 08:21<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 04/01/2019 22:49 | CM |
| 319-84-6 | alpha-BHC | ND | | ug/kg dry | 1.86 | 5 | EPA 8081B<br>Certifications: | 04/01/2019 08:21<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 04/01/2019 22:49 | CM |
| 5103-71-9 | alpha-Chlordane | ND | | ug/kg dry | 1.86 | 5 | EPA 8081B<br>Certifications: | 04/01/2019 08:21<br>NELAC-NY10854,NJDEP | 04/01/2019 22:49 | CM |
| 319-85-7 | beta-BHC | ND | | ug/kg dry | 1.86 | 5 | EPA 8081B<br>Certifications: | 04/01/2019 08:21<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 04/01/2019 22:49 | CM |
| 57-74-9 | Chlordane, total | ND | | ug/kg dry | 37.1 | 5 | EPA 8081B<br>Certifications: | 04/01/2019 08:21<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 04/01/2019 22:49 | CM |
| 319-86-8 | delta-BHC | ND | | ug/kg dry | 1.86 | 5 | EPA 8081B<br>Certifications: | 04/01/2019 08:21<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 04/01/2019 22:49 | CM |
| 60-57-1 | Dieldrin | ND | | ug/kg dry | 1.86 | 5 | EPA 8081B<br>Certifications: | 04/01/2019 08:21<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 04/01/2019 22:49 | CM |
| 959-98-8 | Endosulfan I | ND | | ug/kg dry | 1.86 | 5 | EPA 8081B<br>Certifications: | 04/01/2019 08:21<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 04/01/2019 22:49 | CM |
| 33213-65-9 | Endosulfan II | ND | | ug/kg dry | 1.86 | 5 | EPA 8081B<br>Certifications: | 04/01/2019 08:21<br>CTDOH,NELAC-NY10854 | 04/01/2019 22:49 | CM |
| 1031-07-8 | Endosulfan sulfate | ND | | ug/kg dry | 1.86 | 5 | EPA 8081B<br>Certifications: | 04/01/2019 08:21<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 04/01/2019 22:49 | CM |
| 72-20-8 | Endrin | ND | | ug/kg dry | 1.86 | 5 | EPA 8081B<br>Certifications: | 04/01/2019 08:21<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 04/01/2019 22:49 | CM |
| 7421-93-4 | Endrin aldehyde | ND | | ug/kg dry | 1.86 | 5 | EPA 8081B<br>Certifications: | 04/01/2019 08:21<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 04/01/2019 22:49 | CM |

## Sample Information

**Client Sample ID:** 97SB2 **York Sample ID:** 19C1024-02

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 19C1024 | 97 Granite | Soil | March 22, 2019 5:15 pm | 03/25/2019 |

### Pesticides, 8081 target list

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 53494-70-5 | Endrin ketone | ND | | ug/kg dry | 1.86 | 5 | EPA 8081B | 04/01/2019 08:21 | 04/01/2019 22:49 | CM |
| | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 58-89-9 | gamma-BHC (Lindane) | ND | | ug/kg dry | 1.86 | 5 | EPA 8081B | 04/01/2019 08:21 | 04/01/2019 22:49 | CM |
| | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 5566-34-7 | gamma-Chlordane | ND | | ug/kg dry | 1.86 | 5 | EPA 8081B | 04/01/2019 08:21 | 04/01/2019 22:49 | CM |
| | | | | | | | Certifications: NELAC-NY10854,NJDEP | | | |
| 76-44-8 | Heptachlor | ND | | ug/kg dry | 1.86 | 5 | EPA 8081B | 04/01/2019 08:21 | 04/01/2019 22:49 | CM |
| | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 1024-57-3 | Heptachlor epoxide | ND | | ug/kg dry | 1.86 | 5 | EPA 8081B | 04/01/2019 08:21 | 04/01/2019 22:49 | CM |
| | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 72-43-5 | Methoxychlor | ND | | ug/kg dry | 9.28 | 5 | EPA 8081B | 04/01/2019 08:21 | 04/01/2019 22:49 | CM |
| | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |
| 8001-35-2 | Toxaphene | ND | | ug/kg dry | 94.0 | 5 | EPA 8081B | 04/01/2019 08:21 | 04/01/2019 22:49 | CM |
| | | | | | | | Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 2051-24-3 | *Surrogate: Decachlorobiphenyl* | *70.2 %* | *30-150* |
| 877-09-8 | *Surrogate: Tetrachloro-m-xylene* | *57.0 %* | *30-150* |

### Polychlorinated Biphenyls (PCB)

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg dry | 0.0187 | 1 | EPA 8082A | 04/01/2019 08:21 | 04/01/2019 18:03 | SR |
| | | | | | | | Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | | | |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg dry | 0.0187 | 1 | EPA 8082A | 04/01/2019 08:21 | 04/01/2019 18:03 | SR |
| | | | | | | | Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | | | |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg dry | 0.0187 | 1 | EPA 8082A | 04/01/2019 08:21 | 04/01/2019 18:03 | SR |
| | | | | | | | Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | | | |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg dry | 0.0187 | 1 | EPA 8082A | 04/01/2019 08:21 | 04/01/2019 18:03 | SR |
| | | | | | | | Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | | | |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg dry | 0.0187 | 1 | EPA 8082A | 04/01/2019 08:21 | 04/01/2019 18:03 | SR |
| | | | | | | | Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | | | |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg dry | 0.0187 | 1 | EPA 8082A | 04/01/2019 08:21 | 04/01/2019 18:03 | SR |
| | | | | | | | Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | | | |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg dry | 0.0187 | 1 | EPA 8082A | 04/01/2019 08:21 | 04/01/2019 18:03 | SR |
| | | | | | | | Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | | | |
| 1336-36-3 | * Total PCBs | ND | | mg/kg dry | 0.0187 | 1 | EPA 8082A | 04/01/2019 08:21 | 04/01/2019 18:03 | SR |
| | | | | | | | Certifications: | | | |

| | Surrogate Recoveries | Result | Acceptance Range |
|---|---|---|---|
| 877-09-8 | *Surrogate: Tetrachloro-m-xylene* | *84.0 %* | *30-140* |
| 2051-24-3 | *Surrogate: Decachlorobiphenyl* | *95.0 %* | *30-140* |

## Sample Information

**Client Sample ID:** 97SB2 **York Sample ID:** 19C1024-02

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 19C1024 | 97 Granite | Soil | March 22, 2019 5:15 pm | 03/25/2019 |

**Metals, Target Analyte**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 3050B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | **Aluminum** | **7110** | | mg/kg dry | 5.68 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:39 | KML |
| 7440-36-0 | **Antimony** | **5.53** | | mg/kg dry | 2.84 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:39 | KML |
| 7440-38-2 | **Arsenic** | **24.6** | | mg/kg dry | 1.70 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:39 | KML |
| 7440-39-3 | **Barium** | **85.1** | | mg/kg dry | 2.84 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:39 | KML |
| 7440-41-7 | Beryllium | ND | | mg/kg dry | 0.057 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:39 | KML |
| 7440-43-9 | **Cadmium** | **2.07** | | mg/kg dry | 0.341 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:39 | KML |
| 7440-70-2 | **Calcium** | **31200** | | mg/kg dry | 5.68 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:39 | KML |
| 7440-47-3 | **Chromium** | **33.7** | | mg/kg dry | 0.568 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:39 | KML |
| 7440-48-4 | **Cobalt** | **8.82** | | mg/kg dry | 0.455 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:39 | KML |
| 7440-50-8 | **Copper** | **166** | | mg/kg dry | 2.27 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:39 | KML |
| 7439-89-6 | **Iron** | **35600** | | mg/kg dry | 28.4 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:39 | KML |
| 7439-92-1 | **Lead** | **481** | | mg/kg dry | 0.568 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:39 | KML |
| 7439-95-4 | **Magnesium** | **2560** | | mg/kg dry | 5.68 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:39 | KML |
| 7439-96-5 | **Manganese** | **316** | | mg/kg dry | 0.568 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:39 | KML |
| 7440-02-0 | **Nickel** | **42.0** | | mg/kg dry | 1.14 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:39 | KML |
| 7440-09-7 | **Potassium** | **683** | | mg/kg dry | 5.68 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:39 | KML |
| 7782-49-2 | Selenium | ND | | mg/kg dry | 2.84 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:39 | KML |
| 7440-22-4 | Silver | ND | | mg/kg dry | 0.568 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:39 | KML |
| 7440-23-5 | **Sodium** | **103** | | mg/kg dry | 56.8 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:39 | KML |
| 7440-28-0 | Thallium | ND | | mg/kg dry | 2.84 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:39 | KML |
| 7440-62-2 | **Vanadium** | **33.5** | | mg/kg dry | 1.14 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:39 | KML |
| 7440-66-6 | **Zinc** | **599** | | mg/kg dry | 2.84 | 1 | EPA 6010D<br>Certifications: | 03/26/2019 09:13<br>CTDOH,NELAC-NY10854,NJDEP,PADEP | 03/26/2019 16:39 | KML |

## Sample Information

**Client Sample ID:** 97SB2 **York Sample ID:** 19C1024-02

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|---|---|---|---|---|
| 19C1024 | 97 Granite | Soil | March 22, 2019 5:15 pm | 03/25/2019 |

### Mercury by 7473

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | **Mercury** | **0.116** | | mg/kg dry | 0.0341 | 1 | EPA 7473 | 03/29/2019 09:08 | 03/29/2019 13:47 | SY |
| | | | | | | | Certifications: CTDOH,NJDEP,NELAC-NY10854,PADEP | | | |

### Total Solids

**Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: % Solids Prep

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| solids | *** % Solids** | **88.0** | | % | 0.100 | 1 | SM 2540G | 03/29/2019 10:34 | 03/29/2019 15:34 | TJM |
| | | | | | | | Certifications: CTDOH | | | |

## Volatile Analysis Sample Containers

| Lab ID | Client Sample ID | Volatile Sample Container |
|---|---|---|
| 19C1024-01 | 97SB1 | 40mL Vial with Stir Bar-Cool 4° C |
| 19C1024-02 | 97SB2 | 40mL Vial with Stir Bar-Cool 4° C |

## Sample and Data Qualifiers Relating to This Work Order

| | |
|---|---|
| QL-02 | This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature. |
| M-CRL | The RL check for this element recovered outside of control limits. |
| J | Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration. |
| CCV-E | The value reported is ESTIMATED. The value is estimated due to its behavior during continuing calibration verification (>20% Difference for average Rf or >20% Drift for quadratic fit). |

## Definitions and Other Explanations

| | |
|---|---|
| * | Analyte is not certified or the state of the samples origination does not offer certification for the Analyte. |
| ND | NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL) |
| RL | REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve. |
| LOQ | LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses. |
| LOD | LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846. |
| MDL | METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods. |
| Reported to | This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only. |
| NR | Not reported |
| RPD | Relative Percent Difference |
| Wet | The data has been reported on an as-received (wet weight) basis |
| Low Bias | Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias. |
| High Bias | High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias. |
| Non-Dir. | Non-dir. flag (Non-Directional Bias ) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons. |

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

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www.yorklab.com

# Field Chain-of-Custody Record

**NOTE:** YORK's Standard Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization for YORK to proceed with the analyses requested below.
Your signature binds you to YORK's Standard Terms & Conditions.

YORK Project No. 19C1024



| YOUR Information | Report To: | Invoice To: |
|---|---|---|
| Company: GEI Consultants | Company: | Company: |
| Address: 110 Walt Whitman Rd Huntington Station NY | Address: SAME | Address: |
| Phone.: 631 759 2977 | Phone.: | Phone.: |
| Contact: Ed Bradshaw | Contact: | Contact: |
| E-mail: ebradshaw@geiconsultants.com | E-mail: | E-mail: |

**YOUR Project Number:**

**YOUR Project Name:** 97 Granite

**YOUR PO#:**

**Turn-Around Time**

| | |
|---|---|
| RUSH - Next Day | |
| RUSH - Two Day | |
| RUSH - Three Day | |
| RUSH - Four Day | |
| Standard (5-7 Day) | X |

*Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.*

Samples Collected by: (print your name above and sign below)
Ed Bradshaw

**Matrix Codes:** S - soil / solid; GW - groundwater; DW - drinking water; WW - wastewater; O - Oil; Other

**Samples From:** New York X; New Jersey; Connecticut; Pennsylvania; Other

**Report / EDD Type** (circle selections): Summary Report; QA Report; NY ASP A Package; NY ASP B Package; CT RCP; CT RCP DQA/DUE; NJDEP Reduced Deliverables; NJDKQP; Standard Excel EDD; EQuIS (Standard); NYSDEC EQuIS; NJDEP SRP HazSite; Other:

**YORK Reg. Comp.:** Compared to the following Regulation(s): (please fill in) 375 Unrestricted and Restricted Residential

| Sample Identification | Sample Matrix | Date/Time Sampled | Analysis Requested | Container Description |
|---|---|---|---|---|
| 97SB1 | S | 3.22.19 1640 | VOC, SVOC, TAL Metals, PCB, Pest | 1802/4oz/Tonka |
| 97SB2 | S | 3.22.19 1715 | VOC, SVOC, TAL Metals, PCB, Pest | 1 |

**Comments:**

**Preservation:** (check all that apply)
HCl ___ MeOH ___ HNO3 ___ H2SO4 ___ NaOH ___ ZnAc ___
Ascorbic Acid ___ Other: ___

**Special Instruction:** Field Filtered ___ Lab to Filter ___

| Samples Relinquished by / Company | Date/Time | Samples Received by / Company | Date/Time | Samples Relinquished by / Company | Date/Time |
|---|---|---|---|---|---|
| [signature] | 3.25.19 1250 PM | KBakowski | 3/25/19 1250PM | KBakowski | 3/25/19 1753 |
| Samples Received by / Company | Date/Time | Samples Relinquished by / Company | Date/Time | Samples Received by / Company | Date/Time |
| | | | | | |
| Samples Relinquished by / Company | Date/Time | Samples Received by / Company | Date/Time | Samples Received in LAB by | Date/Time / Temp. Received at Lab |
| | | | | TC Mahl | 3/25/19 1753 / 4.8 Degrees C |

# APPENDIX D
# TRACK 4 AREA ENDPOINT SAMPLE ANALYTICALS DATA

Table 1a. Endpoint Soil Analytical Results
Volatile Organic Compounds
99 Granite Street
Brooklyn, New York

| **Client ID** | NYDEC 375-6 | **EP-13** | | **EP-17** | |
|---|---|---|---|---|---|
| **Lab Sample ID** | Soil Cleanup Obj | 460-273093-2 | | 460-273323-1 | |
| **Sampling Date** | UnRestricted Use | 01/17/2023 09:00:00 | | 01/20/2023 08:50:00 | |
| **Matrix** | | Soil | | Soil | |
| **Dilution Factor** | | 1 | | 1 | |
| **Unit** | mg/kg | mg/kg | | mg/kg | |
| | | Result | Q | Result | Q |
| **SOIL BY 8260D** | | | | | |
| 1,1,1-Trichloroethane | 0.68 | 0.0011 | U | 0.00089 | U |
| 1,1,2,2-Tetrachloroethane | NA | 0.0011 | U | 0.00089 | U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | NA | 0.0011 | U | 0.00089 | U |
| 1,1,2-Trichloroethane | NA | 0.0011 | U | 0.00089 | U |
| 1,1-Dichloroethane | 0.27 | 0.0011 | U | 0.00089 | U |
| 1,1-Dichloroethene | 0.33 | 0.0011 | U | 0.00089 | U |
| 1,2,3-Trichlorobenzene | NA | 0.0011 | U | 0.00089 | U |
| 1,2,4-Trichlorobenzene | NA | 0.0011 | U | 0.00089 | U |
| 1,2-Dibromo-3-Chloropropane | NA | 0.0011 | U | 0.00089 | U |
| 1,2-Dichlorobenzene | 1.1 | 0.0011 | U | 0.00089 | U |
| 1,2-Dichloroethane | NA | 0.0011 | U | 0.00089 | U |
| 1,2-Dichloropropane | NA | 0.0011 | U | 0.00089 | U |
| 1,3-Dichlorobenzene | 2.4 | 0.0011 | U | 0.00089 | U |
| 1,4-Dichlorobenzene | 1.8 | 0.0011 | U | 0.00089 | U |
| 2-Butanone (MEK) | 0.12 | 0.0055 | U | 0.0045 | U |
| 2-Hexanone | NA | 0.0055 | U | 0.0045 | U |
| 4-Methyl-2-pentanone (MIBK) | NA | 0.0055 | U | 0.0045 | U |
| Acetone | 0.05 | 0.0065 | U | 0.0054 | U |
| Benzene | 0.06 | 0.0011 | U | 0.00089 | U |
| Bromoform | NA | 0.0011 | U | 0.00089 | U |
| Bromomethane | NA | 0.0022 | U | 0.0018 | U |
| Carbon disulfide | NA | 0.0011 | U | 0.00089 | U |
| Carbon tetrachloride | 0.76 | 0.0011 | U | 0.00089 | U |
| Chlorobenzene | 1.1 | 0.0011 | U | 0.00089 | U |
| Chlorobromomethane | NA | 0.0011 | U | 0.00089 | U |
| Chlorodibromomethane | NA | 0.0011 | U | 0.00089 | U |
| Chloroethane | NA | 0.0011 | U * | 0.00089 | U |
| Chloroform | 0.37 | 0.0011 | U | 0.00089 | U |
| Chloromethane | NA | 0.0011 | U | 0.00089 | U |
| cis-1,2-Dichloroethene | 0.25 | 0.0011 | U | 0.00089 | U |
| cis-1,3-Dichloropropene | NA | 0.0011 | U | 0.00089 | U |
| Cyclohexane | NA | 0.0011 | U | 0.00089 | U |
| Dichlorobromomethane | NA | 0.0011 | U | 0.00089 | U |
| Dichlorodifluoromethane | NA | 0.0011 | U | 0.00089 | U |
| Ethylbenzene | 1 | 0.0011 | U | 0.00089 | U |
| Ethylene Dibromide | NA | 0.0011 | U | 0.00089 | U |
| Isopropylbenzene | NA | 0.0011 | U * | 0.00089 | U |
| Methyl acetate | NA | 0.0055 | U | 0.0045 | U |
| Methyl tert-butyl ether | 0.93 | 0.0011 | U | 0.00089 | U |
| Methylcyclohexane | NA | 0.0011 | U | 0.00089 | U |
| Methylene Chloride | 0.05 | 0.0022 | U | 0.0018 | U |
| m-Xylene & p-Xylene | NA | 0.0011 | U | 0.00089 | U |
| o-Xylene | NA | 0.0011 | U | 0.00089 | U |
| Styrene | NA | 0.0011 | U | 0.00089 | U |
| Tetrachloroethene | 1.3 | 0.0011 | U | 0.00089 | U |
| Toluene | 0.7 | 0.0011 | U | 0.00089 | U |
| trans-1,2-Dichloroethene | 0.19 | 0.0011 | U | 0.00089 | U |
| trans-1,3-Dichloropropene | NA | 0.0011 | U | 0.00089 | U |
| Trichloroethene | 0.47 | 0.0011 | U | 0.00089 | U |
| Trichlorofluoromethane | NA | 0.0011 | U * | 0.00089 | U |
| Vinyl chloride | 0.02 | 0.0011 | U | 0.00089 | U |
| Total Conc | NA | | | | |
| Total Estimated Conc. (TICs) | NA | 0.0*T | | 0.0*T | |

