

PRE-DESIGN SUBSURFACE INVESTIGATION SUMMARY REPORT

AT

**FORMER IMPERIAL CLEANERS SITE
218 LAKEVILLE ROAD
LAKE SUCCESS, NEW YORK 11042
NYSDEC BCP SITE #C130225**

OCTOBER 2019

PREPARED FOR:

**MR. JOSEPH JONES
PROJECT MANAGER
NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION
REMEDIAL BUREAU A, 11TH FLOOR
625 BROADWAY
ALBANY, NEW YORK 12233**

WALDEN ENVIRONMENTAL ENGINEERING, PLLC

Industry Leader in Environmental Engineering Consulting

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Sent via email to joseph.jones@dec.ny.gov

October 17, 2019
IMPL0115.6

Mr. Joseph Jones
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, 12th Floor
Albany, New York 12233-7015

Re: Pre-Design Subsurface Investigation Report
Former Imperial Cleaners Site (BCP #C130225)
218 Lakeville Road, Lake Success, NY

Dear Mr. Jones:

Walden Environmental Engineering, PLLC (Walden) is submitting the attached *Pre-Design Subsurface Investigation Summary Report* for the above referenced site on behalf of the property owner, 218 Lakeville Acquisition LLC. This report summarizes the results of the May 2019 SVI soil and perched groundwater investigation completed in accordance with the NYSDEC approved *Remedial Work Plan* (Walden, February 2019). Please call me if you have any questions.

Very truly yours,
Walden Environmental Engineering, PLLC

Nora M. Brew, P.E.
Senior Project Manager

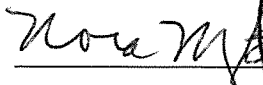
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Professional Engineer Certification

I certify that I am currently a professional engineer licensed to practice in New York State in accordance with New York State Education Law, Article 145, Section 7200 et seq. I have completed accredited university courses and degrees in engineering and have sufficient training and experience in remediation, groundwater hydrology, and related fields that enable me to make sound professional judgments with regards to engineering design.

I further certify that this submittal, *Pre-Design Subsurface Investigation Summary Report*, dated October 17, 2019, was prepared under my direction.



Nora M. Brew, P.E.
Walden Environmental Engineering, PLLC



10/17/19
Date

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1 INTRODUCTION

Walden Environmental Engineering, PLLC (Walden) has prepared this report to summarize the results of the May 2019 pre-design subsurface investigation conducted at the Former Imperial Cleaners site located at 218 Lakeville Road, Lake Success, New York (the “Site”). The Site is currently managed under the New York State Brownfield Cleanup Program (BCP) and is subject to New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Agreement #C130225-01-18. This agreement was fully executed by 218 Lakeville Acquisition LLC, the current Site owner (hereinafter, the “Volunteer”) and the NYSDEC on February 12, 2018. Previously, the Site was managed under the NYSDEC Voluntary Cleanup Program (VCP) as site #V-00244-1. The Volunteer became owner of the Site in July 2015.

This investigation was conducted to support the design and implementation of a soil vapor extraction (SVE) system, which was determined to be the most feasible remedial alternative for the Site, as discussed in the February 2019 *Remedial Work Plan (RWP)*, Walden). The investigation was completed in accordance with the NYSDEC-approved *RWP*, which was developed in accordance with the guidelines set forth in NYSDEC *DER-10: Technical Guidance for Site Investigation and Remediation* (issued May 3, 2010). The investigation included the advancement of soil borings, the installation of temporary groundwater monitoring wells and the subsequent collection of numerous soil and groundwater samples throughout the Site.

A brief Site description of the investigation and the objectives of this investigation are presented below. Section 2 describes the investigation fieldwork conducted at the Site. Section 3 summarizes the soil and groundwater sampling results, and Section 4 presents conclusions and recommendations based on the findings of the investigation.

1.1 Site History and Previous Investigations/Remediation

The Site location is illustrated on Figure 1. The Site is a commercial strip with a single-story building with a basement occupying approximately 4,250 square feet, with two (2) active tenants (Tobacco Plaza, Ltd. and CCQ Construction Inc.) and two (2) vacant spaces, as shown on Figure 2. Residential properties are located directly west of the Site and commercial parcels adjoin the Site to the north, northwest and south.

The basement of the on-site building has concrete block walls and a poured concrete floor slab. Outside the building footprint, the property is completely asphalt-paved. Sanitary wastewater from the building is discharged to two (2) on-site septic systems (refer to Figure 2) as there are no public sewers available near the Site. A perched water table underlies the Site at approximately 30 feet below grade, with a confining clay layer approximately 35 to 50 feet

below grade; the groundwater table is located approximately 150 feet below grade. Groundwater flow at the Site varies from west to west-northwest.

A release of tetrachloroethylene (PCE) at the Site was first noted in 1995. The PCE contamination was suspected to originate from floor drains within the tenant space occupied by a dry cleaner (i.e., Imperial Cleaners) at that time and from a leaching pool and drywell on the property that were associated with the former dry cleaner operations. The site investigation and remediation work described below was conducted by the previous owners of the Site, 218 Lakeville Associates LP, as required by NYSDEC under the VCP prior to the Volunteer's ownership and involvement with the Site.

A site investigation was conducted to identify source areas and determine the extent of contaminated soil and groundwater at the Site. Contaminated sediments were removed from the source areas (drywell, interior floor drains and leaching pool associated with the former Imperial Cleaners operations) in 1996 and 2000 to the extent possible without undermining the on-Site structures. Post-excavation soil sampling results indicated that volatile organic compounds (VOCs) remained in the subsurface at concentrations above the NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046 Recommended Cleanup Objectives. However, no additional materials were removed because it was determined that further excavation would threaten the integrity of the structures. A SVE system was installed to remove VOC vapors remaining in the soil and to improve soil and groundwater quality. The SVE system included eight (8) extraction wells and began operating in 2001. A soil, soil gas, groundwater and indoor air monitoring program was implemented to track the reductions in VOC concentrations achieved by operation of the SVE system.

Site closure sampling (soil, soil vapor and indoor air perc badge sampling) was conducted in November 2007 – January 2008 in accordance with a NYSDEC-approved work plan. The closure sampling results indicated that the SVE system had successfully reduced soil contaminant concentrations to below the NYSDEC TAGM 4046 Recommended Cleanup Objectives. Permanent shutdown of the SVE system was recommended based on the 2007-2008 closure sampling results. 218 Lakeville Associates L.P., the previous Site owner, subsequently shut down the SVE system circa 2008 without approval from NYSDEC and NYSDOH. These activities occurred approximately seven (7) years before the current Owner/Volunteer purchased the Site or had any involvement in the Site.

Representatives from the NYSDEC, the Volunteer and Walden met on-site in September 2015 to evaluate Site conditions and discuss previous sampling investigations, potential redevelopment of the Site and the work required to achieve VCP Site closure. Based on this meeting and subsequent discussions, a soil vapor intrusion (SVI) investigation ensued to evaluate potential indoor air quality impacts related to SVI and to support development of appropriate Site

closure/management recommendations for NYSDEC and New York State Department of Health (NYSDOH) review and approval. The SVI sampling was conducted in February 2016 in accordance with the NYSDEC-approved *Soil Vapor Intrusion Investigation Work Plan* (Walden, December 2015) and included the collection of sub-slab soil vapor, indoor air and outdoor (ambient) air samples at the Site and several neighboring properties. The results of this sampling were documented in the May 2017 *Soil Vapor Intrusion Investigation Summary Report*, prepared by Walden and submitted to the NYSDEC, and indicated that subsurface VOC concentrations at the Site and surrounding area had rebounded since the SVE system was shut down. Remedial action objectives were subsequently developed (and discussed in the February 2019 RWP) to guide the selection of an appropriate remedial alternative for the Site and to support future development of Site closure/management plans.

In accordance with the February 2019 RWP, a subsequent SVI investigation was performed in April 2019 to confirm the February 2016 SVI sampling results at the Site and the adjacent property to the south at 220 Lakeville Road, and to evaluate the potential for vapor migration and intrusion at additional off-site properties not included in the February 2016 investigation. The April 2019 investigation included the collection of sub-slab soil vapor, indoor air and outdoor air samples at the Site, 220 Lakeville Road and one (1) additional off-site residential property to the west (5 University Place). Sampling was performed in accordance with the procedures described in the NYSDEC- and NYSDOH-approved *Soil Vapor Intrusion Investigation Work Plan* (Walden, December 2015). The results were documented in the July 2019 *Soil Vapor Intrusion Investigation Summary Report*, prepared by Walden and submitted to the NYSDEC which indicated that subsurface VOC concentrations at the Site remained elevated. Additionally, elevated concentrations of VOC-contaminated vapors were detected at 5 University Place.

1.2 May 2019 Soil and Groundwater Sampling Objectives

Based on the results of the February 2016 SVI sampling, remedial action alternatives were evaluated and presented in the February 2019 RWP. The selected remedial strategy for the Site entails the development and installation of a SVE system to reduce the residual VOC mass and prevent off-site vapor migration by removing contaminated vapors in the subsurface, with excavation of residual source material as appropriate.

In accordance with the February 2019 RWP, a pre-design subsurface investigation was performed at the Site in May 2019. The objectives of the pre-design investigation were to support the design and implementation of the SVE system by further evaluating potential residual VOC source material and categorizing geological factors which may affect the radius of influence and screen zones of SVE wells in the unsaturated zone. Fieldwork included the advancement of soil borings and the installation of temporary monitoring wells throughout the

Site with collection of numerous soil and groundwater samples. Sampling locations were biased towards the on-site building space, drywells and leaching pools associated with the former dry-cleaning operations. The results of the investigation are detailed herein and, in conjunction with data from previous investigations at the Site, will be utilized to identify and delineate on-Site source areas for removal and to support development of the SVE system pilot test.

2 SUBSURFACE INVESTIGATION FIELDWORK

The pre-design soil and groundwater investigation began on May 13, 2019 with a ground penetrating radar (GPR) survey of the exterior portions of the Site to clear the proposed sampling locations of underground utilities and other structures prior to drilling. One (1) previously unidentified subsurface drainage pool was detected by the GPR survey; the structure was situated on the west (rear) side of the Site building near the tenant space occupied by Tobacco Plaza (see Figure 2) and appeared to be utilized for roof drainage.

The subsurface investigation was performed from May 14 through 22, 2019. Eastern Environmental Solutions, Inc. (Eastern) of Manorville, NY was retained to perform drilling activities and temporary well installations. Sampling locations were chosen, in accordance with the *RWP*, to target buried drainage structures throughout the Site (stormwater drywells/sanitary leaching pools) where residual source material may be present, particularly those associated with the former dry cleaning operations, and to evaluate subsurface conditions along the upgradient (eastern/ southeastern) and downgradient (western/northwestern) Site boundaries. Based on historic Site use, it was anticipated that residual contamination would likely be found at the inverts of stormwater drywells and septic leaching pools; therefore, soil sampling was conducted in accordance with the *RWP* from the depth of the suspected source material (minimum ten [10] feet below grade, or bg) to just above the perched groundwater interface at approximately 30 feet bg. Select borings were converted to temporary monitoring wells and groundwater samples were collected from the top five (5) feet of the perched water column. Fieldwork and sampling activities are described in further detail below.

2.1 Soil Investigation

Fourteen (14) soil borings (GB-1 through GB-14) were advanced throughout the Site utilizing a direct-push drill rig (Geoprobe® 7822DT). Boring locations are depicted on Figure 2. Two (2) borings were advanced on either side of each buried drainage structure, one upgradient (southeast) and one downgradient (northwest), including the suspected roof drainage structure initially identified during the May 13, 2019 GPR survey. Additional borings were also installed in the rear parking lot just outside the southernmost (former Imperial Cleaners) tenant space and in the southeastern, northeastern and northwestern corners of the Site to evaluate potential VOC contamination in these areas.

Continuous soil samples were collected via five (5) foot Macrocores from ten (10) feet bg to the terminus of each boring (35 feet bg). The cores were visually inspected, logged and screened utilizing a photoionization detector (PID) which was calibrated according to manufacturers' instructions prior to the commencement of drilling activities. Boring logs are provided in Appendix A and photographs collected during the fieldwork are provided in Appendix B.

Perched groundwater was encountered between 27 and 33 feet bg. The soil lithology generally included medium brown, fine to medium sand with trace amounts of silt and gravel. Solvent odors and elevated PID measurements were detected sparingly and at varying depths throughout the borings; the maximum PID reading was detected in boring GB-6 at a depth of 15.5 feet bg, immediately downgradient of stormwater drywell DW-1 in the southwestern corner of the Site.

Two (2) soil samples were selected for laboratory analysis from each boring based on PID readings, field screening results (visual/olfactory observations), and other factors including proximity to suspected source areas, distinct soil types, and/or depth with respect to the perched groundwater table. Quality assurance/quality control (QA/QC) samples were also collected in accordance with the Quality Assurance Project Plan (QAPP) for the Site, provided as Appendix B of the February 2019 RWP. All soil samples were containerized in clean, laboratory-provided glassware, labeled, placed in ice-filled coolers and transported via courier under standard Chain-of-Custody protocols to Phoenix Environmental Laboratories, Inc. (Phoenix) of Manchester, CT, a NYSDOH Environmental Laboratory Approval Program (ELAP) Contract Laboratory Protocol (CLP) laboratory, for analysis of VOCs via U.S. Environmental Protection Agency (USEPA) Method 5035. The laboratory analytical results are summarized in Table 1 and are compared with 6 NYCRR/NYSDEC Part 375 Soil Cleanup Objectives (SCOs) for Commercial Site Use and Protection of Groundwater. The complete laboratory analytical reports are presented in Appendix C.

Drill cuttings were containerized in one (1) 55-gallon drum, labeled as non-hazardous waste, and transported off-site on May 22, 2019 by Eastern for disposal at Clean Water of New York Inc. in Staten Island, NY. A copy of the waste disposal manifest is included in Appendix D.

2.2 Groundwater Investigation

Following soil boring advancement and sample collection, seven (7) of the boring locations were converted to temporary monitoring wells, as summarized below and depicted on Figure 2:

Soil Boring ID	Temporary Monitoring Well ID
GB-1	TMW-1
GB-2	TMW-2
GB-3	TMW-3
GB-6	TMW-4
GB-8	TMW-5
GB-9	TMW-6
GB-12	TMW-7

The wells were installed to collect groundwater samples from the top of the perched water column (approximately 30-35 feet bg) and to collect perched water table measurements to determine the groundwater flow direction. The approximate groundwater flow direction (west to west-northwest) determined based on water level measurements recorded historically at the Site is shown on Figure 2. Note that the surface elevations of the temporary wells will be surveyed to accurately map the groundwater elevations and confirm the flow direction. Each temporary well was constructed with a five (5)-foot long section of one (1)-inch diameter polyvinylchloride (PVC) 0.020-inch screen at the bottom of the column and solid one (1)-inch diameter PVC riser pipe to grade, and was finished with a J-plug within a five (5)-inch diameter roadbox with bolt-down manhole cover, as shown on the boring logs provided as Appendix A and the photographs included in Appendix B.

One (1) perched groundwater sample was collected for VOC analysis from each of the temporary wells via peristaltic pump and dedicated high-density polyethylene (HDPE) tubing. In addition, groundwater samples collected from four (4) locations (GB-1/TMW-1, GB-6/TMW-4, GB-8/TMW-5 and GB-12/TMW-7) were also analyzed for “emerging contaminants” (1,4-dioxane and per- and polyfluorinated alkyl substances [PFAS]) in accordance with the RWP and NYSDEC memos *Groundwater Sampling for Emerging Contaminants* (February 2018) and *Collection of Groundwater Samples for Perfluorooctanoic Acid (PFOA) and Perfluorinated Compounds (PFCs) from Monitoring Wells Sample Protocol* (June 2016). QA/QC samples were also collected as prescribed in the QAPP.

The groundwater and QA/QC samples were placed in single-use laboratory-provided bottleware, labeled, placed in ice-filled coolers and transported via courier under standard Chain-of-Custody protocols to Phoenix for analysis of VOCs via USEPA Method 8260 and 1,4-dioxane via USEPA Method 8270. The samples slated for PFAS analysis were sent by Phoenix to Con-Test Analytical Laboratory of East Longmeadow, MA. The laboratory results for VOC analyses are summarized in Table 2 and are compared with NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1 Class GA Ambient Water Quality Standards (Standards). Table 3 presents the emerging contaminants (1,4-dioxane and PFAS) analytical results. Note that on July 24, 2019, the NYSDOH issued a Notice of Proposed Rulemaking [Amendment of Subpart 5-1 of Title 10 NYCRR (Maximum Contaminant Levels (MCLs))] to establish MCLs of 1 microgram per liter ($\mu\text{g/L}$) for 1,4-dioxane and 10 nanograms per liter (ng/L) for perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS). Following a 60-day public comment period (which ended September 23, 2019), NYSDOH will review comments received on the proposed rule. The MCLs will go into effect upon publication of a Notice of Adoption in the New York State Register. The 1,4-dioxane and PFAS results in Table 3 are compared with the proposed MCLs. Complete laboratory reports are included in Appendix C.

