Commercial Building
101-21 101st Street
Queens, New York 11417

PHASE II LIMITED SUBSURFACE INVESTIGATION

MAY 23, 2022

PREPARED FOR:
LSC Development LLC
777 Lake Zurich Road, #195
Barrington, IL 60010

PREPARED BY:
The Vertex Companies, LLC
3322 Route 22, West, Suite 907
Branchburg, NJ 08876
PHONE 908.448.2627

VERTEX PROJECT NO: 79111

May 23, 2022

LSC Development LLC
777 Lake Zurich Road, #195
Barrington, IL 60010
Attn: Mr. Paul Bergin

RE: Phase II Limited Subsurface Investigation
Commercial Building
101-21 101st Street
Queens, New York 11417
VERTEX Project No. 79111

Dear Mr. Bergin:

The Vertex Companies, LLC (VERTEX) is pleased to submit this Phase II Limited Subsurface Investigation (LSI) report for the above-referenced property (the "Site"). The purpose of this investigation was to determine the current soil, groundwater, sub-slab soil gas, and indoor air conditions at the Site due to the presence of recognized environmental conditions (RECs) identified during a Phase I Environmental Site Assessment prepared by VERTEX, dated April 29, 2022. The Phase II LSI was conducted in general conformance with proposal P. 4856.22 executed by LSC Development LLC on May 4, 2022, and in accordance with standard industry protocols and applicable New York State Department of Environmental Conservation (NYSDEC) technical guidelines. To the best of our knowledge, this Phase II LSI report is true and accurate.

Please do not hesitate to contact us at your convenience should you have any questions or comments regarding this report or our recommendations. It has been a pleasure working with you on this project.

Sincerely,

The Vertex Companies, LLC

Madalyn Kulas
Senior Project Manager

Joseph J.C. Dultz
Regional Vice President Director

TABLE OF CONTENTS

PHASE II LIMITED SUBSURFACE INVESTIGATION
Commercial Building
101-21 101st Street
Queens, New York 11417
VERTEX Project No. 79111

1.0 BACKGROUND INFORMATION

The Vertex Companies, LLC (VERTEX) was contracted by LSC Development LLC to conduct a Phase II Limited Site Investigation ("LSI") at 101-21 101st Street, Queens, New York (the "Site"). The Site location is depicted on Figure 1 - Site Location Map. According to the New York City Department of Finance, the subject property consists of one 0.75-acre parcel of land identified as Block 9419, Lot 49. The subject property is improved with an approximately 35,600 square-foot, two-story building constructed in 1947 and is currently occupied by Moving Right Along, a storage facility. An overall layout of the Site, with the approximate Site boundaries, is shown on Figure 2 – Site Plan. VERTEX conducted a Phase I Environmental Site Assessment (ESA) in April 2022. The Phase I ESA identified the following recognized environmental conditions (RECs):

- Historical on-site operations including machine shops, and various manufacturing operations.
- Three former underground storage tanks (USTs); one closed in place 1,080-gallon UST containing trichloroethylene (TCE), one closed in place 2,500-gallon No. 4 fuel oil UST, and one removed, 2,500-gallon No. 4 fuel oil UST with a lack of closure documentation, a lack of groundwater sampling, and inadequate soil sampling.
- The unknown status of the floor vault with impacted sediments confirmed during a prior Phase II investigation.
- The long-term historical industrial operations on off-site properties: and,
- Confirmed groundwater and soil vapor impacts at the site.

A Phase II LSI was recommended to determine the current soil, groundwater, sub-slab soil gas, and indoor air conditions at the Site due to the presence of the RECs.

2.0 LIMITED SITE INVESTIGATION ACTIVITIES

In accordance with VERTEX proposal P.4856.22 executed by LSC Development on May 4, 2022, VERTEX performed a Phase II LSI of the Site. The Phase II LSI consisted of the following:

- A geophysical investigation to clear boring locations;
- The installation of soil borings and temporary monitoring wells;
- The collection and analysis of soil and groundwater samples;
- The installation of temporary sub-slab sampling ports; and,
- The collection of sub-slab soil gas (SSSV) and indoor/ambient air (IA/AA) samples.