Notes:
U : Indicates the analyte was analyzed for but not detected.
*NYCRR, Chapter IV, Part 375-6 Soil Cleanup Objectives (SCOs) Unrestricted Use and Restricted-Residential
Exceeds NYSDEC Unrestricted Use SCOs
*- : LCS and/or LCSD is outside acceptance limits, low biased.
J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

# Table 1b. Endpoint Soil Analytical Results
# Semi-Volatile Organic Compounds
# 99 Granite Street
# Brooklyn, New York

| **Client ID** | NYDEC 375-6 | **EP-13** | | **EP-17** | |
|---|---|---|---|---|---|
| **Lab Sample ID** | Soil Cleanup Obj | 460-273093-2 | | 460-273323-1 | |
| **Sampling Date** | UnRestricted Use | 01/17/2023 09:00:00 | | 01/20/2023 08:50:00 | |
| **Matrix** | | Soil | | Soil | |
| **Dilution Factor** | | 1 | | 1 | |
| **Unit** | mg/kg | mg/kg | | mg/kg | |
| | | Result | Q | Result | Q |
| **SOIL BY 8270E** | | | | | |
| 1,1'-Biphenyl | NA | **0.036** | J | 0.35 | U |
| 1,2,4,5-Tetrachlorobenzene | NA | 0.36 | U | 0.35 | U |
| 1,4-Dioxane | 0.1 | 0.036 | U | 0.035 | U |
| 2,2'-oxybis[1-chloropropane] | NA | 0.36 | U | 0.35 | U |
| 2,3,4,6-Tetrachlorophenol | NA | 0.36 | U | 0.35 | U |
| 2,4,5-Trichlorophenol | NA | 0.36 | U | 0.35 | U |
| 2,4,6-Trichlorophenol | NA | 0.15 | U | 0.14 | U |
| 2,4-Dichlorophenol | NA | 0.15 | U | 0.14 | U |
| 2,4-Dimethylphenol | NA | 0.36 | U | 0.35 | U |
| 2,4-Dinitrophenol | NA | 0.29 | U * | 0.28 | U |
| 2,4-Dinitrotoluene | NA | 0.074 | U | 0.072 | U |
| 2,6-Dinitrotoluene | NA | 0.074 | U | 0.072 | U |
| 2-Chloronaphthalene | NA | 0.36 | U | 0.35 | U |
| 2-Chlorophenol | NA | 0.36 | U | 0.35 | U |
| 2-Methylnaphthalene | NA | **0.10** | J | 0.35 | U |
| 2-Methylphenol | 0.33 | 0.36 | U | 0.35 | U |
| 2-Nitroaniline | NA | 0.36 | U | 0.35 | U |
| 2-Nitrophenol | NA | 0.36 | U | 0.35 | U |
| 3,3'-Dichlorobenzidine | NA | 0.15 | U | 0.14 | U |
| 3-Nitroaniline | NA | 0.36 | U | 0.35 | U |
| 4,6-Dinitro-2-methylphenol | NA | 0.29 | U * | 0.28 | U |
| 4-Bromophenyl phenyl ether | NA | 0.36 | U | 0.35 | U |
| 4-Chloro-3-methylphenol | NA | 0.36 | U | 0.35 | U |
| 4-Chloroaniline | NA | 0.36 | U | 0.35 | U |
| 4-Chlorophenyl phenyl ether | NA | 0.36 | U | 0.35 | U |
| 4-Methylphenol | 0.33 | 0.36 | U | 0.35 | U |
| 4-Nitroaniline | NA | 0.36 | U | 0.35 | U |
| 4-Nitrophenol | NA | 0.74 | U | 0.72 | U |
| Acenaphthene | 20 | **0.47** | | **0.021** | J |
| Acenaphthylene | 100 | **0.036** | J | **0.019** | J |
| Acetophenone | NA | 0.36 | U | 0.35 | U |
| Anthracene | 100 | **0.89** | | **0.075** | J |
| Atrazine | NA | 0.15 | U * | 0.14 | U |
| Benzaldehyde | NA | **0.077** | J * | **0.094** | J |
| Benzo[a]anthracene | 1 | **1.6** | | **0.30** | |
| Benzo[a]pyrene | 1 | **1.4** | | **0.25** | |
| Benzo[b]fluoranthene | 1 | **1.8** | | **0.33** | |
| Benzo[g,h,i]perylene | 100 | **0.90** | | **0.17** | J |
| Benzo[k]fluoranthene | 0.8 | **0.67** | | **0.12** | |
| Bis(2-chloroethoxy)methane | NA | 0.36 | U | 0.35 | U |
| Bis(2-chloroethyl)ether | NA | 0.036 | U | 0.035 | U |
| Bis(2-ethylhexyl) phthalate | NA | 0.36 | U | 0.35 | U |
| Butyl benzyl phthalate | NA | 0.36 | U | 0.35 | U |
| Caprolactam | NA | 0.36 | U * | 0.35 | U |
| Carbazole | NA | **0.35** | J | **0.023** | J |
| Chrysene | 1 | **1.4** | | **0.29** | J |
| Dibenz(a,h)anthracene | 0.33 | 0.25 | | **0.044** | |
| Dibenzofuran | 7 | **0.29** | J | **0.015** | J |
| Diethyl phthalate | NA | 0.36 | U | 0.35 | U |
| Dimethyl phthalate | NA | 0.36 | U | 0.35 | U |
| Di-n-butyl phthalate | NA | **0.018** | J | 0.35 | U |
| Di-n-octyl phthalate | NA | 0.36 | U | 0.35 | U |
| Fluoranthene | 100 | **3.8** | | **0.52** | |
| Fluorene | 30 | **0.39** | | **0.020** | J |
| Hexachlorobenzene | 0.33 | 0.036 | U | 0.035 | U |
| Hexachlorobutadiene | NA | 0.074 | U | 0.072 | U |
| Hexachlorocyclopentadiene | NA | 0.36 | U | 0.35 | U |
| Hexachloroethane | NA | 0.036 | U | 0.035 | U |
| Indeno[1,2,3-cd]pyrene | 0.5 | **1.1** | | **0.20** | |
| Isophorone | NA | 0.15 | U | 0.14 | U |
| Naphthalene | 12 | **0.17** | J | **0.011** | J |
| Nitrobenzene | NA | 0.036 | U | 0.035 | U |
| N-Nitrosodi-n-propylamine | NA | 0.036 | U | 0.035 | U |
| N-Nitrosodiphenylamine | NA | 0.36 | U | 0.35 | U |
| Pentachlorophenol | 0.8 | 0.29 | U | 0.28 | U |
| Phenanthrene | 100 | **3.8** | | **0.34** | J |
| Phenol | 0.33 | 0.36 | U | 0.35 | U |
| Pyrene | 100 | **3.2** | | 0.53 | |
| Total Conc | NA | **22.747** | | **3.372** | |
| Total Estimated Conc. (TICs) | NA | 7.05 | | 2.57 | |

Notes:
U : Indicates the analyte was analyzed for but not detected.
*NYCRR, Chapter IV, Part 375-6 Soil Cleanup Objectives (SCOs) Unrestricted Use and Restricted-Residential
Exceeds NYSDEC Unrestricted Use SCOs
*- : LCS and/or LCSD is outside acceptance limits, low biased.
J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Table 1c. Endpoint Soil Analytical Results
Pesticides
99 Granite Street
Brooklyn, New York

| **Client ID** | NYDEC 375-6 | **EP-13** | | **EP-17** | |
|---|---|---|---|---|---|
| **Lab Sample ID** | Soil Cleanup Obj | 460-273093-2 | | 460-273323-1 | |
| **Sampling Date** | UnRestricted Use | 01/17/2023 09:00:00 | | 01/20/2023 08:50:00 | |
| **Matrix** | | Soil | | Soil | |
| **Dilution Factor** | | 1 | | 1 | |
| **Unit** | mg/kg | mg/kg | | mg/kg | |
| | | Result | Q | Result | Q |
| **SOIL BY 8081B** | | | | | |
| 4,4'-DDD | 0.0033 | 0.0074 | U | 0.0072 | U |
| 4,4'-DDE | 0.0033 | 0.0074 | U | 0.0072 | U |
| 4,4'-DDT | 0.0033 | 0.0074 | U | 0.0072 | U |
| Aldrin | 0.005 | 0.0074 | U | 0.0072 | U |
| alpha-BHC | 0.02 | 0.0022 | U | 0.0021 | U |
| beta-BHC | 0.036 | 0.0022 | U | 0.0021 | U |
| Chlordane (technical) | NA | 0.074 | U | 0.072 | U |
| delta-BHC | 0.04 | 0.0022 | U | 0.0021 | U |
| Dieldrin | 0.005 | 0.0022 | U | 0.0021 | U |
| Endosulfan I | 2.4 | 0.0074 | U | 0.0072 | U |
| Endosulfan II | 2.4 | 0.0074 | U | 0.0072 | U |
| Endosulfan sulfate | 2.4 | 0.0074 | U | 0.0072 | U |
| Endrin | 0.014 | 0.0074 | U | 0.0072 | U |
| Endrin aldehyde | NA | 0.0074 | U | 0.0072 | U |
| Endrin ketone | NA | 0.0074 | U | 0.0072 | U |
| gamma-BHC (Lindane) | 0.1 | 0.0022 | U | 0.0021 | U |
| Heptachlor | 0.042 | 0.0074 | U | 0.0072 | U |
| Heptachlor epoxide | NA | 0.0074 | U | 0.0072 | U |
| Methoxychlor | NA | 0.0074 | U | 0.0072 | U |
| Toxaphene | NA | 0.074 | U | 0.072 | U |

Notes:
U : Indicates the analyte was analyzed for but not detected.
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*- : LCS and/or LCSD is outside acceptance limits, low biased.
J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Table 1d. Endpoint Soil Analytical Results
Herbicides
99 Granite Street
Brooklyn, New York

| **Client ID** | NYDEC 375-6 | **EP-13** | | **EP-17** | |
|---|---|---|---|---|---|
| **Lab Sample ID** | Soil Cleanup Obj | 460-273093-2 | | 460-273323-1 | |
| **Sampling Date** | UnRestricted Use | 01/17/2023 09:00:00 | | 01/20/2023 08:50:00 | |
| **Matrix** | | Soil | | Soil | |
| **Dilution Factor** | | 1 | | 1 | |
| **Unit** | mg/kg | mg/kg | | mg/kg | |
| | | Result | Q | Result | Q |
| **SOIL BY 8151A** | | | | | |
| 2,4,5-T | NA | 0.037 | U | 0.036 | U |
| 2,4-D | NA | 0.037 | U | 0.036 | U |
| Silvex (2,4,5-TP) | 3.8 | 0.037 | U | 0.036 | U |

Notes:
U : Indicates the analyte was analyzed for but not detected.
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J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Table 1e. Endpoint Soil Analytical Results
Polychlorinated Biphenyls
99 Granite Street
Brooklyn, New York

| **Client ID** | NYDEC 375-6 | **EP-13** | | **EP-17** | |
|---|---|---|---|---|---|
| **Lab Sample ID** | Soil Cleanup Obj | 460-273093-2 | | 460-273323-1 | |
| **Sampling Date** | UnRestricted Use | 01/17/2023 09:00:00 | | 01/20/2023 08:50:00 | |
| **Matrix** | | Soil | | Soil | |
| **Dilution Factor** | | 1 | | 1 | |
| **Unit** | mg/kg | mg/kg | | mg/kg | |
| | | Result | Q | Result | Q |
| **SOIL BY 8082A** | | | | | |
| Aroclor 1016 | NA | 0.074 | U | 0.072 | U |
| Aroclor 1221 | NA | 0.074 | U | 0.072 | U |
| Aroclor 1232 | NA | 0.074 | U | 0.072 | U |
| Aroclor 1242 | NA | 0.074 | U | 0.072 | U |
| Aroclor 1248 | NA | 0.074 | U | 0.072 | U |
| Aroclor 1254 | NA | 0.074 | U | 0.072 | U |
| Aroclor 1260 | NA | 0.074 | U | 0.072 | U |
| Aroclor 1268 | NA | 0.074 | U | 0.072 | U |
| Aroclor-1262 | NA | 0.074 | U | 0.072 | U |
| Total PCBs | 0.1 | 0.074 | U | 0.072 | U |

Notes:
U : Indicates the analyte was analyzed for but not detected.
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J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Table 1f. Endpoint Soil Analytical Results
Metals
99 Granite Street
Brooklyn, New York

| Client ID | NYDEC 375-6 | EP-13 | | EP-17 | |
|---|---|---|---|---|---|
| Lab Sample ID | Soil Cleanup Obj | 460-273093-2 | | 460-273323-1 | |
| Sampling Date | UnRestricted Use | 01/17/2023 09:00:00 | | 01/20/2023 08:50:00 | |
| Matrix | | Soil | | Soil | |
| | | | | | |
| Unit | | | | | |
| | | Result | Q | Result | Q |
| **SOIL BY 6020B(MG/KG)** | | | | | |
| Aluminum | NA | **7,880** | | **7,220** | |
| Antimony | NA | **0.86** | | **0.15** | J |
| Arsenic | 13 | **4.2** | | **4.1** | |
| Barium | 350 | **72.7** | | **61.8** | |
| Beryllium | 7.2 | **0.46** | | **0.36** | |
| Cadmium | 2.5 | **0.17** | J | **0.16** | J |
| Calcium | NA | **4,970** | | **6,980** | |
| Chromium | NA | **17.0** | | **14.9** | |
| Cobalt | NA | **6.5** | | **5.0** | |
| Copper | 50 | **36.0** | | **24.9** | |
| Iron | NA | **24,900** | | **16,100** | |
| Lead | 63 | **176** | | **111** | |
| Magnesium | NA | **2,020** | | **1,860** | |
| Manganese | 1,600 | **416** | | **314** | |
| Nickel | 30 | **12.9** | | **10.4** | |
| Potassium | NA | **797** | | **655** | |
| Selenium | 3.9 | **0.36** | J | **0.23** | J |
| Silver | 2 | **0.074** | J | 0.34 | U |
| Sodium | NA | **105** | | **56.4** | J |
| Thallium | NA | **0.14** | J | **0.044** | J |
| Vanadium | NA | **36.7** | | **21.2** | |
| Zinc | 109 | **75.5** | | **80.8** | |
| | | | | | |
| **SOIL BY 7471B(MG/KG)** | | | | | |
| Mercury | 0.18 | **0.21** | B | **0.28** | |