Purged groundwater was containerized in one (1) 55-gallon drum, labeled as non-hazardous waste, and transported off-site by Eastern on May 22, 2019 to Clean Water of New York Inc. in Staten Island, NY for disposal. A copy of the waste disposal manifest is included in Appendix D.

3 EVALUATION OF SOIL AND GROUNDWATER INVESTIGATION SAMPLING RESULTS

3.1 Summary of Soil Sampling Results

Numerous VOCs were detected above laboratory Reporting Limits (RLs) in the soil samples, primarily PCE and associated breakdown products (cis-1,2-dichloroethene [cis-1,2-DCE] and trichloroethene [TCE]). Refer to Table 2 for a summary of the soil sampling results. None of the reported detections exceeded applicable NYSDEC SCOs (for Commercial Use or Protection of Groundwater) with the exception of PCE in the sample collected from boring GB-6, located immediately downgradient of stormwater drywell DW-1, at a depth of 14.5-15.5 feet bg (the suspected invert of this drainage structure). The PCE concentration detected in this sample exceeds the NYSDEC SCO for Protection of Groundwater and represents the highest VOC concentration reported in the 28 soil samples collected during this investigation. Low concentrations of several other VOCs, predominantly chlorinated compounds, were also reported in this sample at levels below their respective SCOs.

Low concentrations of PCE (well below NYSDEC SCOs) were detected in all other soil samples with the exception of the samples collected from borings GB-8 and GB-9 at a depth of 14-14.5 feet bg and those collected from boring location GB-12 in the southeastern corner of the Site, where PCE was not detected.

Low concentrations (below NYSDEC SCOs) of PCE, TCE and cis-1,2-DCE were detected in numerous soil samples, particularly those collected at the perched groundwater interface (approximately 27-33 feet below grade). As discussed in Section 3.2 below, concentrations of these compounds exceeding applicable NYSDEC water quality Standards were detected in groundwater samples collected throughout the Site.

Low concentrations of acetone were also detected in several soil samples. Acetone is a common laboratory solvent and all the reported concentrations were well below applicable NYSDEC SCOs. Therefore, these detections are not considered to present a concern.

3.2 Summary of Groundwater Sampling Results

3.2.1 VOC Analysis

Several VOCs were detected above laboratory RLs in perched groundwater samples collected from the temporary monitoring wells. All reported concentrations were below their respective NYSDEC Standards except as discussed below. Refer to Table 3 for a summary of the groundwater sampling results.

PCE was detected at concentrations exceeding the NYSDEC Standard of 5 µg/L in perched groundwater samples collected from all temporary monitoring wells with the exception of TMW-7. The highest reported PCE concentration occurred in the sample collected from monitoring well TMW-2, which was converted from soil boring GB-2 and is located immediately downgradient of sanitary overflow leaching pool LP-3 on the west side of the Site building. Concentrations of cis-1,2-DCE and TCE slightly exceeding NYSDEC Standards were also detected in temporary monitoring wells TMW-4 (downgradient of drywell DW-1), TMW-5 (located in the northeastern corner of the Site) and TMW-6 (downgradient of leaching pool LP-1).

Concentrations of methyl tertiary butyl ether (MTBE) above the NYSDEC Standard of 10 µg/L were detected in perched groundwater samples collected from temporary monitoring wells TMW-1, TMW- 2, TMW-3 and TMW-7. No other VOCs were detected in well TMW-7 at concentrations exceeding laboratory RLs. Monitoring well TMW-7 is situated along the upgradient (eastern/southeastern) property boundary while wells TMW-1, TMW-2 and TMW-3 are situated directly downgradient of TMW-7 on the western/ northwestern side of the Site. Current and reported former uses of the Site have not included potential sources of MTBE, such as the storage or dispensing of gasoline. Considering the Site history and hydrologic locations of the temporary monitoring wells in which elevated concentrations of MTBE were reported, these detections support the conclusion that MTBE from an off-Site upgradient source(s) has migrated onto the Site. Note that MTBE was not detected in any of the sub-slab soil vapor or indoor air samples collected during the April 2019 SVI investigation.

3.2.2 *Emerging Contaminants Analysis*

None of the perched groundwater samples contained 1,4-dioxane above the laboratory RL of 0.20 µg/L or the NYSDOH proposed MCL of 1 µg/L. Additionally, none of the detected PFOA and PFOS concentrations exceeded the current USEPA Health Advisory Level of 70 ng/L for combined concentrations of PFOA and PFOS. However, all of the groundwater samples contained PFOA above the NYSDOH proposed MCL of 10 ng/L and two (2) of samples, collected from temporary monitoring wells TMW-1 and TMW-4, contained PFOS above the proposed MCL of 10 ng/L. It should be noted that the 10 ng/L proposed MCLs are not final MCLs in the State of New York as of the date of this report. The source of the PFOA and PFOS concentrations detected in the perched groundwater samples is unknown; however, these compounds are believed to be attributable to off-site sources because historic Site uses did not involve manufacturing or the use of firefighting foams, the operations commonly associated with PFOA and PFOS.

3.3 Data Usability Summary Report (DUSR)

A Data Usability Summary Report (DUSR) completed in accordance with DER-10 is provided herein as Appendix E.

4 SUMMARY AND RECOMMENDATIONS

4.1 Summary

The May 2019 pre-design subsurface investigation at the Site included the advancement of fourteen (14) soil borings (GB-1 through GB-14), conversion of seven (7) borings into temporary monitoring wells (TMW-1 through TMW-7), and the collection of twenty-eight (28) soil and seven (7) perched groundwater samples. The investigation was performed to evaluate the nature and extent of residual VOC contamination and to characterize geological conditions at the Site. The results will be used to support the design and implementation of a SVE remediation system to remove elevated concentrations of VOC vapors remaining in the subsurface at the Site as identified during the SVI investigation completed in April 2019. The results will also be used to support excavation of residual VOC source material as appropriate.

On-site soils consist mainly of medium brown, fine to medium sand with trace amounts of silt and gravel. The depth to perched groundwater was observed during the investigation to vary from approximately 27 to 33 feet bg. The approximate groundwater flow direction is west to west-northwest, as determined from water level measurements recorded historically at the Site.

Numerous VOCs were detected above laboratory RLs in the soil samples. However, none of the reported detections exceeded applicable NYSDEC SCOs (for Commercial Use or Protection of Groundwater) with the exception of PCE in the sample collected from boring GB-6, located immediately downgradient of stormwater drywell DW-1, at a depth of 14.5-15.5 feet below grade (the suspected invert of this drainage structure). The reported PCE concentration in this sample exceeds the SCO for Protection of Groundwater. These data suggest that contaminant source material is present in and around the DW-1 structure.

PCE was detected at concentrations exceeding the NYSDEC Class GA Ambient Water Quality Standard of 5 µg/L in all temporary monitoring wells with the exception of TMW-7. The highest reported PCE concentration occurred in the perched groundwater sample collected from monitoring well TMW-2, located immediately downgradient of sanitary overflow leaching pool LP-3 on the west side of the Site building. Low concentrations of cis-1,2-DCE and TCE were detected in temporary monitoring wells TMW-4, TMW-5 and TMW-6.

MTBE concentrations above the 10 µg/L NYSDEC Standard were detected in perched groundwater samples collected from temporary monitoring wells TMW-1, TMW-2, TMW-3 and TMW-7. These detections support the conclusion that MTBE from an off-Site upgradient source(s) has migrated onto the Site. Note that MTBE was not detected in any of the sub-slab soil vapor or indoor air samples collected during the April 2019 SVI investigation.

None of the perched groundwater samples analyzed for emerging contaminants contained 1,4-dioxane above the laboratory RL of 0.20 µg/L and none of the detected PFOA and PFOS concentrations exceeded the current USEPA Health Advisory Level of 70 ng/L for combined concentrations of PFOA and PFOS. The PFOS concentrations detected in the samples collected from temporary monitoring wells TMW-1 and TMW-4 and PFOA concentrations in all of the groundwater samples exceeded the NYSDOH proposed MCLs of 10 ng/L. It should be noted that the 10 ng/L proposed MCLs are not final MCLs in New York as of the date of this report. The source of the PFOA and PFOS concentrations detected in the perched groundwater samples is unknown; however, these compounds are believed to be attributable to off-site sources because historic Site uses did not involve manufacturing or the use of firefighting foams, the operations commonly associated with PFOA and PFOS.

4.2 Recommendations

The following actions are recommended based on the pre-design soil and groundwater investigation results:

- Removal of the DW-1 structure in the southwestern corner of the Site and remedial excavation of impacted soils in this area is recommended.
- In order focus source removal, Walden recommends advancing two (2) additional soil borings in the vicinity of DW-1 to a depth of approximately 27 feet bg (just above the perched groundwater interface) to delineate the lateral and vertical extent of soil impacts. Soils will be continuously sampled, logged, field screened for lithology and evidence of contamination, and selectively retained for laboratory analysis of VOCs. These data will be utilized to constrain the limits of remedial excavation in this area.
- No VOCs were detected above laboratory RLs in the soil samples collected from boring GB-7, situated just west of the former Imperial Cleaners tenant space between the Site building and drywells DW-1 and DW-2 near the western property boundary. However, the February 2016 and April 2019 soil vapor intrusion investigations performed at the Site indicated the presence of significantly elevated concentrations of chlorinated VOC vapors beneath the building slab. The impacts detected in the DW-1 area may not account for these sub-slab vapor concentrations and it is possible that an additional source of contaminated vapors is present beneath the building. Therefore, Walden recommends further investigation beneath the concrete slab floor of the former Imperial Cleaners basement. The collection of three (3) sub-slab soil samples is recommended in the vicinity of floor drain FD-2 to evaluate the potential presence of residual contaminant

source material in this area. Remedial options will be evaluated as appropriate based on the sub-slab soil sampling results.

- Following remedial excavation activities in the DW-1 area, Walden recommends collecting a subsequent round of perched groundwater samples from all temporary monitoring wells to evaluate pre- and post-excavation perched groundwater conditions.

Figure 1

Site Location Map



Notes: Aerial photos obtained from the USGS

Creation date: 1/29/2018 Print Date: 4/10/2018

Author: MCT Job No: IMPL0115.6

PDF: Z:\IMPL0115 (Imperial Cleaners)\IMPL0115.5 BCP Application Remedial Work Plan
APRIL 2018\Figures\Figure 1 Site Location Map.pdf

Map: Y:\IMPL0115.4\IMPL0115.5\Site Location Map.mxd



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Figure 1
Site Location Map
Former Imperial Cleaners Site
Site No. C130225

218 Lakeville Road
Lake Success, NY 11020

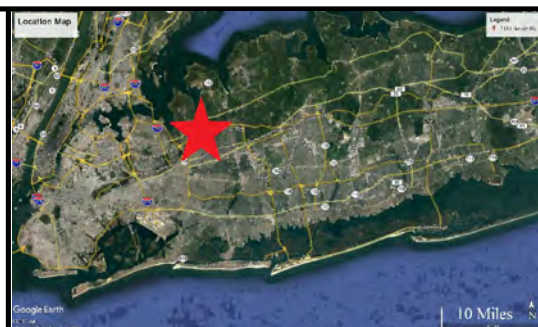


Figure 2

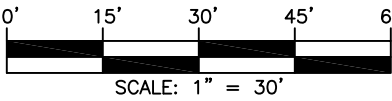
Pre-Design Investigation Soil Boring Locations

LEGEND

- PROPERTY LINE OF BROWNFIELD SITE
- PROPERTY LINE
- DW #1 STORMWATER DRYWELL
- LP SANITARY LEACHING POOL
- FD-1 FLOOR DRAIN
- APPROXIMATE PIPING CONNECTION (SANITARY SYSTEM/STORMWATER/ROOF DRAINAGE)

SOIL/ GROUNDWATER SAMPLE LOCATIONS (APPROXIMATE)

- GB-5 X - SOIL BORING ONLY
- GB-1/TMW-1 X - SOIL BORING/TEMPORARY MONITORING WELL



NOTES

1. Site base map was derived from a property survey prepared by Welsh Engineering & Land Surveying, P.C., 343 Manville Road, Pleasantville, NY 10570, revised on 7/14/00.
2. The Welsh Eningeering north area was corrected based on 1999 Nassau County GIS basemap.
3. Piezometers were installed at each of the 7 groundwater sampling locations (GB-1, GB-2, GB-3, GB-6, GB-8, GB-9 and GB-12) to allow for groundwater collection and water level measurements.
4. Groundwater samples collected from each of the 7 piezometers were analyzed for VOCs by EPA Method 8260.
5. Groundwater samples collected from GB-1, GB-6, GB-8 and GB-12 were also analyzed for emerging contaminants (PFAS and 1,4 - dioxane).

UNIVERSITY PLACE

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Table 1

Summary of Soil Analysis – Volatile Organic Compounds (VOCs)

Pre-Design Soil and Groundwater Investigation
218 Lakeville Road
Lake Success, NY

Table 1
Summary of Soil Analysis - Volatile Organic Compounds (VOCs)

