250 MAMARONECK AVENUE
WHITE PLAINS, NEW YORK
SECTION, BLOCK, AND LOT 130.28 - 9 - 3

PHASE II
ENVIRONMENTAL SITE ASSESSMENT
(ASTM 1903-11)

PREPARED FOR:

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PWGC
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PHASE II ENVIRONMENTAL SITE ASSESSMENT
250 MAMARONECK AVENUE, WHITE PLAINS, NEW YORK

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ACRONYM	DEFINITION
ASP	Analytical Services Protocol
ASTM	American Society for Testing and Materials
AWQS	Ambient Water Quality Standards
BTEX	Benzene, Toluene, Ethylbenzene and Xylenes
CFR	Code of Federal Regulations
DCE	Dichloroethene
DER	Department of Environmental Remediation
DGI	Delta Geophysics
ELAP	Environmental Laboratory Approval Program
EM	Electromagnetic
ESA	Environmental Site Assessment
GPR	Ground Penetrating Radar
GQS	Groundwater Quality Standard
GV	Guidance Value
NYCRR	New York Codes, Rules, and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
PCB	Polychlorinated Biphenyl
PCE	Tetrachloroethene
PID	Photo-ionization Detector
PWGC	P.W. Grosser Consulting, Inc.
QA/QC	Quality Assurance / Quality Control
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
RRUSCO	Restricted-Residential Use Soil Cleanup Objective
SCO	Soil Cleanup Objective
SVOC	Semi-volatile Organic Compound
TCE	Trichloroethene
TCL	Target Compound List
USCS	Unified Soil Classification System
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
UUSCO	Unrestricted Use Soil Cleanup Objective
VISL	Vapor Intrusion Screening Level
VOC	Volatile Organic Compound

1.0 INTRODUCTION

Southern Land Company (Client) retained P.W. Grosser Consulting, Inc. (PWGC) to prepare a Phase II Environmental Site Assessment (ESA) for the property located at 250 Mamaroneck Avenue, White Plains, New York. The purpose of the Phase II ESA was to further evaluate recognized environmental conditions (RECs) identified in the Phase I ESA to obtain sound, scientifically valid data concerning actual property conditions.

Work was conducted in accordance with the American Society for Testing and Materials (ASTM) Standard E 1903-11 (Standard Practices for Environmental Site Assessment: Phase II Environmental Site Assessment Process) and in substantial conformance with the New York State Department of Environmental Conservation's (NYSDEC's) Division of Environmental Remediation's (DER's) Technical Guidance for Site Investigation and Remediation, May 2010 (DER-10).

2.0 BACKGROUND

2.1 Site Description and Features

The subject property consists of one parcel located at 250 Mamaroneck Avenue in White Plains, New York. The site is located in Westchester County. The property is identified in the Westchester County Tax Map as section, block, and lot 130.28-9-3.

The subject property measures approximately 1.16 acres and is occupied by one building with sections that are six stories tall, four stories tall, and 1.5 stories tall, as well as asphalt paved parking areas and a playground. The property has a full basement under the six-story and four-story sections.

A Site Location Map is included as **Figure 1** and a Site Plan is included as **Figure 2**.

2.2 Physical Setting

The topography of the site and surrounding area was reviewed from the USGS 7.5-minute series topographic map for the White Plains, New York quadrangle. The property elevation is approximately 239 feet above the National Geodetic Vertical Datum (NGVD). The local elevation of the property is varied and generally decreases when moving from west to east towards Mamaroneck Avenue. The approximate decrease in elevation is eight to ten feet from the western boundary of the site to the eastern boundary. Regional physiographic conditions are summarized below.

2.3 Site History and Land Use

The subject property is currently used as a YMCA facility with a gym, daycare, offices, two pools, and single room occupancy residential units.

Historical usage of the subject property indicates that it was first developed sometime prior to 1905 and used for residential purposes from sometime prior to 1905 to at least 1911 and residential and commercial purposes from as late as 1930 to the present.

2.4 Adjacent Property Land Use

The adjacent surrounding properties are currently utilized for commercial offices, retail units, residential apartments buildings, parking lots, and a church.

Historical information reviewed for the properties surrounding the subject property indicate that the area has been developed since sometime prior to 1905. Development was primarily residential until 1930, after which commercial development increased to the present-day extent. Historical usage of properties in the surrounding area indicative of potential RECs included a nearby property with historic usage as a dry-cleaning facility.

2.5 Summary of Previous Assessments

2.5.1 August 2019 Phase I Environmental Site Assessment Report by P.W. Grosser Consulting

A Phase I ESA was prepared for the subject property in August of 2019 by P.W. Grosser Consulting. The Phase I ESA identified the following RECs associated with subject property:

- The subject property is identified as having an open NYSDEC spill record. The open spill record appears to relate to residual contamination from numerous prior releases according to prior investigations. During the site reconnaissance performed at the subject property, a PWGC representative identified a strong petroleum odor in the southern basement and stairwell, which the building manager stated was related to the open spill. A review of the January 2018 Tank Survey Report by US Tank Tech and the April 2018 Subsurface Investigation Report by HydroEnvironmental Solutions, Inc. indicated that the suspected petroleum products that triggered the opening of the spill record appeared to be entering the building at the subject property from a combination of the rear parking lot, rear stairwell, and the southern basement. An attempt was made by both US Tank Tech and HydroEnvironmental Solutions, Inc. to identify the specific source of petroleum product entering the basement of the subject property. No specific source of the petroleum release was identified by either party. PWGC has also identified the currently active release of petroleum on the subject property as a Vapor Encroachment Condition (VEC). The open spill record at the site appears to have evidence of existing impact, including the petroleum odor in the building and the lack of on-going remediation, and as such represents a REC.
- The subject property is identified as both a NYSPILLS and an LTANKS site. There are nine closed NYSDEC spill records in addition to the aforementioned open NYSDEC spill record between the two databases. Each of the spill records are affiliated with releases of #2 heating oil. Releases at the subject property occurred both at numerous locations within the subsurface at the site (including underground fill piping and the tank connection for the heating oil UST) and numerous locations in the basement boiler room

(including piping and boiler connections). According to the building manager, basement boiler room spills have resulted in large quantities of staining on the concrete boiler room floor. Based upon all of this information, the closed past spill records constitute past releases of petroleum products that have occurred in connection with the property and have been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria. As such, the spill records closed by the NYSDEC represent an HREC.

- The subject property is identified in the Westchester County Department of Health Petroleum Bulk Storage (WCDH PBS) database as having historically stored #2 heating oil in a registered 12,000-gallon underground storage tank (UST) that was located under the front parking lot at the subject property. In November 2015, the UST was excavated, cleaned, and removed. The tank appeared intact and without holes during removal. The fuel oil service line leading to the tank appeared to have been leaking. A total of 422.75 tons of contaminated soil and 2,514 gallons of impacted water surrounding the tank was also removed and disposed of. A total of 14 post excavation soil samples were collected and analyzed, and no exceedances of New York State Department of Environmental Conservation (NYSDEC) CP-51 guidance were detected. Evidence was not identified of removal of the oil service line. During an August 2019 geotechnical investigation, a boring advanced in the vicinity of the former UST oil service piping encountered petroleum stained soils. Based upon this information, the stained soils located in the vicinity of the former oil service piping leading to the UST represents a REC.
- An adjacent site to the east (across Mamaroneck Avenue) from the property was utilized as a dry-cleaning facility from at least 1969 to 2010. The site has also been identified in the Drycleaner, RCRA Generator, and EDR Historic Cleaner databases. Specifically, the site is identified as a RCRA Non-Gen and historic RCRA LQG of spent solvents with no identified violations. The site has been identified as a VEC due to its hydraulically upgradient position and the potential for solvent vapors to migrate from the site onto the subject property. As such, due to the duration of the site's operation as drycleaner, its identified solvent storage, and its adjacent and hydraulically upgradient position, PWGC believes that the site represents a REC.

The Phase I ESA recommended that a Phase II ESA be performed at subject property.

2.5.2 November 2015 Tank Closure Report by Northeast Environmental

In November 2015, Northeast Environmental excavated, cleaned, and removed a 12,000-gallon #2 heating oil UST from beneath the front parking lot along Mamaroneck Avenue at the subject property. The tank appeared intact and without holes during removal. The fuel oil service line leading to the tank appeared to have been leaking. A total of 422.75 tons of contaminated soil and 2,514 gallons of impacted water surrounding the tank was also removed and disposed of. A total of 14 post excavation soil samples were collected and analyzed, and no exceedances of NYSDEC CP-51 guidance were detected. The report did not indicate whether or not the oil service line was removed.

2.5.3 January 2018 Tank Survey Report by US Tank Tech

US Tank Tech was called to attempt to identify the source of oil entering the basement of the subject property. US Tank Tech performed a visual inspection and oil appeared to have been migrating from the rear parking lot area into the basement of the 6-story building on the subject property. Although a petroleum sheen was identified on the asphalt parking lot, it was not clear if this was related to the seeping petroleum in the basement. No specific source of the petroleum release was identified.

2.5.4 April 2018 Subsurface Investigation Report by HydroEnvironmental Solutions, Inc

HydroEnvironmental Solutions, Inc. performed a subsurface investigation of the subject property to investigate the oil intrusion and petroleum odor identified by the property manager and US Tank Tech, including 12 soil borings and three temporary monitoring wells. Borings were installed throughout the basement beneath the pool room and in the rear parking area. Groundwater was identified at approximately 11 to 12 feet below ground surface (bgs) in outdoor borings and at approximately 1-foot bgs in indoor borings. Photoionization detector (PID) screening identified no volatile organic compound (VOC) contamination in outdoor borings and some VOC contamination in indoor borings (including readings as high as 220.7 parts per million [ppm]). None of the three soil samples and three groundwater samples collected included any exceedances of applicable standards (Unrestricted Use Soil Cleanup Objectives and Ambient Water Quality Standards); however, at least one of the soil samples contained elevated reporting limits due to dilution that exceeded the Unrestricted Use Soil Cleanup Objectives.

3.0 WORK PERFORMED AND RATIONALE

3.1 Scope of Assessment

The Phase II ESA included the following tasks:

- Geophysical Survey
- Soil Quality Evaluation
- Groundwater Quality Evaluation
- Soil Vapor Intrusion Evaluation

3.2 Geophysical Survey

On August 27, 2019, PWGC and Delta Geophysics Inc. (DGI) of Catasauqua, PA mobilized to the subject property to perform a geophysical survey. The purpose of the geophysical survey was to determine the absence/presence of subsurface anomalies at the subject property. Descriptions of the geophysical methods are described below.

3.2.1 Electromagnetic Survey

DGI utilized Fisher M-Scope TW-6 and Radiodetection RD7000 electromagnetic (EM) instruments. The Fisher M-Scope TW-6 and Radiodetection RD7000 instruments use the principle of EM induction to measure the variability of electrical conductivity of subsurface materials and the presence of buried metal objects. Significant contrasts in the electrical properties between non-indigenous materials and surrounding soil enable accurate delineation of buried waste materials, fill, and geologic features. The large EM response to metal makes this technique particularly well suited to identifying buried metal objects such as underground storage tanks (USTs), metallic wastes, buried drums, pipelines, reinforced building foundations, and other metal components of buried structures. It is, however, equally sensitive to metal objects on the ground surface.

3.2.2 Ground Penetrating Radar Survey

Following the electromagnetic survey, DGI utilized a Geophysical Survey Systems Inc. SIR-3000 cart-mounted Ground Penetrating Radar (GPR) unit with a 400 Mhz antenna to further investigate the metallic anomalies. GPR is a geophysical method that has been developed over the past thirty years for shallow, high-resolution, subsurface investigations of the earth. GPR uses high frequency pulsed electromagnetic waves to acquire subsurface information. Energy is propagated downward into the ground and is reflected back to the surface from boundaries at which there are electrical property contrasts. The 400 MHz antenna can achieve depths of penetration up to about 20 feet, but this depth may be greatly reduced due to site-specific conditions. Signal

penetration decreases with increased soil conductivity as conductive materials attenuate or absorb the GPR signal. The GPR was configured to transmit to a depth of approximately 10 feet below the subsurface, but actual signal penetration was limited to approximately 5 to 7 feet below grade due to signal attenuation from near surface soils.

3.2.3 Survey Findings

The geophysical survey covered the front parking lot east of the building along Mamaroneck Avenue and the rear parking lot to the west of the building. GPR transects in the parking lot east of the building imaged soil disturbances consistent with a former excavation. Approximate dimensions measure 54 feet by 24 feet with the longest dimension running from north to south. Three unknown utilities were also traced north from the anomaly for approximately 50 feet where they terminated near the location of the former fill port. The potential exists that these are former fill lines and / or product piping. No anomalies were detected that were consistent with in-place USTs.

Delta also performed a utility survey across the specified area. The following utilities were identified: water, storm sewer, gas, and unknown lines. All detectable utilities were marked onsite with appropriate colors. Unknown utilities were marked onsite in pink paint.

The complete Geophysical Survey, including further detail regarding the methodology and findings, is included in **Appendix A**.

3.3 Soil Quality Evaluation

To characterize soil quality, soil borings were installed throughout the subject property. Boring locations were focused in areas of potential concern as identified by the Phase I ESA and geophysical survey. A total of eight soil borings were installed during the investigation. Soil boring locations are illustrated on **Figure 2**.

3.3.1 Soil Boring Protocol

Coastal Environmental Solutions (Coastal) of Medford, New York provided environmental drilling services during the investigation. A Geoprobe 7822DT was utilized to install the environmental soil borings. Prior to performing each soil boring, 10-mil polyethylene sheeting, sufficiently large to hold the anticipated number of soil cores was laid on the ground in the area where each soil boring was performed.

Soils were collected continuously from ground surface to refusal at each location. Refusal was caused by either bedrock or tightly compacted subsurface material, depending on the location. Soil boring IDs and refusal depths are presented in the in-text table below.