Notes:
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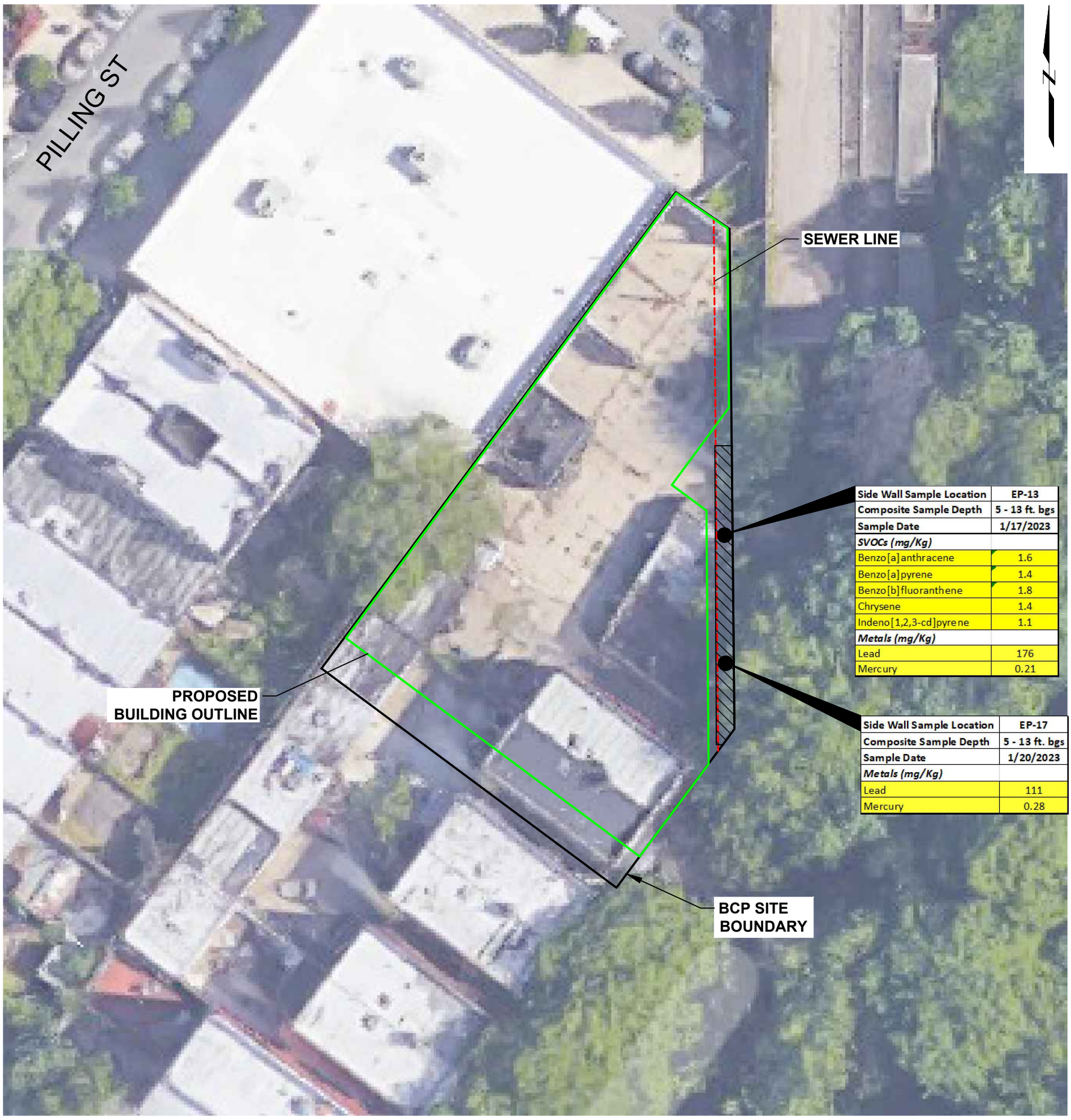
Table 1g. Endpoint Soil Analytical Results
Per- and Polyfluoroalkyl Substances
99 Granite Street
Brooklyn, New York

| **Client ID** | NYDEC 375-6 | NY CP-51 | **EP-13** | | **EP-17** | |
|---|---|---|---|---|---|---|
| **Lab Sample ID** | Sampling, Analysis, | Table 3 | 460-273104-2 | | 460-273349-1 | |
| **Sampling Date** | and Assessment of Per- and | Soil Fuel Oil | 01/17/2023 09:00:00 | | 01/20/2023 08:50:00 | |
| **Matrix** | Polyfluoroalkyl Substances | Contaminat | Soil | | Soil | |
| **Dilution Factor** | (PFAS) - UnRestricted Use | | 1 | | 1 | |
| **Unit** | ug/kg | ug/kg | ug/kg | | ug/kg | |
| | | | Result | Q | Result | Q |
| **SOIL BY 1633** | | | | | | |
| Perfluorobutanoic acid | NA | NA | 0.11 | U | 0.11 | U |
| Perfluoropentanoic acid | NA | NA | 0.11 | U | 0.11 | U |
| Perfluorohexanoic acid | NA | NA | 0.064 | U | 0.067 | U |
| Perfluoroheptanoic acid | NA | NA | 0.055 | U | 0.057 | U |
| Perfluorooctanoic acid (PFOA) | 0.66 | NA | **0.19** | J | 0.058 | U |
| Perfluorononanoic acid | NA | NA | 0.055 | U | 0.057 | U |
| Perfluorodecanoic acid | NA | NA | 0.055 | U | 0.057 | U |
| Perfluoroundecanoic acid | NA | NA | 0.055 | U | 0.057 | U |
| Perfluorododecanoic acid | NA | NA | 0.055 | U | 0.057 | U |
| Perfluorotridecanoic acid | NA | NA | 0.055 | U | 0.057 | U |
| Perfluorotetradecanoic acid | NA | NA | 0.055 | U | 0.057 | U |
| Perfluorobutanesulfonic acid | NA | NA | 0.055 | U | 0.057 | U |
| Perfluoropentanesulfonic acid | NA | NA | 0.055 | U | 0.057 | U |
| Perfluorohexanesulfonic acid | NA | NA | 0.055 | U | 0.057 | U |
| Perfluoroheptanesulfonic acid | NA | NA | 0.055 | U | 0.057 | U |
| Perfluorooctanesulfonic acid (PFOS) | 0.88 | NA | **0.12** | J | 0.11 | J |
| Perfluorononanesulfonic acid | NA | NA | 0.055 | U | 0.057 | U |
| Perfluorodecanesulfonic acid | NA | NA | 0.055 | U | 0.057 | U |
| Perfluorododecanesulfonic acid (PFDoS) | NA | NA | 0.055 | U | 0.057 | U |
| 1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2) | NA | NA | 0.22 | U | 0.23 | U |
| 1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2) | NA | NA | 0.38 | U | 0.40 | U |
| 1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2) | NA | NA | 0.38 | U | 0.40 | U |
| Perfluorooctanesulfonamide | NA | NA | 0.055 | U | 0.057 | U |
| NMeFOSA | NA | NA | 0.055 | U | 0.057 | U |
| N-ethylperfluoro-1-octanesulfonamide | NA | NA | 0.055 | U | 0.057 | U |
| NMeFOSAA | NA | NA | 0.055 | U | 0.057 | U |
| NEtFOSAA | NA | NA | 0.055 | U | 0.057 | U |
| 2-(N-methylperfluoro-1-octanesulfonamido) ethanol | NA | NA | 0.55 | U | 0.57 | U |
| 2-(N-ethylperfluoro-1-octanesulfonamido) ethanol | NA | NA | 0.55 | U | 0.57 | U |
| HFPO-DA | NA | NA | 0.056 | U | 0.058 | U |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | NA | NA | 0.22 | U | 0.23 | U |
| Perfluoro-3-methoxypropanoic acid | NA | NA | 0.11 | U | 0.11 | U |
| Perfluoro(4-methoxybutanoic acid) | NA | NA | 0.11 | U | 0.11 | U |
| Perfluoro-3,6-dioxaheptanoic acid | NA | NA | 0.11 | U | 0.12 | U |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid | NA | NA | 0.22 | U | 0.23 | U |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid | NA | NA | 0.22 | U | 0.23 | U |
| PFEESA | NA | NA | 0.11 | U | 0.11 | U |
| 3:3 FTCA | NA | NA | 0.27 | U | 0.28 | U |
| 5:3 FTCA | NA | NA | 1.09 | U | 1.13 | U |
| 7:3 FTCA | NA | NA | 1.09 | U | 1.13 | U |

Notes:
U : Indicates the analyte was analyzed for but not detected.
*NYCRR, Chapter IV, Part 375-6 Soil Cleanup Objectives (SCOs) Unrestricted Use and Restricted-Residential
Exceeds NYSDEC Unrestricted Use SCOs
*- : LCS and/or LCSD is outside acceptance limits, low biased.
J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.




| Side Wall Sample Location | EP-13 |
|---|---|
| Composite Sample Depth | 5 - 13 ft. bgs |
| Sample Date | 1/17/2023 |
| *SVOCs (mg/Kg)* | |
| Benzo[a]anthracene | 1.6 |
| Benzo[a]pyrene | 1.4 |
| Benzo[b]fluoranthene | 1.8 |
| Chrysene | 1.4 |
| Indeno[1,2,3-cd]pyrene | 1.1 |
| *Metals (mg/Kg)* | |
| Lead | 176 |
| Mercury | 0.21 |

| Side Wall Sample Location | EP-17 |
|---|---|
| Composite Sample Depth | 5 - 13 ft. bgs |
| Sample Date | 1/20/2023 |
| *Metals (mg/Kg)* | |
| Lead | 111 |
| Mercury | 0.28 |

NOTES:

ALL ENDPOINT SOIL SAMPLES EXHIBITED CONTAMINANT CONCENTRATIONS BELOW THE UNRESTRICED USE SCOS.

SIDE WALL SAMPLES EP-11, EP-13, AND EP-17 WERE COLLECTED IN ASSOCIATION WITH THE SEWER LINE EXTENDING ALONG/NEARBY THE EASTERN PROPERTY BOUNDARY.

mg/Kg: MILLIGRAMS/KILOGRAM
ft. bgs: FEET BELOW GROUND SURFACE
ug/Kg: MICROGRAMS/KILOGRAM
VOCs: VOLATILE ORGANIC COMPOUNDS
SVOCs: SEMIVOLATILE ORGANIC COMPOUNDS
NYSDEC: NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SCOs: SOIL CLEANUP OBJECTIVES
PFAS: PER AND POLYFLUOROALKYL SUBSTANCES
PFOA: PERFLUOROOCTANOIC ACID
PFOS: PERFLUOROOCTANESULFONIC ACID

EXCEEDS NYSDEC PART 375 UNRESTRICTED USE SCO

| Analyte | NYSDEC Unrestricted Use SCO |
|---|---|
| *SVOCs (mg/Kg)* | |
| Benzo[a]anthracene | 1 |
| Benzo[a]pyrene | 1 |
| Benzo[b]fluoranthene | 1 |
| Chrysene | 1 |
| Indeno[1,2,3-cd]pyrene | 0.5 |
| *Metals (mg/Kg)* | |
| Lead | 63 |
| Mercury | 0.18 |

LEGEND:

- APPROXIMATE CONFIRMATION ENDPOINT AND SIDE WALL SAMPLE LOCATION
- PROPOSED TRACK 4 AREA & COVER SYSTEM ENGINEERING CONTROL
- PROPOSED BUILDING OUTLINE
- SEWER LINE

0 30 60
SCALE, FEET

***SOURCE:***

1. MAP EXTRACTED FROM GOOGLE MAPS

Site Management Plan
99 GRANITE STREET
BROOKLYN, NY

MEDFORD BER LLC
LYNBROOK, NY

GEI Consultants

SITE LAYOUT, TRACK 4 AREA, REMAINING SOIL EXCEEDANCES, AND ENGINEERING CONTROLS

Project 2000189 | October 2023 | Fig. 3

CASILLAS, DAVID C:\Users\dcasillas\OneDrive - GEI Consultants, Inc\Desktop\MISC PROJECTS\Par Group\FIG - 3 (october).dwg - 10/10/2023

# APPENDIX E
# EXCAVATION WORK PLAN

This EWP will be implemented to address any intrusive activities at the Site that may breach the cover overlying the Track 4 area and/or disturb remaining contamination limited to the Track 4 area. Large-scale[1] intrusive activities may require an additional detailed work plan, such as a RAWP, which must comply with this EWP.

## 1 NOTIFICATION

At least 15 days prior to the start of any activity that is anticipated to encounter remaining contamination or breach or alter the cover overlying the Track 4 area, the Site owner or their representative will notify the NYSDEC contacts listed in Table 1 below. The information on this table will be updated as necessary to provide accurate contact information. A full listing of site-related contact information is provided in Appendix B.

**Table 1: Notifications***

| **Name** | **Contact Information** | **Required Notification**** |
|---|---|---|
| NYSDEC Project Manager:<br>Aaron Fischer | 518.402.9805<br>aaron.fischer@dec.ny.gov | All Notifications |
| NYSDEC Project Manager's Supervisor<br>Heidi Dudek | 518.402.9813<br>heidi.dudek@dec.ny.gov | All Notifications |
| NYSDEC Site Control:<br>Kelly Lewandowski | 518.402.9553<br>kelly.lewandowski@dec.ny.gov | Notifications 1 and 8 |
| NYSDOH Project Manager<br>Sarita Wagh | 518.402.7817<br>sarita.wagh@health.ny.gov | Notifications 4, 6, and 7 |

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

[1] Note that NYSDEC makes the determination of which excavations are small-scale (e.g. limited) and which are large-scale. To know with certainty that the proposed excavation is considered to be small-scale (e.g. limited) will require a prior notification to NYSDEC describing the work to be performed.

** Note: Numbers in this column reference the numbered bullets in the notification list in this section.

This notification will include:

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

- A summary of environmental conditions anticipated to be encountered in the work areas, including the nature and concentration levels of contaminants of concern, potential presence of grossly contaminated media, and plans for any pre-construction sampling.

- A schedule for the work, detailing the start and completion of all intrusive work, and submittals (e.g., reports) to the NYSDEC documenting the completed intrusive work.

- A summary of the applicable components of this EWP.

- A statement that the work will be performed in compliance with this EWP, 29 CFR 1910.120 and 29 CFR 1926 Subpart P.

- A copy of the contractor's HASP, in electronic format, if it differs from the HASP provided in Appendix H of this SMP.

- Identification of disposal facilities for potential waste streams.

- Identification of sources of any anticipated backfill, along with the required request to import form and all supporting documentation including, but not limited to, chemical testing results.

The NYSDEC project manager will review the notification and may impose additional requirements for the excavation that are not listed in this EWP. The alteration, restoration and modification of engineering controls must conform with Article 145 Section 7209 of the Education Law regarding the application professional seals and alterations.

## 2 SOIL SCREENING METHODS

Visual, olfactory and instrument-based (e.g. PID) soil screening will be performed during all excavations into known or potentially contaminated material (remaining contamination) or a breach of the cover system. A QEP as defined in 6 NYCRR Part 375, a PE who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State will perform the screening. Soil screening will be performed when invasive work is done within the Track 4 area and will include all excavation and invasive work performed during development, such as excavations for foundations and utility work, after issuance of the COC.

Soils excavated from the Track 4 area will be segregated based on previous environmental data and screening results into material that requires off-site disposal and material that requires testing to determine if the material can be reused on-site as soil beneath a cover or if the material can be used as cover soil. Further discussion of off-site disposal of materials and on-site reuse is provided in Sections E-6 and E-7 of this Appendix.

## 3 SOIL STAGING METHODS

Track 4 area soil stockpiles will be continuously encircled with a berm and/or silt fence, as necessary. Hay bales will be used as needed near catch basins, surface waters and other discharge points.

Track 4 area soil stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced.

Track 4 area soil stockpiles will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by the NYSDEC.

# 4 MATERIALS EXCAVATION AND LOAD-OUT

A QEP as defined in 6 NYCRR Part 375, a PE who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State will oversee all invasive work and the excavation completed in the Track 4 area and load-out of all excavated Track 4 area material.

The owner of the property and remedial party (if applicable) and its contractors are responsible for safe execution of all invasive and other work performed in the Track 4 area under this Plan.

The presence of utilities and easements on the Site will be investigated by the QEP. It will be determined whether a risk or impediment to the planned work under this SMP is posed by utilities or easements on the Site. A Site utility stakeout will be completed for all utilities prior to any ground intrusive activities at the Site.

Loaded vehicles leaving the Site with material removed from the Track 4 area will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and NYSDOT requirements (and all other applicable transportation requirements). Trucks transporting contaminated Track 4 area soil must have either tight-fitting opaque covers that are secured on the sides and/or back, or opaque covers that are locked on all sides.

A truck wash will be operated on-site, as appropriate. The QEP will be responsible for ensuring that all outbound trucks will be washed at the truck wash before leaving the Site until the activities performed under this section are complete. Truck wash waters will be collected and disposed of off-site in an appropriate manner.

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

The QEP will be responsible for ensuring that all egress points for truck and equipment transport from the Site which may contain material from the Track 4 area are clean of dirt and other materials derived from the Site during intrusive excavation activities in the Track 4 area. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to site-derived materials. Material accumulated from the street cleaning and egress cleaning activities will be disposed off-site at a permitted landfill facility in accordance with all applicable local, State, and Federal regulations.

# 5 MATERIALS TRANSPORT OFF-SITE

All transport of materials excavated from the Track 4 area 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.

Track 4 area material transported by trucks exiting the Site will be secured with either tight-fitting opaque covers that are secured on the sides and/or back, or opaque covers that are locked on all sides. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used.

Truck transport routes for Track 4 area soil will be established prior to implementation of any fieldwork. All trucks loaded with materials excavated from the Track 4 area will exit the vicinity of the Site using only these approved truck routes. This is the most appropriate route and takes into account: (a) limiting transport through residential areas and past sensitive sites; (b) use of city mapped truck routes; (c) prohibiting off-site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport.

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

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

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

## 6 MATERIALS DISPOSAL OFF-SITE

All material excavated and removed from the Track 4 area of the Site will be treated as contaminated and regulated material and will be transported and disposed off-site in a permitted facility in accordance with all local, State and Federal regulations. If disposal of material from the Track 4 area of this Site is proposed for unregulated off-site disposal (i.e. clean soil removed for development purposes), a formal request with an associated plan will be made to the NYSDEC project manager. Unregulated off-site management of materials from the Track 4 area of this Site will not occur without formal NYSDEC project manager approval.