Chemical Compound	CAS	NYSDEC Soil Cleanup Objectives		GB-1 (14-15')		DUPLICATE 051719		GB-1 (28.75-29.25')		GB-2 (14-14.5')		GB-2 (27-28')		DUPLICATE 051519		GB-3 (16.5-17')		GB-3 (27.75-28.25')		GB-4 (16.5-17')		GB-4 (28-28.5')		GB-5 (14-14.5')		GB-5 (27.5-28')	
		Commercial Use	Protection of Groundwater	5/17/2019		5/17/2019		5/17/2019		5/15/2019		5/15/2019		5/15/2019		5/16/2019		5/16/2019		5/17/2019		5/17/2019		5/16/2019		5/16/2019	
				Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
1,1,1,2-Tetrachloroethane	630-20-6	-	-	< 5.8	U	< 5.4	U	< 4.9	U	< 11	U	< 5.2	U	< 4.6	U	< 4.3	U	< 4.8	U	< 4.4	U	< 5.2	U	< 4.0	U	< 5.1	U
1,1,1-Trichloroethane	71-55-6	500,000	680	< 5.8	U	< 5.4	U	< 4.9	U	< 11	U	< 5.2	U	< 4.6	U	< 4.3	U	< 4.8	U	< 4.4	U	< 5.2	U	< 4.0	U	< 5.1	U
1,1,2,2-Tetrachloroethane	79-34-5	-	600	< 5.8	U	< 5.4	U	< 4.9	U	< 11	U	< 5.2	U	< 4.6	U	< 4.3	U	< 4.8	U	< 4.4	U	< 5.2	U	< 4.0	U	< 5.1	U
1,1,2-Trichloroethane	79-00-5	-	-	< 5.8	U	< 5.4	U	< 4.9	U	< 11	U	< 5.2	U	< 4.6	U	< 4.3	U	< 4.8	U	< 4.4	U	< 5.2	U	< 4.0	U	< 5.1	U
1,1-Dichloroethane	75-34-3	240,000	270	< 5.8	U	< 5.4	U	< 4.9	U	< 11	U	< 5.2	U	< 4.6	U	< 4.3	U	< 4.8	U	< 4.4	U	< 5.2	U	< 4.0	U	< 5.1	U
1,1-Dichloroethene	75-35-4	500,000	330	< 5.8	U	< 5.4	U	< 4.9	U	< 11	U	< 5.2	U	< 4.6	U	< 4.3	U	< 4.8	U	< 4.4	U	< 5.2	U	< 4.0	U	< 5.1	U
1,1-Dichloropropene	563-58-6	-	-	< 5.8	U	< 5.4	U	< 4.9	U	< 11	U	< 5.2	U	< 4.6	U	< 4.3	U	< 4.8	U	< 4.4	U	< 5.2	U	< 4.0	U	< 5.1	U
1,2,3-Trichlorobenzene	87-61-6	-	-	< 5.8	U	< 5.4	U	< 4.9	U	< 11	U	< 5.2	U	< 4.6	U	< 4.3	U	< 4.8	U	< 4.4	U	< 5.2	U	< 4.0	U	< 5.1	U
1,2,3-Trichloropropane	96-18-4	-	340	< 5.8	U	< 5.4	U	< 4.9	U	< 11	U	< 5.2	U	< 4.6	U	< 4.3	U	< 4.8	U	< 4.4	U	< 5.2	U	< 4.0	U	< 5.1	U
1,2,4-Trichlorobenzene	120-82-1	-	3,400	< 5.8	U	< 5.4	U	< 4.9	U	< 11	U	< 5.2	U	< 4.6	U	< 4.3	U	< 4.8	U	< 4.4	U	< 5.2	U	< 4.0	U	< 5.1	U
1,2,4-Trimethylbenzene	95-63-6	190,000	3,600	< 5.8	U	< 5.4	U	< 4.9	U	< 11	U	< 5.2	U	< 4.6	U	< 4.3	U	< 4.8	U	< 4.4	U	< 5.2	U	< 4.0	U	< 5.1	U
1,2-Dibromo-3-chloropropane	96-12-8	-	-	< 5.8	U	< 5.4	U	< 4.9	U	< 11	U	< 5.2	U	< 4.6	U	< 4.3	U	< 4.8	U	< 4.4	U	< 5.2	U	< 4.0	U	< 5.1	U
1,2-Dibromomethane	106-93-4	-	-	< 5.8	U	< 5.4	U	< 4.9	U	< 11	U	< 5.2	U	< 4.6	U	< 4.3	U	< 4.8	U	< 4.4	U	< 5.2	U	< 4.0	U	< 5.1	U
1,2-Dichlorobenzene	95-50-1	500,000	1,100	< 5.8	U	< 5.4	U	< 4.9	U	< 11	U	< 5.2	U	< 4.6	U	< 4.3	U	< 4.8	U	< 4.4	U	< 5.2	U	< 4.0	U	< 5.1	U
1,2-Dichloroethane	107-06-2	30,000	20	< 5.8	U	< 5.4	U	< 4.9	U	< 11	U	< 5.2	U	< 4.6	U	< 4.3	U	< 4.8	U	< 4.4	U	< 5.2	U	< 4.0	U	< 5.1	U
1,2-Dichloropropane	78-87-5	-	-	< 5.8	U	< 5.4	U	< 4.9	U	< 11	U	< 5.2	U	< 4.6	U	< 4.3	U	< 4.8	U	< 4.4	U	< 5.2	U	< 4.0	U	< 5.1	U
1,3,5-Trimethylbenzene	108-67-8	190,000	8,400	< 5.8	U	< 5.4	U	< 4.9	U	< 11	U	< 5.2	U	< 4.6	U	< 4.3	U	< 4.8	U	< 4.4	U	< 5.2	U	< 4.0	U	< 5.1	U
1,3-Dichlorobenzene	541-73-1	280,000	2,400	< 5.8	U	< 5.4	U	< 4.9	U	< 11	U	< 5.2	U	< 4.6	U	< 4.3	U	< 4.8	U	< 4.4	U	< 5.2	U	< 4.0	U	< 5.1	U
1,3-Dichloropropane	142-28-9	-	300	< 5.8	U	< 5.4	U	< 4.9	U	< 11	U	< 5.2	U	< 4.6	U	< 4.3	U	< 4.8	U	< 4.4	U	< 5.2	U	< 4.0	U	< 5.1	U
1,4-Dichlorobenzene	106-46-7	130,000	1,800	< 5.8	U	< 5.4	U	< 4.9	U	< 11	U	< 5.2	U	< 4.6	U	< 4.3	U	< 4.8	U	< 4.4	U	< 5.2	U	< 4.0	U	< 5.1	U
2,2-Dichloropropane	594-20-7	-	-	< 5.8	U	< 5.4	U	< 4.9	U	< 11	U	< 5.2	U	< 4.6	U	< 4.3	U	< 4.8	U	< 4.4	U	< 5.2	U	< 4.0	U	< 5.1	U
2-Chlorotoluene	95-49-8	-	-	< 5.8	U	< 5.4	U	< 4.9	U	< 11	U	< 5.2	U	< 4.6	U	< 4.3	U	< 4.8	U	< 4.4	U	< 5.2	U	< 4.0	U	< 5.1	U
2-Hexanone	591-78-6	-	-	< 29	U	< 27	U	< 24	U	< 54	U	< 26	U	< 23	U	< 22	U	< 24	U	< 22	U	< 26	U	< 20	U	< 26	U
2-Isopropyltoluene	527-84-4	-	-	< 5.8	U	< 5.4	U	< 4.9	U	< 11	U	< 5.2	U	< 4.6	U	< 4.3	U	< 4.8	U	< 4.4	U	< 5.2	U	< 4.0	U	< 5.1	U
4-Chlorotoluene	106-43-4	-	-	< 5.8	U	< 5.4	U	< 4.9	U	< 11	U	< 5.2	U	< 4.6	U	< 4.3	U	< 4.8	U	< 4.4	U	< 5.2	U	< 4.0	U	< 5.1	U
4-Methyl-2-pentanone	108-10-1	-	1,000	< 29	U	< 27	U	< 24	U	< 54	U	< 26	U	< 23	U	< 22	U	< 24	U	< 22	U	< 26	U	< 20	U	< 26	U
Acetone	67-64-1	500,000	50	< 29	U	< 27	U	< 24	U	< 50	U	< 26	U	< 23	U	7.0	JS	11	JS	< 22	U	< 26	U	< 20	U	< 26	U
Acrylonitrile	107-13-1	-	-	< 12	U	< 11	U	< 9.8	U	< 22	U	< 10	U	< 9.1	U	< 8.6	U	< 9.6	U	< 8.8	U	< 10	U	< 8.0	U	< 10	U
Benzene	71-43-2	44,000	60	< 5.8	U	< 5.4	U	< 4.9	U	< 11	U	< 5.2	U	< 4.6	U	< 4.3	U	< 4.8	U	< 4.4	U	< 5.2	U	< 4.0	U	< 5.1	U
Bromobenzene	108-86-1	-	-	< 5.8	U	< 5.4	U	< 4.9	U	< 11	U	< 5.2	U	< 4.6	U	< 4.3	U	< 4.8	U	< 4.4	U	< 5.2	U	< 4.0	U	< 5.1	U
Bromochloromethane	74-97-5	-	-	< 5.8	U	< 5.4	U	< 4.9	U	< 11	U	< 5.2	U	< 4.6	U	< 4.3	U	< 4.8	U	< 4.4	U	< 5.2	U	< 4.0	U	< 5.1	U
Bromodichloromethane	75-27-4	-	-	< 5.8	U	< 5.4	U	< 4.9	U	< 11	U	< 5.2	U	< 4.6	U	< 4.3	U	< 4.8	U	< 4.4	U	< 5.2	U	< 4.0	U	< 5.1	U
Bromoform	75-25-2	-	-	< 5.8	U	< 5.4	U	< 4.9	U	< 11	U	< 5.2	U	< 4.6	U	< 4.3	U	< 4.8	U	< 4.4	U	< 5.2	U	< 4.0	U	< 5.1	U
Bromomethane	74-83-9	-	-	< 5.8	U	< 5.4	U	< 4.9	U	< 11	U	< 5.2	U	< 4.6	U	< 4.3	U	< 4.8	U	< 4.4	U	< 5.2	U	< 4.0	U	< 5.1	U
Carbon disulfide	75-15-0	-	2,700	< 5.8	U	< 5.4	U	< 4.9	U	< 11	U	< 5.2	U	< 4.6	U	< 4.3	U	< 4.8	U	< 4.4	U	< 5.2	U	< 4.0	U	< 5.1	U
Carbon tetrachloride	56-23-5	22,000	760	< 5.8	U	< 5.4	U	< 4.9	U	< 11	U	< 5.2	U	< 4.6	U	< 4.3	U	< 4.8	U	< 4.4	U	< 5.2	U	< 4.0	U	< 5.1	U
Chlorobenzene	108-90-7	500,000	1,100	< 5.8	U	< 5.4	U	< 4.9	U	< 11	U	< 5.2	U	< 4.6	U	< 4.3	U	< 4.8	U	< 4.4	U	< 5.2	U	< 4.0	U	&	

Pre-Design Soil and Groundwater Investigation
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Table 1
Summary of Soil Analysis - Volatile Organic Compounds (VOCs)

Chemical Compound	CAS	NYSDEC Soil Cleanup Objectives		GB-6 (14.5-15.5')		DUPLICATE 05162019		GB-6 (28-29')		GB-7 (14-14.5')		DUPLICATE 05222019		GB-7 (30-31')		GB-8 (14-15')		GB-8 (33-33.5')		GB-9 (14-14.5')		GB-9 (31.5-32.5')		DUPLICATE 051419		GB-10 (14-14.5')		GB-10 (32-32.5')	
				5/16/2019		5/16/2019		5/16/2019		5/22/2019		5/22/2019		5/22/2019		5/17/2019		5/17/2019		5/14/2019		5/14/2019		5/14/2019		5/14/2019		5/14/2019	
		Commercial Use	Protection of Groundwater	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
1,1,1,2-Tetrachloroethane	630-20-6	-	-	< 5.3	U	< 4.8	U	< 3.7	U	< 4.2	U	< 3.8	U	< 5.7	U	< 4.0	U	< 5.3	U	< 5.3	U	< 5.4	U	< 4.5	U	< 4.3	U	< 5.8	U
1,1,1-Trichloroethane	71-55-6	500,000	680	< 5.3	U	< 4.8	U	< 3.7	U	< 4.2	U	< 3.8	U	< 5.7	U	< 4.0	U	< 5.3	U	< 5.3	U	< 5.4	U	< 4.5	U	< 4.3	U	< 5.8	U
1,1,2,2-Tetrachloroethane	79-34-5	-	600	< 5.3	U	< 4.8	U	< 3.7	U	< 4.2	U	< 3.8	U	< 5.7	U	< 4.0	U	< 5.3	U	< 5.3	U	< 5.4	U	< 4.5	U	< 4.3	U	< 5.8	U
1,1,2-Trichloroethane	79-00-5	-	-	< 5.3	U	< 4.8	U	< 3.7	U	< 4.2	U	< 3.8	U	< 5.7	U	< 4.0	U	< 5.3	U	< 5.3	U	< 5.4	U	< 4.5	U	< 4.3	U	< 5.8	U
1,1-Dichloroethane	75-34-3	240,000	270	< 5.3	U	< 4.8	U	< 3.7	U	< 4.2	U	< 3.8	U	< 5.7	U	< 4.0	U	< 5.3	U	< 5.3	U	< 5.4	U	< 4.5	U	< 4.3	U	< 5.8	U
1,1-Dichloroethene	75-35-4	500,000	330	< 5.3	U	< 4.8	U	< 3.7	U	< 4.2	U	< 3.8	U	< 5.7	U	< 4.0	U	< 5.3	U	< 5.3	U	< 5.4	U	< 4.5	U	< 4.3	U	< 5.8	U
1,1-Dichloropropene	563-58-6	-	-	< 5.3	U	< 4.8	U	< 3.7	U	< 4.2	U	< 3.8	U	< 5.7	U	< 4.0	U	< 5.3	U	< 5.3	U	< 5.4	U	< 4.5	U	< 4.3	U	< 5.8	U
1,2,3-Trichlorobenzene	87-61-6	-	-	2.0	J	1.6	J	< 3.7	U	< 4.2	U	< 3.8	U	< 5.7	U	< 4.0	U	< 5.3	U	< 5.3	U	< 5.4	U	< 4.5	U	< 4.3	U	< 5.8	U
1,2,3-Trichloropropane	96-18-4	-	340	< 5.3	U	< 4.8	U	< 3.7	U	< 4.2	U	< 3.8	U	< 5.7	U	< 4.0	U	< 5.3	U	< 5.3	U	< 5.4	U	< 4.5	U	< 4.3	U	< 5.8	U
1,2,4-Trichlorobenzene	120-82-1	-	3,400	6.4		5.3		< 3.7	U	< 4.2	U	< 3.8	U	< 5.7	U	< 4.0	U	< 5.3	U	< 5.3	U	< 5.4	U	< 4.5	U	< 4.3	U	< 5.8	U
1,2,4-Trimethylbenzene	95-63-6	190,000	3,600	< 5.3	U	< 4.8	U	< 3.7	U	< 4.2	U	< 3.8	U	< 5.7	U	< 4.0	U	< 5.3	U	< 5.3	U	< 5.4	U	< 4.5	U	< 4.3	U	< 5.8	U
1,2-Dibromo-3-chloropropane	96-12-8	-	-	< 5.3	U	< 4.8	U	< 3.7	U	< 4.2	U	< 3.8	U	< 5.7	U	< 4.0	U	< 5.3	U	< 5.3	U	< 5.4	U	< 4.5	U	< 4.3	U	< 5.8	U
1,2-Dibromoethane	106-93-4	-	-	< 5.3	U	< 4.8	U	< 3.7	U	< 4.2	U	< 3.8	U	< 5.7	U	< 4.0	U	< 5.3	U	< 5.3	U	< 5.4	U	< 4.5	U	< 4.3	U	< 5.8	U
1,2-Dichlorobenzene	95-50-1	500,000	1,100	8.9		6.9		< 3.7	U	< 4.2	U	< 3.8	U	< 5.7	U	< 4.0	U	< 5.3	U	< 5.3	U	< 5.4	U	< 4.5	U	< 4.3	U	< 5.8	U
1,2-Dichloroethane	107-06-2	30,000	20	< 5.3	U	< 4.8	U	< 3.7	U	< 4.2	U	< 3.8	U	< 5.7	U	< 4.0	U	< 5.3	U	< 5.3	U	< 5.4	U	< 4.5	U	< 4.3	U	< 5.8	U
1,2-Dichloropropane	78-87-5	-	-	< 5.3	U	< 4.8	U	< 3.7	U	< 4.2	U	< 3.8	U	< 5.7	U	< 4.0	U	< 5.3	U	< 5.3	U	< 5.4	U	< 4.5	U	< 4.3	U	< 5.8	U
1,3,5-Trimethylbenzene	108-67-8	190,000	8,400	< 5.3	U	< 4.8	U	< 3.7	U	< 4.2	U	< 3.8	U	< 5.7	U	< 4.0	U	< 5.3	U	< 5.3	U	< 5.4	U	< 4.5	U	< 4.3	U	< 5.8	U
1,3-Dichlorobenzene	541-73-1	280,000	2,400	3.3	J	3.3	J	< 3.7	U	< 4.2	U	< 3.8	U	< 5.7	U	< 4.0	U	< 5.3	U	< 5.3	U	< 5.4	U	< 4.5	U	< 4.3	U	< 5.8	U
1,3-Dichloropropane	142-28-9	-	300	< 5.3	U	< 4.8	U	< 3.7	U	< 4.2	U	< 3.8	U	< 5.7	U	< 4.0	U	< 5.3	U	< 5.3	U	< 5.4	U	< 4.5	U	< 4.3	U	< 5.8	U
1,4-Dichlorobenzene	106-46-7	130,000	1,800	10		9.7		< 3.7	U	< 4.2	U	< 3.8	U	< 5.7	U	< 4.0	U	< 5.3	U	< 5.3	U	< 5.4	U	< 4.5	U	< 4.3	U	< 5.8	U
2,2-Dichloropropane	594-20-7	-	-	< 5.3	U	< 4.8	U	< 3.7	U	< 4.2	U	< 3.8	U	< 5.7	U	< 4.0	U	< 5.3	U	< 5.3	U	< 5.4	U	< 4.5	U	< 4.3	U	< 5.8	U
2-Chlorotoluene	95-49-8	-	-	< 5.3	U	< 4.8	U	< 3.7	U	< 4.2	U	< 3.8	U	< 5.7	U	< 4.0	U	< 5.3	U	< 5.3	U	< 5.4	U	< 4.5	U	< 4.3	U	< 5.8	U
2-Hexanone	591-78-6	-	-	< 26	U	< 24	U	< 19	U	< 21	U	< 19	U	< 29	U	< 20	U	< 27	U	< 26	U	< 27	U	< 22	U	< 21	U	< 29	U
2-Isopropyltoluene	527-84-4	-	-	< 5.3	U	< 4.8	U	< 3.7	U	< 4.2	U	< 3.8	U	< 5.7	U	< 4.0	U	< 5.3	U	< 5.3	U	< 5.4	U	< 4.5	U	< 4.3	U	< 5.8	U
4-Chlorotoluene	106-43-4	-	-	< 5.3	U	< 4.8	U	< 3.7	U	< 4.2	U	< 3.8	U	< 5.7	U	< 4.0	U	< 5.3	U	< 5.3	U	< 5.4	U	< 4.5	U	< 4.3	U	< 5.8	U
4-Methyl-2-pentanone	108-10-1	-	1,000	< 26	U	< 24	U	< 19	U	< 21	U	< 19	U	< 29	U	< 20	U	< 27	U	< 26	U	< 27	U	< 22	U	< 21	U	< 29	U
Acetone	67-64-1	500,000	50	7.4	JS	16	JS	13	JS	< 21	U	< 19	U	< 29	U	< 20	U	< 27	U	< 26	U	5.9	JS	< 22	U	6.0	JS	7.0	JS
Acrylonitrile	107-13-1	-	-	< 11	U	< 9.5	U	< 7.4	U	< 8.4	U	< 7.5	U	< 11	U	< 7.9	U	< 11	U	< 11	U	< 11	U	< 8.9	U	< 8.5	U	< 12	U
Benzene	71-43-2	44,000	60	< 5.3	U	< 4.8	U	< 3.7	U	< 4.2	U	< 3.8	U	< 5.7	U	< 4.0	U	< 5.3	U	< 5.3	U	< 5.4	U	< 4.5	U	< 4.3	U	< 5.8	U
Bromobenzene	108-86-1	-	-	< 5.3	U	< 4.8	U	< 3.7	U	< 4.2	U	< 3.8	U	< 5.7	U	< 4.0	U	< 5.3	U	< 5.3	U	< 5.4	U	< 4.5	U	< 4.3	U	< 5.8	U
Bromochloromethane	74-97-5	-	-	< 5.3	U	< 4.8	U	< 3.7	U	< 4.2	U	< 3.8	U	< 5.7	U	< 4.0	U	< 5.3	U	< 5.3	U	< 5.4	U	< 4.5	U	< 4.3	U	< 5.8	U
Bromodichloromethane	75-27-4	-	-	< 5.3	U	< 4.8	U	< 3.7	U	< 4.2	U	< 3.8	U	< 5.7	U	< 4.0	U	< 5.3	U	< 5.3	U	< 5.4	U	< 4.5	U	< 4.3	U	< 5.8	U
Bromoform	75-25-2	-	-	< 5.3	U	< 4.8	U	< 3.7	U	< 4.2	U	< 3.8	U	< 5.7	U	< 4.0	U	< 5.3	U	< 5.3	U	< 5.4	U	< 4.5	U	< 4.3	U	< 5.8	U
Bromomethane	74-83-9	-	-	< 5.3	U	< 4.8	U	< 3.7	U	< 4.2	U	< 3.8	U	< 5.7.															