Boring ID	Refusal Depth	Sample ID	Sample Depth
SB001	15' bgs	SB001 4-6'	4-6'
SB002	14' bgs	N/A	N/A
SB003	14' bgs	N/A	N/A
SB004	14' bgs	N/A	N/A
SB005	14' bgs	N/A	N/A
SB006	18.5' bgs	N/A	N/A
SB007	14.5' bgs	N/A	N/A
SB008	13' bgs	N/A	N/A

The soil cores were placed on the 10-mil polyethylene sheeting in the order they came out of the ground. The acetate liners were cut open and the soil core was screened for the presence of volatile organic vapors, which are commonly associated with petroleum products and industrial solvents, utilizing a photoionization detector (PID). Each soil core was classified by a hydrogeologist using the Unified Soil Classification System (USCS).

Soil characterization indicated that urban fill was present in the soils from grade to between 1- to 3- feet bgs in the front parking area and 1- to 5- feet bgs in the rear parking area. Fill primarily contained a mixture of concrete, brick, asphalt, and silty sand. Fill was typically underlain by 1- to 3-feet of medium brown loose silty sand, 1- to 3-feet of gray-brown or gray silty sand interspersed with potential perched water, underlain by fine, tightly compacted native gray or gray brown silty or clayey sand. Metamorphic rock fragments (typically gneiss or schist) were also encountered near the refusal depth of multiple borings. No borings exhibited significant odors or PID readings in excess of 5.0 ppm with the exception of SB001. SB001 exhibited a petroleum odor from 4- to 15- feet bgs, petroleum staining, and an elevated PID response from 4- to 10- feet bgs (max of 239.5 ppm).

3.3.2 Sample Collection Protocol

Soil samples were collected only from borings that exhibited petroleum impact above the groundwater table smear zone. As previously discussed, only one boring met this requirement, SB001. The sample was analyzed for the following chemical analyses:

- CP-51 Volatile Organic Compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260
- CP-51 Semi-Volatile Organic Compounds (SVOCs) by USEPA Method 8270

The chemical analyses were limited to the NYSDEC CP-51 list which is a truncated list for petroleum impacted soils.

Samples collected for volatile organic analysis were collected directly from the acetate liners utilizing terra-core sampling devices. The remaining sample volumes were transferred to a stainless-steel bowl and homogenized. Once homogenized, samples were transferred to laboratory supplied glassware and packed in a cooler with ice and shipped under proper chain-of-custody procedures to Alpha Analytical Laboratory, a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) certified laboratory, for the following analysis individually following NYSDEC Analytical Services Protocol (ASP)-Category A Deliverables.

3.3.3 Soil Analytical Results

Soil analytical results were compared to the NYSDEC's Title 6 New York Codes, Rules, and Regulations (NYCRR) Part 375 and Final Commissioner Policy, CP-51 Soil Cleanup Objectives (SCOs) for Unrestricted Use and Restricted Residential Use.

One soil sample, SB001 (4-6'), was collected during the Phase II evaluation from a 2-foot interval exhibiting significant evidence of petroleum impact above the smear zone (elevated PID response, odor, and staining) to evaluate the level of contamination and potential presence of a release. The boring from which the sample was collected was located approximately 20 feet north of the former UST excavation and ten feet east of the the potential fill line / product piping.

The results of the sample revealed concentrations of 1,2,4-Trimethlybenzene and Total Xylenes greater than their respective Unrestricted Use SCOs (UUSCOs), but not greater than their respective Restricted Residential Use SCOs (RRUSCOs).

Results for sampled concentrations SVOCs in SB001 (4-6') were all less than detection limits with the exception of Fluorene, Phenanthrene, and Pyrene, none of which exceeded their respective UUSCOs, RRUSCOs, or CP-51 Soil Cleanup Guidance levels.

Analytical results are detailed in **Tables 1 and 2** and the complete laboratory analytical report is included in **Appendix B**.

3.4 Groundwater Quality Evaluation

To characterize groundwater quality, groundwater samples were collected throughout the subject property. Groundwater sampling locations were focused in areas of potential concern as identified by the Phase I ESA and geophysical survey. A total of five groundwater samples were collected during the investigation. Groundwater flow direction is suspected to be towards the northeast. Groundwater sampling locations are illustrated on **Figure 2**.

3.4.1 Sampling Collection Protocol

Following the completion of the soil borings at SB001, SB002, SB003, SB004 and SB007, Coastal utilized a stainless-steel screen point sampling device to sample through the Geoprobe rods in each borehole. The five sample locations were selected to either: A. Evaluate the potential for contaminated groundwater migration onsite from upgradient sources (GW005), B. Evaluate the potential for groundwater contamination from a release from the potential fill line / product piping (GW002 and GW003) or C. Evaluate the potential for contaminated groundwater migration onsite from historic dry cleaners across Mamaroneck Avenue (GW001 and GW004). Two groundwater sampling locations were proposed in the rear parking lot area to evaluate the potential for contaminated groundwater migration onsite from upgradient sources, but only one was able to be collected due to refusal and drilling limitations. The sample IDs for the five locations were GW001 through GW005. Potential perched groundwater was encountered ranging from approximately 5 to 7 feet below surface grade in most of the borings. Sampling was performed from the 4-foot interval prior to refusal in each borehole. Disposable polyethylene tubing was inserted into the water bearing zone of the screen point sampler.

Approximately three to four volumes of water were purged from the temporary sampling point prior to the collection of samples where feasible.

Samples were collected in pre-cleaned laboratory supplied glassware and stored in a cooler on ice for transport to Alpha Analytical Laboratory for analysis. Groundwater samples were analyzed for the following:

- TCL VOCs by USEPA Method 8260 (GW001 and GW004)
- CP-51 VOCs by USEPA Method 8260 (GW002, GW003, and GW005)
- CP-51 SVOCs by USEPA Method 8270 (GW001, GW002, GW003, and GW005)

3.4.2 Groundwater Analytical Results

Groundwater analytical results were compared to NYSDEC groundwater quality standards (GQS) / guidance values (GVs) specified in 6 NYCRR Part 703.

VOCs were detected at concentrations that exceeded AWQS at every sampling location except GW005, which was collected from an upgradient location in the rear parking lot area. Analytes that exceeded AWQS included 1,2,4,5-Tetramethylbenzene (max of 39 parts per billion (ppb)), 1,2,4-Trimethylbenzene (max of 220 ppb), 1,3,5-Trimethylbenzene (max of 55 ppb), Benzene (max of 12 ppb), Ethylbenzene (max of 100 ppb), Isopropylbenzene (max of 34 ppb), n-Butylbenzene (max of 26 ppb), n-Propylbenzene (max of 52 ppb), Naphthalene (max of 300 ppb), o-Xylene (max of 42 ppb), p-Isopropyltoluene (max of 19 ppb), p/m-Xylene (max of 130 ppb), and sec-Butylbenzene (max of 34 ppb). Total BTEX ranged from 0.79 ppb (GW005) to 284.2 ppb (GW001). The chlorinated solvents typically associated with drycleaners (tetrachloroethene [PCE], trichloroethene [TCE], cis-1,2-dichloroethene [DCE], and vinyl chloride [VC]) were not detected at concentrations greater than detection limits.

SVOCs were detected at concentrations that exceeded AWQS at all four of the sampling locations that were successfully analyzed. GW004 was not able to be analyzed for SVOCs due to laboratory extraction error, however, GW004 did have multiple VOCs with detectable concentrations, a sheen, and a slight petroleum odor. Analytes that exceeded AWQS included Acenaphthene (max of 86 ppb), Benzo(a)anthracene (max of 3.4 ppb), Benzo(a)pyrene (max of 0.95), Benzo(b)fluoranthene (max of 1.4 ppb), Benzo(k)fluoranthene (max of 0.42 ppb), Chrysene (max of 7 ppb), Fluorene (max of 180 ppb), Indeno(1,2,3-cd)pyrene (max of 1.4 ppb) and Phenanthrene (max of 410 ppb).

Analytical results are detailed in **Tables 3 and 4** and the complete laboratory analytical report is included in **Appendix B**.

3.5 Soil Vapor Evaluation

To evaluate potential soil vapor contamination at the subject property, a soil vapor investigation was performed, biased towards the subject property boundary nearest to the nearby historic dry-cleaning sites. Specific sample locations were chosen by identifying potential preferential pathways to the subsurface, such as voids in the parking lot and storm drains and installing the soil vapor implants several feet away from these pathways to prevent short-circuiting of the samples.

3.5.1 Sampling Protocol

Sampling was conducted in accordance with the NYSDOH "Guidance for Evaluating Soil Vapor Intrusion in New York State," (NYSDOH Guidance) October 2006. Temporary soil vapor implants were installed along the subject property boundary to a depth of approximately three feet. Prior to sampling, the integrity of the sampling port seals were tested using tracer gas analysis. The environment surrounding the seal was enriched with the tracer gas, helium, as readings were collected through the sampling probe with a portable helium detector. Tracer gas readings collected from each soil vapor implant were acceptable indicating the seals were intact and the sampling probes were acceptable for sample collection.

After the initial tracer gas test was performed, one to three volumes of the sample tubing was purged prior to collecting samples. Flow rates for both purging and collecting did not exceed 0.2 liters per minute to minimize potential indoor air infiltration during sampling.

Soil vapor samples were collected into 2.7-liter Summa® vacuum canisters fitted with two-hour flow controllers. The samplers were batch certified clean by the laboratory. Proper quality assurance (QA) / quality control (QC) protocol was followed during the collection of soil gas samples to ensure that cross-contamination in the field did not occur. The samples were submitted to Alpha Analytical Laboratory for analysis of VOCs by USEPA Method TO-15.

3.5.2 *Analytical Results*

As New York State has not developed standards or guidance levels for soil vapor concentrations, soil vapor sample analytical data were compared to the USEPA Vapor Intrusion Screening Levels (VISLs) for default residential target sub-slab and near source gas concentration criteria, compiled August 2019, as specified at https://www.epa.gov/vaporintrusion/vapor-intrusion-screening-level-calculator. Analytical results for the soil vapor samples are shown on **Table 5**. The laboratory data report is included as **Appendix B**.

VOCs did not exceed their respective VISLs with the following exceptions:

- 1,3-Butadiene ranged from 5.35 to 13.3 µg/m^3 (SV002); and,
- Ethylbenzene ranged from 11.9 µg/m^3 to 495 µg/m^3 (SV001).

The compound 1,3-Butadiene is utilized in industry as a monomer in the production of synthetic rubber which is not known to have occurred at this site. It is also commonly found in ambient air in urban and suburban areas as a consequence of emissions from vehicles. In addition to ethylbenzene, the other analytes that make up BTEX (Benzene, Toluene, and Xylenes) were also observed; however, not at concentrations exceeding VISLs. BTEX compounds are typically observed in petroleum products. Total BTEX ranged from 110.6 µg/m^3 (SV003) to 3,355.24 µg/m^3 (SV001). Soil vapor results for chlorinated solvents affiliated with dry cleaning (DCE, PCE, TCE, and VC) were each less than detection limits.

4.0 CONCLUSIONS AND RECOMMENDATIONS

PWGC has performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E1903-11 for the subject property. The Phase II ESA consisted of the following tasks:

- Geophysical Survey
- Soil Quality Evaluation
- Groundwater Quality Evaluation
- Soil Vapor Intrusion Evaluation

4.1 Conclusions

Based on the results of the Phase II ESA, PWGC offers the following conclusions:

- The geophysical survey did not identify the presence of any USTs or similar subsurface anomalies beneath the front or rear parking lot areas at the subject property. The survey did identify three unknown subsurface lines which may represent historic fill lines or product piping.
- Based upon visual observations, historic fill appears to be present at the subject property to a depth of at least 3 feet below grade in the front parking lot area and 5 feet below graded in the rear parking lot area.
- Based upon the results of the soil quality evaluation performed at the subject site, residual petroleum contamination affiliated with the open spill and/or the former UST appears to be present at the subject property at the SB001 location in the front parking area; however, evidence of petroleum contamination in soil was not identified at any of the other soil boring locations (including the rear parking lot area and in the vicinity of the potential historic fill line / product piping).
- Results of the groundwater quality evaluation at the site identified widespread sampling results in the front parking area with petroleum-related VOCs and SVOCs in exceedance of AWQS. Groundwater sampling results in the upgradient rear parking area only identified exceedances of SVOCs. Groundwater sampling results for chlorinated solvents affiliated with historic dry cleaning at nearby sites (DCE, PCE, TCE, and VC) were not detected at concentrations greater than reporting limits. Based upon this information, PWGC did not identify evidence of the migration of significant groundwater contamination onto the property from offsite sources as a part of this groundwater quality evaluation.
- Results of the soil vapor quality investigation of the property indicated that petroleum related VOCs including Benzene, Ethylbenzene, Toluene, and Xylenes are present in soil vapor. 1,3-Butadiene, typical in urban settings resulting from vehicle emissions, and Ethylbenzene were detected at concentrations in excess of USEPA Vapor Intrusion Screening Levels. Soil vapor sampling results for chlorinated solvents affiliated with historic dry cleaning at nearby sites (DCE, PCE, TCE, and VC) were not detected at concentrations greater than reporting limits.

4.2 Recommendations

Based on the conclusions detailed above, PWGC offers the following recommendations for the subject property:

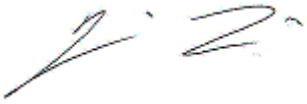
- The Client (or PWGC on the client's behalf) should relay soil, groundwater, and soil vapor analytical results and locations from this Phase II ESA to the NYSDEC as further investigation of the open spill.

- Following the correspondence with the NYSDEC, the Client should consider the presence of the open spill and how it may impact current or future uses of the site and the actions that may be required by the NYSDEC to grant spill closure.
- If the site is to be redeveloped or other excavations occur at the site, such as for utilities, subsurface soils and other materials that are excavated should be properly characterized and disposed of in accordance with applicable local, state, and federal requirements.
- If the site is to be redeveloped, inclusion of vapor intrusion controls to prevent the migration of contaminated soil vapor into buildings or structures should be considered. Examples of vapor intrusion controls include vapor barrier systems and/or sub-slab depressurization systems.