Off-site disposal locations for excavated soils from the Track 4 area will be identified in the pre-excavation notification. This will include estimated quantities and a breakdown by class of disposal facility if appropriate, (e.g. hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, C&D debris recovery facility). Actual Track 4 area disposal quantities and associated documentation will be reported to the NYSDEC in the PRR. This documentation will include, but will not be limited to: waste profiles, test results, facility acceptance letters, manifests, bills of lading and facility receipts.

Non-hazardous historic fill and contaminated soils taken off-site from the Track 4 area will be handled consistent with 6 NYCRR Parts 360, 361, 362, 363, 364 and 365.

Material from the Track 4 area that does not meet Unrestricted SCOs is prohibited from being taken to a New York State C&D debris recovery facility (6 NYCRR Subpart 360-15 registered or permitted facility).

# 7 MATERIALS REUSE ON-SITE

The QEP, as defined in 6 NYCRR Part 375, will ensure that procedures defined for materials reuse in this SMP are followed and that unacceptable material (i.e. contaminated) generated from the Track 4 area does not remain on-site. Contaminated on-site material from the Track 4 area, including historic fill and contaminated soil, that is acceptable for reuse on-site will be placed below the demarcation layer or impervious surface, and will not be reused within the cover system overlying the Tack 4 area or within landscaping berms. Contaminated on-site material from the Track 4 area may only be used beneath the Site cover as backfill for subsurface utility lines with prior approval from the DEC project manager.

Proposed materials from the Track 4 area for reuse on-site must be sampled for full suite analytical parameters including per- and polyfluoroalkyl substances (PFAS) and 1,4-dioxane. The sampling frequency will be in accordance with DER-10 Table 5.4(e)10 unless prior approval is obtained from the NYSDEC project manager for modification of the sampling frequency. The analytical results of soil/fill material testing must meet the Site use criteria presented in NYSDEC DER-10 Appendix 5 – Allowable Constituent Levels for Imported Fill or Soil for all constituents listed, and the NYSDEC Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (November 2022 or date of current version, whichever is later) guidance values. Approvals for modifications to the analytical parameters must be obtained from the NYSDEC project manager prior to the sampling event.

Soil/fill material from the Track 4 area for reuse on-site will be segregated and staged as described in Sections E-2 and E-3 of this EWP. The anticipated size and location of stockpiles will be provided in the 15-day notification to the NYSDEC project manager. Stockpile locations will be based on the location of Site excavation activities and proximity

to nearby Site features. Track 4 area material reuse on-site will comply with requirements of NYSDEC DER-10 Section 5.4(e)4. Any modifications to the requirements of DER-10 Section 5.4(e)4 must be approved by the NYSDEC project manager.

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

## 8 FLUIDS MANAGEMENT

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

## 9 COVER SYSTEM RESTORATION

After the completion of soil removal and any other invasive activities in the Track 4 area, the cover system will be restored in-kind. The existing cover system in the Track 4 area is comprised of clean crushed stone overlain by concrete at grade. The clean crushed stone also serves as a demarcation layer, providing a visual reference to the top of remaining contamination in the Track 4 area. If the type of cover system changes from that which exists prior to the excavation (i.e., cover is replaced by asphalt), this will constitute a modification of the cover element of the remedy and the upper surface of the remaining contamination. A figure showing the modified surface will be included in the subsequent PRR and in an updated SMP. The alteration, restoration and modification of ECs must conform with Article 145 Section 7209 of the Education Law regarding the application professional seals and alterations.

## 10 BACKFILL FROM OFF-SITE SOURCES

All materials proposed for import onto the Site will be approved by the QEP, as defined in 6 NYCRR Part 375, and will be in compliance with provisions in this SMP prior to receipt at the Site. A Request to Import/Reuse Fill or Soil form, which can be found in Appendix F and at http://www.dec.ny.gov/regulations/67386.html, will be prepared and submitted to the NYSDEC project manager allowing a minimum of 5 business days for review.

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

All imported soils for the Track 4 area will meet the backfill and cover soil quality standards established in 6 NYCRR 375-6.7(d) and DER-10 Appendix 5 for Restricted Residential use. Based on an evaluation of the land use, protection of groundwater and protection of ecological resources criteria, the resulting soil quality standards are listed in Table 375-6.8(a) of 6 NYCRR Part 375. Soils that meet 'general' fill requirements under 6 NYCRR Part 360.13, but do not meet backfill or cover soil objectives for this Site, will not be imported onto the Site without prior approval by NYSDEC project manager. Soil material will be sampled for the full suite of analytical parameters, including PFAS and 1, 4-dioxane. Solid waste will not be imported onto the Site.

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

## E-11 STORMWATER POLLUTION PREVENTION

Barriers and hay bale checks will be installed and inspected once a week and after every storm event for Track 4 area excavations. Results of inspections will be recorded in

a logbook and maintained at the Site and available for inspection by the NYSDEC. All necessary repairs will be made immediately.

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

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

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

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

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

## 12 EXCAVATION CONTINGENCY PLAN

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

Sampling will be performed on product, sediment and surrounding soils, etc. as necessary to determine the nature of the material and proper disposal method. Chemical analysis will be performed for a full list of analytes [TAL metals, TCL volatiles and semi-volatiles (including 1,4-dioxane), TCL pesticides and PCBs, and PFAS], unless the Site

history and previous sampling results provide sufficient justification to limit the list of analytes. In this case, a reduced list of analytes will be proposed to the NYSDEC project manager for approval prior to sampling. Any tanks will be closed as per NYSDEC regulations and guidance.

Identification of unknown or unexpected contaminated media identified by screening during invasive Site work will be promptly communicated by phone within two hours to NYSDEC's Project Manager. Reportable quantities of petroleum product will also be reported to the NYSDEC spills hotline. These findings will be also included in the PRR.

## 13 COMMUNITY AIR MONITORING PLAN

The CAMP will consist of a real-time monitoring and action level reporting. The CAMP will be conducted during all intrusive activity completed within the Track 4 area at the Site. The location of the Track 4 area is shown in Figure 3. Air sampling station locations will be chosen based on generally prevailing wind conditions and adjusted on a daily or more frequent basis based on actual wind directions to provide one upwind and at least one downwind monitoring station.

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

## 14 ODOR CONTROL PLAN

Nuisance odors were not noted during implementation of remedial activities at the Site and impacts were at levels well below the safety limits defined in the CAMP. However, this odor control plan is capable of controlling emissions of nuisance odors off-site, if encountered during future disturbance of the Track 4 area. Specific odor control methods to be used on a routine basis will include all reasonable and necessary means as described in the following paragraph.

If nuisance odors are identified at the Site boundary, or if odor complaints are received, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will

be notified of all odor events and of any other complaints about the project. Implementation of all odor controls, including the halt of work, is the responsibility of the remedial party's Remediation Engineer, and any measures that are implemented will be discussed in the PRR.

All necessary means will be employed to prevent on- and off-site nuisances during intrusive activities within the Track 4 area. At a minimum, these measures will include: (a) limiting the area of open excavations and size of soil stockpiles; (b) shrouding open excavations with tarps and other covers; and (c) using foams to cover exposed odorous soils. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-site disposal; (e) use of chemical odorants in spray or misting systems; and, (f) use of staff to monitor odors in surrounding neighborhoods.

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

## 15 DUST CONTROL PLAN

Particulate monitoring will be conducted, as needed, according to the CAMP provided in Section E-13. During intrusive activities within Track 4 area, if particulate levels at the Site exceed the thresholds listed in the CAMP or if airborne dust is observed on the Site or leaving the Site, the dust suppression techniques listed below will be employed. The remedial party will also take measures listed below to prevent dust production on the Site.

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

- Dust suppression will be achieved using a dedicated on-site water truck for road wetting. The truck will be equipped with a water cannon capable of

spraying water directly onto off-road areas including excavations and stockpiles.

- Clearing and grubbing of larger sites will be done in stages to limit the area of exposed, unvegetated soils vulnerable to dust production.
- Gravel will be used on roadways to provide a clean and dust-free road surface.
- On-site roads will be limited in total area to minimize the area required for water truck sprinkling.

## 16 OTHER NUISANCES

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

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

# APPENDIX F
# NYSDOH GENERIC 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 G
# SITE MANAGEMENT FORMS

# SITE INSPECTION LOG
# 99 GRANITE STREET
# BROOKLYN, NEW YORK

**Date:** _____ **Time:** _____

**Inspector:** _____ **Weather:** _____

**Purpose of Site Visit:** Routine Site Inspection -OR- Incident Report

**General Observations** (note condition, and damage [if any] including, severity, and impacts, etc.)

**Overall Site**:

_____

**Track 4 Area:**

Track 4 Area Concrete Cover:

_____

Signs of Damage/Erosion:

_____

Evidence of Excavation:

_____

Persons Contacted & Time:

_____

## Recommendations:

_____

_____

_____

# SITE INSPECTION LOG
# 99 GRANITE STREET
# BROOKLYN, NEW YORK

**Representative Site Photos and Descriptions:**

**NEW YORK STATE**
**DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

***Request to Import/Reuse Fill or Soil***

*This form is based on the information required by DER-10, Section 5.4(e). Use of this form is not a substitute for reading the applicable Technical Guidance document.*

## SECTION 1 – SITE BACKGROUND

The allowable site use is: Choose an item

Have Ecological Resources been identified? Choose an item

Is this soil originating from the site? Choose an item

How many cubic yards of soil will be imported/reused? Choose an item

If greater than 1000 cubic yards will be imported, enter volume to be imported:

## SECTION 2 – MATERIAL OTHER THAN SOIL

Is the material to be imported gravel, rock or stone? Choose an item

Does it contain less than 10%, by weight, material that would pass a size 80 sieve? Choose an item

Is this virgin material from a permitted mine or quarry? Choose an item

Is this material recycled concrete or brick from a DEC registered processing facility? Choose an item

## SECTION 3 - SAMPLING

Provide a brief description of the number and type of samples collected in the space below:

---

*Example Text: 5 discrete samples were collected and analyzed for VOCs. 2 composite samples were collected and analyzed for SVOCs, Inorganics & PCBs/Pesticides.*

*If the material meets requirements of DER-10 section 5.5 (other material), no chemical testing needed.*

## SECTION 3 CONT'D - SAMPLING

Provide a brief written summary of the sampling results or attach evaluation tables (compare to DER-10, Appendix 5):

---

*Example Text: Arsenic was detected up to 17 ppm in 1 (of 5) samples; the allowable level is 16 ppm.*

*If Ecological Resources have been identified use the "If Ecological Resources are Present" column in Appendix 5.*

## SECTION 4 – SOURCE OF FILL

Name of person providing fill and relationship to the source:

Location where fill was obtained:

Identification of any state or local approvals as a fill source:

If no approvals are available, provide a brief history of the use of the property that is the fill source:

Provide a list of supporting documentation included with this request:

The information provided on this form is accurate and complete.

_____ _____

Signature Date

_____

Print Name

_____

Firm

Revised August 2014

# APPENDIX H
# HEALTH AND SAFETY PLAN

GEI Consultants

Consulting
Engineers and
Scientists

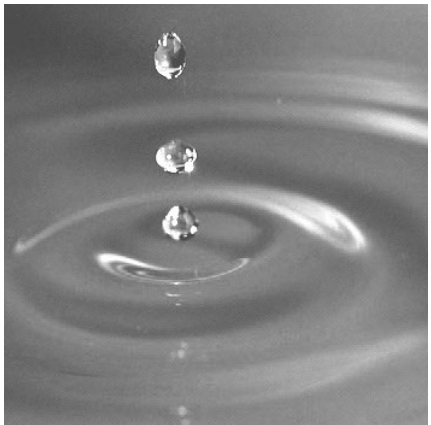
# Health and Safety Plan

99 Granite Street
Brooklyn, New York

**Prepared For:**
Medford Ber LLC
C/O Par Group Development
60 Prospect Avenue
Lynbrook, NY 11563

**Submitted by:**
GEI Consultants, Inc., P.C.
1000 New York Avenue, Suite B
Huntington Station, NY 11746
631-760-9300

August 2, 2022
Project No. 2000189



Henry Gold
Project Manager

Lesley Gastwirth, ASP
Regional Safety Manager

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D. Forms
E. GEI Health and Safety SOPs and Programs

# 1. Emergency Contact Information

## Table 1. Emergency Contact Information

| | |
|---|---|
| **Site Information** | |
| Project Name: | 99 Granite Street |
| Project Address: | 99 Granite Street, Brooklyn New York, 11746 |
| Project Number: | 2202735 |
| **Important Phone Numbers** | |
| Local Police: | 911 |
| Fire Department: | 911 |
| Ambulance: | 911 |
| **Hospital and Occupational Clinic Information**<br>*(See Attached Map and Directions in Appendix A)* | |
| **Local Hospital: Huntington Hospital**<br>374 Stockholm Street<br>Brooklyn, New York 11237<br><br>**Urgent Care/Occupational Health Clinic: Contact Medcor Triage** | (718) 963-7272<br><br><br><br>Call Medcor Triage<br>1-800-775-5866 |
| **Contacts** | |
| Environmental Practice Leader<br>Henry Gold | (631) 759-2973 office<br>(917) 836-2011 cell |
| Safety Director:<br>Steve Hawkins | (860) 368-5348 office<br>(860) 916-4167 cell |
| Regional Safety Manager:<br>Kelly Thorsby | (616) 283-8383 |
| Site Safety Manager:<br>Leif Robertson | (631) 759-2973 office<br>(631) 275-4865 cell |
| Medcor Triage | 1-800-775-5866 |
| Client Contact:<br>Mr. Mihir B. Patel | (718) 359-5149 cell |
| **Other Information** | |
| Contractor Requesting/Performing Utility Clearance: New York 811<br>Utility Clearance Ticket Number: | Clean Globe Environmental LLC<br>Ticket# TBD |

# 2. GEI Safety Practices to Live By

Safety is what we do and how we do it every day. These Everyday Practices to Live Safe are simple yet concise reminders to our employees, clients, contractors, visitors of the steps that must be taken to avoid injury, illness, and incident so everyone can live safe every day. To maintain a safe work environment, GEI has established an organizational structure and a Corporate Health and Safety Program along with these safety practices.

1. Stop work if it is unsafe to continue, after any incident, injury, or near miss.
2. Prepare before starting work. Complete safety training and project-related safety requirements, such as preparation and review Health and Safety Plans (HASPs) as required by project or job-related duties.
3. Assess and control safety hazards/risks before starting any tasks and when previously unidentified safety hazards are observed.
4. Be attentive and aware of your environment. Constant focus and awareness will avoid complacency.
5. Properly use and maintain GEI-approved and required PPE in all appropriate circumstances.
6. Do not work or drive impaired, including under the influence of alcohol/drugs or while fatigued.
7. Follow all safety practices when operating a vehicle. Always wear your seatbelt while in any vehicle. Do not drive distracted, including using hand-held cell phones, when operating any vehicle.
8. Use tools, equipment, and safety devices in accordance with manufacturers recommendations and GEI expectations. Never modify or override safety devices.
9. When activities involve chemicals or hazardous substances, follow GEI's hazard communication requirements, including labeling, reviewing Safety Data Sheets (SDS), and keeping proper protections in place.
10. Be aware of and keep clear of equipment moving in all work areas, at all times.
11. Follow GEI's incident reporting procedure in the event of safety incidents, including injuries, illness, near misses, or observation of unsafe behaviors.

# 3. Site Background

This Health and Safety Plan (HASP) establishes policies and procedures to protect GEI Consultants, Inc. (GEI) personnel from the potential hazards posed by the activities at the Site located at 99 Granite Street in Brooklyn, New York (Figure 1). Reading, understanding, and compliance with the contents of the HASP is required for on-site GEI personnel and will be reviewed by GEI subcontractors. Subcontractors will prepare their own site-specific HASP but may use this HASP as a guide. This HASP identifies measures to minimize accidents and injuries which may result from site conditions or activities. A copy of this HASP will be maintained on site for the duration of the work.

## 3.1 Site Description

The Site consists of an approximately 0.226-acre irregularly-shaped parcel of land, located on the west side of Granite Street, in the borough of Brooklyn, Kings County, New York City, NY. Prior to construction activity, the 99 Granite Street parcel was improved with a 2-story rental apartment building with a basement which contained a total of two residential apartment units (99 Granite Street). In addition, the site also contained a rear paved parking lot area containing a total of three brick masonry carport buildings, which were constructed on-grade (101 Granite Street). The 97 Granite Street parcel is currently occupied by a two-story (with basement) single-family building with a detached two car garage behind the building.

## 3.2 Scope of Field Work

A total of up to 72 soil borings will be completed. Up to five soil samples will be collected from each soil boring that is representative to the depth outline in the waste characterization plan prepared for the site. Each soil boring will be advanced to the depth of up to 15 feet below ground surface, groundwater, or bedrock refusal, whichever occurs first using Geoprobe® macrocore soil sampling techniques.

### Soil Sampling Protocol

The soil borings will be conducted using a Geoprobe® Direct Push Drill Machine using macrocore samplers. Soil samples will be obtained continuously. The collected soil samples will be screened in the field by utilizing a photoionization detector (PID) with a 10.6eV lamp portable gas analyzer. If soil samples show an elevated PID reading, then that sample will be selected for laboratory analysis. The highest PID reading sample will be selected for testing.