Pre-Design Soil and Groundwater Investigation
218 Lakeville Road
Lake Success, NY

Table 1
Summary of Soil Analysis - Volatile Organic Compounds (VOCs)

Chemical Compound	CAS	NYSDEC Soil Cleanup Objectives		GB-11 (14-14.5')		GB-11 (32-32.5')		GB-12 (15.5-16')		GB-12 (30.25-30.75')		GB-13 (14-14.5')		GB-13 (28.75-29.25')		GB-14 (14-14.5')		GB-14 (28.5-29')	
				5/14/2019		5/14/2019		5/15/2019		5/15/2019		5/15/2019		5/15/2019		5/22/2019		5/22/2019	
		Commercial Use	Protection of Groundwater	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
1,1,1,2-Tetrachloroethane	630-20-6	-	-	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
1,1,1-Trichloroethane	71-55-6	500,000	680	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
1,1,2,2-Tetrachloroethane	79-34-5	-	600	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
1,1,2-Trichloroethane	79-00-5	-	-	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
1,1-Dichloroethane	75-34-3	240,000	270	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
1,1-Dichloroethene	75-35-4	500,000	330	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
1,1-Dichloropropene	563-58-6	-	-	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
1,2,3-Trichlorobenzene	87-61-6	-	-	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
1,2,3-Trichloropropane	96-18-4	-	340	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
1,2,4-Trichlorobenzene	120-82-1	-	3,400	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
1,2,4-Trimethylbenzene	95-63-6	190,000	3,600	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
1,2-Dibromo-3-chloropropane	96-12-8	-	-	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
1,2-Dibromoethane	106-93-4	-	-	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
1,2-Dichlorobenzene	95-50-1	500,000	1,100	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
1,2-Dichloroethane	107-06-2	30,000	20	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
1,2-Dichloropropane	78-87-5	-	-	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
1,3,5-Trimethylbenzene	108-67-8	190,000	8,400	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
1,3-Dichlorobenzene	541-73-1	280,000	2,400	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
1,3-Dichloropropane	142-28-9	-	300	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
1,4-Dichlorobenzene	106-46-7	130,000	1,800	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
2,2-Dichloropropane	594-20-7	-	-	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
2-Chlorotoluene	95-49-8	-	-	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
2-Hexanone	591-78-6	-	-	< 25	U	< 24	U	< 28	U	< 26	U	< 33	U	< 29	U	< 24	U	< 24	U
2-Isopropyltoluene	527-84-4	-	-	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
4-Chlorotoluene	106-43-4	-	-	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
4-Methyl-2-pentanone	108-10-1	-	1,000	< 25	U	< 24	U	< 28	U	< 26	U	< 33	U	< 29	U	< 24	U	< 24	U
Acetone	67-64-1	500,000	50	< 25	U	< 24	U	5.8	JS	5.4	JS	< 33	U	< 29	U	< 24	U	< 24	U
Acrylonitrile	107-13-1	-	-	< 10	U	< 9.6	U	< 11	U	< 10	U	< 13	U	< 12	U	< 9.8	U	< 9.5	U
Benzene	71-43-2	44,000	60	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
Bromobenzene	108-86-1	-	-	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
Bromochloromethane	74-97-5	-	-	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
Bromodichloromethane	75-27-4	-	-	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
Bromoform	75-25-2	-	-	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
Bromomethane	74-83-9	-	-	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
Carbon disulfide	75-15-0	-	2,700	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
Carbon tetrachloride	56-23-5	22,000	760	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
Chlorobenzene	108-90-7	500,000	1,100	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
Chloroethane	75-00-3	-	-	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
Chloroform	67-66-3	350,000	370	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
Chloromethane	74-87-3	-	-	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
cis-1,2-Dichloroethene	156-59-2	500,000	250	2.1	J	28		< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
cis-1,3-Dichloropropene	10061-01-5	-	-	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
Dibromochloromethane	124-48-1	-	-	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
Dibromomethane	74-95-3	-	-	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
Dichlorodifluoromethane	75-71-8	-	-	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
Ethylbenzene	100-41-4	390,000	1,000	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
Hexachlorobutadiene	87-68-3	-	-	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
Isopropylbenzene	98-82-8	-	2,300	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
m&p-Xylene	179601-23-1	500,000	1,600	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
o-Xylene	95-47-6	-	-	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
Methyl Ethyl Ketone	78-93-3	500,000	300	< 30	U	< 29	U	< 34	U	< 31	U	< 40	U	< 35	U	< 29	U	< 28	U
Methyl t-butyl ether (MTBE)	1634-04-4	500,000	930	< 10	U	< 9.6	U	< 11	U	< 10	U	< 13	U	< 12	U	< 9.8	U	< 9.5	U
Methylene chloride	75-09-2	500,000	50	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
Naphthalene	91-20-3	500,000	12,000	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	U
n-Butylbenzene	104-51-8	500,000	12,000	< 5.1	U	< 4.8	U	< 5.7	U	< 5.2	U	< 6.7	U	< 5.8	U	< 4.9	U	< 4.7	

Table 2

Summary of Groundwater Analysis – Volatile Organic Compounds (VOCs)

Pre-Design Soil and Groundwater Investigation
218 Lakeville Road
Lake Success, NY

Table 2
Summary of Groundwater Analysis - Volatile Organic Compounds (VOCs)

Chemical Compound	CAS	NYSDEC Class GA Ambient Water Quality Standard/Guidance Value	TMW-1		DUPLICATE GW 051719		TMW-2		TMW-3		DUPLICATE GW 05162019		TMW-4		TMW-5		TMW-6		DUPLICATE GW 051419		TMW-7		DUPLICATE GW 051519	
			5/17/2019		5/17/2019		5/15/2019		5/16/2019		5/16/2019		5/16/2019		5/17/2019		5/14/2019		5/14/2019		5/15/2019		5/15/2019	
			Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
1,1,1,2-Tetrachloroethane	630-20-6	5	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U
1,1,1-Trichloroethane	71-55-6	5	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U
1,1,2,2-Tetrachloroethane	79-34-5	5	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U
1,1,2-Trichloroethane	79-00-5	1	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U
1,1-Dichloroethane	75-34-3	5	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U
1,1-Dichloroethene	75-35-4	5	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U
1,1-Dichloropropene	563-58-6	5	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U
1,2,3-Trichlorobenzene	87-61-6	5	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U
1,2,3-Trichloropropane	96-18-4	0.04	<0.25	U*	<0.25	U*	<0.25	U*	<0.25	U*	<0.25	U*	<0.25	U*	<0.25	U*	<0.25	U*	<0.25	U*	<0.25	U*	<0.25	U*
1,2,4-Trichlorobenzene	120-82-1	5	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U
1,2,4-Trimethylbenzene	95-63-6	5	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U
1,2-Dibromo-3-chloropropane	96-12-8	0.04	<0.50	U*	<0.50	U*	<0.50	U*	<0.50	U*	<0.50	U*	<0.50	U*	<0.50	U*	<0.50	U*	<0.50	U*	<0.50	U*	<0.50	U*
1,2-Dibromoethane	106-93-4	0.0006	<0.25	U*	<0.25	U*	<0.25	U*	<0.25	U*	<0.25	U*	<0.25	U*	<0.25	U*	<0.25	U*	<0.25	U*	<0.25	U*	<0.25	U*
1,2-Dichlorobenzene	95-50-1	3	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U
1,2-Dichloroethane	107-06-2	0.6	<0.60	U	<0.60	U	<0.60	U	<0.60	U	<0.60	U	<0.60	U	<0.60	U	<0.60	U	<0.60	U	<0.60	U	<0.60	U
1,2-Dichloropropane	78-87-5	1	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U
1,3,5-Trimethylbenzene	108-67-8	5	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U
1,3-Dichlorobenzene	541-73-1	3	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U
1,3-Dichloropropane	142-28-9	5	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U
1,4-Dichlorobenzene	106-46-7	3	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U
2,2-Dichloropropane	594-20-7	5	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U
2-Chlorotoluene	95-49-8	5	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U
2-Hexanone	591-78-6	50	<2.5	U	<2.5	U	<2.5	U	<2.5	U	<2.5	U	<2.5	U	<2.5	U	<2.5	U	<2.5	U	<2.5	U	<2.5	U
2-Isopropyltoluene	527-84-4	5	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U
4-Chlorotoluene	106-43-4	5	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U
4-Methyl-2-pentanone (MIBK)	108-10-1	-	<2.5	U	<2.5	U	<2.5	U	<2.5	U	<2.5	U	<2.5	U	<2.5	U	<2.5	U	<2.5	U	<2.5	U	<2.5	U
Acetone	67-64-1	50	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U
Acrolein	107-02-8	5	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U
Acrylonitrile	107-13-1	5	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U
Benzene	71-43-2	1	<0.70	U	<0.70	U	<0.70	U	<0.70	U	<0.70	U	<0.70	U	<0.70	U	<0.70	U	<0.70	U	<0.70	U	<0.70	U
Bromobenzene	108-86-1	5	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U
Bromochloromethane	74-97-5	5	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U
Bromodichloromethane	75-27-4	50	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U
Bromoform	75-25-2	50	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U
Bromomethane	74-83-9	5	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U
Carbon disulfide	75-15-0	60	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	0.31	J	<1.0	U	<1.0	U	<1.0	U
Carbon tetrachloride	56-23-5	5	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U
Chlorobenzene	108-90-7	5	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U
Chloroethane	75-00-3	5	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U
Chloroform	67-66-3	7	<5.0	U	<5.0	U	<5.0	U	0.46	J	0.49	J	0.47	J	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U
Chloromethane	74-87-3	5	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U
cis-1,2-Dichloroethene	156-59-2	5	4.1		3.7		1.1		0.89	J	0.93	J	9.5		10		9.3		17		<1.0	U	<1.0	U
cis-1,3-Dichloropropene	10061-01-5	0.4**	<0.40	U	<0.40	U	<0.40	U	<0.40	U	<0.40	U	<0.40	U	<0.40	U	<0.40	U	<0.40	U	<0.40	U	<0.40	U
Dibromochloromethane	124-48-1	50	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	U
Dibromomethane	74-95-3	5	<1.0																					

Table 3

Summary of Groundwater Analysis – Emerging Contaminants (1,4-Dioxane and PFAS)

Pre-Design Soil and Groundwater Investigation

218 Lakeville Road

Lake Success, NY

Table 3

Summary of Groundwater Analysis - Emerging Contaminants (1,4-Dioxane and PFAS)

Chemical Compound	USEPA HAL	NYSDOH Proposed MCL	TMW-1		TMW-4		TMW-5		TMW-7		DUPLICATE GW 051519	
			5/17/2019		5/16/2019		5/17/2019		5/15/2019		5/15/2019	
			Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
1,4-Dioxane	-	1 µg/L	< 0.20	U	< 0.20	U	< 0.20	U	< 0.20	U	< 0.20	U
PFAS Compound:												
Perfluorobutanesulfonic acid (PFBS)	-	-	5.9		5.3		3.0		4.9		5.1	
Perfluorohexanoic acid (PFHxA)	-	-	3.8		7.0		15		5.3		7.6	
Perfluoroheptanoic acid (PFHpA)	-	-	3.4		6.3		10		3.6		5.5	
Perfluorobutanoic acid (PFBA)	-	-	< 2.0	U	2.1		3.2		< 2.0	U	< 2.0	U
Perfluorodecanesulfonic acid (PFDS)	-	-	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U
Perfluoroheptanesulfonic acid (PFHpS)	-	-	4.7		2.5		2.5		4.7		5.3	
Perfluorooctanesulfonamide (FOSA)	-	-	3.3		2.4		< 2.0	U	< 2.0	U	< 2.0	U
Perfluoropentanoic acid (PFPeA)	-	-	2.9		6.7		13		8.0		< 2.0	U
6:2 Fluorotelomersulfonate (6:2 FTS)	-	-	3.9		< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U
8:2 Fluorotelomersulfonate (8:2 FTS)	-	-	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U
Perfluorohexanesulfonic acid (PFHxS)	-	-	5.2		2.2		4.2		3.5		4.2	
Perfluorooctanoic acid (PFOA)	70	10	20		32		41		17		23	
Perfluorooctanesulfonic acid (PFOS)		10	28		26		3.4		3.0		5.6	
Perfluorononanoic acid (PFNA)	-	-	< 2.0	U	2.7		< 2.0	U	< 2.0	U	< 2.0	U
Perfluorodecanoic acid (PFDA)	-	-	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U
N-MeFOSAA	-	-	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U
Perfluoroundecanoic acid (PFUnA)	-	-	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U
N-EtFOSAA	-	-	9.2		< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U
Perfluorododecanoic acid (PFDoA)	-	-	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U
Perfluorotridecanoic acid (PFTrDA)	-	-	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U
Perfluorotetradecanoic acid (PFTA)	-	-	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U

Notes:

Results are reported in nanograms per liter (ng/L)

USEPA - U.S. Environmental Protection Agency

HAL - Health Advisory Level

NYSDOH - New York State Department of Health

MCL - Maximum Contaminant Level

- HAL/MCL has not been established

U - The compound was not detected above the laboratory Reporting Limit (RL)

Bold results indicate those detected above the RL

Highlighted results indicate those detected above the NYSDOH proposed MCLs published in the July 24, 2019 Notice of Proposed Rulemaking [Amendment of Subpart 5-1 of Title 10 NYCRR (Maximum Contaminant Levels (MCLs))]

Appendix A
Soil Boring Logs

BORING/WELL LOG

WALDEN ENVIRONMENTAL ENGINEERING				SHEET: 1 OF 2		
BORING/WELL I.D.: GB-1			CLIENT: 218 Lakeville Acquisition, LLC			
DATE(S) DRILLED: 5/17/19			PROJECT NAME: 218 Lakeville Road			
DRILL METHOD: Direct push via Geoprobe 7822 DT			PROJECT NO.: IMPL0115.6			
BORING DIAMETER: 2"			PROJECT LOCATION: Lake Success, NY			
SAMPLING METHOD/INTERVAL Dual-tube; 5' length			DRILLING CONTRACTOR: Eastern Environmental Solutions, Inc.			
LOGGED BY: JKB						
REMARKS: Begin soil screening and logging at 10 ft bg						
TEMPORARY WELL CONSTRUCTION INFORMATION						
SCREEN SIZE AND MATERIAL: 5' of 1" diameter 20-slot PVC			SCREEN INTERVAL: 29-34' bg			
SAND PACK SIZE AND MATERIAL: Filbro Superior Quartz			SAND PACK INTERVAL: 28-34' bg			
REF. POINT: Top of Casing			BENTONITE SEAL INTERVAL: 27-28' bg			
STATIC WATER DEPTH: 29.20'			DATE: 5/22/19			
REMARKS: TMW-1						
WELL/BOREHOLE ABANDONMENT INFORMATION						
ABANDONMENT DATE: N/A			ABANDONMENT METHOD: N/A			
DESCRIPTIVE LOG						
SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID (ppm)	GRAPHIC COLUMN	DEPTH (FT)	DESCRIPTION OF MATERIAL
10-15' bg	42				-10-	Medium brown, fine-medium SAND with trace fine gravel; uniform; laminations present from 12-12.5' bg; no odors or staining; dry
			0.0		-11-	
					-	
			0.0		-12-	
					-	
			0.0		-13-	
					-	
			0.0		-14-	
15-20' bg	41	NA			-15-	Medium brown, fine-medium SAND with little fine-medium gravel; uniform; no odors or staining; dry
			0.0		-	
					-16-	
			0.0		-	
					-17-	
			0.0		-	
					-18-	
			0.0		-	
20-25' bg	40				-19-	Medium brown, fine-medium SAND with fine-medium rounded gravel and few stone fragments; brick and asphalt debris between 22.5-23' bg; some coarse sand throughout
			0.0		-20-	
					-	
			0.0		-21-	
					-	
			0.0		-22-	
					-	
			0.0		-23-	
					-24-	
					-25-	

- Native soil/rock
- Sand pack
- Bentonite seal
- Cement/bentonite grout
- Riser Pipe
- Well screen