5.0 SIGNATURE OF ENVIRONMENTAL PROFESSIONAL

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in Section 312.10 of 40 CFR 312. I have the specific qualifications based on education, training and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR 312.

Michael Gaul
Sr. Hydrogeologist



Jennifer Lewis, P.G.
Sr. Project Manager

Report Completion Date: 9/18/19

6.0 REFERENCES

6 NYCRR Part 375 Environmental Remediation Programs Subparts 375-1 to 375-4 & 375-6.

6 NYCRR Part 703 Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations.

CP-51 / Soil Cleanup Guidance.

DER-10 / Technical Guidance for Site Investigation and Remediation.

Standard practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process, ASTM Standard E 1903-11.

NYSDOH Final Soil Vapor Intrusion Guidance (October 2006)

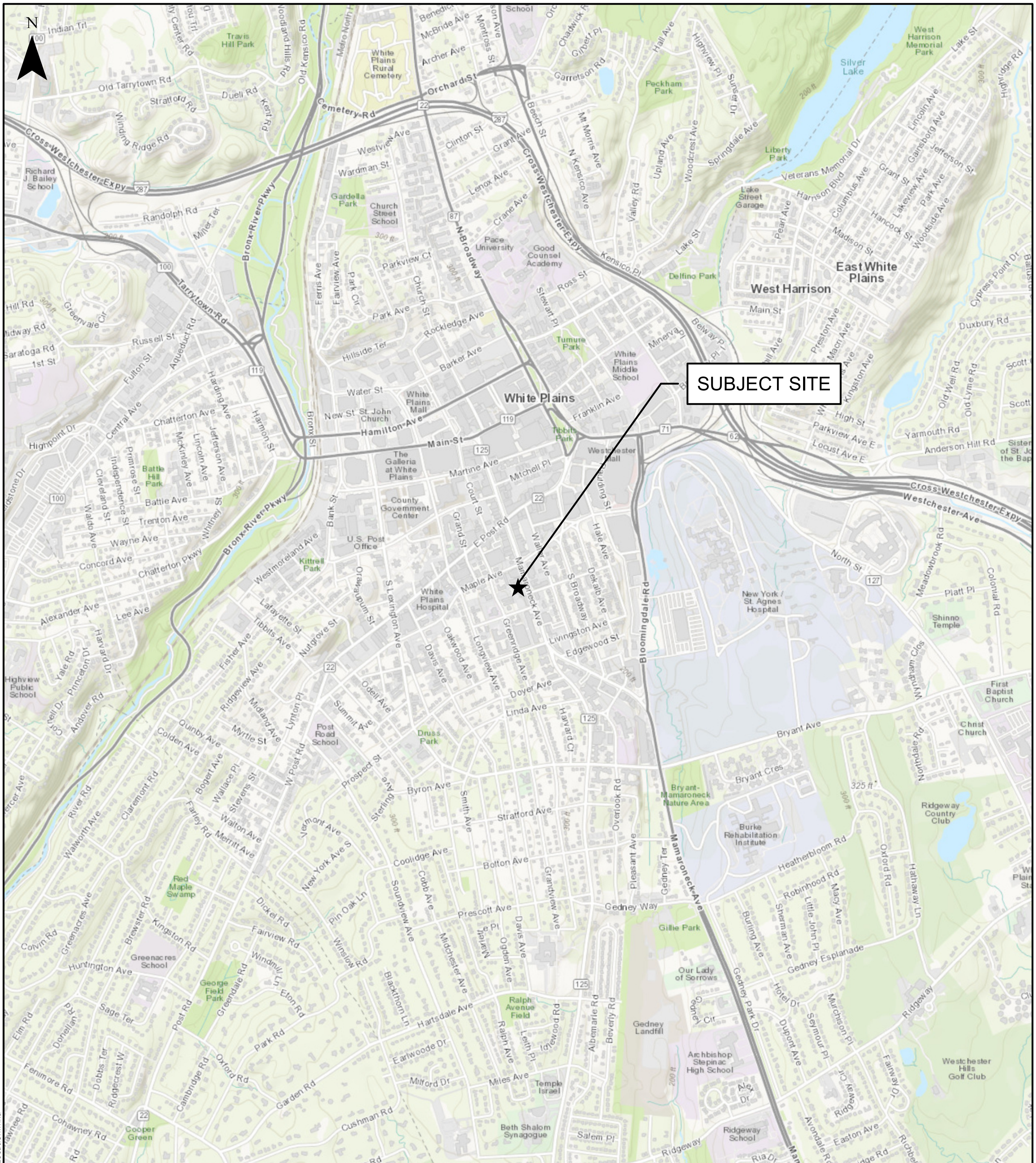
7.0 LIMITATIONS

The conclusions presented in this report are professional opinions based on the data described in this report. These opinions have been arrived at in accordance with currently accepted engineering and hydrogeologic standards and practices applicable to this location, and are subject to the following inherent limitations:

1. The data presented in this report are from visual inspections and examination of records prepared by others. The passage of time, manifestation of latent conditions, or occurrence of future events may require further exploration of the site, analysis of data, and re-evaluation of the findings, observations, and conclusions presented in this report.
2. The data reported and the findings, observations, and conclusions expressed are limited by the scope of work. The scope of work was defined by the request of the client.
3. No warranty or guarantee, whether expressed or implied, is made with respect to the data reported, findings, observations, or conclusions. These are based solely upon site conditions in existence at the time of the investigation, and other information obtained and reviewed by PWGC.
4. The conclusions presented in this report are professional opinions based on data described in this report. They are intended only for the purpose, site location, and project indicated. This report is not a definitive study of contamination at the site and should not be interpreted as such.
5. This report is based, in part, on information supplied to PWGC by third-party sources. While efforts have been made to substantiate this third-party information, PWGC cannot attest to the completeness or accuracy of information provided by others.

PWGC
CLIENT DRIVEN SOLUTIONS

FIGURES



PWGC
CLIENT DRIVEN SOLUTIONS
P.W. Grosser Consulting, Inc.

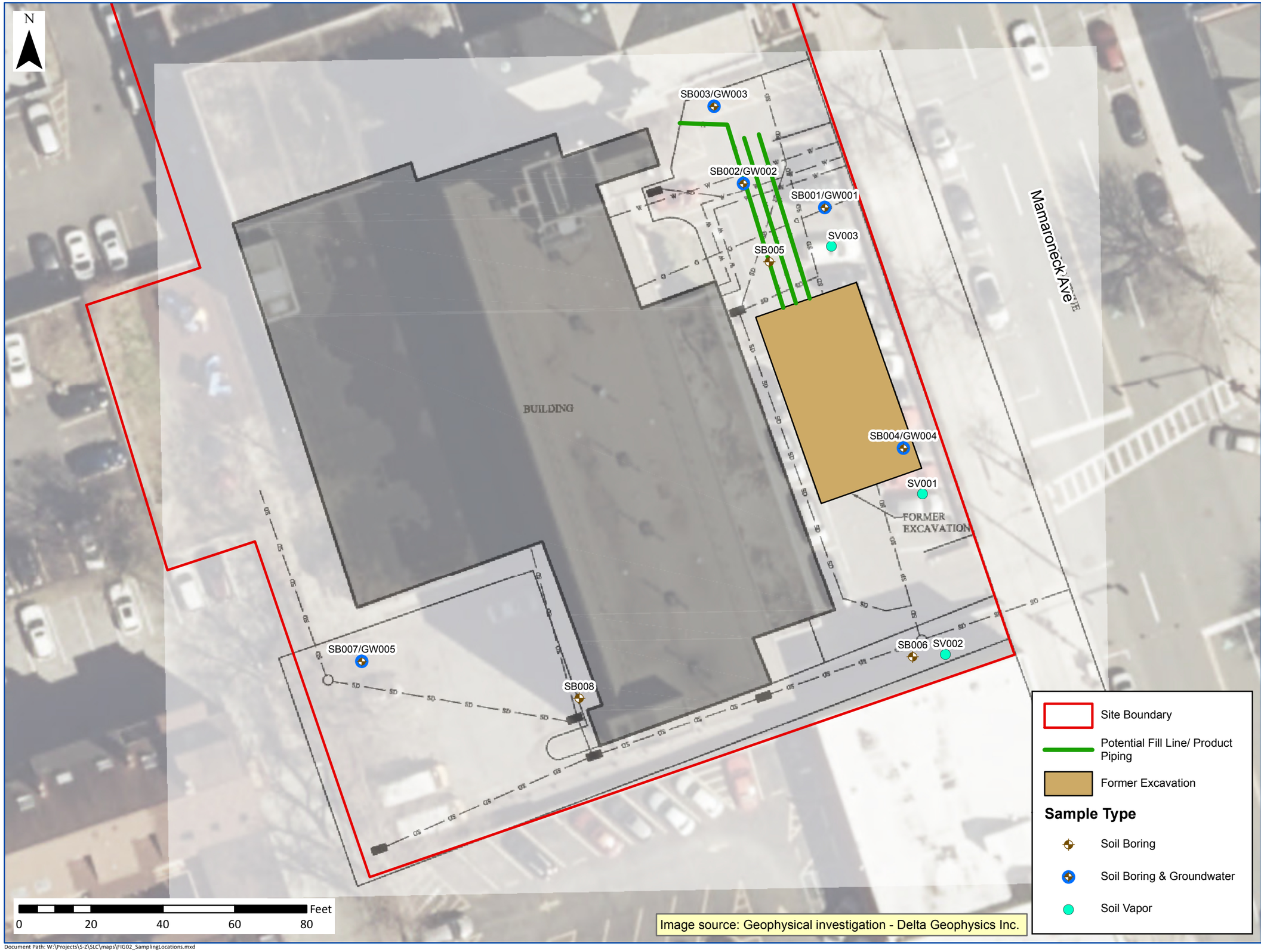
630 Johnson Ave., Suite 7
Bohemia, NY 11716
Ph: 631-589-6353 • Fax: 631-589-8705
pwgc.info@pwgrosser.com

SITE LOCATION

250 Mamaroneck Ave
White Plains, NY

0 ¼ ½ ¾ 1 Miles

Project:	SLC1901
Date:	8/1/2019
Designed by:	MG
Drawn by:	PH
Approved by:	MG
Figure No:	1



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DRAWING PREPARED FOR:

REVISION	DATE	INITIAL	COMMENTS

DRAWING INFORMATION:

Project:	SLC1901	Designed by:	MG
Date:	9/17/2019	Drawn by:	TS
Scale:	AS SHOWN	Approved by:	MG

SITE PLAN WITH SAMPLING LOCATIONS

250 Mamaroneck Ave
White Plains, NY

FIGURE NO:

2

Document Path: W:\Projects\S-Z\SLC\maps\FIG02_SamplingLocations.mxd

PWGC
CLIENT DRIVEN SOLUTIONS

TABLES

Table 1
Soil Analytical Results - VOCs
250 Mamaroneck Avenue, White Plains, NY

Client Sample ID: Sample Depth: Laboratory ID: Sampling Date:	NYSDEC SCOs Unrestricted Use [1]	NYSDEC SCOs Restricted Residential Use [2]	NYSDEC CP-51 [3]	SB001 4-6' L1911583-08 8/27/2019
VOCs by USEPA method 5035 in mg/kg				
1,2,4-Trimethylbenzene	3.6	52	3.6	6.1
1,3,5-Trimethylbenzene	8.4	52	8.4	1.6
Benzene	0.06	4.8	0.06	0.045 U
Ethylbenzene	1	41	1	0.58
Isopropylbenzene	NS	NS	2.3	0.53
n-Butylbenzene	12	100	12	1.2
n-Propylbenzene	3.9	100	3.9	1.1
Naphthalene	12	100	12	6.3
o-Xylene	NS	NS	0.26	0.82
p-Isopropyltoluene	NS	NS	10	1
p/m-Xylene	NS	NS	0.26	0.84
sec-Butylbenzene	11	100	11	1.3
tert-Butylbenzene	5.9	100	5.9	0.027 J
Toluene	0.7	100	0.7	0.065 J
Xylenes, Total	0.26	100	0.26	1.7

Notes:

(1) NYSDEC 6 NYCRR Environmental Remediation Programs Part 375 Unrestricted Use of Soil Cleanup Objective Table 375-6.8a

(2) NYSDEC 6 NYCRR Environmental Remediation Programs Part 375 Restricted Use of Soil Cleanup Objective Table 375-6.8b

(3) New York DEC CP-51 Soil Cleanup Levels Criteria per NY CP-51 Soil Cleanup Levels dated October 21, 2010

NS - No Standard

U - The analyte was analyzed for, but was not detected above the reported sample quantification limit.

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

Highlighted text denotes concentrations exceeding Unrestricted Use and/or CP-51

Table 2
Soil Analytical Results - SVOCs
250 Mamaroneck Avenue, White Plains, NY

Client Sample ID: Sample Depth: Laboratory ID: Sampling Date:	NYSDEC SCOs Unrestricted Use [1]	NYSDEC SCOs Restricted Residential Use [2]	NYSDEC CP-51 [3]	SB001 4-6' L1911583-08 8/27/2019	
SVOCs by GC/MS in mg/kg					
Acenaphthene	20	100	20	0.69	U
Acenaphthylene	100	100	100	0.69	U
Anthracene	100	100	100	0.52	U
Benzo(a)anthracene	1	1	1	0.52	U
Benzo(a)pyrene	1	1	1	0.69	U
Benzo(b)fluoranthene	1	1	1	0.52	U
Benzo(ghi)perylene	100	100	100	0.69	U
Benzo(k)fluoranthene	0.8	3.9	0.8	0.52	U
Chrysene	1	3.9	1	0.52	U
Dibenzo(a,h)anthracene	0.33	0.33	0.33	0.52	U
Fluoranthene	100	100	100	0.52	U
Fluorene	30	100	30	2.6	
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.5	0.69	U
Phenanthrene	100	100	100	4.5	
Pyrene	100	100	100	0.94	

Notes:

(1) NYSDEC 6 NYCRR Environmental Remediation Programs Part 375 Unrestricted Use of Soil Cleanup Objective Table 375-6.8a

(2) NYSDEC 6 NYCRR Environmental Remediation Programs Part 375 Restricted Use of Soil Cleanup Objective Table 375-6.8b

(3) New York DEC CP-51 Soil Cleanup Levels Criteria per NY CP-51 Soil Cleanup Levels dated October 21, 2010

NS - No Standard

U - The analyte was analyzed for, but was not detected above the reported sample quantification limit.