**Table 2. GEI Employee Site Tasks and Descriptions**

| Task Number | Task Titles | Task Descriptions |
|---|---|---|
| 1. | Driving – Site Mobilization | Drive to the project site to complete the work. |
| 2. | Drilling Observation | Oversee drilling activities performed by the certified subcontractor at the project site. |
| 3. | Soil Sampling – Drill Rig | GEI will soil collect soil samples from the sample cores cut open by the subcontractor. |

# 4. Potential Hazards

The potential hazards associated with site conditions and activity hazards related to GEI on-site activities have been identified in this section. Detailed information for these hazards and their control methods are discussed further in the Table 3 and the job hazard analysis (JHAs) included in Appendix B.

## 4.1 General Site Hazards

General hazards and control measures that are applicable to all site activities have been identified in Table 3.

**Table 3. General Site Hazards**

| General Hazards These Hazards Apply to All Site Activities | Control Measure |
|---|---|
| **Coronavirus-COVID-19** | • Maintain a distance of 6 feet from others.<br>• If tasks needed to be performed close to others, wear appropriate PPE including a face mask (surgical or cloth), gloves, and eye protection.<br>• When travelling to project site, travel in separate vehicles.<br>• Frequent washing of hands with soap and warm water for 20 seconds. If soap is not available, use hand sanitizer with 60% alcohol.<br>• Wipe down surfaces such as equipment surfaces, vehicle steering wheel, gear shifter, controls and door handles with disinfectant routinely before and after use.<br>• Wear Nitrile gloves as frequently as possible.<br>• Wash hands after gloves removal.<br>• Do not shake hands, hug, or engage in other personal contact. |
| **Driving** | • Employees must wear their safety belt while in a moving vehicle.<br>• Vehicle accidents will be reported in accordance with GEI's accident reporting procedures.<br>• Vehicles will be properly maintained and safely operated (refer to GEI's Fleet Maintenance Program).<br>• Employees will follow safe driving behaviors, which include limiting distractions such as manipulating radios or other equipment that may cause a distraction. Employees will not exceed the posted speed limit and will maintain a safe distance between other vehicles.<br>• Use defensive driving techniques.<br>• Driving distance and time after a 12-hour shift will not exceed 30 miles or 30 minutes (whichever is greater).<br>• See SOP HS-004 |

| General Hazards These Hazards Apply to All Site Activities | Control Measure |
|---|---|
| **Heat stress –** Fainting, Fatigue, Heat Stroke | • Increase water intake while working.<br>• Increase number of rest breaks and/or rotate workers in shorter work shifts. Rest in cool, dry areas.<br>• Watch for signs and symptoms of heat exhaustion and fatigue.<br>• Plan work for early morning or evening during hot months.<br>• Use ice vests when necessary.<br>• In the event of heat stroke, bring the victim to a cool environment and initiate first aid procedures.<br>• See Appendix C of the HASP |
| **Inclement Weather** | • Listen to local forecasts for warnings about specific weather hazards such as tornados, thunderstorms, and flash floods.<br>• If storms produce thunder and/or lightning, leave the work area immediately and move to a safe area.<br>• Discuss an action plan prior to the severe weather.<br>• Wear appropriate PPE for the type of weather that could be encountered.<br>• Stop work until conditions are suitable. Take cover in vehicles or shelter as appropriate.<br>• See SOP HS-010 |
| **Insects –** Bites, Stings, Allergic Reactions | • Apply insect repellent prior to performing field work and as often as needed throughout the work shift.<br>• Wear proper protective clothing (work boots, socks, and light-colored clothing)<br>• Wear shoes, long pants with bottoms tucked into boots or socks, and a long-sleeved shirt when outdoors for extended periods of time, or when many insects are most active (between dawn and dusk).<br>• When walking in wooded areas, avoid contact with bushes, tall grass, or brush as much as possible<br>• Field personnel who may have insect allergies will have allergy medication on site and will provide this information to the SSM prior to commencing work.<br>• Field personnel will perform a self-check at the end of the day for ticks.<br>• 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.<br>• Maintain good visibility of the work area.<br>• Avoid walking on uneven, steeply sloped or debris ridden ground surfaces.<br>• Plan tasks prior to preforming them including an activity hazard analysis.<br>• Keep trafficked areas free from slip/trip/fall hazards.<br>• Maintain weed growth in sampling areas, especially on slopes.<br>• Wear shoes with traction.<br>• Avoid traversing steep areas in slippery conditions.<br>• Do not carry heavy objects to sampling areas, on steeply sloped areas, or where steep areas must be traversed to arrive at sample points. |

| General Hazards These Hazards Apply to All Site Activities | Control Measure |
|---|---|
| **Poisonous Plants -** Poison Ivy, Poison Oak, and Poison Sumac | • Avoid areas infested with poisonous plants.<br>• Use a barrier cream to provide some protection.<br>• Wash exposed clothing separately in hot water with detergent.<br>• After use, clean tools, and soles of boots with rubbing alcohol or soap and lots of water.<br>• Immediately wash with soap and water any areas that come into contact with poisonous plants.<br>• If exposed to a poisonous plant, wash with soap and water or a product such as Technu. First aid kits are available in the company vehicles.<br>• See SOP HS-001 |
| **Repetitive Motion Injury -** Standing, Squatting, and Bending Over | • Take regular breaks and do not work in unusual positions for long periods of time.<br>• Walk and stretch between tasks.<br>• See SOP HS-025 |
| **Sun Exposure** | • Liberally apply sunscreen, with a minimum broad-spectrum sun protection factor (SPF) of 30<br>• Wear safety glasses that offer protection from ultraviolet A and B (UVA/UVB) rays.<br>• Bring shade to the site to reduce exposure.<br>• When possible, wear long-sleeved shirts and long pants.<br>• Clothes made from tightly woven fabric and darker colors offer the best protection. Some clothing is certified as offering UV protection.<br>• Wear a hat that has a brim all the way around that shades your face, ears, and the back of your neck. A tightly woven fabric, such as canvas, works best to protect your skin from UV rays.<br>• Sunscreen wears off. Put it on again if you stay out in the sun for more than 2 hours.<br>• Check the sunscreen's expiration date. Sunscreen without an expiration date has a shelf life of no more than 3 years. |
| **Utilities –** Shock, Electrocution, Fire, Explosion | • An underground utility survey must be conducted prior to intrusive activities. Coordination with utility locating services, property owner(s) or utility companies must be conducted.<br>• Utilities are to be considered live or active until documented otherwise.<br>• 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.<br>• If exposing a utility, proper support and protection must be provided so that the utility will not be damaged.<br>• 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 will be made to tamper with or correct the damaged utility.<br>• See SOP HS-014 |

| General Hazards These Hazards Apply to All Site Activities | Control Measure |
|---|---|
| **Vehicular Traffic –** Struck by injury, crushing | • Increase visibility of the work area to others by using cones, flags, barricades, proper lighting and caution tape to define work area.<br>• Use a "spotter" to locate oncoming vehicles.<br>• Use vehicle to block work area.<br>• Engage police detail for all work conducted in appropriate areas.<br>• Wear high-visibility, reflective vest at all times.<br>• Maintain minimum DOT defined distances to other traffic lanes.<br>• See SOP HS-016. |

### *4.1.1 Hazard Controls*

On-site safety equipment to control the hazards listed above will include:

| **Site-Specific Safety Equipment** *(check all that apply)* | | |
|---|---|---|
| ☒ Drinking water/electrolyte fluids | ☒ Hand cleaner/sanitizer | ☐ Tick removal kit |
| ☒ Eye wash bottles | ☒ Insect repellent | ☐ Other: |
| ☒ Fire extinguisher | ☒ Phone charger | ☐ Other: |
| ☒ First aid kit | ☐ Poison ivy/oak cleanser | ☐ Other: |
| ☐ Flashlight/head lamp | ☒ Sunscreen | |

Personal protective equipment (PPE) is discussed in further detail in Section 5.

### *4.1.2 Personal Safety*

Field activities have the potential to take employees into areas which may pose a risk to personal safety. The following websites have been researched to identify potential crime activity in the area of the project:

- https://communitycrimemap.com/
- www.cityrating.com/crimestatistics.asp
- www.crimemapping.com

The crime rate in Brooklyn Station is lower than the New York Averages.

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 Manager (SSM) 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 SSM and Safety Team (Safety Director and Regional Safety Managers: 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 are 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.

### *4.1.3 Communicable Diseases*

Communicable diseases are illnesses caused by viruses or bacteria that people spread to one another through contact with contaminated surfaces, bodily fluids, blood products, insect bites, or through the air. Examples of communicable diseases include influenza, coronavirus 2019, hepatitis B, salmonella, measles, and blood-borne illnesses. Most common forms of spread include food, insect bites, droplets, or skin contact. Infections may range in severity from asymptomatic (without symptoms) to severe and fatal. Transmission of these biologic agents can occur in a variety of ways including airborne (inhalation), direct physical contact with an infectious person, consuming contaminated foods, or beverages, contact with contaminated body fluids, contact with contaminated inanimate objects, or being bitten by an infected insect or tick. Below are ways to prevent the infection or spread of communicable diseases:

1. Distancing: Maintain a distance of at least 6 feet (2 meters) from others. Minimize the number of employees in one location to the extent possible. If tasks need to be performed close to others (within 6 feet) and that cannot be avoided, wear appropriate PPE including a face mask (surgical or cloth), gloves, and eye protection.
2. Wash Hands Often: Frequent hand washing with soap and warm water for 20 seconds. If soap and water are not readily available, use hand sanitizer (containing 60% alcohol) until soap and water can be used.
3. Clean and Disinfect Commonly Used Surfaces: Wipe down surfaces with disinfectant on a routine basis. This includes field equipment and other items that may have previously been used by others. This is especially important while working in construction trailers. When using company and personal vehicles, wipe surfaces

including the steering wheel, gear shifter, controls, and door handles before and after use.

4. Use Good Hygiene Practices: These include washing hands frequently, avoid touching your eyes, nose, and mouth, and cover coughs and sneezes.
5. Get Vaccinated: Vaccines can prevent many infectious diseases. There are also vaccines that are recommended or required for travel to certain parts of the world.
6. Avoid Touching Wild Animals: Be cautious around wild animals as they can spread infectious diseases.
7. Stay home when you are sick.

## 4.2 Job Hazard Analysis

The site-specific tasks, potential hazards, and control measures established to reduce the risk of injury or illness are identified in step-by-step JHAs included in Appendix B. Prior to the start of work, project team members will determine what tasks are covered in the scope of work (Table 2) and then develop a JHA for each of these tasks and have them reviewed by the Project Manager (PM) or their designee and approved by a member of the Safety Team. Indicated in each JHA are the specific PPE, training, equipment, health and safety SOPs and programs that apply to each task. Additional information on hazard controls can be found in GEI's SOPs and programs that apply to this project which are indicated in Appendix E.

## 4.3 Heat and Cold Stress

### *4.3.1 Heat Stress*

Employees may be exposed to the hazards associated with heat stress when ambient temperatures exceed 80ºF. To prevent heat-related illness, Project Managers (PMs) should plan for proper hydration (drinking plenty of water), acclimatization (getting used to weather conditions), and schedules that alternate work with rest. Employees should also be trained to recognize the symptoms of heat related illnesses and know how to administer first aid for heat-related illnesses and activate emergency medical services quickly when needed. Water and shade will be available to all project employees and located as close as practicable to the work areas when temperatures exceed 80°F.

Prior to each workday, the forecasted temperature and humidity for the worksite will be reviewed and will be compared against the National Weather Service Heat Index to evaluate the risk level for heat illness. When the temperature equals or exceeds 95°F, or during a heat wave, high heat procedures will be used which include additional preventive measures

**CDC Heat Planning Tool**

For the most recent details and tools for heat stress, use your smart phone to access the Centers for Disease Control for the latest information. Additional details can be found in GEI's Heat Stress Program located on the Safety Resources page of GEI Connections.

including pre-shift meetings to encourage employees to drink plenty of water, working in the buddy system or regular communication so observations can be made for heat related illness, and to remind employees of their right to take a cool-down rest when necessary.

### *4.3.2 Cold Stress*

Employees may be exposed to the hazards associated with cold stress when working in cold, wet, and/or windy conditions. Potential hazards in cold environments include frostbite, trench foot or immersion foot, hypothermia, as well as slippery surfaces, brittle equipment, and poor judgment.

**CDC Cold Stress Info**

For the most recent details and tools for cold stress, use your smart phone to access the Centers for Disease Control for the latest information. Additional details can be found in GEI's Cold Stress Program located on the Safety Resources page of GEI Connections.

## 4.4 Constituents of Concern

The characteristics of constituents of concern (COC) at the site are discussed below for safety information purposes. A COC is any substance classified or defined as hazardous, extremely hazardous, toxic, or dangerous. The COC included in this health and safety plan will be the primary constituents that have been detected on site or are anticipated to be detected. These COC will be used to determine the action levels and PPE necessary for site personnel. Adherence to the safety and health guidelines in this HASP should reduce the potential for exposure to the COC discussed below.

### *4.4.1 Site-Specific COC*

#### Chlorinated Hydrocarbons

Chlorinated hydrocarbons (organochlorides) are a very large and diverse group of hydrocarbon molecules that also have at least one covalently bound chlorine atom chemically bonded to them. Chlorinated hydrocarbons are used predominantly as solvents and have historically been used as industrial degreasers, dry cleaning solvents, anesthetic agents and as refrigerants. They are colorless, volatile liquids with a moderately sweet aroma and partially soluble in but denser than water. They are the most common DNAPL.

The more common forms of chlorinated solvent contamination of soils and ground waters include:

- Tetrachloroethene (PCE, Tetrachloroethylene)
- Carbon tetrachloride (Tetrachloromethane or carbon tet)
- Trichloroethylene (TCE,Trichloroethene)
- 1,1,1-TrichloroMethane (Chloroform)

- 1,1,1 - Trichloroethane (TCA, methyl chloroform, chlorothene, Solvent 111)
- Dichloromethane (DCM or methylene chloride)

As a class, the chlorinated hydrocarbons are potent central nervous system depressants or stimulants. They also cause greater liver and kidney damage compared to other organic solvents. Many have been shown to cause cancer in laboratory animals; due to widespread industrial use, the issue of carcinogenic risk to humans is one of the most controversial issues in regulatory toxicology.

Exposure to chlorinated hydrocarbon compounds in the occupational setting is primarily through inhalation. Skin absorption is variable and usually insignificant, although dermal absorption following prolonged or extensive skin contact can cause systemic toxicity.

### 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 than contain PFAS), the PFAS are absorbed, and can accumulate in the body. Studies indicate that PFOA and PFOS can cause reproductive and developmental, liver and kidney, and immunological effects in laboratory animals.

### Semi-Volatile Organic Compounds

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, naphththalene, phenanthrene, phenols, and pyrene.

These SVOCs are present at the Site within impacted soil and groundwater and as a dense non-aqueous phase liquid (DNAPL) by-product of gas production within soils, former manufactured gas plant (MGP) structures, and abandoned pipelines.

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

Volatile organic chemicals (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 oil or tar 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 Central Nervous System (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.

### Gasoline and Diesel Fuels

Gasoline is a pale brown or pink liquid made from processed crude oil. It evaporates easily, is very flammable and can form explosive mixtures in air. A typical gasoline mixture contains about 150 different hydrocarbons, including butane, pentane, isopentane and the BTEX compounds (benzene, ethylbenzene, toluene, and xylenes). The most common exposure to gasoline occurs by breathing vapors when filling fuel tanks. Gasoline also can be absorbed through skin during contact, such as when pumping gas or cleaning up a gasoline spill. Many harmful effects of gasoline are due to individual chemicals in gasoline, mainly BTEX, that are present in small amounts. Breathing small amounts of gasoline vapors can lead to nose and throat irritation, headaches, dizziness, nausea, vomiting, confusion and breathing difficulties. Symptoms from swallowing small amounts of gasoline include mouth, throat and stomach irritation, nausea, vomiting, dizziness and headaches. Some effects of skin contact with gasoline include rashes, redness, and swelling. Being exposed to large amounts of gasoline can lead to coma or death.

Diesel fuel is a complex mixture of hydrocarbons produced by mixing fractions obtained from the distillation of crude oil with brand-specific additives to improve performance. It is

a liquid under normal conditions with a characteristic odor. Like most chemicals, the amount of diesel you are exposed to must be above a certain level to cause adverse health effects. A short, one-off exposure to diesel will not normally cause any long-term health effects. Occasional skin exposure may lead to dermatitis (eczema). Breathing large quantities of diesel vapor or drinking diesel-based fluids may cause nonspecific signs and symptoms of poisoning such as dizziness, headache, and vomiting.