BORING/WELL LOG

WALDEN ENVIRONMENTAL ENGINEERING					SHEET: 2 OF 2	
BORING/WELL I.D.: GB-1/TMW-1		CLIENT/SITE: 218 Lakeville Road			DATE(s) DRILLED: 5/17/19	
DESCRIPTIVE LOG (continued)						
SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID/FID (ppm)	GRAPHIC COLUMN	DEPTH (FT)	DESCRIPTION OF MATERIAL
25-30' bg	45	NA			-	Medium brown, fine-medium SAND with trace fine-medium rounded gravel and trace stone fragments; no odors or staining; wet below ~29' bg
			0.0	-26-		
				-		
			0.0	-27-		
				-		
			0.0	-28-		
				-		
			0.0	-29-		
	-					
	0.2		-30-			
30-35' bg	36			-	Medium brown, fine-medium SAND with trace fine gravel; no odors or staining; wet	
		0.0	-31-			
			-			
		0.0	-32-			
			-			
		0.0	-33-			
			-			
		0.0	-34-			
	-					
	0.0	-35-				
				-	END OF BORING	
				-36-		
				-		
				-37-		
				-		
				-38-		
				-		
				-39-		
				-		
				-41-		
				-		
				-42-		
				-		
				-43-		
				-		
				-44-		
				-		
				-45-		
NOTES: Collected soil samples GB-1 (14'-15')/DUPLICATE 05172019 and GB-1 (28.75'-29.25')						
Collected groundwater samples TMW-1 and DUPLICATE GW 051719						

NA - Not applicable



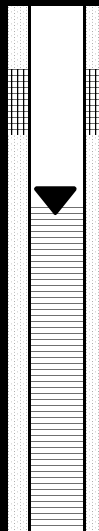
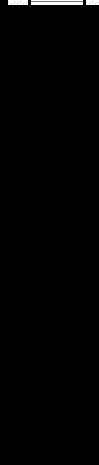
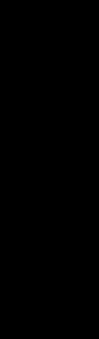
Native soil/rock
Sand pack
Bentonite seal
Cement/bentonite grout
Well screen

BORING/WELL LOG

WALDEN ENVIRONMENTAL ENGINEERING				SHEET: 1 OF 2		
BORING/WELL I.D.: GB-2			CLIENT: 218 Lakeville Acquisition, LLC			
DATE(S) DRILLED: 5/15/19			PROJECT NAME: 218 Lakeville Road			
DRILL METHOD: Direct push via Geoprobe 7822 DT			PROJECT NO.: IMPL0115.6			
BORING DIAMETER: 2"			PROJECT LOCATION: Lake Success, NY			
SAMPLING METHOD/INTERVAL: Dual-tube; 5' length			DRILLING CONTRACTOR: Eastern Environmental Solutions, Inc.			
LOGGED BY: JKB						
REMARKS: Begin soil screening and logging at 10 ft bg						
TEMPORARY WELL CONSTRUCTION INFORMATION						
SCREEN SIZE AND MATERIAL: 5' of 1" diameter 20-slot PVC			SCREEN INTERVAL: 28-33' bg			
SAND PACK SIZE AND MATERIAL: Filbro Superior Quartz			SAND PACK INTERVAL: 27-33' bg			
REF. POINT: Top of Casing			BENTONITE SEAL INTERVAL: 26-27' bg			
STATIC WATER DEPTH: 28.14'			DATE: 5/22/19			
REMARKS: TMW-2						
WELL/BOREHOLE ABANDONMENT INFORMATION						
ABANDONMENT DATE: N/A			ABANDONMENT METHOD: N/A			
DESCRIPTIVE LOG						
SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID (ppm)	GRAPHIC COLUMN	DEPTH (FT)	DESCRIPTION OF MATERIAL
10-15' bg	27	NA			-10-	Medium brown, fine-medium SAND with trace fine-medium gravel towards bottom of interval
			0.0		-11-	
					-	
			0.0		-12-	
					-	
			0.0		-13-	
					-	
			0.0		-14-	
15-20' bg	34	NA			-15-	Medium brown, fine-medium SAND with trace fine-medium gravel; dry; no odor or staining
			0.0		-16-	
					-	
			0.0		-17-	
					-	
			0.0		-18-	
					-	
			0.0		-19-	
20-25' bg	41	NA			-20-	Medium brown fine-medium SAND with some fine-medium gravel; dry; no odor or staining
			0.0		-21-	
					-	
			0.0		-22-	
					-	
			0.0		-23-	
					-	
			0.0		-24-	
					-25-	

-  Native soil/rock
-  Sand pack
-  Bentonite seal
-  Cement/bentonite grout
-  Riser Pipe
-  Well screen

BORING/WELL LOG

WALDEN ENVIRONMENTAL ENGINEERING					SHEET: 2 OF 2	
BORING/WELL I.D.: GB-2/TMW-2		CLIENT/SITE: 218 Lakeville Road			DATE(s) DRILLED: 5/15/19	
DESCRIPTIVE LOG (continued)						
SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID/FID (ppm)	GRAPHIC COLUMN	DEPTH (FT)	DESCRIPTION OF MATERIAL
25-30' bg	40	NA			-	Medium brown, fine-medium SAND with some fine-medium gravel; no odor or staining; wet below ~27.5' bg
			0.0		-26-	
					-	
			0.0		-27-	
					-	
			0.0		-28-	
					-	
			0.1		-29-	
					-	
			0.1		-30-	
30-35' bg	25	NA			-	Same as above; wet; no odor or staining; greater average grain size from 32-33' bg
			0.0		-31-	
					-	
			0.0		-32-	
					-	
			0.0		-33-	
					-	
			0.0		-34-	
	-					
					-	END OF BORING
			-36-			
			-			
			-37-			
			-			
			-38-			
			-			
			-39-			
			-			
			-40-			
					-	
					-41-	
					-	
					-42-	
					-	
					-43-	
					-	
					-44-	
					-	
					-45-	
NOTES: Collected soil samples GB-2 (14-14.5), GB-2 (27-28) and DUPLICATE 05152019						
Collected groundwater sample TMW-7						

NA - Not applicable



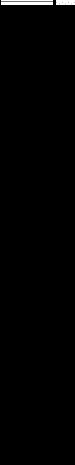
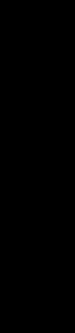
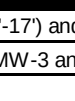
Native soil/rock
Sand pack
Bentonite seal
Cement/bentonite grout
Well screen

BORING/WELL LOG

WALDEN ENVIRONMENTAL ENGINEERING					SHEET: 1 OF 2	
BORING/WELL I.D.: GB-3			CLIENT:		218 Lakeville Acquisition, LLC	
DATE(S) DRILLED: 5/16/19			PROJECT NAME:		218 Lakeville Road	
DRILL METHOD: Direct push via Geoprobe 7822 DT			PROJECT NO.:		IMPL0115.6	
BORING DIAMETER: 2"			PROJECT LOCATION:		Lake Success, NY	
SAMPLING METHOD/INTERVAL: Dual-tube; 5' length			DRILLING CONTRACTOR:		Eastern Environmental Solutions, Inc.	
LOGGED BY: JKB						
REMARKS: Begin soil screening and logging at 10 ft bg						
TEMPORARY WELL CONSTRUCTION INFORMATION						
SCREEN SIZE AND MATERIAL: 5' of 1" diameter 20-slot PVC			SCREEN INTERVAL: 28-33' bg			
SAND PACK SIZE AND MATERIAL: Filbro Superior Quartz			SAND PACK INTERVAL: 27-33' bg			
REF. POINT: Top of Casing			BENTONITE SEAL INTERVAL: 26-27' bg			
STATIC WATER DEPTH: 27.76'			DATE: 5/22/19			
REMARKS: TMW-3						
WELL/BOREHOLE ABANDONMENT INFORMATION						
ABANDONMENT DATE: N/A			ABANDONMENT METHOD: N/A			
DESCRIPTIVE LOG						
SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID (ppm)	GRAPHIC COLUMN	DEPTH (FT)	DESCRIPTION OF MATERIAL
10-15' bg	26	NA			-10-	Medium brown, fine-medium SAND with trace fine-medium gravel; uniform; dry; no odors or staining
			0.0		-11-	
			0.0		-12-	
			0.0		-13-	
			0.0		-14-	
			0.0		-15-	
			0.1		-16-	
			0.0		-17-	
15-20' bg	25	NA			-18-	Same as above
			0.1		-19-	
			0.0		-20-	
			0.1		-21-	
			0.1		-22-	
			0.1		-23-	
			0.1		-24-	
			0.1		-25-	
20-25' bg	30	NA			-26-	Medium brown, fine-medium SAND with little fine-medium gravel; dry; no odors or staining
			0.2		-27-	
			0.2		-28-	
			0.1		-29-	
			0.1		-30-	
			0.1		-31-	
			0.1		-32-	
			0.1		-33-	

-  Native soil/rock
-  Sand pack
-  Bentonite seal
-  Cement/bentonite grout
-  Riser Pipe
-  Well screen

BORING/WELL LOG

WALDEN ENVIRONMENTAL ENGINEERING					SHEET: 2 OF 2	
BORING/WELL I.D.: GB-3/TMW-3		CLIENT/SITE: 218 Lakeville Road			DATE(s) DRILLED: 5/16/19	
DESCRIPTIVE LOG (continued)						
SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID/FID (ppm)	GRAPHIC COLUMN	DEPTH (FT)	DESCRIPTION OF MATERIAL
25-30' bg	35	NA			-	Medium brown, fine-medium SAND with trace fine-medium gravel; few cobbles from 28.5-30' bg; wet below ~28' bg; no odors or staining
			0.1		-26-	
					-	
			0.1		-27-	
					-	
			0.3		-28-	
					-	
			0.1		-29-	
					-	
			0.1		-30-	
30-35' bg	34	NA			-	Medium brown, medium SAND with some fine-coarse sand throughout and little fine-medium gravel; no odors or staining
			0.2		-31-	
					-	
			0.2		-32-	
					-	
			0.1		-33-	
					-	
			0.1		-34-	
	-					
					-	END OF BORING
			-36-			
			-			
			-37-			
			-			
			-38-			
			-			
			-39-			
			-			
					-40-	
			-			
			-41-			
			-			
			-42-			
			-			
			-43-			
			-			
					-44-	
			-			
			-45-			

NOTES:	Collected soil samples GB-3 (16.5'-17') and GB-3 (27.75'-28.25')
	Collected groundwater samples TMW-3 and DUPLICATE GW 05162019

NA - Not applicable



Native soil/rock
Sand pack
Bentonite seal
Cement/bentonite grout
Well screen

BORING/WELL LOG

WALDEN ENVIRONMENTAL ENGINEERING						SHEET: 1 OF 2	
BORING/WELL I.D.: GB-4				CLIENT: 218 Lakeville Acquisition, LLC			
DATE(S) DRILLED: 5/17/19				PROJECT NAME: 218 Lakeville Road			
DRILL METHOD: Direct push via Geoprobe 7822 DT				PROJECT NO.: IMPL0115.6			
BORING DIAMETER: 2"				PROJECT LOCATION: Lake Success, NY			
SAMPLING METHOD/INTERVAL: Dual-tube; 5' length				DRILLING CONTRACTOR: Eastern Environmental Solutions, Inc.			
LOGGED BY: JKB							
REMARKS: Begin soil screening and logging at 10 ft bg							
TEMPORARY WELL CONSTRUCTION INFORMATION							
SCREEN SIZE AND MATERIAL:				SCREEN INTERVAL:			
SAND PACK SIZE AND MATERIAL:				SAND PACK INTERVAL:			
REF. POINT:				BENTONITE SEAL INTERVAL:			
STATIC WATER DEPTH:				DATE:			
REMARKS: No well installation							
WELL/BOREHOLE ABANDONMENT INFORMATION							
ABANDONMENT DATE: 5/17/19				ABANDONMENT METHOD: Backfilled with clean sand; asphalt patch			
DESCRIPTIVE LOG							
SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID (ppm)	GRAPHIC COLUMN	DEPTH (FT)	DESCRIPTION OF MATERIAL	
10-15' bg	40	NA			-10-	Medium brown, fine-medium SAND with trace fine gravel; uniform; no odors or staining; dry	
			0.0		-11-		
					-12-		
			0.1		-13-		
					-14-		
			0.1		-15-		
					-16-		
			0.2		-17-		
15-20' bg	38		0.0		-18-	Same as above; organics 19-20' bg	
					-19-		
			0.1		-20-		
					-21-		
			0.0		-22-		
					-23-		
			0.0		-24-		
					-25-		
20-25' bg	39		0.0		-26-	Same as above; organics 20-21' bg	
					-27-		
			0.1		-28-		
					-29-		
			0.1		-30-		
					-31-		
			0.1		-32-		
			0.0		-33-		

Fill
 Sand/gravel
 Silty sand/clay
 Depth to Water
 N/A Not Applicable

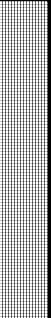
BORING/WELL LOG

WALDEN ENVIRONMENTAL ENGINEERING					SHEET: 2 OF 2	
BORING/WELL I.D.: GB-4		CLIENT/SITE: 218 Lakeville Road		DATE(s) DRILLED: 5/17/19		
DESCRIPTIVE LOG (continued)						
SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID/FID (ppm)	GRAPHIC COLUMN	DEPTH (FT)	DESCRIPTION OF MATERIAL
25-30' bg	40	NA			-	Medium brown, fine-medium SAND with little fine-medium gravel; slightly larger grain size than above; no odors or staining; wet below ~27.75' bg
			0.4		-26-	
					-	
			0.2		-27-	
			0.3		-	
			1.4		-28-	
			1.6		-	
			0.5		-29-	
					-	
30-35' bg	16	NA			-30-	Medium brown, fine-medium SAND with little fine-medium gravel; no odors or staining; wet
				-31-		
				-		
				-32-		
				-		
				-33-		
				-		
				-34-		
				-		
					-35-	END OF BORING
				-36-		
				-		
				-37-		
				-		
				-38-		
				-		
				-39-		
				-		
					-40-	
				-41-		
				-		
				-42-		
				-		
				-43-		
				-		
				-44-		
				-		
					-45-	
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		

NOTES: Collected soil samples GB-4 (16.5'-17') and GB-4 (28'-28.5')

 Fill
 Sand/gravel
 Silty sand/clay
 Depth to Water
 N/A Not Applicable

BORING/WELL LOG

WALDEN ENVIRONMENTAL ENGINEERING					SHEET: 1 OF 2	
BORING/WELL I.D.: GB-5			CLIENT: 218 Lakeville Acquisition, LLC			
DATE(S) DRILLED: 5/16/19			PROJECT NAME: 218 Lakeville Road			
DRILL METHOD: Direct push via Geoprobe 7822 DT			PROJECT NO.: IMPL0115.6			
BORING DIAMETER: 2"			PROJECT LOCATION: Lake Success, NY			
SAMPLING METHOD/INTERVAL: Dual-tube; 5' length			DRILLING CONTRACTOR: Eastern Environmental Solutions, Inc.			
LOGGED BY: JKB						
REMARKS: Begin soil screening and logging at 10 ft bg						
TEMPORARY WELL CONSTRUCTION INFORMATION						
SCREEN SIZE AND MATERIAL:			SCREEN INTERVAL:			
SAND PACK SIZE AND MATERIAL:			SAND PACK INTERVAL:			
REF. POINT:			BENTONITE SEAL INTERVAL:			
STATIC WATER DEPTH:			DATE:			
REMARKS: No well installation						
WELL/BOREHOLE ABANDONMENT INFORMATION						
ABANDONMENT DATE: 5/16/19			ABANDONMENT METHOD: Backfilled with clean sand; asphalt patch			
DESCRIPTIVE LOG						
SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID (ppm)	GRAPHIC COLUMN	DEPTH (FT)	DESCRIPTION OF MATERIAL
10-15' bg	48	NA			-10-	Medium brown, fine-medium SILTY SAND with fine-medium gravel and stone fragments; moist and slightly cohesive; no odors or staining
			0.1		-11-	
					-	
			0.2		-12-	
					-	
			0.7		-13-	
					-	
			1.4		-14-	
15-20' bg	42	NA	0.5		-	15-16.25' bg: Same as above; slightly less silt content 16-20' bg: Medium brown, fine-medium SAND with trace gravel; no odors or staining
			0.9		-15-	
					-	
			0.4		-16-	
					-	
			0.1		-17-	
					-	
			0.0		-18-	
20-25' bg	38	NA			-	Same as above
			0.1		-19-	
					-	
			0.1		-20-	
					-	
			0.0		-21-	
					-	
			0.1		-22-	
					-	
			0.1		-23-	
					-	
			0.1		-24-	
			0.1		-	
					-25-	

 Fill
 Sand/gravel
 Silty sand/clay
 Depth to Water
 N/A Not Applicable

BORING/WELL LOG

WALDEN ENVIRONMENTAL ENGINEERING					SHEET: 2 OF 2	
BORING/WELL I.D.: GB-5		CLIENT/SITE: 218 Lakeville Road		DATE(s) DRILLED: 5/16/19		
DESCRIPTIVE LOG (continued)						
SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID/FID (ppm)	GRAPHIC COLUMN	DEPTH (FT)	DESCRIPTION OF MATERIAL
25-30' bg	28	NA			-	Medium brown, fine-medium SAND with trace gravel; no odors or staining; wet below ~27.5' bg
			0.0		-26-	
					-	
			0.0		-27-	
			0.1		-	
			2.3		-28-	
					-	
			0.2		-29-	
30-35' bg	21	NA			-	Medium brown, medium SAND with little fine sand, some coarse sand and fine-medium gravel; no odors or staining; wet
			0.0	-31-		
				-		
			0.0	-32-		
				-		
			0.0	-33-		
				-		
			0.0	-34-		
					-	END OF BORING
				-36-		
				-		
				-37-		
				-		
				-38-		
				-		
				-39-		
					-	
				-41-		
				-		
				-42-		
				-		
				-43-		
				-		
				-44-		
					-	
				-45-		