The Phase II LSI is described in detail in the following sections.

2.1 Health and Safety Plan

Prior to initiating field activities, a Health & Safety Plan (HASP) was prepared to guide the conduct of the work in the event that regulated constituents were encountered during the performance of the field activities. The purpose of the HASP was to minimize the likelihood of exposure of VERTEX employees to hazardous concentrations of chemicals during field activities, minimize impacts to the environment, and provide safety guidelines for subcontractors. Field activities were completed in accordance with OSHA level D personal protective equipment ("PPE") consisting of hard hats, safety glasses, protective gloves and steel toed boots.

2.2 Geophysical Investigation

VERTEX retained the services of Clean Globe Environmental LLC (Clean Globe) of Brentwood, New York to perform a geophysical survey to "clear" proposed drilling and SSSV locations to ensure

that they were free of subsurface utilities or structures. Clean Globe utilized ground penetrating radar (GPR) and electromagnetic (EM) equipment during their survey.

The proposed drilling locations and SSSV sample locations were "cleared" by Clean Globe on May 9, 2022. The former UST and closed-in-place UST location were identified; however, the former floor vault was unable to be located during this investigation. A geophysical report was not prepared; however, VERTEX was on-site during the investigation to confirm the findings.

In addition, VERTEX's drilling subcontractor, Clean Globe, contacted the New York One Call program to coordinate the mark-out of public utilities.

2.3 Soil Boring Installation with Soil Sampling

Clean Globe was retained by VERTEX to advance soil borings at the Site using direct-push (i.e. Geoprobe®) drilling techniques. The soil borings were advanced on May 9 and 10, 2022, under the oversight and supervision of VERTEX field staff. A total of six borings were advanced at the Site. Soil borings were installed adjacent to RECs, in areas not previously investigated, and in the sidewalk along 101st Street downgradient from the Site. The soil boring locations are depicted on Figure 2.

Soil samples were continuously collected in five-foot acetate sleeves as each boring was advanced. Recovered soil samples were screened in the field for the presence of total volatile organic vapors using a photoionization detector (PID) calibrated to 100 parts per million (ppm) by volume of isobutylene. Visual and olfactory observations were utilized to assess the soil for evidence of suspected regulated constituents. The observed soil types, field screening readings, notations of regulated constituent's presence were recorded on soil boring logs. Soil boring logs are included as Appendix A.

Shallow soil at the Site consisted of brown medium-grained sand with traces of gravel to depths of 30 feet below ground surface (bgs). Groundwater was encountered between 24 and 29 feet bgs in the temporary wells.

The soil samples were analyzed for volatile organic compounds (VOCs) via United States Environmental Protection Agency (USEPA) Method 8260. The soil samples collected from adjacent to the closed in place and removed fuel oil USTs were additionally analyzed for semi-volatile organic compounds (SVOCs) via USEPA Method 8270. The soil samples were submitted under chain of custody to Alpha Analytical (Alpha) of Westborough, Massachusetts for the analyses referenced above (New York Environmental Laboratory Approval Program (ELAP) No. 11148).

The following table provides a summary of the soil sampling, depths, rationale, and laboratory analysis.