**Table 4. Primary Constituents of Concern Data**

| Constituent | Exposure Limit(s) | Route of Exposure | Primary Hazard/ Symptoms of Exposure |
|---|---|---|---|
| Aluminum | TWA 15 $mg/m^3$ (total) TWA 5 $mg/m^3$ (resp) | Inhalation, skin and/or eye contact | Irritation eyes, skin, respiratory system |
| Antimony | TWA 0.5 $mg/m^3$ | Inhalation, ingestion, skin contact, eyes | Irritation eyes, skin, nose, throat, mouth; cough; dizziness; headache; nausea, vomiting, diarrhea; stomach cramps; insomnia; anorexia; unable to smell properly |
| Arsenic | 0.01 $mg/m^3$ A.L. 0.005$mg/m^3$ | Inhalation, skin absorption, ingestion, skin contact | Ulceration of nasal septum, dermatitis, GI disturbances, peripheral neuropathy, respiratory irritation, hyperpigmentation of skin, potential carcinogen |
| Barium | TWA 15 $mg/m^3$ (total) TWA 5 $mg/m^3$ (resp) | Inhalation, skin and/or eye contact | Irritation eyes, nose, upper respiratory system; benign pneumoconiosis (baritosis) |
| Benzene | 1 ppm TWA 5 ppm STEL | Inhalation, skin absorption, ingestion skin contact | Irritation of eyes, skin, nose, respiratory system, giddiness, headache, nausea; staggering gait, fatigue, anorexia, weakness, dermatitis, bone marrow depression, potential carcinogen |
| Beryllium | TWA 0.002 $mg/m^3$ C 0.005 $mg/m^3$ (30 minutes), with a maximum peak of 0.025 $mg/m^3$ | Inhalation, skin and/or eye contact | Berylliosis (chronic exposure): anorexia, weight loss, lassitude (weakness, exhaustion), chest pain, cough, clubbing of fingers, cyanosis, pulmonary insufficiency; irritation eyes; dermatitis; [potential occupational carcinogen] |

| Constituent | Exposure Limit(s) | Route of Exposure | Primary Hazard/ Symptoms of Exposure |
|---|---|---|---|
| Cadmium | TWA 0.005 $mg/m^3$ | Inhalation, ingestion | Pulmonary edema, dyspnea (breathing difficulty), cough, chest tightness, substernal (occurring beneath the sternum) pain; headache; chills, muscle aches; nausea, vomiting, diarrhea; anosmia (loss of the sense of smell), emphysema, proteinuria, mild anemia; [potential occupational carcinogen] |
| Carbon Tetrachloride | Ca ST 2 ppm (12.6 $mg/m^3$) [60-minute] | Inhalation, skin absorption, ingestion, skin and/or eye contact | Irritation eyes, skin; central nervous system depression; nausea, vomiting; liver, kidney injury; drowsiness, dizziness, incoordination; [potential occupational carcinogen] |
| Chromium (Chromic Acid and Chromates) | 0.1 $mg/m^3$ | Inhalation, ingestion, skin contact | Irritates respiratory system, nasal, septum perforation, liver and kidney damage, leukocytosis (increased blood leucocytes), leukopenia (reduced blood leucocytes), moncytosis (increased monocytes), Eosinophilia, eye injury, conjunctivitis, skin ulcer, sensitivity dermatitis, potential carcinogen |
| Dieldrin | OSHA PEL: TWA 0.25 $mg/m^3$ [skin] | Inhalation, skin absorption, ingestion, skin and/or eye contact | Headache, dizziness; nausea, vomiting, malaise (vague feeling of discomfort), sweating; myoclonic limb jerks; clonic, tonic convulsions; coma; [potential occupational carcinogen]; in animals: liver, kidney damage |
| Ethylbenzene | 100 ppm | Inhalation, ingestion, skin contact | Eye, skin, mucous membrane irritation; headache; dermatitis, narcosis; coma |
| Gasoline | 1 ppm TWA (benzene) 5 ppm STEL (benzene) Ca [N.D.] | inhalation, skin absorption, ingestion, skin and/or eye contact | Irritation eyes, skin, mucous membrane; dermatitis; headache, lassitude (weakness, exhaustion), blurred vision, dizziness, slurred speech, confusion, convulsions; chemical pneumonitis (aspiration liquid); possible liver, kidney damage; [potential occupational carcinogen] |
| Tetramethyl lead (gasoline additive) | OSHA PEL TWA 0.075 $mg/m^3$ [skin] | inhalation, skin absorption, ingestion, skin and/or eye contact | insomnia, bad dreams, restlessness, anxious; hypotension; nausea, anorexia; delirium, mania, convulsions; coma |

| Constituent | Exposure Limit(s) | Route of Exposure | Primary Hazard/ Symptoms of Exposure |
|---|---|---|---|
| Lead | 0.05 mg/m$^3$<br><br>A.L. 0.03 mg/m$^3$ | Inhalation, ingestion, skin contact | Weakness, insomnia; facial pallor; pal eye, anorexia, weight loss, malnutrition; constipation, abdominal pain, colic; anemia; gingival lead line; tremor; paralysis of wrist and ankles; irritates eyes, hypo tension |
| Manganese | C 5 mg/m$^3$ | Inhalation, ingestion | Manganism; asthenia, insomnia, mental confusion; metal fume fever: dry throat, cough, chest tightness, dyspnea (breathing difficulty), rales, flu-like fever; low-back pain; vomiting; malaise (vague feeling of discomfort); lassitude (weakness, exhaustion); kidney damage |
| Mercury | 0.10 mg/m3 | Inhalation, ingestion, skin contact, skin absorption | Irritates eyes and skin, chest pain, cough, difficulty breathing, bronchitis, pneumonitis, tremor, insomnia, irritability, indecision, headache, fatigue, weakness, stomatitis, salivation, Gastrointestinal disturbance, weight loss, proteinuria |
| MTBE (Methyl-t-Butyl Ether) | NA | Inhalation, skin absorption, ingestion, skin contact | Potential Symptoms: Drowsiness, dizziness, headache, weakness, unconsciousness; redness of skin and eyes; INGES ACUTE: Nausea, vomiting, abdominal pain; chemical pneumonitis (by aspiration). |
| Naphthalene | 10 ppm (50 mg/m$^3$) TWA | inhalation, skin absorption, ingestion, skin and/or eye contact | Irritation eyes; headache, confusion, excitement, malaise (vague feeling of discomfort); nausea, vomiting, abdominal pain; irritation bladder; profuse sweating; jaundice; hematuria (blood in the urine), renal shutdown; dermatitis, optical neuritis, corneal damage |
| PCE (tetrachloroethene or perchloroethylene) | 100 ppm TWA<br>200 ppm C<br>300 ppm (5 minutes in any 3 hours) | Inhalation, Ingestion, Skin Contact | Irritation, nausea, vomiting, chest pain, difficulty breathing, headache, drowsiness, dizziness, disorientation, loss of coordination, blurred vision, loss of appetite, stomach pain, pain in extremities |
| TCE (trichloroethylene) | 100 ppm TWA<br>200 ppm C<br>300 ppm (5 minutes in any 3 hours) | Inhalation, ingestion, skin contact | Irritation to eyes, skin, dizziness, fatigue, blurred vision, tremors, nausea, vomiting, drowsiness, headache |

| Constituent | Exposure Limit(s) | Route of Exposure | Primary Hazard/ Symptoms of Exposure |
|---|---|---|---|
| Toluene | 200 ppm | Inhalation, skin absorption, ingestion, skin contact | Eye, nose irritation; fatigue, weakness, confusion, euphoria, dizziness, headache; dilated pupils, tearing of eyes; nervousness, muscle fatigue, insomnia, tingling in limbs; dermatitis |
| 1,1,1 Trichloroethane | 350 TWA (1,900 $mg/m^3$) | Inhalation, ingestion, skin contact | Irritation of eyes, nausea, vomiting, dizziness, drowsiness, blurred vision, headache |
| 1,2,4-Trimethyl-benzene | None | Inhalation, ingestion, skin and/or eye contact | Irritation eyes, skin, nose, throat, respiratory system; bronchitis; hypochromic anemia; headache, drowsiness, lassitude (weakness, exhaustion), dizziness, nausea, incoordination; vomiting, confusion; chemical pneumonitis (aspiration liquid) |
| 1,3,5 – Trimethylbenzene | NA | inhalation, ingestion, skin and/or eye contact | Irritation eyes, skin, nose, throat, respiratory system; bronchitis; hypochromic anemia; headache, drowsiness, lassitude (weakness, exhaustion), dizziness, nausea, incoordination; vomiting, confusion; chemical pneumonitis (aspiration liquid) |
| Xylene | 100 ppm | Inhalation, skin absorption, ingestion, skin contact | Eye, skin, nose, throat irritation; dizziness, excitement, drowsiness; incoordination, staggering gait; corneal damage; appetite loss, nausea, vomiting, abdominal pain; dermatitis |

Notes:
A.L. - Action Level
C - ceiling limit, not to be exceeded
Ca – carcinogen
f/cc - fibers per cubic centimeter
$mg/m^3$ - micrograms per cubic meter
mppcf - millions of particulates per cubic foot of air
ppm - parts per million
STEL - Short-term exposure limit (15 minutes)
TWA - Time-weighted average (8 hours)

### *4.4.2 Chemicals Brought on Site*

Potential hazards associated with chemicals brought on site (e.g., decontamination chemicals, sample preservatives, fuels, calibration fluids) for the work will be mitigated through training, administrative controls (e.g., proper labeling and storage), and proper use of PPE. Safety data sheets (SDSs) for all chemicals brought on site shall be maintained by the SSM and are included in Appendix C.

# 5. Personal Protective Equipment

The PPE required to be worn on the project site is listed in the table below. Additional PPE required for the tasks to be performed is listed on the JHAs in Appendix B.

| **Site Required PPE** *(check all that apply)* | | |
|---|---|---|
| ☒ Hard Hat | ☐ Respirator | ☐ Tyvek clothing/boots |
| ☒ Safety Glasses | ☐ Flame Resistant Clothing | ☐ Other: |
| ☒ Safety Boots | ☐ Personal Flotation Device | ☐ Other: |
| ☒ Long Sleeve Shirt | ☐ Snake Chaps | ☐ Other: |
| ☒ High Visibility Safety Vest | ☐ EH-Rated Boots | ☐ Other: |

If site conditions suggest the existence of a situation more hazardous than anticipated, the site personnel will evacuate the area to a safe distance. The hazard, the level of precautions, and the PPE will then be reevaluated with the assistance and approval of the Safety Director and the PM. If conditions indicating the need for Level A or Level B PPE are encountered, personnel will leave the site and notify the PM or a member of the Safety Team. GEI's PPE Program can be found on the Safety Resources page of GEI Connections.

## 5.1 Respiratory PPE

GEI personnel who have the potential to don a respirator must have a valid fit test certification and medical clearance. 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.

Upgrades to respiratory protection may be required based on the designated Action Levels found in Section 9.

# 6. Responsibilities and Lines of Authority

## 6.1 GEI Personnel Responsibilities

The implementation of health and safety at this project location will be the shared responsibility of the Safety Director, Regional Safety Director, PM, the Site Safety Manager (SSM), and each GEI personnel implementing the proposed scope of work.

### *6.1.1 GEI Safety Director*

The Safety Director is responsible for the overall management of GEI's safety programs, policies, and procedures. Modifications to this HASP which may result in the reduction in the identification, evaluation, and control of safety and health hazards cannot be undertaken by the project team without the approval of the Safety Director.

### *6.1.2 GEI Project Manager*

The PM is responsible for confirming that the requirements of this HASP are implemented. The PM's specific responsibilities include:

- Conducting and documenting the Project Safety Briefing.
- Verifying that the GEI staff and subcontractors selected to work on this program are sufficiently trained for site activities and have reviewed this HASP.
- Maintaining regular communications with the SSM and, if necessary, the Safety Director.

### *6.1.3 GEI Regional Safety Manager*

The RSM is responsible for supporting the safety needs and requirements specified in this HASP. The RSM's specific responsibilities include:

- Reviewing and approving the HASP and applicable JHAs.
- Working with the PM and SSM to meet client safety requirements.
- Providing approval for fall protection plans and confined space entries (permit numbers), as applicable.
- Providing safety support regarding safety programs and procedures as applicable to the project.

### 6.1.4 GEI Site Safety Manager

The SSM is responsible for implementing and enforcing the safety requirements specified in this HASP and will be on-site during activities covered in the HASP. The SSM's specific responsibilities include:

- Enforcing the requirements of this HASP and notify the PM of noncompliance.
- Conduct daily Safety Tailgate meetings for site-related work.
- Maintaining a high level of health and safety consciousness among employees implementing the proposed activities.
- Procuring the air monitoring instrumentation, PPE, and safety equipment needed for GEI project employees and verifying that each is in good working order.
- Verifying that GEI subcontractors are utilizing the correct PPE and safety equipment.

### 6.1.5 All GEI Field Personnel

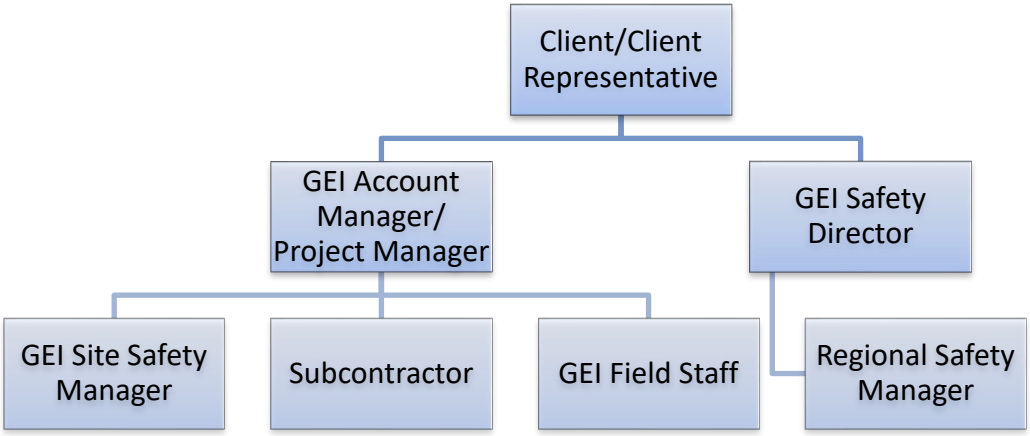
All GEI field personnel (including the PM and SSM) covered by this HASP are responsible for following the health and safety procedures in this HASP and for performing their work in a safe and responsible manner. The specific responsibilities that apply to all field personnel include:

- Reading and signing the HASP prior to the start of on-site work.
- Bringing forth any questions or concerns regarding the content of the HASP to the PM or the SSM.
- Attending and actively participating in the required Project Safety Briefing prior to beginning on-site work and any subsequent safety meetings.
- Complying with the requirements of this HASP and the requests of the SSM.
- Stopping work in the event that an immediate danger situation is perceived.
- Reporting accidents, injuries, and illnesses, regardless of their severity by following GEI's incident reporting procedures.

## 6.2 Lines of Authority

GEI will have responsibility for safety of its employees during the work performed at the site. GEI's SSM will have a cell phone available to contact the appropriate local authorities, in the event of an emergency. GEI's SSM will be available for communication with the GEI PM and with the Client's representative.

**Project Lines of Authority**




### *6.2.1 Stop Work Authority*

**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 Safety Director and the Project Manager to discuss the stop work conditions and potential control methods that can be implemented.**

## 6.3 Subcontractors

GEI has subcontracted the following firms to assist in performing work on this project:

| **Subcontractor Information** | |
|---|---|
| Company Name/Address: Tri-State Drilling Technologies, Inc., 55 Hilton Avenue, Garden City New York 11530 | |
| Contact Name: Anthony Fiorentine | Cell: (888) 454-5923 |
| Scope of Work: Advance 72 soil borings to 16-feet via track mounted Geoprobe 7822DT drill rig and 2.25-inch macro core drill string, | |

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 Safety Prequalification 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. The PM will obtain applicable safety certifications and training records from the subcontractor's site supervisor prior to the initiation of work.

# 7. Training Requirements

Prior to commencement of field activities, the PM or their designee 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. This training will be documented on the applicable JHAs (Appendix B). Personnel that have not received project-specific training will not be allowed on site.

| **Applicable Site-Specific Training Requirements** *(check all that apply)* | | |
|---|---|---|
| ☒ HAZWOPER (8Hr Refresher) | ☐ Railroad | ☐ Other: |
| ☒ HAZWOPER (Site Supervisor) | ☐ Transportation Worker Identification Credential (TWIC) | ☐ Other: |
| ☒ First Aid/CPR | ☐ MSHA (Mine Safety and Health Administration) | ☐ Other: |

## 7.1 On-Site Safety Briefings

GEI personnel will be given health and safety briefings daily (or as frequently as needed) by the SSM or their designee to plan for conducting work activities safely. The briefing will include GEI subcontractors and others as appropriate. The briefings can include information on:

- Applicable JHAs
- Changes in work practices
- Changes in environmental conditions
- Anticipated weather
- Evacuation/emergency procedures
- Air monitoring results
- Safety inspection results

Documentation of these briefings will be recorded in the GEI field book or the Tailgate Safety Briefing Form (Appendix D). For long-term projects, the Tailgate Safety Briefing Form is preferred.

# 8. Medical Surveillance Program

GEI maintains a medical surveillance program under the supervision of the Safety Director that includes a plan designed specifically for field personnel engaged in work at sites where hazardous materials may be present. Field personnel undergo an initial physical examination, including a detailed medical and occupational history before they are able to engage in work at hazardous waste sites. Upon successful completion of the examination, personnel are provided a medical clearance from an occupational health physician stating their fitness to perform the specified work activities. Employees who are part of this program will schedule and attend annual exams 12 months from the date of their previous exam.

If a GEI employee or other project worker shows symptoms of exposure to a hazardous substance and wishes to be seen by a doctor, GEI will consult with their third-party medical administrator and provide access to the nearest area hospital or medical facility.

GEI subcontractor personnel that will enter any hazardous waste sites 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). A copy of their medical clearance will be submitted to the GEI PM or SSM prior to the start of field activities.