NOTES: Collected soil samples GB-5 (14'-14.5') and GB-5 (27.5'-28')

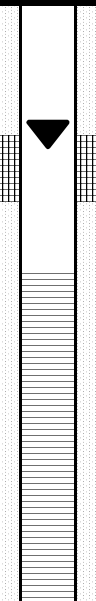
 Fill
 Sand/gravel
 Silty sand/clay
 Depth to Water
 N/A Not Applicable

BORING/WELL LOG

WALDEN ENVIRONMENTAL ENGINEERING						SHEET: 1 OF 2	
BORING/WELL I.D.: GB-6				CLIENT: 218 Lakeville Acquisition, LLC			
DATE(S) DRILLED: 5/16/19				PROJECT NAME: 218 Lakeville Road			
DRILL METHOD: Direct push via Geoprobe 7822 DT				PROJECT NO.: IMPL0115.6			
BORING DIAMETER: 2"				PROJECT LOCATION: Lake Success, NY			
SAMPLING METHOD/INTERVAL: Dual-tube; 5' length				DRILLING CONTRACTOR: Eastern Environmental Solutions, Inc.			
LOGGED BY: JKB							
REMARKS: Begin soil screening and logging at 10 ft bg							
TEMPORARY WELL CONSTRUCTION INFORMATION							
SCREEN SIZE AND MATERIAL: 5' of 1" diameter 20-slot PVC				SCREEN INTERVAL: 29-34' bg			
SAND PACK SIZE AND MATERIAL: Filbro Superior Quartz				SAND PACK INTERVAL: 28-34' bg			
REF. POINT: Top of Casing				BENTONITE SEAL INTERVAL: 27-28' bg			
STATIC WATER DEPTH: 27.14'				DATE: 5/22/19			
REMARKS: TMW-4							
WELL/BOREHOLE ABANDONMENT INFORMATION							
ABANDONMENT DATE: N/A				ABANDONMENT METHOD: N/A			
DESCRIPTIVE LOG							
SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID (ppm)	GRAPHIC COLUMN	DEPTH (FT)	DESCRIPTION OF MATERIAL	
10-15' bg	43.5	NA			-10-	Medium brown, fine-medium SAND with trace fine-medium rounded gravel; uniform; slightly damp; musty odor in lower half of interval; no staining	
			0.7		-11-		
			2.2		-12-		
			0.6		-13-		
			8.3		-14-		
			14.1		-		
			22.1		-15-		
			35.8		-		Same as above; musty/perchloroethene odor
			4.3		-16-		
9.9	-						
11.9	-17-						
16.1	-						
6.4	-18-						
4.5	-						
5.2	-19-						
0.3	-						
0.1	-20-		Same as above; no odor				
20-25' bg	25				0.1	-21-	
						-	
					0.1	-22-	
						-	
					0.1	-23-	
						-	
					0.1	-24-	
						-	
			0.1		-25-		

-  Native soil/rock
-  Sand pack
-  Bentonite seal
-  Cement/bentonite grout
-  Riser Pipe
-  Well screen

BORING/WELL LOG

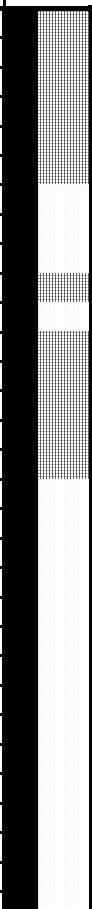
WALDEN ENVIRONMENTAL ENGINEERING					SHEET: 2 OF 2	
BORING/WELL I.D.: GB-6/TMW-4		CLIENT/SITE: 218 Lakeville Road			DATE(s) DRILLED: 5/16/19	
DESCRIPTIVE LOG (continued)						
SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID/FID (ppm)	GRAPHIC COLUMN	DEPTH (FT)	DESCRIPTION OF MATERIAL
25-30' bg	7	NA			-	Medium brown, fine-medium SAND with trace fine-medium rounded gravel; uniform; no odor or staining; slightly larger average grain size in lower half of interval; wet below ~28' bg
			0.1		-26-	
					-	
			0.1		-27-	
					-	
			0.1		-28-	
					-	
			0.9		-29-	
	-					
	0.2		-30-			
30-35' bg	0			-	No recovery	
			-31-			
			-			
			-32-			
			-			
			-33-			
			-			
			-34-			
	-					
		-35-				
				-	END OF BORING	
			-36-			
			-			
			-37-			
			-			
			-38-			
			-			
			-39-			
	-					
		-40-				
				-		
			-41-			
			-			
			-42-			
			-			
			-43-			
			-			
			-44-			
	-					
		-45-				
NOTES: Collected soil samples GB-6 (14.5'-15.5')/DUPLICATE 05162019 and GB-6 (28'-29')						
Collected groundwater sample TMW-4						

NA - Not applicable



Native soil/rock
Sand pack
Bentonite seal
Cement/bentonite grout
Well screen

BORING/WELL LOG

WALDEN ENVIRONMENTAL ENGINEERING					SHEET: 1 OF 2	
BORING/WELL I.D.: GB-7			CLIENT: 218 Lakeville Acquisition, LLC			
DATE(S) DRILLED: 5/22/19			PROJECT NAME: 218 Lakeville Road			
DRILL METHOD: Direct push via Geoprobe 7822 DT			PROJECT NO.: IMPL0115.6			
BORING DIAMETER: 2"			PROJECT LOCATION: Lake Success, NY			
SAMPLING METHOD/INTERVAL: Dual-tube; 5' length			DRILLING CONTRACTOR: Eastern Environmental Solutions, Inc.			
LOGGED BY: JKB						
REMARKS: Begin soil screening and logging at 10 ft bg						
TEMPORARY WELL CONSTRUCTION INFORMATION						
SCREEN SIZE AND MATERIAL:			SCREEN INTERVAL:			
SAND PACK SIZE AND MATERIAL:			SAND PACK INTERVAL:			
REF. POINT:			BENTONITE SEAL INTERVAL:			
STATIC WATER DEPTH:			DATE:			
REMARKS: No well installation						
WELL/BOREHOLE ABANDONMENT INFORMATION						
ABANDONMENT DATE: 5/22/19			ABANDONMENT METHOD: Backfilled with clean sand; asphalt patch			
DESCRIPTIVE LOG						
SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID (ppm)	GRAPHIC COLUMN	DEPTH (FT)	DESCRIPTION OF MATERIAL
10-15' bg	50	NA			-10-	10-12.5' bg: Medium brown, fine-medium SAND with little silt and fine-medium rounded gravel; very slightly cohesive; no odors or staining; moist
			0.1		-11-	
					-12-	
			0.0		-13-	
			0.1		-14-	
			0.1		-15-	
			0.0		-16-	
			0.0		-17-	
15-20' bg	55	NA		-18-	15-17.5' bg: Medium brown, fine-medium SAND with little silt and fine-medium rounded gravel; very slightly cohesive; few stone fragments; 5" void space between 16-17' bg; no odors or staining; moist	
			0.1	-19-		
			0.1	-20-		
			0.0	-21-		
			0.0	-22-		
			0.0	-23-		
			0.0	-24-		
			0.0	-25-		
20-25' bg	46	NA		-26-	Medium brown, fine-medium SAND with trace fine-medium gravel; uniform; no odors or staining; dry	
			0.0	-27-		
			0.0	-28-		
			0.0	-29-		
			0.1	-30-		
			0.1	-31-		
			0.0	-32-		
			0.0	-33-		

 Fill
 Sand/gravel
 Silty sand/clay
 Depth to Water
 N/A Not Applicable

BORING/WELL LOG

WALDEN ENVIRONMENTAL ENGINEERING					SHEET: 2 OF 2	
BORING/WELL I.D.: GB-7		CLIENT/SITE: 218 Lakeville Road		DATE(s) DRILLED: 5/22/19		
DESCRIPTIVE LOG (continued)						
SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID/FID (ppm)	GRAPHIC COLUMN	DEPTH (FT)	DESCRIPTION OF MATERIAL
25-30' bg	21	NA			-	Medium brown, fine-medium SAND with trace fine-medium gravel; uniform; no odors or staining; dry
			0.0		-26-	
					-	
			0.0		-27-	
					-	
			0.0		-28-	
					-	
			0.0		-29-	
30-35' bg	10	NA			-30-	Same as above; wet at ~30' bg
			0.0	-31-		
				-		
			0.1	-32-		
				-		
			0.0	-33-		
				-		
			0.0	-34-		
					-35-	END OF BORING
				-36-		
				-		
				-37-		
				-		
				-38-		
				-		
				-39-		
					-40-	
				-		
				-41-		
				-		
				-42-		
				-		
				-43-		
				-		
					-44-	
				-		
				-45-		

NOTES: Collected soil samples GB-7 (14'-14.5')/DUPLICATE 05222019 and GB-7 (30'-31')

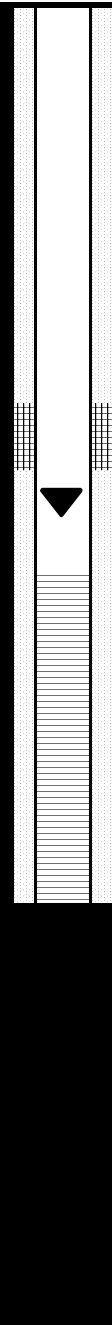
 Fill
 Sand/gravel
 Silty sand/clay
 Depth to Water
 N/A Not Applicable

BORING/WELL LOG

WALDEN ENVIRONMENTAL ENGINEERING					SHEET: 1 OF 2	
BORING/WELL I.D.: GB-8			CLIENT: 218 Lakeville Acquisition, LLC			
DATE(S) DRILLED: 5/17/19			PROJECT NAME: 218 Lakeville Road			
DRILL METHOD: Direct push via Geoprobe 7822 DT			PROJECT NO.: IMPL0115.6			
BORING DIAMETER: 2"			PROJECT LOCATION: Lake Success, NY			
SAMPLING METHOD/INTERVAL: Dual-tube; 5' length			DRILLING CONTRACTOR: Eastern Environmental Solutions, Inc.			
LOGGED BY: JKB						
REMARKS: Begin soil screening and logging at 10 ft bg						
TEMPORARY WELL CONSTRUCTION INFORMATION						
SCREEN SIZE AND MATERIAL: 5' of 1" diameter 20-slot PVC			SCREEN INTERVAL: 33.5-38.5' bg			
SAND PACK SIZE AND MATERIAL: Filbro Superior Quartz			SAND PACK INTERVAL: 32-38.5' bg			
REF. POINT: Top of Casing			BENTONITE SEAL INTERVAL: 31-32' bg			
STATIC WATER DEPTH: 32.67'			DATE: 5/22/19			
REMARKS: TMW-5						
WELL/BOREHOLE ABANDONMENT INFORMATION						
ABANDONMENT DATE: N/A			ABANDONMENT METHOD: N/A			
DESCRIPTIVE LOG						
SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID (ppm)	GRAPHIC COLUMN	DEPTH (FT)	DESCRIPTION OF MATERIAL
10-15' bg	15.5	NA			-10-	Medium brown, fine-medium SILTY SAND with fine-medium gravel and trace brick/asphalt debris and broken stone; very slightly cohesive; no odors or staining
			0.0		-11-	
			0.1		-12-	
			0.1		-13-	
			0.2		-14-	
			0.0		-15-	
			0.0		-16-	
			0.0		-17-	
15-20' bg	30.5	NA			-16-	15-17.5' bg: Medium brown, fine-medium SAND with abundant gravel and crushed/broken stone; no odors or staining 17.5-20' bg: Medium brown, fine-medium SAND with gravel and stone from 17.5-18.5' bg; no odors or staining
			0.0		-17-	
			0.0		-18-	
			0.1		-19-	
			0.0		-20-	
			0.0		-21-	
			0.0		-22-	
			0.0		-23-	
20-25' bg	40	NA			-21-	Medium brown, fine-medium SAND with trace fine-medium gravel; uniform; dry; no odors or staining
			0.0		-22-	
			0.0		-23-	
			0.0		-24-	
			0.0		-25-	
			0.0		-26-	
			0.0		-27-	
			0.0		-28-	

-  Native soil/rock
-  Sand pack
-  Bentonite seal
-  Cement/bentonite grout
-  Riser Pipe
-  Well screen

BORING/WELL LOG

WALDEN ENVIRONMENTAL ENGINEERING					SHEET: 2 OF 2	
BORING/WELL I.D.: GB-8/TMW-5		CLIENT/SITE: 218 Lakeville Road			DATE(s) DRILLED: 5/17/19	
DESCRIPTIVE LOG (continued)						
SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID/FID (ppm)	GRAPHIC COLUMN	DEPTH (FT)	DESCRIPTION OF MATERIAL
25-30' bg	43	NA			-	Medium brown, fine-medium SAND with trace fine-medium gravel; uniform; dry; no odors or staining
			0.0		-26-	
					-	
			0.0		-27-	
					-	
			0.0		-28-	
					-	
			0.0		-29-	
	-					
0.0	-30-					
30-35' bg	18				-	Same as above; broken stone at ~32' bg with some coarse sand present immediately above; dry
			0.0		-31-	
					-	
			0.0		-32-	
					-	
			0.0		-33-	
			-			
		0.0	-34-			
	-					
0.0	-35-					
35-40' bg	0		-	No recovery; drilling rod is wet		
			-36-			
			-			
			-37-			
			-			
			-38-			
			-			
			-39-			
	-					
	-40-					
			-	END OF BORING		
			-41-			
			-			
			-42-			
			-			
			-43-			
			-			
			-44-			
	-					
	-45-					
NOTES: Collected soil samples GB-8 (14'-15') and GB-8 (33'-33.5')						
Collected groundwater sample TMW-5						

NA - Not applicable



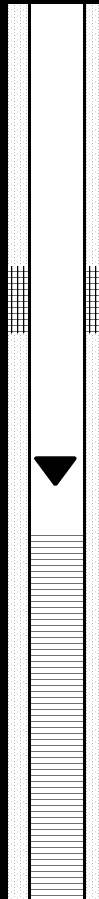
Native soil/rock
Sand pack
Bentonite seal
Cement/bentonite grout
Well screen

BORING/WELL LOG

WALDEN ENVIRONMENTAL ENGINEERING					SHEET: 1 OF 2	
BORING/WELL I.D.: GB-9			CLIENT: 218 Lakeville Acquisition, LLC			
DATE(S) DRILLED: 5/14/19			PROJECT NAME: 218 Lakeville Road			
DRILL METHOD: Direct push via Geoprobe 7822 DT			PROJECT NO.: IMPL0115.6			
BORING DIAMETER: 2"			PROJECT LOCATION: Lake Success, NY			
SAMPLING METHOD/INTERVAL: Dual-tube; 5' length			DRILLING CONTRACTOR: Eastern Environmental Solutions, Inc.			
LOGGED BY: JKB						
REMARKS: Begin soil screening and logging at 10 ft bg						
TEMPORARY WELL CONSTRUCTION INFORMATION						
SCREEN SIZE AND MATERIAL: 5' of 1" diameter 20-slot PVC			SCREEN INTERVAL: 33.8-38.8' bg			
SAND PACK SIZE AND MATERIAL: Filbro Superior Quartz			SAND PACK INTERVAL: 32-38.8' bg			
REF. POINT: Top of Casing			BENTONITE SEAL INTERVAL: 29-30' bg			
STATIC WATER DEPTH: 32.24'			DATE: 5/22/19			
REMARKS: TMW-6						
WELL/BOREHOLE ABANDONMENT INFORMATION						
ABANDONMENT DATE: N/A			ABANDONMENT METHOD: N/A			
DESCRIPTIVE LOG						
SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID (ppm)	GRAPHIC COLUMN	DEPTH (FT)	DESCRIPTION OF MATERIAL
10-15' bg	48	NA			-10-	Medium brown, fine-medium SAND with little gravel and little silt below ~13.5' bg; fractured stone; slightly cohesive; suspected brick debris at ~12.25' bg; no odors or staining
			0.0		-11-	
			0.0		-12-	
			0.0		-13-	
			0.0		-14-	
			0.1		-15-	
					-16-	
			0.0		-17-	
15-20' bg	50	NA			-16-	15-17' bg: Medium brown, fine-medium SAND with fine-medium gravel and trace silt; very slightly cohesive; no odors or staining 17-20' bg: Medium brown, fine-medium SAND; uniform; dry; no odors or staining
			0.0		-17-	
			0.1		-18-	
			0.0		-19-	
			0.0		-20-	
			0.0		-21-	
			0.0		-22-	
			0.0		-23-	
20-25' bg	45	NA			-21-	Medium brown, medium SAND with trace fine-medium gravel; uniform; dry; no odors or staining
			0.0		-22-	
			0.0		-23-	
			0.0		-24-	
			0.0		-25-	
			0.0			
			0.0			
			0.0			