Sample ID	Boring Depth (feet bgs)	Sample Depth (feet bgs)	Location
VTX-SB-1	35	30-30.5	Adjacent to the closed in place NW fuel oil UST
VTX-SB-2	30	26-26.5	Adjacent to the closed in place TCE UST
VTX-SB-3	35	10-10.5	Adjacent to the hydraulic elevator
VTX-SB-4	35	No sample collected	SW corner of the building. Unable to locate the former floor vault. No evidence of impacts observed; accordingly, no sample was collected.
VTX-SB-5	34	8-8.5	Adjacent to the removed fuel oil UST
VTX-SB-6	30	23.5-24	Southwest corner of the site building, in the sidewalk along 101st Street

2.3.1 Soil Analytical Results

The results of the soil samples analyses were compared to the New York State Department of Environmental Conservation (NYSDEC) Restricted Use Soil Cleanup Objectives (SCOs) for Commercial Use (RUSCO-C), for Protection of Groundwater (RUSC-GW) and for Unrestricted Use (UUSCO). Based on the current Site use, the most applicable SCOs are the RUSCO-C. Review of the soil analytical results identified the following constituents above SCOs:

Soil Results				
Sample ID	Sample Depth (feet bgs)	Constituents >UUSCO	Constituents >RUSCO-C	Constituents >RUSCO-GW
VTX-01	30-30.5	--	--	--
VTX-02	26-26.5	--	--	--
VTX-03	10-10.5	--	--	--
VTX-04	No sample collected	NA	NA	NA
VTX-05	8-8.5	--	--	--
VTX-06	23.5-24	--	--	--

-- No exceedances
NA – Not analyzed

A summary of the soil analytical results is included as Table 1. The laboratory data package for the soil sampling is provided in Appendix B.

Review of the soil analytical results identified that no contaminants were detected at concentrations exceeding the RUSCO-C, RUSCO-GW, or the UUSCO in any of the soil samples. Low concentrations of tetrachloroethylene (PCE) and trichloroethylene (TCE), solvents previously stored and used at the site, were detected in several of the soil samples but at concentrations below the UUSCOs.

2.4 Temporary Monitoring Well Installation and Groundwater Sampling

During the investigation, all six of the soil borings were converted into temporary wells. The locations of the temporary monitoring wells are depicted on Figure 2. Groundwater stabilized in the temporary monitoring wells at depths between 24 and 29 feet bgs.

The temporary monitoring wells were constructed of ten feet of 1-inch diameter Schedule 40 slotted (0.01-inch) polyvinyl chloride ("PVC") screen and 1-inch diameter PVC riser to grade. The temporary monitoring wells were installed so that the screened interval straddled the shallow water table in each boring.

The temporary monitoring wells were sampled the same day as installation. A groundwater sample was also collected from a permanent monitoring well (B-4W) installed in the sidewalk along 101st Street on the northwestern side of the of the site building as part of a geotechnical evaluation. The temporary monitoring wells were purged using dedicated polyethylene tubing and a peristaltic pump prior to sample collection to remove drilling materials from the screened portion of the well. Purge development water was discharged to the borehole after sampling was completed.

No evidence of a visible sheen, odors, or elevated PID readings were observed in the temporary well during the development or sampling activities. The groundwater samples were collected using a dedicated, disposable weighted bailer. The groundwater sample was submitted to Alpha and analyzed for VOCs. The samples collected near the closed in place and removed fuel oil USTs and the southwestern side of the site (near the suspected location of the former floor vault) were additionally analyzed for SVOCs.

Once sampling activities were complete, the temporary well screen was removed, and each borehole location was backfilled to grade with previously removed soil and bentonite. The surface restoration included patching of the concrete building slab and sidewalk to match existing conditions.

2.4.1 Groundwater Analytical Results – Temporary Monitoring Wells

The results of the groundwater sample analyses were compared to the NYSDEC Ambient Water Quality Standards (AWQS) and the NYSDEC Groundwater Effluent Limitations (Class GA). Review of the groundwater analytical data identified the following:

Groundwater Results		
Sample Location	**Constituents >AWQS**	**Constituents >CLASS GA**
VTX-TW-1	Benzo(a)anthracene Benzo(a)pyrene Benz(b)fluoranthene Benzo(k)fluoranthene Chrysene Indeno(1,2,3-cd)pyrene	Benzo(a)anthracene Benzo(a)pyrene Benz(b)fluoranthene Benzo(k)fluoranthene Chrysene Indeno(1,2,3-cd)pyrene
VTX-TW-2	PCE TCE	PCE TCE
VTX-TW-3	PCE TCE	PCE TCE
VTX-TW-4	Benzo(a)anthracene Benzo(a)pyrene Benz(b)fluoranthene Benzo(k)fluoranthene Chrysene Indeno(1,2,3-cd)pyrene	Benzo(a)anthracene Benzo(a)pyrene Benz(b)fluoranthene Benzo(k)fluoranthene Chrysene Indeno(1,2,3-cd)pyrene
VTX-TW-5	TCE Benzo(a)anthracene Benzo(a)pyrene Benz(b)fluoranthene Benzo(k)fluoranthene Chrysene Indeno(1,2,3-cd)pyrene	TCE Benzo(a)anthracene Benzo(a)pyrene Benz(b)fluoranthene Benzo(k)fluoranthene Chrysene Indeno(1,2,3-cd)pyrene
VTX-TW-6	TCE	TCE
B-4W	--	--

-- No exceedances

PCE and TCE were detected in groundwater at concentrations exceeding the AWQS and Class GA, which indicates that the former site operations have impacted the site. Polycyclic aromatic hydrocarbons (PAHs) were detected in the three groundwater samples that were analyzed for

SVOCs. Based on a lack of detections of PAHs in the soil samples and the turbid nature of the samples collected from temporary monitoring wells, these exceedances are not indicative of a release from the former USTs or floor vault. A summary of the groundwater analytical results for the temporary monitoring well is included as Table 2. The laboratory data package for the groundwater samples is provided in Appendix B.

3.0 VAPOR INTRUSION SAMPLING

3.1 Sub-Slab Soil Vapor Sampling

On May 9, 2022, VERTEX installed five temporary SSSV sample probes VTX-SG-1 through VTX-SG5 throughout the Site building. The locations were selected to either confirm previous Phase II LSI results or fill in data gaps. SSSV samples were completed by drilling 3/8-inch core holes through the concrete slab. The sample locations are depicted on Figure 2.

Teflon tubing was installed into the drilled core hole to facilitate the collection of soil vapor from beneath the concrete slab into stainless steel 6-liter Summa canisters. The tubing was connected to the Summa canister using a compression fitting and the other end of the tubing was placed several inches into the concrete core hole. A seal consisting of Teflon tape and non- VOC-emitting modeling clay was utilized to seal the tubing within the core hole to prevent air leakage. All sample trains were tested for leaks utilizing helium tracer test. All leak test results were acceptable.

The entire sample train was purged of approximately three air volumes prior to sample collection at a rate that did not exceed 200 milliliters per minute. Following purging, the sample valves of the six-liter Summa canisters were opened to initiate sample collection. The sub-slab samples were collected over an approximate two-hour timeframe. Following sample collection, the tubing was removed, and the concrete core holes were sealed with concrete.

Indoor and ambient weather conditions, including temperature and atmospheric pressure, were collected and recorded on field sampling data sheets during the sampling event. The sub-slab soil vapor samples were collected into laboratory-supplied, pre-cleaned Summa canisters and were submitted to Alpha for laboratory analysis of VOCs by USEPA Method TO-15.

3.1.1 SSSV Analytical Results

The New York State Department of Health (NYSDOH) provides guidance for vapor intrusion investigations in New York State. The NYSDOH guidance document utilizes three decision matrices to determine a course of action to address current and potential exposures related to soil vapor intrusion. In order to use the matrices, SSSV and IA samples must be collected. IA samples were collected in advance of co-located SSSV samples during this investigation, and the IA sampling and analytical results are discussed in Section 3.2.1.