# 9. Atmospheric Monitoring

| **Air Monitoring Required?** | |
|---|---|
| ☒ Yes | ☐ No* |

Air monitoring will be performed to identify and quantify airborne levels of hazardous substances and atmospheric hazards to determine the appropriate level of worker protection needed on-site. Work on this project requiring air monitoring includes:

| **Air Monitoring Tasks** *(check all that apply)* | | |
|---|---|---|
| ☐ Excavation | ☐ Confined Space Entry | ☐ Other: |
| ☒ Soil Sampling | ☐ Indoor Drilling | ☐ Other: |
| ☐ GW Monitoring Well Headspace | ☐ Product Sampling | ☐ Other: |

The following air monitoring equipment will be on site:

| **Air Monitoring Equipment** *(check all that apply)* | |
|---|---|
| ☒ PID with 10.6 eV lamp or equivalent | ☐ Particulate Meter (PM-10 capable) |
| ☐ Drager Chip Measurement System (CMS) with appropriate gas detection chips | ☐ Multi-gas meter: lower explosive limit (LEL) / oxygen ($O_2$) / hydrogen sulfide ($H_2S$) / hydrogen cyanide (HCN) or carbon monoxide (CO) meter |
| ☐ Sensodyne Gas Detection Pump with appropriate gas detector tubes | ☐ Other: |

GEI will conduct and document on-site work zone monitoring and will inform GEI employees of the results. ***If Action Levels are exceeded, immediately implement site action(s) according to Action Table below and notify the PM.***

## 9.1 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.

## 9.2 Action Levels

The tables below provide 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).

### *9.2.1 VOC Monitoring and Control*

Air monitoring reduces the risk of overexposure by indicating when action levels have been exceeded and when PPE must be upgraded or changed. Based on the volatile organic compounds (VOCs) listed in Table 4, determine which constituent has the lowest permissible exposure limit (PEL). This data is used to determine the action levels needed including respiratory protection at the project site. GEI's action level is half of the PEL listed in Table 4.

Exposure to organic COC can be evaluated and/or controlled by:

- Monitoring worker breathing zone atmospheric concentrations for organic COC in the breathing zone with a photoionization detector (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.

| Air Monitoring Instrument | Action Level (above background) | Site Action |
|---|---|---|
| Action Levels for the following parameters are 15-minute time weighted averages (TWA), not a single exceedance. | | |
| PID (Monitoring for VOCs) | 0.0 – 50 ppm | No respiratory protection is required if VOCs are 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

## 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. 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.

Figure 1 indicates site zones in addition to the evacuation route (including muster point) and property lines, as applicable to the site.

## 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 help in the event of an emergency. Some projects may not support the need for the buddy system to be implemented. If this is the case, the PM is required to conduct regular check-ins with the employee on site.

## 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. Each site building contains a working bathroom.

## 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. 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. All GEI employees must comply with GEI's Controlled Substance Use & Alcohol Misuse Policy found on the Safety Resources page of GEI Connections. Employees may be subject to random drug and/or alcohol testing if required by a client at a project 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. For incidents involving life-threatening situations or serious injury that require emergency response personnel (Police, Fire, EMS), call 9-1-1 from a safe area.
2. **Stop work** activity to address any injury, illness, property damage, spill, or other emergency.
3. Call Medcor Triage at 1-800-775-5866 to speak with a medical professional following any injury or illness.
4. Notify your Supervisor/Project Manager of the incident or injury.
5. Complete an incident report using the GEI Incident Report Form located on the GEI Safety Smartphone App, GEI Connections intranet page, or in the project HASP.
6. Resume work activity if all steps above have been completed and it is safe to do so.

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 Resources page of GEI Connections. 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

Site decontamination procedures are designed to achieve an orderly, controlled removal or neutralization of contaminants that may come in contact with personnel or equipment. These procedures minimize contact with contaminants and protect against the transfer of contaminants to clean areas. They also extend the useful life of PPE by reducing the amount of time that contaminants contact and can permeate PPE surfaces. This project is being conducted under the requirements of 29 CFR 1910.120(k), and any personnel or equipment that are exposed to site contaminants will follow applicable decontamination procedures.

## 12.1 Personnel and PPE Decontamination

A decontamination station where employees can drop equipment and remove PPE will be set up to minimize the potential for hazardous skin or inhalation exposure and to avoid cross-contamination and chemical incompatibilities. It will be equipped with basins for water and detergent, and 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 wash themselves wherever they have potentially been exposed to any contaminants (e.g., hands, face, etc.)

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.

## 12.2 Equipment Decontamination

All tools, equipment, and machinery that have come into contact with contaminated media, will be decontaminated on site prior to departure. Equipment decontamination procedures are designed to minimize the potential for hazardous skin or inhalation exposure and to avoid cross-contamination and chemical incompatibilities. If your project has equipment decontamination specification refer to where those can be found (work plan, specs, etc.).

# 13. Emergency Response

## 13.1 Evacuation

Prior to the start of work, emergency procedures must be identified and communicated to workers on site. This includes evacuation routes, safe areas, and/or muster points (Figure 1). Also communicate how employees will be notified that an emergency or evacuation of the site is occurring (audio alarms, visible (light) alarms, radios, sirens, etc.). Upon discovering an emergency situation, personnel will notify the SSM, who will initiate an appropriate response. Once the scene is safe, use the incident report procedures to report the evacuation to the PM and Safety Team.

## 13.2 Fire

In the event of a fire personnel will evacuate the area to the muster point located on Figure 1. GEI's SSM will contact the local fire department with jurisdiction and report the fire. The SSM will account for GEI personnel and subcontractor personnel and report their status to the PM. Incident reporting procedures will be followed once the scene is safe.

## 13.3 Spills or Material Release

If a hazardous waste spill or material release occurs, if safe, the SSM 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 SSM 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 fire department will be contacted. The SSM will notify the PM and follow the incident reporting procedures.

## 13.4 Medical Support

In case of minor injuries, on-site care will be administered with the site first aid kit. A GEI employee certified by the American Red Cross or other American Health & Safety Institute (ASHI) will be on-site at all times. 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 of the emergency and follow incident reporting procedures.

In the event of an emergency, prompt communications with local emergency responders are essential. At least one charged and functioning cell phone to enable emergency communications will be on site. Confirmation of cellular phone operation will be confirmed at the start of each working day.

Table 1 of this HASP contains detailed emergency information, including directions to the nearest hospital, and a list of emergency services and their telephone numbers. In addition, Appendix A includes a map to the local hospital/emergency room and Figure 1 indicates the evacuation route (including muster point).

## 13.5 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 40 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 SSM. Notification of evacuation will be made to the PM. The SSM 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 lightning.

## 13.6 Hazard Communication Plan

GEI personnel have received hazard communication (HAZCOM) training as part of their annual safety training and new employee safety orientation training. Hazardous materials brought on site will be properly labeled, stored, and handled. SDSs for each chemical will be included in this HASP in Appendix C. GEI's HAZCOM program can be found on the Safety Resources page of GEI Connections (Appendix E).

# 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 site below.

**Site Name:** 99 Granite Street, Brooklyn NY

**GEI Project No:** 1704281

| Print Name | Signature |
|---|---|
| | |
| | |
| | |
| | |
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| | |
| | |
| | |
| | |
| | |
| Environmental Practice Leader:<br>Henry Gold | |

# Figure

# Appendix A

## Map to Hospital

Scan this QR code or click the link for access to Google Maps.

# Appendix B

## Job Hazard Analyses

## Job Hazard Analysis

| | | | |
|---|---|---|---|
| **Task** | **Drilling Observation** | | |
| **Revision Date** | 8/1/2022 | **Client Name** | Medford Ber LLC / Par Group Development |
| **Project Name** | 99 Granite Street | **Project Number** | 1704281 |
| **Tools/Equipment Used** | Geoprobe Drill Rig (not GEI operated), Field book, camera | | |
| **Task Specific Training** | GEI Annual Safety Training (HAZWOPER), First Aid/CPR | | |
| **Minimum PPE Required** | ☒ Hard Hat ☒Safety Glasses ☒Safety-Toed Boots ☒ Reflective Vest ☒Hearing Protection ☐ Personal Flotation Device (PFD) ☐ Face Shield ☐ Chaps ☐ Tyvek clothing/boots ☐ Flame Resistant Clothing ☒ Gloves Nitrile ☐Respirator ☐Other | | |

| | | | |
|---|---|---|---|
| **JHA Prepared By: Leif Robertson/ Henry Gold** | **Date: 8/2/2022** | **Approved by: Lesley Gastwirth** | **Date: 8/2/2022** |

| Task Steps | Potential Hazards | GEI SOP or Program | Hazard Controls[1] |
|---|---|---|---|
| 1. Mobilize on site | Slips/trips/falls, stuck by, crushing hazards | Hazard Identification HS-026 | • Wear PPE that properly fits, is in good condition, and is appropriate for the activities and hazards.<br>• Maintain good visibility of the work area.<br>• Avoid walking on uneven, steeply sloped, or debris ridden ground surfaces.<br>• Plan tasks prior to preforming them including an activity hazard analysis.<br>• Keep trafficked areas free from slip/trip/fall hazards.<br>• Wear shoes with traction.<br>• Avoid traversing steep areas in slippery conditions.<br>• Do not carry heavy objects to work areas, on steeply sloped areas, or where steep areas must be traversed to reach work areas. |

[1] Use the hierarchy of controls to determine applicable hazard controls for the task in order of most effective to least effective: Elimination (physically remove the hazard), Substitution (replace the hazard), Engineering Controls (Isolate the team from the hazard), Administrative Controls (change the way people work), PPE (personal protective equipment).

| Task Steps | Potential Hazards | GEI SOP or Program | Hazard Controls[1] |
|---|---|---|---|
| 2. Utility survey | Shock, Explosion, Fire | Utility Markout HS-014 | • Ensure that all utilities have been properly marked prior to beginning work.<br>• If a utility strike occurs, call the appropriate authorities immediately. Clear the area and do not delay. |
| 3. Observe contractor activities | Struck by/crushing hazards | Working Around Heavy Equipment HS-018 | • Identify yourself and your work location to heavy equipment operators, so they may incorporate you into their operations.<br>• Coordinate hand signals with operators.<br>• Confirm equipment inspection has been completed.<br>• Stay Alert! Pay attention to equipment backup alarms and swing radii.<br>• Position yourself in a safe location.<br>• Confirm adequate clearance from overhead utilities.<br>• Notify the contractor immediately if any problems arise.<br>• Do not stand or sit under suspended loads or near any pressurized equipment lines.<br>• Do not operate cellular telephones in the vicinity of heavy equipment operation. |
| 4. Waste characterization | Contaminant contact | Hazardous Substance Management HS-009 | • Wear proper PPE during sampling including nitrile gloves and safety glasses.<br>• Dispose of gloves after use and wash hands.<br>• Wear work gloves over nitrile gloves.<br>• Keep trafficked areas free from slip/trip/fall hazards. |
| 5. Demobilize from site | Personal/material security, slips/trips/falls | Hazard Identification HS-026 | • Confirm all materials are secured/labeled, including drums and any equipment left on site.<br>• Confirm that any open trenches/pits are properly marked or barricaded.<br>• Clean all equipment/tools prior to leaving.<br>• Secure any gates/locks.<br>• Notify project manager (or designee) you are leaving the site. |

## Job Hazard Analysis

| | | | |
|---|---|---|---|
| **Task** | **Driving – Site Mobilization** | | |
| **Revision Date** | 8/1/2022 | **Client Name** | Medford Ber LLC / Par Group Development |
| **Project Name** | 99 Granite Street | **Project Number** | 1704281 |
| **Tools/Equipment Used** | GEI Car | | |
| **Task Specific Training** | GEI Annual Safety Training (Field or HAZWOPER), First Aid/CPR | | |
| **Minimum PPE Required** | ☐ Hard Hat ☐Safety Glasses ☐Safety-Toed Boots ☐ Reflective Vest ☐Hearing Protection ☐ Personal Flotation Device (PFD) ☐ Face Shield ☐ Chaps ☐ Tyvek clothing/boots ☐ Flame Resistant Clothing ☐ Gloves ☐Respirator ☐Other | | |

| | | | |
|---|---|---|---|
| **JHA Prepared By: Leif Robertson/ Henry Gold** | **Date: 8/2/2022** | **Approved by: Lesley Gastwirth** | **Date: 8/2/2022** |

| Task Steps | Potential Hazards | GEI SOP or Program | Hazard Controls[1] |
|---|---|---|---|
| 1. Inspect Vehicle | Slips/trips/falls | Hazard Identification HS-026, Driver Safety HS-004 | • Walk around vehicle to inspect for any vehicle safety issues or hazards that could be within the travel path.<br>• Adjust mirrors and seats prior to driving.<br>• Becoming familiar with dashboard, center console, and steering controls.<br>• Locate the turn signals, windshield wipers, lights, emergency flashers, and the heating, air conditioning, and defrost controls.<br>• Use a spotter if needed when backing up. |
| 2. Driving | Struck by/crushing hazards | Driver Safety SOP HS-004 | • Employees must wear their safety belt while in a moving vehicle.<br>• Employees will follow safe driving behaviors, which include limiting distractions such as manipulating radios or other equipment that may cause a distraction. Employees will not exceed the posted speed limit and will maintain a safe distance between other vehicles. |

[1] Use the hierarchy of controls to determine applicable hazard controls for the task in order of most effective to least effective: Elimination (physically remove the hazard), Substitution (replace the hazard), Engineering Controls (Isolate the team from the hazard), Administrative Controls (change the way people work), PPE (personal protective equipment).

| Task Steps | Potential Hazards | GEI SOP or Program | Hazard Controls[1] |
|---|---|---|---|
| | | | • Use defensive driving techniques.<br>• Avoid driving during hazardous weather conditions.<br>• Driving distance and time after a 12-hour shift will not exceed 30 miles or 30 minutes (whichever is greater).<br>• Vehicle accidents will be reported in accordance with GEI's accident reporting procedures. |
| 3. Parking Vehicle | Struck by, crushing hazards, security | Driver Safety SOP HS-004 | • Be aware of surrounding conditions. Park in designated areas or a safe area away from heavy equipment.<br>• Position the vehicle in a manner which reduces or eliminates the need to operate the vehicle in reverse. Choose an easy-exit parking space, like pull-through or where no one else is parked.<br>• Don't crowd neighboring vehicles; be sure to park your vehicle in the middle of your space.<br>• Secure equipment and supplies in the trunk or where they cannot be seen. Or take items with you if they cannot be hidden.<br>• If at night, park in well lit areas. |
| 4. Site Entry | Slips/trips/falls, struck by, crushing | Working Around Heavy Equipment HS-018, Hazard Identification HS-026 | • Don appropriate PPE prior to walking on site.<br>• Identify yourself and your work location to heavy equipment operators, so they may incorporate you into their operations.<br>• Stay Alert! Pay attention to equipment backup alarms and swing radii.<br>• Avoid distractions like using cell phones while traversing the site. |
| 5. Backing Up Vehicle | Struck by, crushing | Driver Safety HS-004 | • Before entering your vehicle do a walk-around. Check for fences, poles, drop-offs, buildings, etc.<br>• Know your clearances. While performing your walk-around also check for obstructions, low hanging eaves and tree limbs, wires, and any other potential clearance-related obstacles.<br>• Use a spotter. Do not allow the spotter to be positioned directly behind your vehicle or walk backwards behind you while giving instructions. They should be off to the driver's side where you can see them in your side mirror. |

## Job Hazard Analysis

| | | | |
|---|---|---|---|
| **Task** | **Soil Sampling – Drill Rig** | | |
| **Revision Date** | 8/1/2022 | **Client Name** | Medford Ber LLC / Par Group Development |
| **Project Name** | 99 Granite Street | **Project Number** | 1704281 |
| **Tools/Equipment Used** | Geoprobe Drill Rig (operated by subcontractor), PID, measuring tape, metal spoon/spatula (?) | | |
| **Task Specific Training** | GEI Annual Safety Training (HAZWOPER), First Aid/CPR | | |
| **Minimum PPE Required** | ☒ Hard Hat ☒Safety Glasses ☒Safety-Toed Boots ☒ Reflective Vest ☒Hearing Protection ☐ Personal Flotation Device (PFD) ☐ Face Shield ☐ Chaps ☐ Tyvek clothing/boots ☐ Flame Resistant Clothing ☒ Gloves Nitrile, Cut resistant ☒Respirator if action levels are exceeded ☐Other | | |

| | | | |
|---|---|---|---|
| **JHA Prepared By: Leif Robertson/Henry Gold** | **Date: 8/2/2022** | **Approved by: Lesley Gastwirth** | **Date: 8/2/2022** |

| Task Steps | Potential Hazards | GEI SOP or Program | Hazard Controls[1] |
|---|---|---|---|
| 1. Mobilize On Site/Equipment Setup | Slips/trips/falls, stuck by, crushing hazards | Hazard Identification HS-026 | • Wear PPE that properly fits, is in good condition, and is appropriate for the activities and hazards.<br>• Maintain good visibility of the work area.<br>• Avoid walking on uneven, steeply sloped, or debris ridden ground surfaces.<br>• Plan tasks prior to preforming them including an activity hazard analysis.<br>• Keep trafficked areas free from slip/trip/fall hazards.<br>• Wear shoes with traction.<br>• Avoid traversing steep areas in slippery conditions.<br>• Do not carry heavy objects to work areas, on steeply sloped areas, or where steep areas must be traversed to reach work areas. |

[1] Use the hierarchy of controls to determine applicable hazard controls for the task in order of most effective to least effective: Elimination (physically remove the hazard), Substitution (replace the hazard), Engineering Controls (Isolate the team from the hazard), Administrative Controls (change the way people work), PPE (personal protective equipment).