Table 3
Groundwater Analytical Results - TCL VOCs
250 Mamaroneck Avenue, White Plains, NY

Client Sample ID:	NY AWQS [1]	GW001		GW002		GW003		GW004		GW005	
Sample Depth:		11-15'		10-14'		10-14'		10-14'		10.5-14.5'	
Laboratory ID:		L1938967-01		L1938967-02		L1938967-03		L1938967-04		L1938967-05	
Sampling Date:		8/27/2019		8/27/2019		8/27/2019		8/27/2019		8/27/2019	
VOCs by GC/MS in ug/l											
1,1,1,2-Tetrachloroethane	5	6.2	U	NA		NA		2.5	U	NA	
1,1,1-Trichloroethane	5	6.2	U	NA		NA		2.5	U	NA	
1,1,2,2-Tetrachloroethane	5	1.2	U	NA		NA		0.5	U	NA	
1,1,2-Trichloroethane	1	3.8	U	NA		NA		1.5	U	NA	
1,1-Dichloroethane	5	6.2	U	NA		NA		2.5	U	NA	
1,1-Dichloroethene	5	1.2	U	NA		NA		0.5	U	NA	
1,1-Dichloropropene	5	6.2	U	NA		NA		2.5	U	NA	
1,2,3-Trichlorobenzene	5	6.2	U	NA		NA		2.5	U	NA	
1,2,3-Trichloropropane	0.04	6.2	U	NA		NA		2.5	U	NA	
1,2,4,5-Tetramethylbenzene	5	39		NA		NA		1.9	J	NA	
1,2,4-Trichlorobenzene	5	6.2	U	NA		NA		2.5	U	NA	
1,2,4-Trimethylbenzene	5	220		220		64		11		4.1	
1,2-Dibromo-3-chloropropane	0.04	6.2	U	NA		NA		2.5	U	NA	
1,2-Dibromoethane	0.0006	5	U	NA		NA		2	U	NA	
1,2-Dichlorobenzene	3	6.2	U	NA		NA		2.5	U	NA	
1,2-Dichloroethane	0.6	1.2	U	NA		NA		0.5	U	NA	
1,2-Dichloroethene, Total	NS	6.2	U	NA		NA		2.5	U	NA	
1,2-Dichloropropane	1	2.5	U	NA		NA		1	U	NA	
1,3,5-Trimethylbenzene	5	55		55		16		3.2		1	J
1,3-Dichlorobenzene	3	6.2	U	NA		NA		2.5	U	NA	
1,3-Dichloropropane	5	6.2	U	NA		NA		2.5	U	NA	
1,3-Dichloropropene, Total		1.2	U	NA		NA		0.5	U	NA	
1,4-Dichlorobenzene	3	6.2	U	NA		NA		2.5	U	NA	
1,4-Dioxane	NS	620	U	NA		NA		250	U	NA	
2,2-Dichloropropane	5	6.2	U	NA		NA		2.5	U	NA	
2-Butanone	50	7.9	J	NA		NA		6.6		NA	
2-Hexanone	50	3.7	J	NA		NA		5	U	NA	
4-Methyl-2-pentanone	NS	12	U	NA		NA		5	U	NA	
Acetone	50	19		NA		NA		30		NA	
Acrylonitrile	5	12	U	NA		NA		5	U	NA	
Benzene	1	12		4.1		0.7		0.26	J	0.5	U
Bromobenzene	5	6.2	U	NA		NA		2.5	U	NA	
Bromochloromethane	5	6.2	U	NA		NA		2.5	U	NA	
Bromodichloromethane	50	1.2	U	NA		NA		0.5	U	NA	
Bromoform	50	5	U	NA		NA		2	U	NA	
Bromomethane	5	6.2	U	NA		NA		2.5	U	NA	
Carbon disulfide	60	12	U	NA		NA		5	U	NA	
Carbon tetrachloride	5	1.2	U	NA		NA		0.5	U	NA	
Chlorobenzene	5	6.2	U	NA		NA		2.5	U	NA	
Chloroethane	5	6.2	U	NA		NA		2.5	U	NA	
Chloroform	7	6.2	U	NA		NA		2.5	U	NA	
Chloromethane	NS	6.2	U	NA		NA		2.5	U	NA	
cis-1,2-Dichloroethene	5	6.2	U	NA		NA		2.5	U	NA	
cis-1,3-Dichloropropene	0.4	1.2	U	NA		NA		0.5	U	NA	
Dibromochloromethane	50	1.2	U	NA		NA		0.5	U	NA	
Dibromomethane	5	12	U	NA		NA		5	U	NA	
Dichlorodifluoromethane	5	12	U	NA		NA		5	U	NA	
Ethyl ether	NS	6.2	U	NA		NA		2.5	U	NA	
Ethylbenzene	5	100		81		15		3.7		2.5	U
Hexachlorobutadiene	0.5	6.2	U	NA		NA		2.5	U	NA	
Isopropylbenzene	5	34		32		8.2		2.3	J	2.5	U
Methyl tert butyl ether	10	8.1		6.2	U	2.5	U	2.5	U	2.5	U
Methylene chloride	5	6.2	U	NA		NA		2.5	U	NA	
n-Butylbenzene	5	18		26		4.7		0.8	J	2.5	U
n-Propylbenzene	5	52		50		13		2.8		2.78	J
Naphthalene	10	270		300		77		6.2		8	
o-Chlorotoluene	5	6.2	U	NA		NA		2.5	U	NA	
o-Xylene	5	42		42		10		2.2	J	2.5	U
p-Chlorotoluene	5	6.2	U	NA		NA		2.5	U	NA	
p-Diethylbenzene	NS	97		NA		NA		5.3		NA	
p-Ethyltoluene	NS	150		NA		NA		8		NA	
p-Isopropyltoluene	5	16		19		5.1		0.98	J	2.5	U
p/m-Xylene	5	130		110		26		5.4		0.79	J
sec-Butylbenzene	5	28		34		9.6		2.2	J	0.8	J
Styrene	5	6.2	U	NA		NA		2.5	U	NA	
tert-Butylbenzene	5	6.2	U	6.2	U	2.5	U	2.5	U	2.5	U
Tetrachloroethene	5	1.2	U	NA		NA		0.5	U	NA	
Toluene	5	2.2	J	6.2	U	2.5	U	2.5	U	2.5	U
trans-1,2-Dichloroethene	5	6.2	U	NA		NA		2.5	U	NA	
trans-1,3-Dichloropropene	0.4	1.2	U	NA		NA		0.5	U	NA	
trans-1,4-Dichloro-2-butene	5	6.2	U	NA		NA		2.5	U	NA	
Trichloroethene	5	1.2	U	NA		NA		0.5	U	NA	
Trichlorofluoromethane	5	6.2	U	NA		NA		2.5	U	NA	
Vinyl acetate	NS	12	U	NA		NA		5	U	NA	
Vinyl chloride	2	2.5	U	NA		NA		1	U	NA	
Xylenes, Total	NS	170		150		36		7.6	J	0.79	J

Notes:

(1) New York TOGS 111 Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.

NA - Not Analyzed

NS - No Standard

U - The analyte was analyzed for, but was not detected above the reported sample quantification limit.

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

Highlighted text denotes concentrations exceeding AWQS

Table 4
Groundwater Analytical Results - CP-51 SVOCs
250 Mamaroneck Avenue, White Plains, NY

Client Sample ID: Sample Depth: Laboratory ID: Sampling Date:	NY AWQS [1]	GW001 11-15' L1938967-01 8/27/2019	GW002 10-14' L1938967-02 8/27/2019	GW003 10-14' L1938967-03 8/27/2019	GW004 10-14' L1938967-04 8/27/2019	GW005 10.5-14.5' L1938967-05 8/27/2019
SVOCs by GC/MS-SIM in ug/l						
Acenaphthene	20	1.7	86	3.5	- -	0.68
Acenaphthylene	NS	0.48	40	0.99	- -	0.18
Anthracene	50	0.39	39	0.68	- -	0.15
Benzo(a)anthracene	0.002	0.05 J	3.4	0.07 J	- -	0.05 J
Benzo(a)pyrene	0	0.1 U	0.95 J	0.14 U	- -	0.02 J
Benzo(b)fluoranthene	0.002	0.02 J	1.4	0.03 J	- -	0.02 J
Benzo(ghi)perylene	NS	0.02 J	0.45 J	0.14 U	- -	0.02 J
Benzo(k)fluoranthene	0.002	0.1 U	0.42 J	0.14 U	- -	0.01 J
Chrysene	0.002	0.05 J	7	0.12 J	- -	0.02 J
Dibenzo(a,h)anthracene	NS	0.1 U	1 U	0.14 U	- -	0.1 U
Fluoranthene	50	0.12	15	0.24	- -	0.07 J
Fluorene	50	3.3	180	5.6	- -	1.3
Indeno(1,2,3-cd)pyrene	0.002	0.1 U	1.2	0.14 U	- -	0.1 U
Phenanthrene	50	4.6	410	9.5	- -	1.9
Pyrene	50	0.77	73	1.3	- -	0.26

Notes:
(1) New York TOGS 111 Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.
NS - No Standard
U - The analyte was analyzed for, but was not detected above the reported sample quantification limit.

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
Highlighted text denotes concentrations exceeding AWQS

Table 5
Soil Vapor Sample Analyical Results - VOCs
250 Mamaroneck Avenue, White Plains, NY

Client Sample ID: Laboratory ID: Sampling Date:	EPA-VISL-TSSGC	SV001 L1938991-01 8/27/2019		SV002 L1938991-02 8/27/2019		SV003 L1938991-03 8/27/2019	
Volatile Organics in Air TO-15 (µg/m^3)							
1,1,1-Trichloroethane	170,000	10.9	U	10.9	U	10.9	U
1,1,2,2-Tetrachloroethane	1.6	13.7	U	13.7	U	13.7	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	170000	15.3	U	15.3	U	15.3	U
1,1,2-Trichloroethane	5.8	10.9	U	10.9	U	10.9	U
1,1-Dichloroethane	58	8.09	U	8.09	U	8.09	U
1,1-Dichloroethene	7000	7.93	U	7.93	U	7.93	U
1,2,4-Trichlorobenzene	70	14.8	U	14.8	U	14.8	U
1,2,4-Trimethylbenzene	2100	12.8		9.83	U	9.83	U
1,2-Dibromoethane	0	15.4	U	15.4	U	15.4	U
1,2-Dichloro-1,1,2,2-tetrafluoroethane	NS	14	U	14	U	14	U
1,2-Dichlorobenzene	7000	12	U	12	U	12	U
1,2-Dichloroethane	4	8.09	U	8.09	U	8.09	U
1,2-Dichloroethene (total)	NS	7.93	U	7.93	U	7.93	U
1,2-Dichloropropane	25	9.24	U	9.24	U	9.24	U
1,3,5-Trimethylbenzene	2100	9.83	U	9.83	U	9.83	U
1,3-Butadiene	3.1	5.35		13.3		5.77	
1,3-Dichlorobenzene	NS	12	U	12	U	12	U
1,3-Dichloropropene, Total	23	9.08	U	9.08	U	9.08	U
1,4-Dichlorobenzene	9	12	U	12	U	12	U
1,4-Dioxane	19	7.21	U	7.21	U	7.21	U
2,2,4-Trimethylpentane	NS	9.34	U	9.34	U	9.34	U
2-Butanone	170,000	941		454		879	
2-Hexanone	1,000	153		8	U	97	
3-Chloropropene	16	6.26	U	6.26	U	6.26	U
4-Ethyltoluene	NS	9.83	U	9.83	U	9.83	U
4-Methyl-2-pentanone	100000	20.5	U	20.5	U	20.5	U
Acetone	1100000	3820		2050		3090	
Benzene	12	9.94		9.01		9.9	
Benzyl chloride	2	10.4	U	10.4	U	10.4	U
Bromodichloromethane	2.5	13.4	U	13.4	U	13.4	U
Bromoform	85	20.7	U	20.7	U	20.7	U
Bromomethane	170	7.77	U	7.77	U	7.77	U
Carbon disulfide	24000	17		13.7		9.19	
Carbon tetrachloride	16	12.6	U	12.6	U	12.6	U
Chlorobenzene	1700	9.21	U	9.21	U	9.21	U
Chloroethane	350000	5.28	U	5.28	U	5.28	U
Chloroform	4	9.77	U	9.77	U	9.77	U
Chloromethane	3100	4.13	U	4.13	U	4.13	U
cis-1,2-Dichloroethene	NS	7.93	U	7.93	U	7.93	U
cis-1,3-Dichloropropene	23	9.08	U	9.08	U	9.08	U
Cyclohexane	210,000	9.09		13.1		7.09	
Dibromochloromethane	NS	17	U	17	U	17	U
Dichlorodifluoromethane	3,500	9.89	U	9.89	U	9.89	U
Ethyl Acetate	2400	18	U	18	U	18	U
Ethyl Alcohol	NS	94.2	U	94.2	U	94.2	U
Ethylbenzene	37	495		191		11.9	
Heptane	NS	36.5		28.2		22.1	
Hexachlorobutadiene	4.3	21.3	U	21.3	U	21.3	U
iso-Propyl Alcohol	7,000	12.3	U	12.3	U	12.3	U
Methyl tert butyl ether	360	7.21	U	7.21	U	7.21	U
Methylene chloride	3,400	17.4	U	17.4	U	17.4	U
n-Hexane	24,000	23		19.8		31.5	
o-Xylene	3,500	669		115		12.2	
p/m-Xylene	3500	2150		433		35.1	
Styrene	35000	8.52	U	8.52	U	8.52	U
tert-Butyl Alcohol	NS	46.7		31.8		49.1	
Tetrachloroethene	360	13.6	U	13.6	U	13.6	U
Tetrahydrofuran	70000	14.7	U	14.7	U	14.7	U
Toluene	170000	40.3		19		41.5	
trans-1,2-Dichloroethene	NS	7.93	U	7.93	U	7.93	U
trans-1,3-Dichloropropene	23	9.08	U	9.08	U	9.08	U
Trichloroethene	16	10.7	U	10.7	U	10.7	U
Trichlorofluoromethane	NS	15.7		11.2	U	434	
Vinyl bromide	2.9	8.74	U	8.74	U	8.74	U
Vinyl chloride	5.6	5.11	U	5.11	U	5.11	U
Xylene (Total)	3500	2810		547		47.3	
Total BTEX	NS	3355.24		766.01		110.6	

Notes:

EPA VISL Default Residential Target Sub-Slab & Near Source Soil Gas Concentrations Criteria per VISL Calculator, August 2019.
NS - No standard
U - Indicates that the analyte was not detected above the laboratory MDL
Highlighted text denotes concentrations exceeding VISL

APPENDIX A
GEOPHYSICAL SURVEY

DELTA Geophysics Inc.