-  Native soil/rock
-  Sand pack
-  Bentonite seal
-  Cement/bentonite grout
-  Riser Pipe
-  Well screen

BORING/WELL LOG

WALDEN ENVIRONMENTAL ENGINEERING					SHEET: 2 OF 2	
BORING/WELL I.D.: GB-9/TMW-6		CLIENT/SITE: 218 Lakeville Road			DATE(s) DRILLED: 5/14/19	
DESCRIPTIVE LOG (continued)						
SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID/FID (ppm)	GRAPHIC COLUMN	DEPTH (FT)	DESCRIPTION OF MATERIAL
25-30' bg	42	NA	0.0		-	Medium brown, medium SAND with trace fine-medium gravel; uniform; dry; no odors or staining; broken stone from 29-30' bg
					-26-	
					-	
			0.0		-27-	
					-	
			0.0		-28-	
					-	
			0.0		-29-	
	-					
0.0	-30-					
30-35' bg	40				-	Same as above; greater average grain size below ~32.5' bg, some coarse sand and higher concentration of fine gravel; gritty texture; wet below ~32.5' bg
			0.0		-31-	
					-	
			0.0		-32-	
					-	
			0.0		-33-	
			-			
		0.1	-34-			
	-					
0.1	-35-					
			-	END OF BORING		
			-36-			
			-			
			-37-			
			-			
			-38-			
			-			
			-39-			
	-					
	-40-					
			-			
			-41-			
			-			
			-42-			
			-			
			-43-			
			-			
			-44-			
	-					
	-45-					
NOTES: Collected soil samples GB-9 (14'-14.5') and GB-9 (31.5'-32.5')/DUPLICATE 051419						
Collected groundwater sample TMW-6						

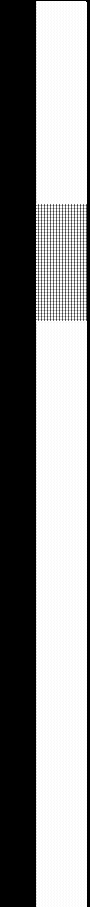
NOTES: Collected soil samples GB-9 (14'-14.5') and GB-9 (31.5'-32.5')/DUPLICATE 051419
Collected groundwater sample TMW-6

NA - Not applicable



Native soil/rock
Sand pack
Bentonite seal
Cement/bentonite grout
Well screen

BORING/WELL LOG

WALDEN ENVIRONMENTAL ENGINEERING					SHEET: 1 OF 2	
BORING/WELL I.D.: GB-10			CLIENT: 218 Lakeville Acquisition, LLC			
DATE(S) DRILLED: 5/14/19			PROJECT NAME: 218 Lakeville Road			
DRILL METHOD: Direct push via Geoprobe 7822 DT			PROJECT NO.: IMPL0115.6			
BORING DIAMETER: 2"			PROJECT LOCATION: Lake Success, NY			
SAMPLING METHOD/INTERVAL: Dual-tube; 5' length			DRILLING CONTRACTOR: Eastern Environmental Solutions, Inc.			
LOGGED BY: JKB						
REMARKS: Begin soil screening and logging at 10 ft bg						
TEMPORARY WELL CONSTRUCTION INFORMATION						
SCREEN SIZE AND MATERIAL:			SCREEN INTERVAL:			
SAND PACK SIZE AND MATERIAL:			SAND PACK INTERVAL:			
REF. POINT:			BENTONITE SEAL INTERVAL:			
STATIC WATER DEPTH:			DATE:			
REMARKS: No well installation						
WELL/BOREHOLE ABANDONMENT INFORMATION						
ABANDONMENT DATE: 5/14/19			ABANDONMENT METHOD: Backfilled with clean sand; asphalt patch			
DESCRIPTIVE LOG						
SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID (ppm)	GRAPHIC COLUMN	DEPTH (FT)	DESCRIPTION OF MATERIAL
10-15' bg	40	NA			-10-	Medium brown, fine-medium SAND with fine-medium gravel; broken stone at ~12' bg; little silt from 13-15' bg, moist and slightly cohesive
			-			
			0.0			
			-11-			
			-			
			0.1			
			-12-			
			-			
15-20' bg	35	NA		-13-	15-16' bg: Dull medium brown, fine-medium SAND with trace silt, abundant gravel/ crushed stone and suspected brick debris; no odors or staining 16-17.5' bg: Dull medium brown, fine-medium SAND with reddish-brown parallel streaks (suspected oxidation); no odors or staining 17.5-19' bg: Dull medium brown/gray, fine-medium SAND; uniform; dry; no odors or staining 19-20' bg: Dull medium brown, fine-medium SAND; uniform; dry; no odors or staining	
			-			
			0.0			
			-13-			
			-			
			0.1			
			-14-			
			-			
20-25' bg	33	NA		-15-	20-22' bg: Same as above 22-25' bg: Medium brown/orange, fine-medium SAND with trace fine gravel; no odors or staining	
			-			
			0.4			
			-16-			
			-			
			0.2			
			-17-			
			-			
		NA		-18-		
			-			
			0.1			
			-19-			
			-			
			0.1			
			-20-			
			-			
		NA		-21-		
			-			
			0.0			
			-22-			
			-			
			0.0			
			-23-			
			-			
		NA		-24-		
			-			
			0.0			
			-25-			
			-			
			0.0			
			-			
			-			

 Fill
 Sand/gravel
 Silty sand/clay
 Depth to Water
 N/A Not Applicable

BORING/WELL LOG

WALDEN ENVIRONMENTAL ENGINEERING					SHEET: 2 OF 2	
BORING/WELL I.D.: GB-10		CLIENT/SITE: 218 Lakeville Road		DATE(s) DRILLED: 5/14/19		
DESCRIPTIVE LOG (continued)						
SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID/FID (ppm)	GRAPHIC COLUMN	DEPTH (FT)	DESCRIPTION OF MATERIAL
25-30' bg	34	NA			-	Medium brown/orange, fine-medium SAND with trace fine gravel and trace amounts of rounded cobbles; no odors or staining
			0.0		-26-	
					-	
			0.0		-27-	
					-	
			0.0		-28-	
					-	
			0.0		-29-	
30-35' bg	37	NA			-30-	Dull medium brown/red-brown/orange, medium SAND; some reddish-brown coloring from 33-35' bg; wet below 32' bg; no odors or staining
			0.1		-31-	
					-	
			1.4		-32-	
					-	
			1.2		-33-	
					-	
			0.1		-34-	
					-35-	END OF BORING
	-					
	-36-					
	-					
	-37-					
	-					
	-38-					
	-					
					-39-	
	-					
	-40-					
	-					
	-41-					
	-					
	-42-					
	-					
					-43-	
	-					
	-44-					
	-					
					-45-	

NOTES: Collected soil samples GB-10 (14'-14.5') and GB-10 (32'-32.5')

 Fill
 Sand/gravel
 Silty sand/clay
 Depth to Water
 N/A Not Applicable

BORING/WELL LOG

WALDEN ENVIRONMENTAL ENGINEERING					SHEET: 1 OF 2	
BORING/WELL I.D.: GB-11			CLIENT: 218 Lakeville Acquisition, LLC			
DATE(S) DRILLED: 5/14/19			PROJECT NAME: 218 Lakeville Road			
DRILL METHOD: Direct push via Geoprobe 7822 DT			PROJECT NO.: IMPL0115.6			
BORING DIAMETER: 2"			PROJECT LOCATION: Lake Success, NY			
SAMPLING METHOD/INTERVAL: Dual-tube; 5' length			DRILLING CONTRACTOR: Eastern Environmental Solutions, Inc.			
LOGGED BY: JKB						
REMARKS: Begin soil screening and logging at 10 ft bg						
TEMPORARY WELL CONSTRUCTION INFORMATION						
SCREEN SIZE AND MATERIAL:			SCREEN INTERVAL:			
SAND PACK SIZE AND MATERIAL:			SAND PACK INTERVAL:			
REF. POINT:			BENTONITE SEAL INTERVAL:			
STATIC WATER DEPTH:			DATE:			
REMARKS: No well installation						
WELL/BOREHOLE ABANDONMENT INFORMATION						
ABANDONMENT DATE: 5/14/19			ABANDONMENT METHOD: Backfilled with clean sand; asphalt patch			
DESCRIPTIVE LOG						
SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID (ppm)	GRAPHIC COLUMN	DEPTH (FT)	DESCRIPTION OF MATERIAL
10-15' bg	43	NA			-10-	10-13' bg: Medium brown, fine-medium SAND with fine-medium gravel, weathered/ broken stone and suspected brick debris; no odors or staining
			0.1		-11-	
					-	
			0.3		-12-	
					-	
			0.1		-13-	
					-	
			0.2		-14-	
15-20' bg	33	NA			-15-	13-13.5' bg: Medium brown, fine-medium SAND; uniform; dry; no odors or staining 13.5-15' bg: Dull medium brown/gray, fine-medium SAND; uniform; dry; no odors or staining
			0.2		-16-	
					-	
			0.1		-17-	
					-	
			0.1		-18-	
					-	
			0.1		-19-	
20-25' bg	29	NA			-20-	15-16.25' bg: Same as above 16.25-20' bg: Fine-medium SAND with little fine-medium gravel and broken stone; interbedded layers of medium brown/orange and medium dull brown/gray color, each ~9-12" thick; no odors or staining
			0.1		-21-	
					-	
			0.0		-22-	
					-	
			0.1		-23-	
					-	
			0.1		-24-	
					-25-	Medium brown, fine-medium SAND with little fine gravel and trace cobbles; no odors or staining

Fill
 Sand/gravel
 Silty sand/clay
 Depth to Water
 N/A Not Applicable

BORING/WELL LOG

WALDEN ENVIRONMENTAL ENGINEERING					SHEET: 2 OF 2	
BORING/WELL I.D.: GB-11		CLIENT/SITE: 218 Lakeville Road		DATE(s) DRILLED: 5/14/19		
DESCRIPTIVE LOG (continued)						
SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID/FID (ppm)	GRAPHIC COLUMN	DEPTH (FT)	DESCRIPTION OF MATERIAL
25-30' bg	35	NA			-	Medium brown, fine-medium SAND with little fine gravel and trace cobbles; no odors or staining
			0.1		-26-	
					-	
			0.1		-27-	
					-	
			0.1		-28-	
					-	
			0.1		-29-	
	-					
0.0	-30-	Same as above but with trace fine gravel; wet below ~32.5' bg				
	-					
0.1	-31-					
	-					
0.1	-32-					
	-					
0.1	-33-					
	-					
0.0	-34-	END OF BORING				
	-					
0.1	-35-					
	-					
	-					
	-					
	-					
	-					
					-	
					-36-	
					-	
					-37-	
					-	
					-38-	
					-	
					-39-	
					-	
					-40-	
					-	
					-41-	
					-	
					-42-	
					-	
					-43-	
					-	
					-44-	
					-	
					-45-	

NOTES: Collected soil samples GB-11 (14'-14.5') and GB-11 (32'-32.5')

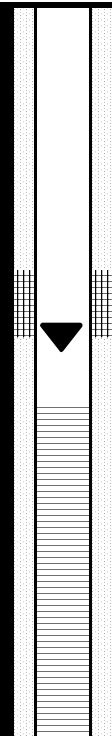
 Fill
 Sand/gravel
 Silty sand/clay
 Depth to Water
 N/A Not Applicable

BORING/WELL LOG

WALDEN ENVIRONMENTAL ENGINEERING				SHEET: 1 OF 2		
BORING/WELL I.D.: GB-12			CLIENT: 218 Lakeville Acquisition, LLC			
DATE(S) DRILLED: 5/15/19			PROJECT NAME: 218 Lakeville Road			
DRILL METHOD: Direct push via Geoprobe 7822 DT			PROJECT NO.: IMPL0115.6			
BORING DIAMETER: 2"			PROJECT LOCATION: Lake Success, NY			
SAMPLING METHOD/INTERVAL: Dual-tube; 5' length			DRILLING CONTRACTOR: Eastern Environmental Solutions, Inc.			
LOGGED BY: JKB						
REMARKS: Begin soil screening and logging at 10 ft bg						
TEMPORARY WELL CONSTRUCTION INFORMATION						
SCREEN SIZE AND MATERIAL: 5' of 1" diameter 20-slot PVC			SCREEN INTERVAL: 31-36' bg			
SAND PACK SIZE AND MATERIAL: Filbro Superior Quartz			SAND PACK INTERVAL: 30-36' bg			
REF. POINT: Top of Casing			BENTONITE SEAL INTERVAL: 29-30' bg			
STATIC WATER DEPTH: 30.21'			DATE: 5/22/19			
REMARKS: TMW-7						
WELL/BOREHOLE ABANDONMENT INFORMATION						
ABANDONMENT DATE: N/A			ABANDONMENT METHOD: N/A			
DESCRIPTIVE LOG						
SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID (ppm)	GRAPHIC COLUMN	DEPTH (FT)	DESCRIPTION OF MATERIAL
10-15' bg	25	NA			-10-	10-13' bg: Medium brown, fine-medium SAND with fine-medium gravel; crushed rock at 13' bg; no odors or staining
			0.0		-11-	
					-	
			0.0		-12-	
					-	
			0.0		-13-	
					-	
			0.0		-14-	
15-20' bg	35.5	NA			-15-	13-14' bg: Medium brown, fine-medium SILTY SAND with some fine gravel and trace pebbles; slightly cohesive; no odors or staining 14-15' bg: Medium brown, fine-medium SAND with fine-medium gravel; crushed rock at 13' bg; no odors or staining
			0.0		-16-	
					-	
			0.0		-17-	
					-	
			0.0		-18-	
					-	
			0.0		-19-	
20-25' bg	33	NA			-20-	Medium brown, fine-medium SAND with trace fine-medium gravel; dry; no odors or staining Same as above
			0.0		-21-	
					-	
			0.0		-22-	
					-	
			0.0		-23-	
					-	
			0.0		-24-	
				-25-		

-  Native soil/rock
-  Sand pack
-  Bentonite seal
-  Cement/bentonite grout
-  Riser Pipe
-  Well screen

BORING/WELL LOG

WALDEN ENVIRONMENTAL ENGINEERING					SHEET: 2 OF 2	
BORING/WELL I.D.: GB-12/TMW-7		CLIENT/SITE: 218 Lakeville Road			DATE(s) DRILLED: 5/15/19	
DESCRIPTIVE LOG (continued)						
SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID/FID (ppm)	GRAPHIC COLUMN	DEPTH (FT)	DESCRIPTION OF MATERIAL
25-30' bg	35.5	NA			-	Medium brown, fine-medium SAND with trace fine-medium gravel; dry; no odors or staining
			0.0		-26-	
					-	
			0.0		-27-	
					-	
			0.0		-28-	
					-	
			0.0		-29-	
	-					
30-35' bg	43		0.1		-30-	
			-			
		0.0	-31-			
			-			
		0.0	-32-			
			-			
		0.0	-33-			
			-			
		0.0	-34-			
			-			
			-35-			
			-			
			-36-			
			-			
			-37-			
			-			
			-38-			
			-			
			-39-			
			-			
			-40-			
			-			
			-41-			
			-			
			-42-			
			-			
			-43-			
			-			
			-44-			
			-			
			-45-			
NOTES: Collected soil samples GB-12 (15.5'-16') and GB-12 (30.25'-30.75')						
Collected groundwater samples TMW-7 and DUPLICATE 05152019						

NA - Not applicable



Native soil/rock
Sand pack
Bentonite seal
Cement/bentonite grout
Well screen

BORING/WELL LOG

WALDEN ENVIRONMENTAL ENGINEERING					SHEET: 1 OF 2	
BORING/WELL I.D.: GB-13			CLIENT:		218 Lakeville Acquisition, LLC	
DATE(S) DRILLED: 5/15/19			PROJECT NAME:		218 Lakeville Road	
DRILL METHOD: Direct push via Geoprobe 7822 DT			PROJECT NO.:		IMPL0115.6	
BORING DIAMETER: 2"			PROJECT LOCATION:		Lake Success, NY	
SAMPLING METHOD/INTERVAL: Dual-tube; 5' length			DRILLING CONTRACTOR:		Eastern Environmental Solutions, Inc.	
LOGGED BY: JKB						
REMARKS: Begin soil screening and logging at 10 ft bg						
TEMPORARY WELL CONSTRUCTION INFORMATION						
SCREEN SIZE AND MATERIAL:			SCREEN INTERVAL:			
SAND PACK SIZE AND MATERIAL:			SAND PACK INTERVAL:			
REF. POINT:			BENTONITE SEAL INTERVAL:			
STATIC WATER DEPTH:			DATE:			
REMARKS: No well installation						
WELL/BOREHOLE ABANDONMENT INFORMATION						
ABANDONMENT DATE: 5/15/19			ABANDONMENT METHOD: Backfilled with clean sand; asphalt patch			
DESCRIPTIVE LOG						
SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID (ppm)	GRAPHIC COLUMN	DEPTH (FT)	DESCRIPTION OF MATERIAL
10-15' bg	38.5	NA			-10-	Medium brown, fine-medium SAND; uniform; dry; no odors or staining
			0.0		-11-	
					-12-	
			0.0		-13-	
					-14-	
			0.1		-15-	
			0.0			
					-16-	
0.0	-17-					
	-18-					
0.0	-19-					
	-20-					
0.0						
	-21-		Same as above with trace fine-medium gravel			
0.0	-22-					
	-23-					
0.0	-24-					
	-25-					
0.1						