The results of the SSSV sampling identified the following:

Constituents in SSSV in Excess of NYSDOH Matrices

SAMPLE ID	MATRIX A	MATRIX B	MATRIX C
VTX-SG1	cis-1,2-Dichloroethene TCE	PCE	--
VTX-SG2	cis-1,2-Dichloroethene TCE	PCE	--
VTX-SG3	cis-1,2-Dichloroethene TCE	1,1,1-Trichloroethane PCE	--
VTX-SG4	cis-1,2-Dichloroethene TCE	1,1,1-Trichloroethane PCE	--
VTX-SG5	cis-1,2-Dichloroethene TCE	--	--

-- No exceedances

It should be noted, the reporting limits for 1,1-dichloroethene, carbon tetrachloride, methylene chloride, and 1,1,1-trichloroethane were elevated due to the high concentrations of PCE and TCE in the samples. A discussion of the vapor intrusion investigation results is provided in Section 4.0. A summary of the SSSV analytical results is included in Table 3. The laboratory data package for the SSSV samples is provided in Appendix C.

3.2 Indoor Air Sampling

On May 6, 2022, five IA samples (VTX) were collected from the SSSV locations. In addition, one AA sample (AA) was collected from the southern parking lot. The sample locations are depicted on Figure 2.

The air samples were collected using stainless steel 6-liter Summa canisters over an 8-hour sample duration. Once the required air samples were collected, they were submitted under chain-of-custody procedures to Alpha for VOC analysis via USEPA Method TO-15.

3.2.1 IA Analytical Results

The IA and AA sample results were compared to the decision matrix values presented in the NYSDOH *Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York* dated October 2006, and the NYSDOH *May 2017: Updates to Soil Vapor/Indoor Air Decision Matrices*. In addition, the IA and AA sample results were compared to the Indoor Air Quality Guidance Values.

The March 2020 indoor/ambient air sampling identified the following:

Constituents in IA/AA in Excess of NYSDOH Matrices

SAMPLE ID	MATRIX A	MATRIX B	MATRIX C
VTX-IA-1	Carbon tetrachloride cis-1,2-Dichloroethene TCE	Methylene chloride PCE	--
VTX-IA-2	Carbon tetrachloride cis-1,2-Dichloroethene TCE	Methylene chloride PCE	--
VTX-IA-3	Carbon tetrachloride TCE	Methylene chloride	--

SAMPLE ID	MATRIX A	MATRIX B	MATRIX C
VTX-IA-4	Carbon tetrachloride cis-1,2-Dichloroethene TCE	Methylene chloride	--
VTX-IA-5	Carbon tetrachloride TCE	Methylene chloride	--
VTX-AA-1	Carbon tetrachloride		

-- No exceedances

A discussion of the vapor intrusion investigation results is provided in Section 4.0. A summary of the indoor/ambient air analytical results compared to the NYSDOH decision matrix values and NYSDOH air guidelines values is included in Table 4. The results provided in Table 3 are utilized to evaluate VI concerns. The laboratory data package for the IA and ambient air samples is provided in Appendix C.

4.0 NYSDOH SOIL VAPOR/INDOOR AIR MATRIX EVALUATION

To evaluate the potential VI concerns at the site, VERTEX utilized the NYSDOH Soil Vapor/Indoor Air Matrix Guidance (May 2017), which presents decision-making matrices and provides recommended actions based on toxicity data and risk assessments for eight chemicals. The following is a summary of the findings and recommended actions for the constituents identified in exceedance of the soil vapor and/or indoor air criteria.

Carbon Tetrachloride

Carbon tetrachloride was identified in the IA and AA samples at concentrations ranging from 0.591 micrograms per cubic meter (ug/m3) to 0.648 ug/m3. The detection of carbon tetrachloride in the AA sample at a concentration similar to the IA samples suggests a potential background source or laboratory contamination. In addition, carbon tetrachloride was not detected in the SSSV samples.

Methylene Chloride

Methylene chloride was identified in the IA samples at concentrations ranging from 11 micrograms per cubic meter (ug/m3) to 129 ug/m3. Methylene chloride was not detected in the SSSV samples; however, the reporting limits were elevated due to the presence of high concentrations of other compounds. Vapor intrusion cannot be ruled out.