GEOPHYSICAL INVESTIGATION REPORT

SITE LOCATION:

250 Mamaroneck Avenue
White Plains, New York

PREPARED FOR:

PW Grosser
630 Johnson Avenue, Suite 7
Bohemia, NY

PREPARED BY:

Benjamin Rimler
Delta Geophysics Inc.
738 Front Street
Catasauqua, PA 18032

September 06, 2019

Delta Geophysics, Inc. (Delta) is pleased to provide the results of the geophysical survey conducted at 250 Mamaroneck Avenue, White Plains, New York.

1.0 INTRODUCTION

On August 27, 2019 Delta Geophysics personnel performed a limited geophysical investigation at 250 Mamaroneck Avenue, White Plains, New York. The area of interest was all accessible areas on the property. Surface conditions consisted of asphalt, concrete, and grass. Subsurface conditions were unknown at time of survey.

2.0 SCOPE OF WORK

The primary objective was to locate USTs (Underground Storage Tanks), and former excavations on site. A secondary objective was to locate and mark detectable underground utilities in close proximity to client proposed soil boring locations.

3.0 METHODOLOGY

Selection of survey equipment is dependent site conditions and project objectives. For this project the technician utilized the following equipment to survey the area of concern:

- Geophysical Survey Systems Inc. SIR-3000 cart-mounted Ground Penetrating Radar (GPR) unit with a 400 Mhz antenna.
- Radiodetection RD7000 precision utility locator.
- Fisher M-Scope TW-6 pipe and cable locator.

Ground penetrating radar (commonly called GPR) is a geophysical method that has been developed over the past thirty years for shallow, high-resolution, subsurface investigations of the earth. GPR uses high frequency pulsed electromagnetic waves (generally 10 MHz to 1,000 MHz) to acquire subsurface information. Energy is propagated downward into the ground and is reflected back to the surface from boundaries at which there are electrical property contrasts. GPR is a method that is commonly used for environmental, engineering, archeological, and other shallow investigations.

The GSSI SIR-3000 GPR can accept a wide variety of antennas which provide various depths of penetration and levels of resolution. The 400 MHz antenna can achieve depths of penetration up to about 20 feet, but this depth may be greatly reduced due to site-specific conditions. Signal penetration decreases with increased soil conductivity. Conductive materials attenuate or absorb the GPR signal. As depth increases the return signal becomes weaker. Penetration is the greatest in unsaturated sands and fine gravels. Clayey, highly saline or saturated soils, areas covered by steel reinforced concrete, foundry slag, of other highly conductive materials significantly reduces GPR depth of penetration.

The GPR was configured to transmit to a depth of approximately 10 feet below the subsurface, but actual signal penetration was limited to approximately 5-7 feet below ground surface (bgs). The limiting factor was signal attenuation from near surface soils.

The RD7000 precision utility locator uses radio emission to trace the location of metal bearing utilities. This radio emission can be active or passive. Active tracing requires the attachment of a

radio transmitter to the utility, passive tracing uses radio emissions that are present on the utility. Underground electrical utilities typically emit radio signals that this device can detect.

The TW-6 is designed to find pipes, cables and other metallic objects such as underground storage tanks. One surveyor can carry both the transmitter and receiver together, making it ideally suited for exploration type searches of ferrous metal masses. Metal detectors of this type operate by generating a magnetic field at the transmitter which causes metallic objects in the subsurface to generate a secondary magnetic field. The induced secondary field is detected by the receiver, which generates an audible tone equal to the strength of the secondary field.

4.0 SURVEY FINDINGS

All accessible areas of the property were examined during this investigation. Each location was examined with the RD7000 for potential subsurface utilities then surveyed with GPR and TW-6 for other potential anomalies.

Former Excavation

GPR transects in the parking lot east of the building imaged soil disturbances consistent with a former excavation. Approximate dimensions measure 54 feet by 24 feet. Three unknown utilities were also traced north from the anomaly for approximately 50 feet where they terminated. The potential exists these are former fill lines and / or product piping.

Utility Survey

Delta performed a utility survey across the client specified area. The following utilities were identified: Water, storm sewer, gas, and unknown lines. All detectable utilities were marked onsite with appropriate colors. Unknown utilities were marked onsite in pink paint.

A site map (082719) is included with all located subsurface features.

5.0 SURVEY LIMITATIONS

GPR depth of penetration was limited to approximately 5-7 feet bgs. The limiting factor was due to conductive soils. Reinforced concrete west of the building limited the use of TW-6.

6.0 WARRANTIES AND DISCLAIMER

As with any geophysical method, it must be stressed that caution be used during any excavation or intrusive testing in proximity to any anomalies indicated in this report. In addition, the absence of detected signatures does not preclude the possibility that targets may exist. To the extent the client desires more definitive conclusions than are warranted by the currently available facts; it is specifically Delta's intent that the conclusions stated herein will be intended as guidance.

This report is based upon the application of scientific principles and professional judgment to certain facts with resultant subjective interpretations. Professional judgments expressed herein are based on the facts currently available within the limit or scope of work, budget and schedule. Delta represents that the services were performed in a manner consistent with currently accepted professional practices employed by geophysical/geological consultants under similar circumstances. No other representations to Client, express or implied, and no warranty or guarantee is included or intended in this agreement, or in any report, document, or otherwise.

This report was prepared pursuant to the contract Delta has with the Client. That contractual relationship included an exchange of information about the property that was unique and between Delta and its client and serves as the basis upon which this report was prepared. Because of the importance of the understandings between Delta and its client, reliance or any use of this report by anyone other than the Client, for whom it was prepared, is prohibited and therefore not foreseeable to Delta.

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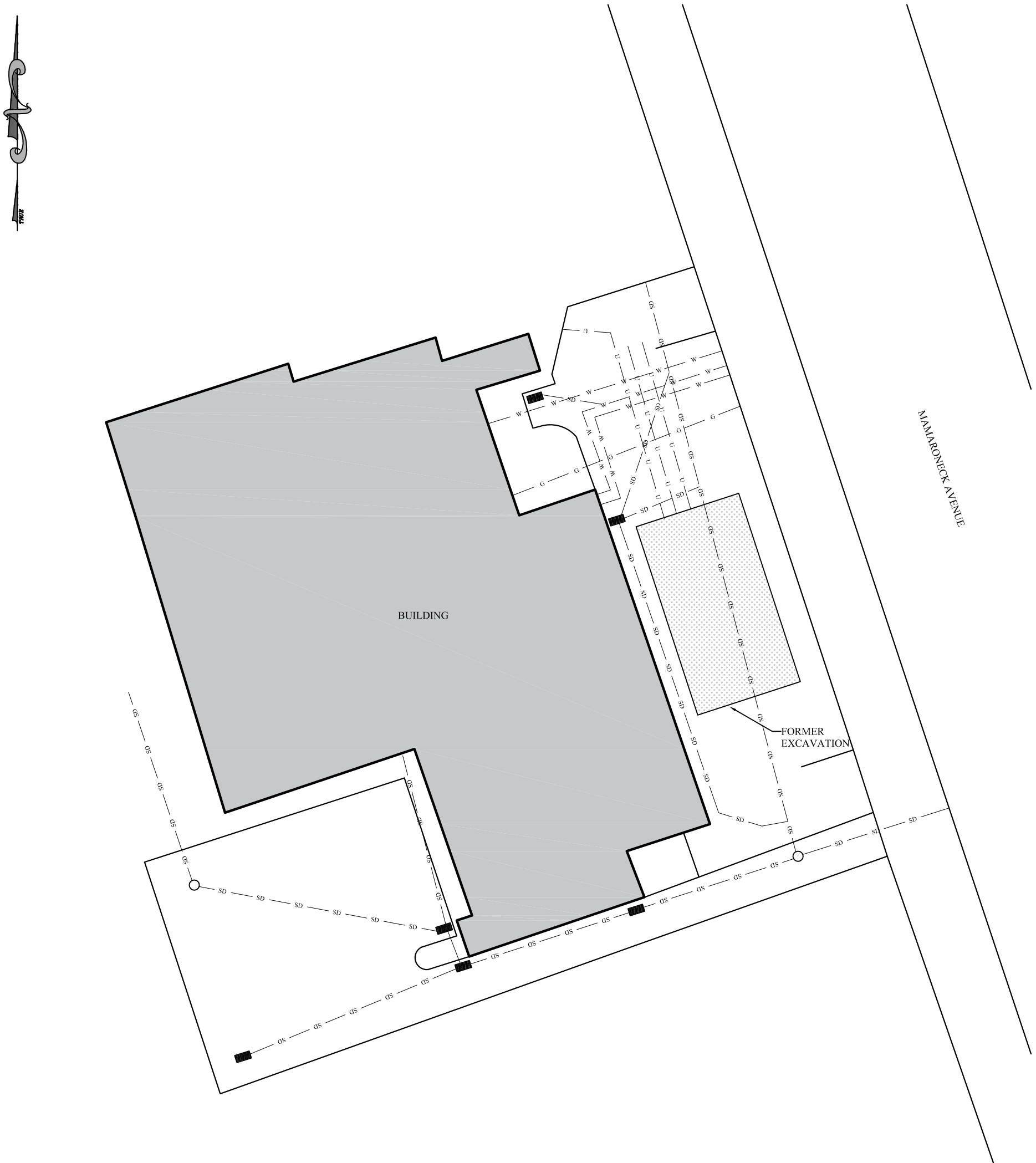

NOTES:

This site plan was produced from data positioned by differential GPS measurments collected in the field. Due to the errors normally present in DGPS data, this document is not intended or represented to be of survey precision. Caution should be used in all field measurments based on this site plan.

As with any geophysical method, it must be stressed that caution be used during any excavation or intrusive testing in proximity of any anomalies indicated in this document The absence of detected signatures does not preclude the possibility that targets exist. The geophysical data and results presented in this site plan are based upon the application of scientific principles and professional judgements to certain facts with resultant subjective interpretations. Professional judgements expressed herein are based on the facts currently available within the limits of the existing data, scope of work, budget, and schedule.

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0 15 30 60 90

GRAPHIC SCALE IN FEET

LEGEND

- G — GAS
- SD — STORM SEWER
- W — WATER
- U — UNKNOWN
- UTILITY MANHOLE
- CATCH BASIN

DATE	09/06/19
SCALE	1'' = 30'
DWG NO.	082719
SHT NO.	1 OF 1
PROJECT.	

GEOPHYSICAL INVESTIGATION
250 MAMARONECK AVENUE, WHITE PLAINS, NEW YORK
FOR
PW GROSSER

DELTA Geophysics Inc.
738 Front Street, Catasauqua, PA 18032
Phone: (610) 231-73012

PWGC
CLIENT DRIVEN SOLUTIONS

APPENDIX B
LABORATORY ANALYTICAL REPORTS

ANALYTICAL REPORT

Lab Number:	L1938967
Client:	P. W. Grosser 630 Johnson Avenue Suite 7 Bohemia, NY 11716
ATTN:	Jennifer Lewis
Phone:	(631) 589-6353
Project Name:	250 MAMARONECK
Project Number:	SLC1901
Report Date:	09/17/19

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: 250 MAMARONECK
Project Number: SLC1901

Lab Number: L1938967
Report Date: 09/17/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1938967-01	GW001	WATER	Not Specified	08/27/19 10:15	08/27/19
L1938967-02	GW002	WATER	Not Specified	08/27/19 11:00	08/27/19
L1938967-03	GW003	WATER	Not Specified	08/27/19 11:20	08/27/19
L1938967-04	GW004	WATER	Not Specified	08/27/19 12:03	08/27/19
L1938967-05	GW005	WATER	Not Specified	08/27/19 13:15	08/27/19
L1938967-06	SB001 4-6'	SOIL	Not Specified	08/27/19 11:49	08/27/19

Project Name:	250 MAMARONECK	**Lab Number:**	L1938967
Project Number:	SLC1901	**Report Date:**	09/17/19

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	250 MAMARONECK	**Lab Number:**	L1938967
Project Number:	SLC1901	**Report Date:**	09/17/19

Case Narrative (continued)

Report Revision

September 17, 2019: The Volatile Organics compound list has been corrected on L1938967-02, -03 and -05 to include Methyl tert butyl ether.

September 13, 2019: The Volatile Organics compound list has been corrected on L1938967-01 and -04.