Fill
 Sand/gravel
 Silty sand/clay
 Depth to Water
 N/A Not Applicable

BORING/WELL LOG

WALDEN ENVIRONMENTAL ENGINEERING					SHEET: 2 OF 2	
BORING/WELL I.D.: GB-13		CLIENT/SITE: 218 Lakeville Road		DATE(s) DRILLED: 5/15/19		
DESCRIPTIVE LOG (continued)						
SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID/FID (ppm)	GRAPHIC COLUMN	DEPTH (FT)	DESCRIPTION OF MATERIAL
25-30' bg	35	NA			-	Medium brown, fine-medium SAND; uniform; no odors or staining; wet below ~29' bg
			0.0		-26-	
					-	
			0.0		-27-	
					-	
			0.0		-28-	
					-	
			0.1		-29-	
	-					
0.1	-30-	Same as above with some coarse sand and trace fine-medium gravel throughout; wet				
	-					
0.1	-31-					
	-					
0.1	-32-					
	-					
0.0	-33-					
	-					
0.1	-34-					
	-					
0.0	-35-	END OF BORING				
	-					
	-36-					
	-					
	-37-					
	-					
	-38-					
	-					
	-39-					
	-					
	-40-					
	-					
	-41-					
	-					
	-42-					
	-					
	-43-					
	-					
	-44-					
	-					
	-45-					

NOTES: Collected soil samples GB-13 (14'-14.5') and GB-13 (28.75'-29.25')

Fill
 Sand/gravel
 Silty sand/clay
 Depth to Water
 N/A Not Applicable

BORING/WELL LOG

WALDEN ENVIRONMENTAL ENGINEERING						SHEET: 1 OF 2	
BORING/WELL I.D.: GB-14				CLIENT: 218 Lakeville Acquisition, LLC			
DATE(S) DRILLED: 5/22/19				PROJECT NAME: 218 Lakeville Road			
DRILL METHOD: Direct push via Geoprobe 7822 DT				PROJECT NO.: IMPL0115.6			
BORING DIAMETER: 2"				PROJECT LOCATION: Lake Success, NY			
SAMPLING METHOD/INTERVAL: Dual-tube; 5' length				DRILLING CONTRACTOR: Eastern Environmental Solutions, Inc.			
LOGGED BY: JKB							
REMARKS: Begin soil screening and logging at 10 ft bg							
TEMPORARY WELL CONSTRUCTION INFORMATION							
SCREEN SIZE AND MATERIAL:				SCREEN INTERVAL:			
SAND PACK SIZE AND MATERIAL:				SAND PACK INTERVAL:			
REF. POINT:				BENTONITE SEAL INTERVAL:			
STATIC WATER DEPTH:				DATE:			
REMARKS: No well installation							
WELL/BOREHOLE ABANDONMENT INFORMATION							
ABANDONMENT DATE: 5/22/19				ABANDONMENT METHOD: Backfilled with clean sand; asphalt patch			
DESCRIPTIVE LOG							
SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID (ppm)	GRAPHIC COLUMN	DEPTH (FT)	DESCRIPTION OF MATERIAL	
10-15' bg	33	NA			-10-	Medium brown, fine-medium SAND with trace fine-medium gravel; uniform; no odors or staining; dry	
			0.1		-11-		
					-		
			0.2		-12-		
					-		
			0.2		-13-		
					-		
			0.2		-14-		
15-20' bg	40	NA			-15-	Same as above	
			0.0		-		
					-16-		
			0.0		-		
					-17-		
			0.0		-		
					-18-		
			0.0		-		
20-25' bg	42	NA			-19-	Medium brown, fine-medium SAND with little fine-medium rounded gravel and few stone fragments; dry; no odors or staining	
			0.1		-20-		
					-		
			0.0		-21-		
					-		
			0.0		-22-		
					-		
			0.0		-23-		
		NA			-24-		
			0.0		-		
					-25-		
			0.0		-		
			0.0		-		

Fill
 Sand/gravel
 Silty sand/clay
 Depth to Water
 N/A Not Applicable

BORING/WELL LOG

WALDEN ENVIRONMENTAL ENGINEERING					SHEET: 2 OF 2	
BORING/WELL I.D.: GB-14		CLIENT/SITE: 218 Lakeville Road		DATE(s) DRILLED: 5/22/19		
DESCRIPTIVE LOG (continued)						
SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID/FID (ppm)	GRAPHIC COLUMN	DEPTH (FT)	DESCRIPTION OF MATERIAL
25-30' bg	42	NA			-	Medium brown, fine-medium SAND with trace fine-medium gravel; no odors or staining; wet below ~28' bg
			0.0		-26-	
					-	
			0.0		-27-	
					-	
			0.1		-28-	
					-	
			0.5		-29-	
30-35' bg	34	NA			-	Same as above with some coarse sand mixed throughout; wet
			0.0	-31-		
				-		
			0.0	-32-		
				-		
			0.0	-33-		
				-		
			0.0	-34-		
					-	END OF BORING
				-36-		
				-		
				-37-		
				-		
				-38-		
				-		
				-39-		
					-	
				-41-		
				-		
				-42-		
				-		
				-43-		
				-		
				-44-		
					-	
				-45-		

NOTES: Collected soil samples GB-14 (14'-14.5') and GB-14 (28.5'-29')

 Fill
 Sand/gravel
 Silty sand/clay
 Depth to Water
 N/A Not Applicable

Appendix B

Site Photographs

Photograph 1

Ground penetrating radar (GPR) survey for utility markout purposes.



Photograph 2

Representative view of direct-push (Geoprobe) drilling activities.



Photograph 3

Representative view of temporary monitoring well installation.



Photograph 4

Representative view of completed temporary monitoring well.



Photograph 5

Asphalt patch after borehole completion.



Photograph 6

Removal of waste drums for off-site disposal.



Appendix C

Laboratory Analytical Reports

Appendix D

Waste Disposal Manifest

29040

GENERATOR	NON-HAZARDOUS WASTE MANIFEST		1. Generator ID Number		2. Page 1 of		3. Emergency Response Phone 631 727 2710		4. Waste Tracking Number	
	5. Generator's Name and Mailing Address 218 Lakeville Acquisition LLC 218 LAKEVILLE ROAD LAKE SUCCESS, NY					Generator's Site Address (if different than mailing address)				
	Generator's Phone:									
	6. Transporter 1 Company Name EASTERN ENVIRONMENTAL SOLUTIONS INC.					U.S. EPA ID Number NY2000135624				
	7. Transporter 2 Company Name					U.S. EPA ID Number				
	8. Designated Facility Name and Site Address CLEAN WATER NEW YORK INC 3249 RICHMOND TERRACE STATEN ISLAND, NY 10313					U.S. EPA ID Number				
	Facility's Phone:									
	9. Waste Shipping Name and Description					10. Containers		11. Total Quantity	12. Unit Wt./Vol.	
						No.	Type			
	1. NON HAZ NON HAZ, NON RCRA REGULATED Solids (Drill Cuttings)					001	DM 200	2		
2. NON HAZ, NON RCRA REGULATED Liquids (Purge Water From Wells)					001	DM	55	Gal		
3.										
4.										
13. Special Handling Instructions and Additional Information										
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.										
Generator's/Offero's Printed/Typed Name Jessica Bluth (Walden) as Agent for 218 Lakeville Acquisition LLC					Signature [Signature]		Month Day Year 05 22 19			
INT'L	15. International Shipments ☐ Import to U.S. ☐ Export from U.S.					Port of entry/exit: Date leaving U.S.:				
	Transporter Signature (for exports only):									
TRANSPORTER	16. Transporter Acknowledgment of Receipt of Materials									
	Transporter 1 Printed/Typed Name John Zinner					Signature [Signature]		Month Day Year 05 22 19		
Transporter 2 Printed/Typed Name					Signature		Month Day Year			
DESIGNATED FACILITY	17. Discrepancy									
	17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection									
	Manifest Reference Number:									
	17b. Alternate Facility (or Generator)					U.S. EPA ID Number				
	Facility's Phone:									
17c. Signature of Alternate Facility (or Generator)							Month Day Year			
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a										
Printed/Typed Name Alexian Arcedo					Signature [Signature]		Month Day Year 06 05 19			

Appendix E

Data Usability Summary Report

Data Usability Summary Report

Pre-Design Soil and Groundwater Sampling Investigation
Former Imperial Cleaners Site
218 Lakeville Road
Lake Success, NY 11020
BCP Site # C130225

This Data Usability Summary Report (DUSR) has been prepared to validate the results of the pre-design soil and groundwater sampling conducted at 218 Lakeville Road, Lake Success, New York on May 14, 2019 through May 22, 2019 in accordance with the NYSDEC-approved *Remedial Work Plan* (RWP) for the Site (Walden, February 2019).

This DUSR has been prepared in accordance with NYSDEC Draft DER-10, Appendix 2B – “*Guidance for Data Deliverables and the Development of Data Usability Summary Reports*”. The DUSR provides a thorough evaluation of analytical data without using the services of an independent third-party data validator. The primary objective of the DUSR is to determine whether or not the data presented meets project-specific criteria for data quality and use.

The analytical data were evaluated by Mr. Lawrence Zeman of Walden Environmental Engineering PLLC, whose experience and qualifications to prepare the DUSR for this project are presented in the attached resume. Soil and groundwater samples collected for laboratory analysis were submitted to Phoenix Environmental Laboratories, Inc. (Phoenix) of Manchester, Connecticut, a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) certified laboratory (NY Lab Registration #11301). Samples for pre-and polyfluoroalkyl (PFAS) substances were then submitted by Phoenix to Con-Test Analytical Laboratory of East Longmeadow, Massachusetts, a NYSDOH ELAP certified laboratory (NY Lab Registration # 10899). Soil and groundwater sample preparation for volatile organic compounds (VOCs) analysis was performed via U.S. Environmental Protection Agency (USEPA) SW-846 Method 5035 and 5030C for soil and groundwater samples. Samples were then analyzed for VOCs via USEPA SW-846 Method 8260C. Samples for 1,4-dioxane were analyzed via USEPA SW-846 Method SW8270-MOD (SIM) and pre-and polyfluoroalkyl (PFAS) substance analysis via USEPA modified Method 537.

The DUSR process consisted of evaluating the analytical data packages produced by Phoenix and Con-Test and answering the following questions.

1. Were there any components of the sampling protocol which deviated from established sampling procedures?

The soil and groundwater samples were collected in laboratory-provided sample containers with prescribed preservatives utilizing Terra Core[®] sample kits for soil sample collection. The sampling followed the established sampling procedures in the NYSDEC-approved *RWP* for the Site (Walden, February 2019).

2. Is the data package complete as defined under the requirements for the NYSDEC ASP Category B or USEPA CLP deliverables?

The sampling and analytical program outlined in the *RWP* was designed to conform to the NYSDEC ASP Category B and USEPA CLP deliverables criteria. Both field sampling and laboratory analytical activities were performed with built-in QA/QC programs. Duplicate soil and groundwater samples were collected at a frequency of one (1) of each type of sample per day of sampling. (i.e. five (5) soil duplicate samples and four (4) groundwater duplicate samples). The analytical testing included method blanks and batch QA/QC samples as part of the laboratories' standard QA/QC program. Additionally, the samples were handled in compliance with the holding time allowances, meeting the NYSDEC ASP Category B and USEPA CLP deliverables criteria requirements.

3. Have all holding times been met?

Times of sample receipt, extraction and analysis have been evaluated to determine whether the holding time specifications have been met. All of the samples were analyzed within the specified holding times.

4. Do all QC data (blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls, and sample data) fall within the protocol-required limits and specifications?

All the primary samples and QC data were reviewed. Duplicate and Matrix Spike sample analyses demonstrated a reasonable level of accuracy in the analytical results. Although not all QA/QC data met the protocol-required criteria, these outliers do not impact the quality of the data package or the reliability of the laboratory results.

5. Have all the data been generated using established and agreed upon analytical protocols?

Laboratory analytical protocols have been developed by the USEPA and are published in SW-846 Method SW5035 for soil sample extraction, SW-846 Method SW5030C for groundwater

sample preparation, SW-846 Method SW8260C for volatile organic compounds (VOCs) analysis, SW-846 Method SW8270-MOD (SIM) for 1,4-Dioxane, and modified Method 537 for PFAS substances analysis. The review of the laboratory deliverables indicated that the analytical data for this project were generated following these standard protocols.

6. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms?

An evaluation of the raw data confirmed the accuracy of results provided in the data summary sheets and the quality control verification forms included in the analytical data packages prepared by the laboratory with one exception. Samples TMW-3 and Duplicate GW 05162019 (duplicate of TMW-3) were mistakenly entered on the chain of custody as soil samples. This soil designation was carried through on all the associated documents, however, the samples were analyzed as liquid samples. These samples and the associated quality control analysis meet the required laboratory criteria, and as such the reliability of the results should not be affected.

7. Have the correct data qualifiers been used?

The laboratory provided a list of qualifiers used in their data reporting. QC failures such as potential sample contamination by laboratory solvents or estimation of sample result values due to analyte concentrations detected above calibration ranges were checked back to the reported data to determine whether the qualifiers were properly used. The evaluation indicated that the laboratory flagged the data using the correct data qualifiers when necessary. The data qualifiers comply with the NYSDEC Analytical Services Protocol (ASP) 95 revised guidelines.

8. Have the minimum detection limits been met?

The minimum detection limits derived from the analytical methods and the laboratories' quality control are as follows:

- VOC for Groundwater: 5.0 ug/L
- VOC for Soil: 0.5 ug/kg
- 1,4-dioxane for Groundwater: 0.2 ug/L
- PFAS for Groundwater: Not required as per EPA Method 537

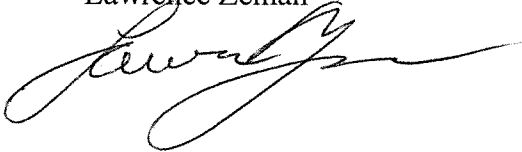
All the minimum detection limits were met.

Summary

In summary, the analytical data package review conducted while preparing this DUSR found that no data deficiencies, analytical protocol deviations, or quality control problems impacted the quality of the data. No significant QC exceedances were identified and it was determined that none of the data should be rejected.

Prepared by:

Lawrence Zeman

A handwritten signature in black ink, appearing to read 'Lawrence Zeman', with a long horizontal flourish extending to the right.

Attachment A

Resume of Environmental Professional



Lawrence F. Zeman

Project Scientist II



Lawrence has 20 years of environmental and lab consulting experience, taking on difficult laboratory issues and QA/QC. He is very well versed in areas as diverse as regulatory compliance, test protocol development and implementation, management of instrument repair and maintenance, field inspections and on-site audits, correlation studies of various analyses and engineering/technical reporting.

SELECTED RELEVANT EXPERIENCE

Various Clients, New York

- Performed sample collection of various sample types at industrial facilities and construction & remediation project sites;
Conducted soil sample collection, field activities oversight and continuous air monitoring for Community Air Monitoring Program (CAMP) in accordance with DER-10 as follows:
 - Elmhurst Tank Park & Playground, Queens, NY (2009 – 2011);
 - Calvert Vaux Park and Athletic Fields, Brooklyn, NY (2009 – 2011), as an Independent Environmental Monitor (IEM) on-site technician;
 - Harlem Rive Greenway, Bronx, NY (2011 – 2012);
 - Beach Channel H.S. Athletic Fields (2016);
 - P.S. 63M William McKinley School, Manhattan, NY (2016);
 - P.S. 131 Abigail Adams Public School, Queens, NY (2017);
 - Forest Hills High School, Queens, NY (2017)
- Developed and implemented new testing protocols and test procedures;
- Conducted instrumentation repair and scheduled maintenance;
- Conducted correlation studies of various analytic procedures;
- Verified laboratory Quality Assurance and Quality Control procedures and data;
- Responsible for regulatory compliance and quality control;
- Prepared and submitted facilities' annual Zoning Performance Standards Compliance Reports, including noise, vibration, odor and opacity testing for DSNY permit renewal;
- Provided environmental services to ensure compliance for facility's NYS DEC Title V Air Facility Permit. Completed monthly, semi-annual and annual compliance reports;
- Conducted field Inspections and on-site audits;
- Performed field measurements and recording of Noise and Vibration;
- Prepared Engineering & Technical Reports;
- Prepared New York City Community Right-To-Know Law and SARA reports for Industrial facilities

EDUCATION

B.A. Biology, Minor in Chemistry Queens College

LICENSES/ CERTIFICATIONS

New York State ELAP
Laboratory Director

New York State ELAP
Laboratory Microbiology
Assistant Director

New York Department of
Health Laboratory
Technologist

OSHA HAZWOPER 40-hour
& OSHA 10-hour Certified