Cis-1,2-Dichloroethene

At all sampling locations, mitigation is required per the NYSDOH matrix.

TCE

At all sampling locations, mitigation is required per the NYSDOH matrix.

PCE

- At VTX-SG1/VTX-IA-1, the soil vapor detection of 28,000 ug/m3 and IA concentration of 21.6 ug/m3 requires mitigation per the NYSDOH matrix.

- At VTX-SG2/VTX-IA-2, the soil vapor detection of 2,350 ug/m3 and IA concentration of 3.64 ug/m3 requires mitigation per the NYSDOH matrix.

- At VTX-SG3/VTX-IA-3, the soil vapor detection of 1,760 ug/m3 and IA concentration of 1.52 ug/m3 requires mitigation per the NYSDOH matrix.

- At VTX-SG4/VTX-IA-4, the soil vapor detection of 374 ug/m3 and IA concentration of 1.3 ug/m3 requires no further action per the NYSDOH matrix.

- At VTX-SG5/VTX-IA-5, the soil vapor detection of 62.4 ug/m3 and IA concentration of 1.3 ug/m3 requires no further action per the NYSDOH matrix.

5.0 CONCLUSIONS AND RECOMMENDATIONS

VERTEX has performed a Phase II LSI at 101-21 101st Street, Queens, New York. The objective of the Phase II LSI was to determine the current soil, groundwater, sub-slab soil gas, and indoor air conditions at the Site due to the presence of RECs identified during a Phase I ESA:

- A geophysical investigation to clear boring locations;
- The installation of soil borings and temporary monitoring wells;
- The collection and analysis of soil and groundwater samples;
- The installation of temporary sub-slab sampling ports; and,
- The collection of SSSV and IA/AA samples.

The findings of the Phase II LSI are summarized below:

Soil

- Soil consisted of brown medium-grained sand with traces of gravel to depths of 30 feet bgs.
- Soil exceedances were not identified during the Phase II LSI; however, based on the other results of the Phase II LSI (summarized below), a hot spot area/area of CVOC contamination are likely to be encountered during site redevelopment.

Groundwater

- Groundwater was encountered between 24 and 29 feet bgs in the temporary wells.
- Groundwater concentrations of CVOCs were detected at the highest concentrations in the vicinity of the abandoned TCE UST (VTX-TW-3) and downgradient of the UST (VTX-TW-2, VTX-TW-5, and VTX-TW-6). A source area may be present near the UST and/or former waste lines. The waste lines could not be located during the Phase II LSI.

Additionally, a source area may be located in the vicinity of the former solvent storage areas (northeast corner of the building) based on the sub-slab soil gas sampling results.

- A previous Phase II investigation concluded that the western adjacent property had impacted the site; however, based on the results of VERTEX's investigation and a review of reports associated with the adjacent property, VERTEX opines that the impacts identified onsite are related to former site operations and not the western adjacent property, as groundwater flows to the south-southwest.