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Volatile Organics

L1938967-06: The sample has elevated detection limits due to the dilution required by the elevated concentrations of non-target compounds in the sample.

Semivolatile Organics

L1938967-06: The sample has elevated detection limits due to the dilution required by the elevated concentrations of non-target compounds in the sample.

Semivolatile Organics by SIM

L1938967-02: The sample has elevated detection limits due to the dilution required by the sample matrix.

L1938967-03 was extracted with the method required holding time exceeded.

L1938967-03: The sample has elevated detection limits due to the limited sample volume utilized during extraction, as required by the sample matrix.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Melissa Sturgis Melissa Sturgis

Title: Technical Director/Representative Date: 09/17/19

ORGANICS

VOLATILES

Project Name: 250 MAMARONECK
Lab Number: L1938967
Project Number: SLC1901
Report Date: 09/17/19

SAMPLE RESULTS

Lab ID: L1938967-01 D
Client ID: GW001
Sample Location: Not Specified
Date Collected: 08/27/19 10:15
Date Received: 08/27/19
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 09/05/19 17:12
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	6.2	1.8	2.5
1,1-Dichloroethane	ND		ug/l	6.2	1.8	2.5
Chloroform	ND		ug/l	6.2	1.8	2.5
Carbon tetrachloride	ND		ug/l	1.2	0.34	2.5
1,2-Dichloropropane	ND		ug/l	2.5	0.34	2.5
Dibromochloromethane	ND		ug/l	1.2	0.37	2.5
1,1,2-Trichloroethane	ND		ug/l	3.8	1.2	2.5
Tetrachloroethene	ND		ug/l	1.2	0.45	2.5
Chlorobenzene	ND		ug/l	6.2	1.8	2.5
Trichlorofluoromethane	ND		ug/l	6.2	1.8	2.5
1,2-Dichloroethane	ND		ug/l	1.2	0.33	2.5
1,1,1-Trichloroethane	ND		ug/l	6.2	1.8	2.5
Bromodichloromethane	ND		ug/l	1.2	0.48	2.5
trans-1,3-Dichloropropene	ND		ug/l	1.2	0.41	2.5
cis-1,3-Dichloropropene	ND		ug/l	1.2	0.36	2.5
1,3-Dichloropropene, Total	ND		ug/l	1.2	0.36	2.5
1,1-Dichloropropene	ND		ug/l	6.2	1.8	2.5
Bromoform	ND		ug/l	5.0	1.6	2.5
1,1,2,2-Tetrachloroethane	ND		ug/l	1.2	0.42	2.5
Benzene	12		ug/l	1.2	0.40	2.5
Toluene	2.2	J	ug/l	6.2	1.8	2.5
Ethylbenzene	100		ug/l	6.2	1.8	2.5
Chloromethane	ND		ug/l	6.2	1.8	2.5
Bromomethane	ND		ug/l	6.2	1.8	2.5
Vinyl chloride	ND		ug/l	2.5	0.18	2.5
Chloroethane	ND		ug/l	6.2	1.8	2.5
1,1-Dichloroethene	ND		ug/l	1.2	0.42	2.5
trans-1,2-Dichloroethene	ND		ug/l	6.2	1.8	2.5

Project Name: 250 MAMARONECK **Lab Number:** L1938967

Project Number: SLC1901 **Report Date:** 09/17/19

SAMPLE RESULTS

Lab ID: L1938967-01 D Date Collected: 08/27/19 10:15

Client ID: GW001 Date Received: 08/27/19

Sample Location: Not Specified Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	ND		ug/l	1.2	0.44	2.5
1,2-Dichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,3-Dichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,4-Dichlorobenzene	ND		ug/l	6.2	1.8	2.5
Methyl tert butyl ether	8.1		ug/l	6.2	1.8	2.5
p/m-Xylene	130		ug/l	6.2	1.8	2.5
o-Xylene	42		ug/l	6.2	1.8	2.5
Xylenes, Total	170		ug/l	6.2	1.8	2.5
cis-1,2-Dichloroethene	ND		ug/l	6.2	1.8	2.5
1,2-Dichloroethene, Total	ND		ug/l	6.2	1.8	2.5
Dibromomethane	ND		ug/l	12	2.5	2.5
1,2,3-Trichloropropane	ND		ug/l	6.2	1.8	2.5
Acrylonitrile	ND		ug/l	12	3.8	2.5
Styrene	ND		ug/l	6.2	1.8	2.5
Dichlorodifluoromethane	ND		ug/l	12	2.5	2.5
Acetone	19		ug/l	12	3.6	2.5
Carbon disulfide	ND		ug/l	12	2.5	2.5
2-Butanone	7.9	J	ug/l	12	4.8	2.5
Vinyl acetate	ND		ug/l	12	2.5	2.5
4-Methyl-2-pentanone	ND		ug/l	12	2.5	2.5
2-Hexanone	3.7	J	ug/l	12	2.5	2.5
Bromochloromethane	ND		ug/l	6.2	1.8	2.5
2,2-Dichloropropane	ND		ug/l	6.2	1.8	2.5
1,2-Dibromoethane	ND		ug/l	5.0	1.6	2.5
1,3-Dichloropropane	ND		ug/l	6.2	1.8	2.5
1,1,1,2-Tetrachloroethane	ND		ug/l	6.2	1.8	2.5
Bromobenzene	ND		ug/l	6.2	1.8	2.5
n-Butylbenzene	18		ug/l	6.2	1.8	2.5
sec-Butylbenzene	28		ug/l	6.2	1.8	2.5
tert-Butylbenzene	ND		ug/l	6.2	1.8	2.5
o-Chlorotoluene	ND		ug/l	6.2	1.8	2.5
p-Chlorotoluene	ND		ug/l	6.2	1.8	2.5
1,2-Dibromo-3-chloropropane	ND		ug/l	6.2	1.8	2.5
Hexachlorobutadiene	ND		ug/l	6.2	1.8	2.5
Isopropylbenzene	34		ug/l	6.2	1.8	2.5
p-Isopropyltoluene	16		ug/l	6.2	1.8	2.5
Naphthalene	270		ug/l	6.2	1.8	2.5

Project Name: 250 MAMARONECK **Lab Number:** L1938967

Project Number: SLC1901 **Report Date:** 09/17/19

SAMPLE RESULTS

Lab ID: L1938967-01 D Date Collected: 08/27/19 10:15

Client ID: GW001 Date Received: 08/27/19

Sample Location: Not Specified Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	52		ug/l	6.2	1.8	2.5
1,2,3-Trichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,2,4-Trichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,3,5-Trimethylbenzene	55		ug/l	6.2	1.8	2.5
1,2,4-Trimethylbenzene	220		ug/l	6.2	1.8	2.5
1,4-Dioxane	ND		ug/l	620	150	2.5
p-Diethylbenzene	97		ug/l	5.0	1.8	2.5
p-Ethyltoluene	150		ug/l	5.0	1.8	2.5
1,2,4,5-Tetramethylbenzene	39		ug/l	5.0	1.4	2.5
Ethyl ether	ND		ug/l	6.2	1.8	2.5
trans-1,4-Dichloro-2-butene	ND		ug/l	6.2	1.8	2.5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	98		70-130

Project Name: 250 MAMARONECK
Project Number: SLC1901
Lab Number: L1938967
Report Date: 09/17/19

SAMPLE RESULTS

Lab ID: L1938967-02 D
Client ID: GW002
Sample Location: Not Specified
Date Collected: 08/27/19 11:00
Date Received: 08/27/19
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 09/05/19 17:35
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Benzene	4.1		ug/l	1.2	0.40	2.5
Toluene	ND		ug/l	6.2	1.8	2.5
Ethylbenzene	81		ug/l	6.2	1.8	2.5
Methyl tert butyl ether	ND		ug/l	6.2	1.8	2.5
p/m-Xylene	110		ug/l	6.2	1.8	2.5
o-Xylene	42		ug/l	6.2	1.8	2.5
Xylenes, Total	150		ug/l	6.2	1.8	2.5
n-Butylbenzene	26		ug/l	6.2	1.8	2.5
sec-Butylbenzene	34		ug/l	6.2	1.8	2.5
tert-Butylbenzene	ND		ug/l	6.2	1.8	2.5
Isopropylbenzene	32		ug/l	6.2	1.8	2.5
p-Isopropyltoluene	19		ug/l	6.2	1.8	2.5
Naphthalene	300		ug/l	6.2	1.8	2.5
n-Propylbenzene	50		ug/l	6.2	1.8	2.5
1,3,5-Trimethylbenzene	55		ug/l	6.2	1.8	2.5
1,2,4-Trimethylbenzene	220		ug/l	6.2	1.8	2.5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	99		70-130

Project Name: 250 MAMARONECK
Project Number: SLC1901
Lab Number: L1938967
Report Date: 09/17/19

SAMPLE RESULTS

Lab ID: L1938967-03
Client ID: GW003
Sample Location: Not Specified
Date Collected: 08/27/19 11:20
Date Received: 08/27/19
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 09/04/19 23:22
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Benzene	0.70		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	15		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	26		ug/l	2.5	0.70	1
o-Xylene	10		ug/l	2.5	0.70	1
Xylenes, Total	36		ug/l	2.5	0.70	1
n-Butylbenzene	4.7		ug/l	2.5	0.70	1
sec-Butylbenzene	9.6		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	8.2		ug/l	2.5	0.70	1
p-Isopropyltoluene	5.1		ug/l	2.5	0.70	1
Naphthalene	77		ug/l	2.5	0.70	1
n-Propylbenzene	13		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	16		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	64		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	118		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	105		70-130

Project Name: 250 MAMARONECK
Project Number: SLC1901
Lab Number: L1938967
Report Date: 09/17/19

SAMPLE RESULTS

Lab ID: L1938967-04
Client ID: GW004
Sample Location: Not Specified

Date Collected: 08/27/19 12:03
Date Received: 08/27/19
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 09/05/19 14:51
Analyst: AD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	0.26	J	ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	3.7		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1

Project Name: 250 MAMARONECK **Lab Number:** L1938967

Project Number: SLC1901 **Report Date:** 09/17/19

SAMPLE RESULTS

Lab ID: L1938967-04 Date Collected: 08/27/19 12:03

Client ID: GW004 Date Received: 08/27/19

Sample Location: Not Specified Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	5.4		ug/l	2.5	0.70	1
o-Xylene	2.2	J	ug/l	2.5	0.70	1
Xylenes, Total	7.6	J	ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	30		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	6.6		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	0.80	J	ug/l	2.5	0.70	1
sec-Butylbenzene	2.2	J	ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	2.3	J	ug/l	2.5	0.70	1
p-Isopropyltoluene	0.98	J	ug/l	2.5	0.70	1
Naphthalene	6.2		ug/l	2.5	0.70	1

Project Name: 250 MAMARONECK **Lab Number:** L1938967

Project Number: SLC1901 **Report Date:** 09/17/19

SAMPLE RESULTS

Lab ID: L1938967-04 Date Collected: 08/27/19 12:03

Client ID: GW004 Date Received: 08/27/19

Sample Location: Not Specified Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	2.8		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	3.2		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	11		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	61.	1
p-Diethylbenzene	5.3		ug/l	2.0	0.70	1
p-Ethyltoluene	8.0		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	1.9	J	ug/l	2.0	0.54	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	100		70-130

Project Name: 250 MAMARONECK
Project Number: SLC1901
Lab Number: L1938967
Report Date: 09/17/19

SAMPLE RESULTS

Lab ID: L1938967-05
Client ID: GW005
Sample Location: Not Specified
Date Collected: 08/27/19 13:15
Date Received: 08/27/19
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 09/04/19 23:45
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	0.79	J	ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	0.79	J	ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	0.80	J	ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	8.0		ug/l	2.5	0.70	1
n-Propylbenzene	0.78	J	ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	1.0	J	ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	4.1		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	102		70-130

Project Name: 250 MAMARONECK
Project Number: SLC1901
Lab Number: L1938967
Report Date: 09/17/19

SAMPLE RESULTS

Lab ID: L1938967-06 D
Client ID: SB001 4-6'
Sample Location: Not Specified
Date Collected: 08/27/19 11:49
Date Received: 08/27/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 09/06/19 09:34
Analyst: JC
Percent Solids: 95%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Benzene	ND		ug/kg	45	15.	2
Toluene	65	J	ug/kg	90	49.	2
Ethylbenzene	580		ug/kg	90	13.	2
p/m-Xylene	840		ug/kg	180	51.	2
o-Xylene	820		ug/kg	90	26.	2
Xylenes, Total	1700		ug/kg	90	26.	2
n-Butylbenzene	1200		ug/kg	90	15.	2
sec-Butylbenzene	1300		ug/kg	90	13.	2
tert-Butylbenzene	27	J	ug/kg	180	11.	2
Isopropylbenzene	530		ug/kg	90	9.9	2
p-Isopropyltoluene	1000		ug/kg	90	9.9	2
Naphthalene	6300		ug/kg	360	59.	2
n-Propylbenzene	1100		ug/kg	90	15.	2
1,3,5-Trimethylbenzene	1600		ug/kg	180	17.	2
1,2,4-Trimethylbenzene	6100		ug/kg	180	30.	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	113		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	130		70-130
Dibromofluoromethane	98		70-130

Project Name: 250 MAMARONECK
Project Number: SLC1901
Lab Number: L1938967
Report Date: 09/17/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/04/19 19:07
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03,05 Batch: WG1280592-5					
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylenes, Total	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	121		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	107		70-130

Project Name: 250 MAMARONECK **Lab Number:** L1938967

Project Number: SLC1901 **Report Date:** 09/17/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/05/19 10:57
Analyst: PK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02,04 Batch: WG1281253-5					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18

Project Name: 250 MAMARONECK **Lab Number:** L1938967

Project Number: SLC1901 **Report Date:** 09/17/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/05/19 10:57
Analyst: PK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02,04 Batch: WG1281253-5					
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylenes, Total	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Acrylonitrile	ND		ug/l	5.0	1.5
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70