| Task Steps | Potential Hazards | GEI SOP or Program | Hazard Controls[1] |
|---|---|---|---|
| 2. Utility survey | Shock, Explosion, Fire | Utility Markout HS-014 | • Ensure that all utilities have been properly marked prior to beginning work.<br>• If a utility strike occurs, call the appropriate authorities immediately. Clear the area and do not delay. |
| 3. Observe contractor activities | Struck by/crushing hazards | Working Around Heavy Equipment HS-018 | • Identify yourself and your work location to heavy equipment operators, so they may incorporate you into their operations.<br>• Coordinate hand signals with operators.<br>• Confirm equipment inspection has been completed.<br>• Stay Alert! Pay attention to equipment backup alarms and swing radii.<br>• Position yourself in a safe location.<br>• Confirm adequate clearance from overhead utilities.<br>• Notify the contractor immediately if any problems arise.<br>• Do not stand or sit under suspended loads or near any pressurized equipment lines.<br>• Do not operate cellular telephones in the vicinity of heavy equipment operation. |
| 4. Sample Soil | Contaminant Exposure, Cuts/Scrapes, Repetition, Slips/Trips/Falls | Hazard Identification HS-026/Container Management HS-003 | • 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.<br>• Dispose of gloves after use and wash hands.<br>• Wear work gloves over nitrile gloves.<br>• Excavation entry will be allowed only with proper sloping or shoring.<br>• Take regular breaks and do not work in unusual positions for long periods of time.<br>• Keep trafficked areas free from slip/trip/fall hazards. |
| 5. Drum Soil Cuttings | Contaminant Contact, Cuts or Abrasions<br>Heavy Lifting ,<br>Slips/Trips/Falls | Container Management HS–003<br>Manual Lifting HS–025<br>Ergonomic Program | • Wear proper PPE during sampling including nitrile gloves and safety glasses and face shield as appropriate.<br>• Use proper dollies or drum moving tools.<br>• Use applicable tools to open/close drum lids.<br>• Do not handle drums with bulging sides.<br>• Dispose of gloves after use and wash hands.<br>• Wear work gloves over nitrile gloves.<br>• Use proper lifting techniques.<br>• Ask fellow worker for help.<br>• Keep trafficked areas free from slip/trip/fall hazards. |

| Task Steps | Potential Hazards | GEI SOP or Program | Hazard Controls[1] |
|---|---|---|---|
| 6. Pack Soil Samples | Heavy lifting, cuts or abrasions | Container Management HS–003<br>Manual Lifting HS–025<br>Ergonomic Program | • Confirm that the lids on all bottles are tight (will not leak).<br>• Place cushioning/absorbent material in the bottom of the cooler and then place the containers in the cooler with sufficient space to allow for the addition of cushioning between the containers.<br>• Use proper dollies or other lifting tools.<br>• Use proper lifting techniques.<br>• Take regular breaks and do not work in unusual positions for long periods of time.<br>• If glassware breaks, dispose of in puncture-resistant containers. Use cut resistant gloves to handle any broken glass. |
| 7. Equipment Decontamination | Contaminant Contact, Cuts or Abrasions, Slips/Trips/Falls | Hazard Identification HS–026<br>Benzene Awareness Program<br>Ergonomic Program | • Wear nitrile gloves and glasses to provide eye protection from splashing.<br>• Wash hands immediately after use.<br>• Take regular breaks and do not work in unusual positions for long periods of time.<br>• Keep trafficked areas free from slip/trip/fall hazards. |
| 8. Demobilize from site | Personal/material security, slips/trips/falls | Hazard Identification HS-026 | • Confirm all materials are secured/labeled, including drums and any equipment left on site.<br>• Confirm that any open trenches/pits are properly marked or barricaded.<br>• Clean all equipment/tools prior to leaving.<br>• Secure any gates/locks.<br>• Notify project manager (or designee) you are leaving the site. |

# Appendix C

## 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<br>RISK PHRASES: None |
| Sodium (C10 – C16) Alkylbenzene Sulfonate | 68081-81-2 | 268-356-1 | Not Listed | 10 – 20% | HAZARD CLASSIFICATION: None<br>RISK PHRASES: None |
| Sodium Tripolyphosphate | 7758-29-4 | 231-838-7 | 1469 | 5 - 15% | HAZARD CLASSIFICATION: None<br>RISK PHRASES: None |
| Tetrasodium Pyrophosphate | 7722-88-5 | 231-767-1 | 1140 | 5 - 15% | HAZARD CLASSIFICATION: None<br>RISK PHRASES: None |
| Sodium Carbonate | 497-19-8 | 207-638-8 | 1135 | 1 - 10% | HAZARD CLASSIFICATION: [Xi] Irritant<br>RISK PHRASES: R36 |
| Sodium Alcohol Sulfate | 151-21-3 | 205-788-1 | 0502 | 1 – 5% | HAZARD CLASSIFICATION: None<br>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.

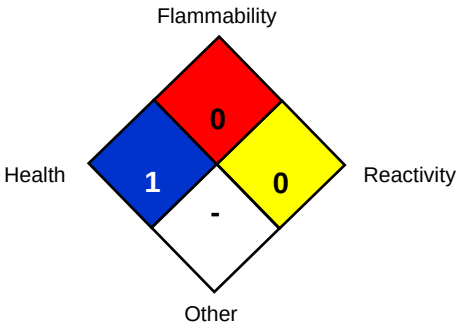
**RECOMMENDATIONS TO PHYSICIANS:** Treat symptoms and reduce over-exposure.

## 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**

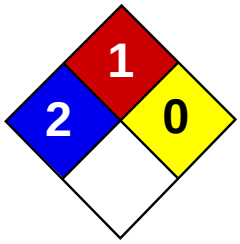
**Used to clean:** Healthcare instruments, laboratory ware, vacuum equipment, tissue culture ware, personal protective equipment, sampling apparatus, catheters, tubing, pipes, radioactive contaminated articles, optical parts, electronic components, pharmaceutical apparatus, cosmetics manufacturing equipment, 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.


| | |
|---|---|
| Health | 2 |
| Fire | 1 |
| Reactivity | 0 |
| Personal Protection | E |

# Material Safety Data Sheet
## Chromium MSDS

## Section 1: Chemical Product and Company Identification

**Product Name:** Chromium

**Catalog Codes:** SLC4711, SLC3709

**CAS#:** 7440-47-3

**RTECS:** GB4200000

**TSCA:** TSCA 8(b) inventory: Chromium

**CI#:** Not applicable.

**Synonym:** Chromium metal; Chrome; Chromium Metal Chips 2" and finer

**Chemical Name:** Chromium

**Chemical Formula:** Cr

**Contact Information:**

**Sciencelab.com, Inc.**
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

**CHEMTREC (24HR Emergency Telephone), call:** 1-800-424-9300

**International CHEMTREC, call:** 1-703-527-3887

**For non-emergency assistance, call:** 1-281-441-4400

## Section 2: Composition and Information on Ingredients

**Composition:**

| Name | CAS # | % by Weight |
|---|---|---|
| Chromium | 7440-47-3 | 100 |

**Toxicological Data on Ingredients:** Chromium LD50: Not available. LC50: Not available.

## Section 3: Hazards Identification

**Potential Acute Health Effects:**
Hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation. Slightly hazardous in case of ingestion.

**Potential Chronic Health Effects:**
CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to kidneys, lungs, liver, upper respiratory tract. Repeated or prolonged exposure to the substance can produce target organs damage.

## Section 4: First Aid Measures

**Eye Contact:**

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

**Skin Contact:**
In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

**Serious Skin Contact:**
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

**Inhalation:**
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Serious Inhalation:** Not available.

**Ingestion:**
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

**Serious Ingestion:** Not available.

## Section 5: Fire and Explosion Data

**Flammability of the Product:** May be combustible at high temperature.

**Auto-Ignition Temperature:** 580°C (1076°F)

**Flash Points:** Not available.

**Flammable Limits:** Not available.

**Products of Combustion:** Some metallic oxides.

**Fire Hazards in Presence of Various Substances:**
Slightly flammable to flammable in presence of open flames and sparks, of heat. Non-flammable in presence of shocks.

**Explosion Hazards in Presence of Various Substances:**
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

**Fire Fighting Media and Instructions:**
SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

**Special Remarks on Fire Hazards:**
Moderate fire hazard when it is in the form of a dust (powder) and burns rapidly when heated in flame. Chromium is attacked vigorously by fused potassium chlorate producing vivid incandescence. Pyrophoric chromium unites with nitric oxide with incandescence. Incandescent reaction with nitrogen oxide or sulfur dioxide.

**Special Remarks on Explosion Hazards:**
Powdered Chromium metal +fused ammonium nitrate may react violently or explosively. Powdered Chromium will explode spontaneously in air.

## Section 6: Accidental Release Measures

**Small Spill:**
Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

**Large Spill:**
Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

## Section 7: Handling and Storage

**Precautions:**
Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, acids, alkalis.

**Storage:** Keep container tightly closed. Keep container in a cool, well-ventilated area.

## Section 8: Exposure Controls/Personal Protection

**Engineering Controls:**
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Personal Protection:**
Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

**Personal Protection in Case of a Large Spill:**
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

**Exposure Limits:**
TWA: 0.5 (mg/m3) from ACGIH (TLV) [United States] TWA: 1 (mg/m3) from OSHA (PEL) [United States] TWA: 0.5 (mg/m3) from NIOSH [United States] TWA: 0.5 (mg/m3) [United Kingdom (UK)] TWA: 0.5 (mg/m3) [Canada]Consult local authorities for acceptable exposure limits.

## Section 9: Physical and Chemical Properties

**Physical state and appearance:** Solid. (Metal solid.)

**Odor:** Odorless.

**Taste:** Not available.

**Molecular Weight:** 52 g/mole

**Color:** Silver-white to Grey.

**pH (1% soln/water):** Not applicable.

**Boiling Point:** 2642°C (4787.6°F)

**Melting Point:** 1900°C (3452°F) +/- !0 deg. C

**Critical Temperature:** Not available.

**Specific Gravity:** 7.14 (Water = 1)

**Vapor Pressure:** Not applicable.

**Vapor Density:** Not available.

**Volatility:** Not available.

**Odor Threshold:** Not available.

**Water/Oil Dist. Coeff.:** Not available.

**Ionicity (in Water):** Not available.

**Dispersion Properties:** Not available.

**Solubility:**
Insoluble in cold water, hot water. Soluble in acids (except Nitric), and strong alkalies.

## Section 10: Stability and Reactivity Data

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Excess heat, incompatible materials

**Incompatibility with various substances:** Reactive with oxidizing agents, acids, alkalis.

**Corrosivity:** Not available.

**Special Remarks on Reactivity:**
Incompatible with molten Lithium at 180 deg. C, hydrogen peroxide, hydrochloric acid, sulfuric acid, most caustic alkalies and alkali carbonates, potassium chlorate, sulfur dioxide, nitrogen oxide, bromine pentafluoride. It may react violently or ignite with bromine pentafluoride. Chromium is rapidly attacked by fused sodium hydroxide + potassium nitrate. Potentially hazardous incompatibility with strong oxidizers.

**Special Remarks on Corrosivity:** Not available.

**Polymerization:** Will not occur.

## Section 11: Toxicological Information

**Routes of Entry:** Inhalation. Ingestion.

**Toxicity to Animals:**
LD50: Not available. LC50: Not available.

**Chronic Effects on Humans:**
CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC. May cause damage to the following organs: kidneys, lungs, liver, upper respiratory tract.

**Other Toxic Effects on Humans:**
Hazardous in case of skin contact (irritant), of inhalation. Slightly hazardous in case of ingestion.

**Special Remarks on Toxicity to Animals:** Not available.

**Special Remarks on Chronic Effects on Humans:**
May cause cancer based on animal data. There is no evidence that exposure to trivalent chromium causes cancer in man.

**Special Remarks on other Toxic Effects on Humans:**
Acute Potential Health Effects: May cause skin irritation. Eyes: May cause mechanical eye irritation. Inhalation: May cause irritation of the respiratory tract and mucous membranes of the respiratory tract. Ingestion: May cause gastrointestinal tract irritation with nausea, vomiting, diarrhea. Chronic Potential Health Effects: Inhalation: The effects of chronic exposure include irritation , sneezing, reddness of the throat, bronchospasm, asthma, cough, polyps, chronic inflammation, emphysema, chronic bronchitis, pharyngitis, bronchopneumonia, pneumoconoisis. Effects on the nose from chronic chromium exposure include irritation, ulceration, and perforation of the nasal septum. Inflammation and ulceration of the larynx may also occur. Ingestion or Inhalation: Chronic exposure may cause liver and kidney damage.

## Section 12: Ecological Information

**Ecotoxicity:** Not available.

**BOD5 and COD:** Not available.

**Products of Biodegradation:**
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The product itself and its products of degradation are not toxic.

**Special Remarks on the Products of Biodegradation:** Not available.

## Section 13: Disposal Considerations

**Waste Disposal:**
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

## Section 14: Transport Information

**DOT Classification:** Not a DOT controlled material (United States).

**Identification:** Not applicable.

**Special Provisions for Transport:** Not applicable.

## Section 15: Other Regulatory Information

**Federal and State Regulations:**
Connecticut hazardous material survey.: Chromium Illinois toxic substances disclosure to employee act: Chromium Illinois chemical safety act: Chromium New York release reporting list: Chromium Rhode Island RTK hazardous substances: Chromium Pennsylvania RTK: Chromium Minnesota: Chromium Michigan critical material: Chromium Massachusetts RTK: Chromium Massachusetts spill list: Chromium New Jersey: Chromium New Jersey spill list: Chromium Louisiana spill reporting: Chromium California Director's List of Hazardous Substances: Chromium TSCA 8(b) inventory: Chromium SARA 313 toxic chemical notification and release reporting: Chromium CERCLA: Hazardous substances.: Chromium: 5000 lbs. (2268 kg)

**Other Regulations:**
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

**Other Classifications:**

**WHMIS (Canada):** Not controlled under WHMIS (Canada).

**DSCL (EEC):**
R40- Limited evidence of carcinogenic effect S36/37/39- Wear suitable protective clothing, gloves and eye/face protection. S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**HMIS (U.S.A.):**

**Health Hazard:** 2

**Fire Hazard:** 1

**Reactivity:** 0

**Personal Protection:** E

**National Fire Protection Association (U.S.A.):**

**Health:** 2

**Flammability:** 1

**Reactivity:** 0

**Specific hazard:**

**Protective Equipment:**
Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Splash goggles.

## Section 16: Other Information

**References:** Not available.

**Other Special Considerations:** Not available.

**Created:** 10/10/2005 08:16 PM

**Last Updated:** 05/21/2013 12:00 PM

*The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall ScienceLab.com be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if ScienceLab.com has been advised of the possibility of such damages.*

# 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 |
|---|---|---|
| ____/____/____<br>Month Day Year<br>____A.M. ____P.M. | ____/____/____<br>Month Day Year<br>____A.M. ____P.M. | **Project Name:** _____<br>**Client and Location:** _____<br>**or** _____<br>**Office Location:** _____ |

## WHAT HAPPENED?

(Please give a detailed description of what happened. Attach photos or a sketch, if applicable.)

_____

_____

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_____

☐ **Photos were Taken**

## WHAT WAS DONE?

(Please give a detailed description of what was done to prevent and incident from occurring.)

_____

_____

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☐ **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** |
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# 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 |
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[1] This form is applicable for *only* 1 day of site activity.

# Appendix E

## GEI's Health and Safety SOPs and Programs

| **Applicable GEI H&S SOPs** *(check all that apply)* | | |
|---|---|---|
| ☒ Biological Hazards – 001 | ☒ Inclement Weather – 010 | ☐ Aerial Lift – 020 |
| ✔ Bloodborne Pathogens – 002 | ☐ Ladders -011 | ☐ Mobile Equipment – 021 |
| ☐ Container Management – 003 | ☒ Noise Exposure -012 | ☐ Aquatic Ecological Survey & Electrofishing -022 |
| ☒ Driver Safety - 004 | ☐ Nuclear Density Gauge Operation -013 | ☐ Scaffolding - 023 |
| ☐ Electrical Safety - 005a | ☒ Utility Markout-014 | ☐ Wilderness Safety - 024 |
| ☐ Lockout Tagout - 005b | ☐ Respirator Fit Test Procedure-015 | ☒ Manual Lifting – 025 |
| ☐ Excavation Trenching - 006 | ☐ Traffic Hazards -016 | ✔ Hazard Identification - 026 |
| ☒ Non-Powered Hand Tools -008a | ☐ Water Safety – 017 | ☐ Confined Space Entry for Sanitary Sewers – 027 |
| ☐ Powered Hand Tools – 008b | ☒ Working Around Heavy Equipment – 018 | ☐ Safe Trailer Use – 028 |
| ☐ Hazardous Substances Management -009 | ☐ Rail Safety -019 | ✔ COVID-19 Field Work Guidance |

**Scan this QR code with your smartphone to access all GEI H&S SOPs**

| **Applicable GEI H&S Programs** *(check all that apply)* | | |
|---|---|---|
| ☐ Asbestos Program | ☐ DOT Driver Safety | ☐ Hydrogen Sulfide |
| ☐ Arsenic Safety | ✔ Ergonomic | ☐ Injury and Illness Prevention (California Only) |
| ☒ Benzene Awareness | ☐ Fall Protection | ☐ Respiratory Protection Program |
| ☐ Cadmium Awareness | ✔ Hazard Communication | ☐ Hydrogen Sulfide |
| ☒ Cold Stress | ☒ Hearing Conservation | ✔ Fire Prevention |
| ☐ Confined Space Entry | ☒ Heat Illness Prevention | ☐ Lead Compliance |
| ☐ Crystalline Silica | ☐ Hexavalent Chromium | |

**Scan this QR code with your smartphone to access all GEI Programs**