Project Name: 250 MAMARONECK **Lab Number:** L1938967

Project Number: SLC1901 **Report Date:** 09/17/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/05/19 10:57
Analyst: PK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02,04 Batch: WG1281253-5					
o-Chlorotoluene	ND		ug/l	2.5	0.70
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
p-Diethylbenzene	ND		ug/l	2.0	0.70
p-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	99		70-130

Project Name: 250 MAMARONECK **Lab Number:** L1938967

Project Number: SLC1901 **Report Date:** 09/17/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/06/19 08:12
Analyst: JC

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 06 Batch: WG1281275-5					
Benzene	ND		ug/kg	25	8.3
Toluene	ND		ug/kg	50	27.
Ethylbenzene	ND		ug/kg	50	7.0
p/m-Xylene	ND		ug/kg	100	28.
o-Xylene	ND		ug/kg	50	14.
Xylenes, Total	ND		ug/kg	50	14.
n-Butylbenzene	ND		ug/kg	50	8.4
sec-Butylbenzene	ND		ug/kg	50	7.3
tert-Butylbenzene	ND		ug/kg	100	5.9
Isopropylbenzene	ND		ug/kg	50	5.4
p-Isopropyltoluene	ND		ug/kg	50	5.4
Naphthalene	ND		ug/kg	200	32.
n-Propylbenzene	ND		ug/kg	50	8.6
1,3,5-Trimethylbenzene	ND		ug/kg	100	9.6
1,2,4-Trimethylbenzene	ND		ug/kg	100	17.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	118		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	117		70-130
Dibromofluoromethane	101		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 250 MAMARONECK

Project Number: SLC1901

Lab Number: L1938967

Report Date: 09/17/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03,05 Batch: WG1280592-3 WG1280592-4								
Benzene	96		98		70-130	2		20
Toluene	89		91		70-130	2		20
Ethylbenzene	90		94		70-130	4		20
Methyl tert butyl ether	91		93		63-130	2		20
p/m-Xylene	90		95		70-130	5		20
o-Xylene	90		95		70-130	5		20
n-Butylbenzene	81		84		53-136	4		20
sec-Butylbenzene	83		85		70-130	2		20
tert-Butylbenzene	82		84		70-130	2		20
Isopropylbenzene	83		86		70-130	4		20
p-Isopropyltoluene	82		84		70-130	2		20
Naphthalene	**64**	Q	**69**	Q	70-130	8		20
n-Propylbenzene	84		87		69-130	4		20
1,3,5-Trimethylbenzene	84		86		64-130	2		20
1,2,4-Trimethylbenzene	83		85		70-130	2		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	126		125		70-130
Toluene-d8	98		99		70-130
4-Bromofluorobenzene	96		96		70-130
Dibromofluoromethane	114		112		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 250 MAMARONECK

Project Number: SLC1901

Lab Number: L1938967

Report Date: 09/17/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02,04 Batch: WG1281253-3 WG1281253-4								
Methylene chloride	97		91		70-130	6		20
1,1-Dichloroethane	100		99		70-130	1		20
Chloroform	97		94		70-130	3		20
Carbon tetrachloride	95		96		63-132	1		20
1,2-Dichloropropane	93		94		70-130	1		20
Dibromochloromethane	84		84		63-130	0		20
1,1,2-Trichloroethane	92		91		70-130	1		20
Tetrachloroethene	97		94		70-130	3		20
Chlorobenzene	92		90		75-130	2		20
Trichlorofluoromethane	100		100		62-150	0		20
1,2-Dichloroethane	92		90		70-130	2		20
1,1,1-Trichloroethane	94		93		67-130	1		20
Bromodichloromethane	90		89		67-130	1		20
trans-1,3-Dichloropropene	90		88		70-130	2		20
cis-1,3-Dichloropropene	93		90		70-130	3		20
1,1-Dichloropropene	100		98		70-130	2		20
Bromoform	85		87		54-136	2		20
1,1,2,2-Tetrachloroethane	93		93		67-130	0		20
Benzene	99		96		70-130	3		20
Toluene	98		93		70-130	5		20
Ethylbenzene	96		93		70-130	3		20
Chloromethane	95		93		64-130	2		20
Bromomethane	66		70		39-139	6		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 250 MAMARONECK

Project Number: SLC1901

Lab Number: L1938967

Report Date: 09/17/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02,04 Batch: WG1281253-3 WG1281253-4								
Vinyl chloride	120		110		55-140	9		20
Chloroethane	110		110		55-138	0		20
1,1-Dichloroethene	100		100		61-145	0		20
trans-1,2-Dichloroethene	100		98		70-130	2		20
Trichloroethene	99		95		70-130	4		20
1,2-Dichlorobenzene	87		87		70-130	0		20
1,3-Dichlorobenzene	88		88		70-130	0		20
1,4-Dichlorobenzene	88		87		70-130	1		20
Methyl tert butyl ether	96		94		63-130	2		20
p/m-Xylene	95		95		70-130	0		20
o-Xylene	95		90		70-130	5		20
cis-1,2-Dichloroethene	96		93		70-130	3		20
Dibromomethane	94		91		70-130	3		20
1,2,3-Trichloropropane	120		120		64-130	0		20
Acrylonitrile	100		98		70-130	2		20
Styrene	90		90		70-130	0		20
Dichlorodifluoromethane	140		140		36-147	0		20
Acetone	**180**	Q	110		58-148	**48**	Q	20
Carbon disulfide	110		97		51-130	13		20
2-Butanone	120		100		63-138	18		20
Vinyl acetate	94		94		70-130	0		20
4-Methyl-2-pentanone	97		94		59-130	3		20
2-Hexanone	94		92		57-130	2		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 250 MAMARONECK

Project Number: SLC1901

Lab Number: L1938967

Report Date: 09/17/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02,04 Batch: WG1281253-3 WG1281253-4								
Bromochloromethane	97		94		70-130	3		20
2,2-Dichloropropane	100		100		63-133	0		20
1,2-Dibromoethane	91		90		70-130	1		20
1,3-Dichloropropane	93		90		70-130	3		20
1,1,1,2-Tetrachloroethane	87		86		64-130	1		20
Bromobenzene	89		88		70-130	1		20
n-Butylbenzene	100		100		53-136	0		20
sec-Butylbenzene	100		100		70-130	0		20
tert-Butylbenzene	98		98		70-130	0		20
o-Chlorotoluene	91		90		70-130	1		20
p-Chlorotoluene	91		91		70-130	0		20
1,2-Dibromo-3-chloropropane	84		87		41-144	4		20
Hexachlorobutadiene	89		92		63-130	3		20
Isopropylbenzene	98		98		70-130	0		20
p-Isopropyltoluene	100		99		70-130	1		20
Naphthalene	82		87		70-130	6		20
n-Propylbenzene	100		100		69-130	0		20
1,2,3-Trichlorobenzene	81		87		70-130	7		20
1,2,4-Trichlorobenzene	83		86		70-130	4		20
1,3,5-Trimethylbenzene	97		96		64-130	1		20
1,2,4-Trimethylbenzene	94		92		70-130	2		20
p-Diethylbenzene	95		96		70-130	1		20
p-Ethyltoluene	97		96		70-130	1		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 250 MAMARONECK

Project Number: SLC1901

Lab Number: L1938967

Report Date: 09/17/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02,04 Batch: WG1281253-3 WG1281253-4								
1,2,4,5-Tetramethylbenzene	89		89		70-130	0		20
Ethyl ether	100		100		59-134	0		20
trans-1,4-Dichloro-2-butene	84		84		70-130	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	101		102		70-130
Toluene-d8	99		98		70-130
4-Bromofluorobenzene	102		103		70-130
Dibromofluoromethane	102		100		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 250 MAMARONECK
Project Number: SLC1901

Lab Number: L1938967
Report Date: 09/17/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 06 Batch: WG1281275-3 WG1281275-4								
Benzene	90		89		70-130	1		30
Toluene	95		94		70-130	1		30
Ethylbenzene	94		94		70-130	0		30
p/m-Xylene	96		95		70-130	1		30
o-Xylene	95		95		70-130	0		30
n-Butylbenzene	91		88		70-130	3		30
sec-Butylbenzene	94		90		70-130	4		30
tert-Butylbenzene	98		94		70-130	4		30
Isopropylbenzene	98		93		70-130	5		30
p-Isopropyltoluene	96		93		70-130	3		30
Naphthalene	106		102		70-130	4		30
n-Propylbenzene	96		92		70-130	4		30
1,3,5-Trimethylbenzene	97		94		70-130	3		30
1,2,4-Trimethylbenzene	100		96		70-130	4		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	109		107		70-130
Toluene-d8	102		103		70-130
4-Bromofluorobenzene	114		113		70-130
Dibromofluoromethane	100		99		70-130

SEMIVOLATILES

Project Name: 250 MAMARONECK
Project Number: SLC1901
Lab Number: L1938967
Report Date: 09/17/19

SAMPLE RESULTS

Lab ID: L1938967-01
Client ID: GW001
Sample Location: Not Specified

Date Collected: 08/27/19 10:15
Date Received: 08/27/19
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 09/02/19 18:25
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 08/30/19 06:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	1.7		ug/l	0.10	0.01	1
Fluoranthene	0.12		ug/l	0.10	0.02	1
Benzo(a)anthracene	0.05	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.02	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	0.05	J	ug/l	0.10	0.01	1
Acenaphthylene	0.48		ug/l	0.10	0.01	1
Anthracene	0.39		ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.02	J	ug/l	0.10	0.01	1
Fluorene	3.3		ug/l	0.10	0.01	1
Phenanthrene	4.6		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	0.77		ug/l	0.10	0.02	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	48		23-120
2-Fluorobiphenyl	43		15-120
4-Terphenyl-d14	44		41-149

Project Name: 250 MAMARONECK
Project Number: SLC1901
Lab Number: L1938967
Report Date: 09/17/19

SAMPLE RESULTS

Lab ID: L1938967-02 D
Client ID: GW002
Sample Location: Not Specified

Date Collected: 08/27/19 11:00
Date Received: 08/27/19
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 09/08/19 10:39
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 08/30/19 06:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	86		ug/l	1.0	0.14	10
Fluoranthene	15		ug/l	1.0	0.20	10
Benzo(a)anthracene	3.4		ug/l	1.0	0.20	10
Benzo(a)pyrene	0.95	J	ug/l	1.0	0.15	10
Benzo(b)fluoranthene	1.4		ug/l	1.0	0.12	10
Benzo(k)fluoranthene	0.42	J	ug/l	1.0	0.09	10
Chrysene	7.0		ug/l	1.0	0.12	10
Acenaphthylene	40		ug/l	1.0	0.12	10
Anthracene	39		ug/l	1.0	0.14	10
Benzo(ghi)perylene	0.45	J	ug/l	1.0	0.14	10
Fluorene	180		ug/l	1.0	0.14	10
Phenanthrene	410		ug/l	1.0	0.23	10
Dibenzo(a,h)anthracene	ND		ug/l	1.0	0.13	10
Indeno(1,2,3-cd)pyrene	1.2		ug/l	1.0	0.12	10
Pyrene	73		ug/l	1.0	0.19	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	**420**	Q	23-120
2-Fluorobiphenyl	92		15-120
4-Terphenyl-d14	85		41-149

Project Name: 250 MAMARONECK
Project Number: SLC1901
Lab Number: L1938967
Report Date: 09/17/19

SAMPLE RESULTS

Lab ID: L1938967-03
Client ID: GW003
Sample Location: Not Specified

Date Collected: 08/27/19 11:20
Date Received: 08/27/19
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 09/10/19 11:46
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 09/09/19 15:32

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	3.5		ug/l	0.14	0.02	1
Fluoranthene	0.24		ug/l	0.14	0.03	1
Benzo(a)anthracene	0.07	J	ug/l	0.14	0.03	1
Benzo(a)pyrene	ND		ug/l	0.14	0.02	1
Benzo(b)fluoranthene	0.03	J	ug/l	0.14	0.02	1
Benzo(k)fluoranthene	ND		ug/l	0.14	0.01	1
Chrysene	0.12	J	ug/l	0.14	0.02	1
Acenaphthylene	0.99		ug/l	0.14	0.02	1
Anthracene	0.68		ug/l	0.14	0.02	1
Benzo(ghi)perylene	ND		ug/l	0.14	0.02	1
Fluorene	5.6		ug/l	0.14	0.02	1
Phenanthrene	9.5		ug/l	0.14	0.03	1
Dibenzo(a,h)anthracene	ND		ug/l	0.14	0.02	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.14	0.02	1
Pyrene	1.3		ug/l	0.14	0.03	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	71		23-120
2-Fluorobiphenyl	62		15-120
4-Terphenyl-d14	61		41-149

Project Name: 250 MAMARONECK
Project Number: SLC1901
Lab Number: L1938967
Report Date: 09/17/19

SAMPLE RESULTS

Lab ID: L1938967-05
Client ID: GW005
Sample Location: Not Specified

Date Collected: 08/27/19 13:15
Date Received: 08/27/19
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 09/02/19 18:57
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 08/31/19 00:49

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	0.68		ug/l	0.10	0.01	1
Fluoranthene	0.07	J	ug/l	0.10	0.02	1
Benzo(a)anthracene	0.05	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	0.02	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.02	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.01	J	ug/l	0.10	0.01	1
Chrysene	0.02	J	ug/l	0.10	0.01	1
Acenaphthylene	0.18		ug/l	0.10	0.01	1
Anthracene	0.15		ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.02	J	ug/l	0.10	0.01	1
Fluorene	1.3		ug/l	0.10	0.01	1
Phenanthrene	1.9		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	0.26		ug/l	0.10	0.02	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	62		23-120
2-Fluorobiphenyl	67		15-120
4-Terphenyl-d14	73		41-149

Project Name: 250 MAMARONECK
Project Number: SLC1901
Lab Number: L1938967
Report Date: 09/17/19

SAMPLE RESULTS

Lab ID: L1938967-06 D
Client ID: SB001 4-6'
Sample Location: Not Specified

Date Collected: 08/27/19 11:49
Date Received: 08/27/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 09/09/19 12:18
Analyst: KR
Percent Solids: 95%

Extraction Method: EPA 3546
Extraction Date: 09/04/19 11:56

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	690	90.	5
Fluoranthene	ND		ug/kg	520	99.	5
Benzo(a)anthracene	ND		ug/kg	520	97.	5
Benzo(a)pyrene	ND		ug/kg	690	210	5
Benzo(b)fluoranthene	ND		ug/kg	520	140	5
Benzo(k)fluoranthene	ND		ug/kg	520	140	5
Chrysene	ND		ug/kg	520	90.	5
Acenaphthylene	ND		ug/kg	690	130	5
Anthracene	ND		ug/kg	520	170	5
Benzo(ghi)perylene	ND		ug/kg	690	100	5
Fluorene	2600		ug/kg	860	84.	5
Phenanthrene	4500		ug/kg	520	100	5
Dibenzo(a,h)anthracene	ND		ug/kg	520	100	5
Indeno(1,2,3-cd)pyrene	ND		ug/kg	690	120	5
Pyrene	940		ug/kg	520	86.	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	54		23-120
2-Fluorobiphenyl	75		30-120
4-Terphenyl-d14	69		18-120

Project Name: 250 MAMARONECK
Project Number: SLC1901
Lab Number: L1938967
Report Date: 09/17/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 08/31/19 16:39
Analyst: CB

Extraction Method: EPA 3510C
Extraction Date: 08/30/19 06:17

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-02,05 Batch: WG1278608-1					
Acenaphthene	ND		ug/l	0.10	0.01
Fluoranthene	ND		ug/l	0.10	0.02
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	ND		ug/l	0.10	0.01
Fluorene	ND		ug/l	0.10	0.01
Phenanthrene	0.04	J	ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	64		23-120
2-Fluorobiphenyl	63		15-120
4-Terphenyl-d14	84		41-149

Project Name: 250 MAMARONECK
Project Number: SLC1901

Lab Number: L1938967
Report Date: 09/17/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 09/05/19 01:20
Analyst: RC

Extraction Method: EPA 3546
Extraction Date: 09/04/19 11:56

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 06 Batch: WG1280115-1					
Acenaphthene	ND		ug/kg	130	17.
Fluoranthene	ND		ug/kg	98	19.
Benzo(a)anthracene	ND		ug/kg	98	18.
Benzo(a)pyrene	ND		ug/kg	130	40.
Benzo(b)fluoranthene	ND		ug/kg	98	28.
Benzo(k)fluoranthene	ND		ug/kg	98	26.
Chrysene	ND		ug/kg	98	17.
Acenaphthylene	ND		ug/kg	130	25.
Anthracene	ND		ug/kg	98	32.
Benzo(ghi)perylene	ND		ug/kg	130	19.
Fluorene	ND		ug/kg	160	16.
Phenanthrene	ND		ug/kg	98	20.
Dibenzo(a,h)anthracene	ND		ug/kg	98	19.
Indeno(1,2,3-cd)pyrene	ND		ug/kg	130	23.
Pyrene	ND		ug/kg	98	16.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	79		25-120
Phenol-d6	74		10-120
Nitrobenzene-d5	51		23-120
2-Fluorobiphenyl	57		30-120
2,4,6-Tribromophenol	68		10-136
4-Terphenyl-d14	60		18-120

Project Name: 250 MAMARONECK
Project Number: SLC1901

Lab Number: L1938967
Report Date: 09/17/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 09/10/19 10:56
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 09/09/19 15:32

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 03 Batch: WG1281925-1					
Acenaphthene	ND		ug/l	0.10	0.01
Fluoranthene	ND		ug/l	0.10	0.02
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	ND		ug/l	0.10	0.01
Fluorene	ND		ug/l	0.10	0.01
Phenanthrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	81		23-120
2-Fluorobiphenyl	69		15-120
4-Terphenyl-d14	72		41-149

Lab Control Sample Analysis
Batch Quality Control

Project Name: 250 MAMARONECK
Project Number: SLC1901

Lab Number: L1938967
Report Date: 09/17/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-02,05 Batch: WG1278608-2 WG1278608-3								
Acenaphthene	104		79		40-140	27		40
Fluoranthene	123		95		40-140	26		40
Benzo(a)anthracene	126		95		40-140	28		40
Benzo(a)pyrene	138		104		40-140	28		40
Benzo(b)fluoranthene	137		102		40-140	29		40
Benzo(k)fluoranthene	129		101		40-140	24		40
Chrysene	121		92		40-140	27		40
Acenaphthylene	108		84		40-140	25		40
Anthracene	115		89		40-140	25		40
Benzo(ghi)perylene	129		98		40-140	27		40
Fluorene	110		85		40-140	26		40
Phenanthrene	112		88		40-140	24		40
Dibenzo(a,h)anthracene	137		104		40-140	27		40
Indeno(1,2,3-cd)pyrene	135		100		40-140	30		40
Pyrene	124		95		40-140	26		40

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Nitrobenzene-d5	92		70		23-120
2-Fluorobiphenyl	95		76		15-120
4-Terphenyl-d14	114		88		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: 250 MAMARONECK

Project Number: SLC1901

Lab Number: L1938967

Report Date: 09/17/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 06 Batch: WG1280115-2 WG1280115-3								
Acenaphthene	59		66		31-137	11		50
Fluoranthene	60		70		40-140	15		50
Benzo(a)anthracene	55		65		40-140	17		50
Benzo(a)pyrene	56		66		40-140	16		50
Benzo(b)fluoranthene	58		66		40-140	13		50
Benzo(k)fluoranthene	64		77		40-140	18		50
Chrysene	57		66		40-140	15		50
Acenaphthylene	60		68		40-140	13		50
Anthracene	61		71		40-140	15		50
Benzo(ghi)perylene	60		69		40-140	14		50
Fluorene	61		70		40-140	14		50
Phenanthrene	57		67		40-140	16		50
Dibenzo(a,h)anthracene	63		69		40-140	9		50
Indeno(1,2,3-cd)pyrene	58		68		40-140	16		50
Pyrene	57		65		35-142	13		50

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	60		62		25-120
Phenol-d6	62		66		10-120
Nitrobenzene-d5	49		53		23-120
2-Fluorobiphenyl	47		53		30-120
2,4,6-Tribromophenol	61		74		10-136
4-Terphenyl-d14	46		54		18-120

Lab Control Sample Analysis
Batch Quality Control

Project Name: 250 MAMARONECK
Project Number: SLC1901

Lab Number: L1938967
Report Date: 09/17/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 03 Batch: WG1281925-2 WG1281925-3								
Acenaphthene	91		71		40-140	25		40
Fluoranthene	89		67		40-140	28		40
Benzo(a)anthracene	88		65		40-140	30		40
Benzo(a)pyrene	90		66		40-140	31		40
Benzo(b)fluoranthene	97		71		40-140	31		40
Benzo(k)fluoranthene	94		69		40-140	31		40
Chrysene	96		72		40-140	29		40
Acenaphthylene	89		68		40-140	27		40
Anthracene	92		70		40-140	27		40
Benzo(ghi)perylene	100		73		40-140	31		40
Fluorene	90		68		40-140	28		40
Phenanthrene	90		67		40-140	29		40
Dibenzo(a,h)anthracene	100		72		40-140	33		40
Indeno(1,2,3-cd)pyrene	81		59		40-140	31		40
Pyrene	88		66		40-140	29		40

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Nitrobenzene-d5	96		77		23-120
2-Fluorobiphenyl	85		67		15-120
4-Terphenyl-d14	85		65		41-149

INORGANICS
&
MISCELLANEOUS

Project Name: 250 MAMARONECK
Project Number: SLC1901

Lab Number: L1938967
Report Date: 09/17/19

SAMPLE RESULTS

Lab ID: L1938967-06
Client ID: SB001 4-6'
Sample Location: Not Specified

Date Collected: 08/27/19 11:49
Date Received: 08/27/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	95.0		%	0.100	NA	1	-	08/28/19 13:36	121,2540G	RI

Lab Duplicate Analysis

Batch Quality Control

Project Name: 250 MAMARONECK

Project Number: SLC1901

Lab Number: L1938967

Report Date: 09/17/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 06 QC Batch ID: WG1277807-1 QC Sample: L1938943-01 Client ID: DUP Sample						
Solids, Total	84.0	84.6	%	1		20

Project Name: 250 MAMARONECK
Project Number: SLC1901

Lab Number: L1938967
Report Date: 09/17/19

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1938967-01A	Vial HCl preserved	A	NA		5.0	Y	Absent		NYTCL-8260(14)
L1938967-01B	Vial HCl preserved	A	NA		5.0	Y	Absent		NYTCL-8260(14)
L1938967-01C	Vial HCl preserved	A	NA		5.0	Y	Absent		NYTCL-8260(14)
L1938967-01D	Amber 250ml unpreserved	A	7	7	5.0	Y	Absent		NYCP51-PAHSIM-LVI(7)
L1938967-01E	Amber 250ml unpreserved	A	7	7	5.0	Y	Absent		NYCP51-PAHSIM-LVI(7)
L1938967-02A	Vial HCl preserved	A	NA		5.0	Y	Absent		NYCP51-8260(14)
L1938967-02B	Vial HCl preserved	A	NA		5.0	Y	Absent		NYCP51-8260(14)
L1938967-02C	Vial HCl preserved	A	NA		5.0	Y	Absent		NYCP51-8260(14)
L1938967-02D	Amber 250ml unpreserved	A	7	7	5.0	Y	Absent		NYCP51-PAHSIM-LVI(7)
L1938967-02E	Amber 250ml unpreserved	A	7	7	5.0	Y	Absent		NYCP51-PAHSIM-LVI(7)
L1938967-03A	Vial HCl preserved	A	NA		5.0	Y	Absent		NYCP51-8260(14)
L1938967-03B	Vial HCl preserved	A	NA		5.0	Y	Absent		NYCP51-8260(14)
L1938967-03C	Vial HCl preserved	A	NA		5.0	Y	Absent		NYCP51-8260(14)
L1938967-03D	Amber 250ml unpreserved	A	7	7	5.0	Y	Absent		NYCP51-PAHSIM-LVI(7)
L1938967-03E	Amber 250ml unpreserved	A	7	7	5.0	Y	Absent		NYCP51-PAHSIM-LVI(7)
L1938967-04A	Vial HCl preserved	A	NA		5.0	Y	Absent		NYTCL-8260(14)
L1938967-04B	Vial HCl preserved	A	NA		5.0	Y	Absent		NYTCL-8260(14)
L1938967-04C	Vial HCl preserved	A	NA		5.0	Y	Absent		NYTCL-8260(14)
L1938967-05A	Vial HCl preserved	A	NA		5.0	Y	Absent		NYCP51-8260(14)
L1938967-05B	Vial HCl preserved	A	NA		5.0	Y	Absent		NYCP51-8260(14)
L1938967-05C	Vial HCl preserved	A	NA		5.0	Y	Absent		NYCP51-8260(14)
L1938967-05D	Amber 250ml unpreserved	A	7	7	5.0	Y	Absent		NYCP51-PAHSIM-LVI(7)
L1938967-05E	Amber 250ml unpreserved	A	7	7	5.0	Y	Absent		NYCP51-PAHSIM-LVI(7)

*Values in parentheses indicate holding time in days

Project Name: 250 MAMARONECK
Project Number: SLC1901

Lab Number: L1938967
Report Date: 09/17/19

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1938967-06A	Vial MeOH preserved	A	NA		5.0	Y	Absent		NYCP51-8260HLW(14)
L1938967-06B	Vial water preserved	A	NA		5.0	Y	Absent	29-AUG-19 09:51	NYCP51-8260HLW(14)
L1938967-06C	Vial water preserved	A	NA		5.0	Y	Absent	28-AUG-19 12:25	NYCP51-8260HLW(14)
L1938967-06D	Plastic 2oz unpreserved for TS	A	NA		5.0	Y	Absent		TS(7)
L1938967-06E	Glass 120ml/4oz unpreserved	A	NA		5.0	Y	Absent		NYCP51-PAH(14)

*Values in parentheses indicate holding time in days

Project Name:	250 MAMARONECK	**Lab Number:**	L1938967
Project Number:	SLC1901	**Report Date:**	09/17/19

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

Report Format: DU Report with 'J' Qualifiers

Project Name:	250 MAMARONECK	**Lab Number:**	L1938967
Project Number:	SLC1901	**Report Date:**	09/17/19

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

Project Name:	250 MAMARONECK	**Lab Number:**	L1938967
Project Number:	SLC1901	**Report Date:**	09/17/19

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

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TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 8/28/19

ALPHA Job #: L1938967

Client Information
Client: PW Grosser
Address: 630 Johnson Ave Bohemia NY
Phone: 631-589-6303
Fax:
Email: Jennifer L@pwgrosser.com

Project Information
Project Name: 250 Mama Concrete
Project Location:
Project #: SLC 1901
(Use Project name as Project #) ☐
Project Manager: Jennifer Lewis
ALPHAQuote #:

Turn-Around Time
Standard ☒ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☒ AWQ Standards ☒ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☒ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

ANALYSIS

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TCL VOCs	CPSL VOCs	CPSL SVOCs	Total Bottle	Sample Specific Comments
31967-01	GW001	8/27/19	1015	GW	MB	X		X		
-02	GW002		1100				X	X		
-03	GW003		1125				X	X		
-04	GW004		1203			X				
-05	GW005		1315				X	X		
-06	SB001 4-6'		1149	Soil			X	X		

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type
Preservative

Relinquished By:	Date/Time	Received By:	Date/Time
	8/27/19 1614		8/27/19 1614
	8/27/19 1715		8/27/19 2140
	8/28/19 0745		8/28/19 0750

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)