SSSV/IA/AA

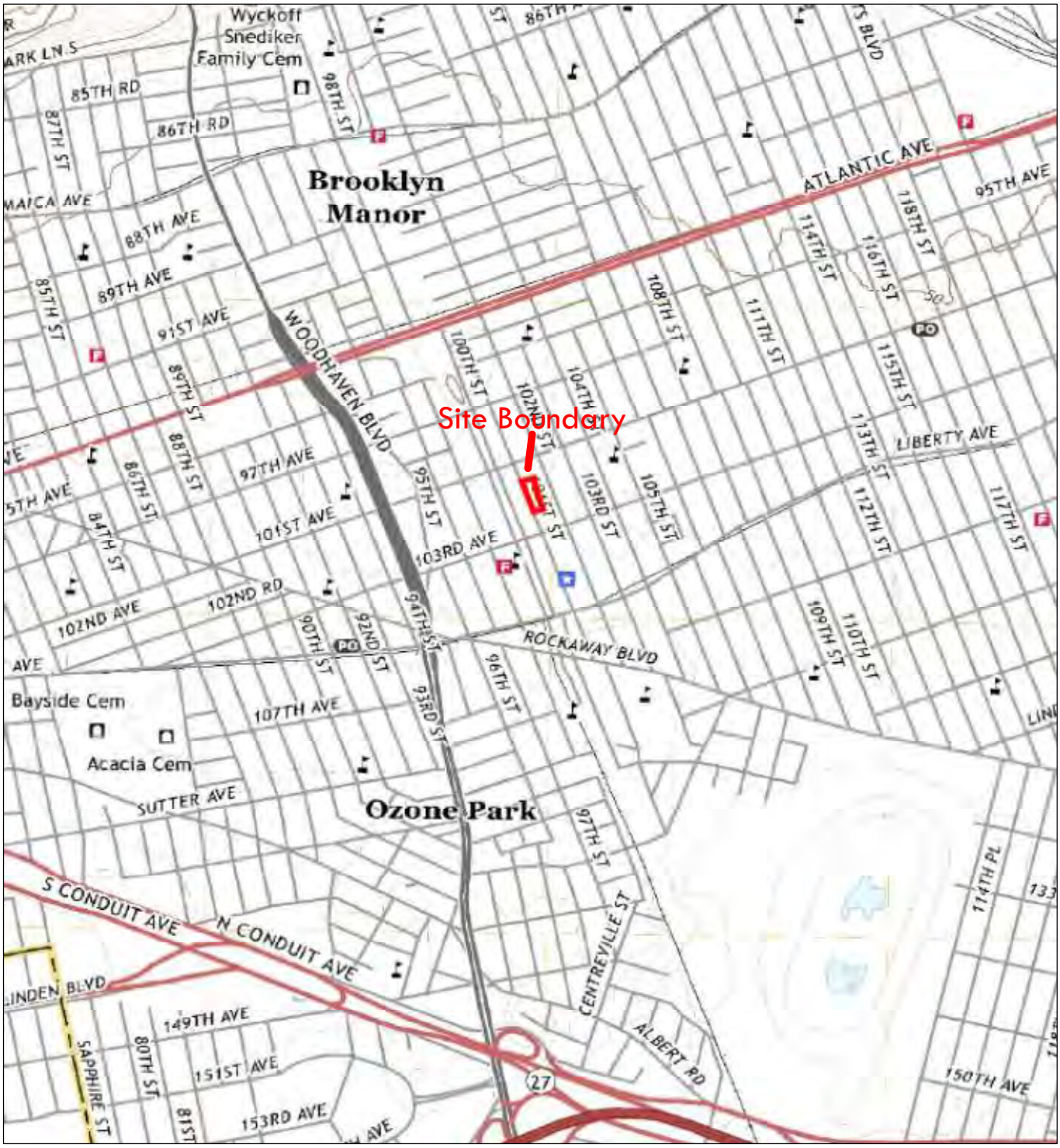
- The highest concentrations of TCE detected in sub-slab soil gas were located in the vicinity of the TCE UST (VTX-SG3) and downgradient from the UST (VTX-SG4 and VTX-SG5). An additional CVOC source area may be located in the northeastern portion of the building (former solvent storage area) as PCE was detected in the highest concentrations in samples VTX-SG1 and VTX-SG2, which are downgradient from the former storage area and upgradient of other CVOC contamination identified at the site. Contamination in the northeast portion of the building may be related to an unknown offsite upgradient source; however, a suspected source was not identified in the Phase I ESA.

Based on these findings, VERTEX recommends the following:

- Preparation of a Soil and Groundwater Management Plan (SGMP) to ensure that all excavated soils, potentially impacted soils related to current or former USTs and any USTs that may be discovered, and any CVOC hot spot area(s) are managed properly in accordance with applicable regulations;
- Removal of the remaining abandoned USTs;
- Additional site characterization to identify the source(s) of the CVOC contamination and delineate groundwater and sub-slab soil gas impacts;

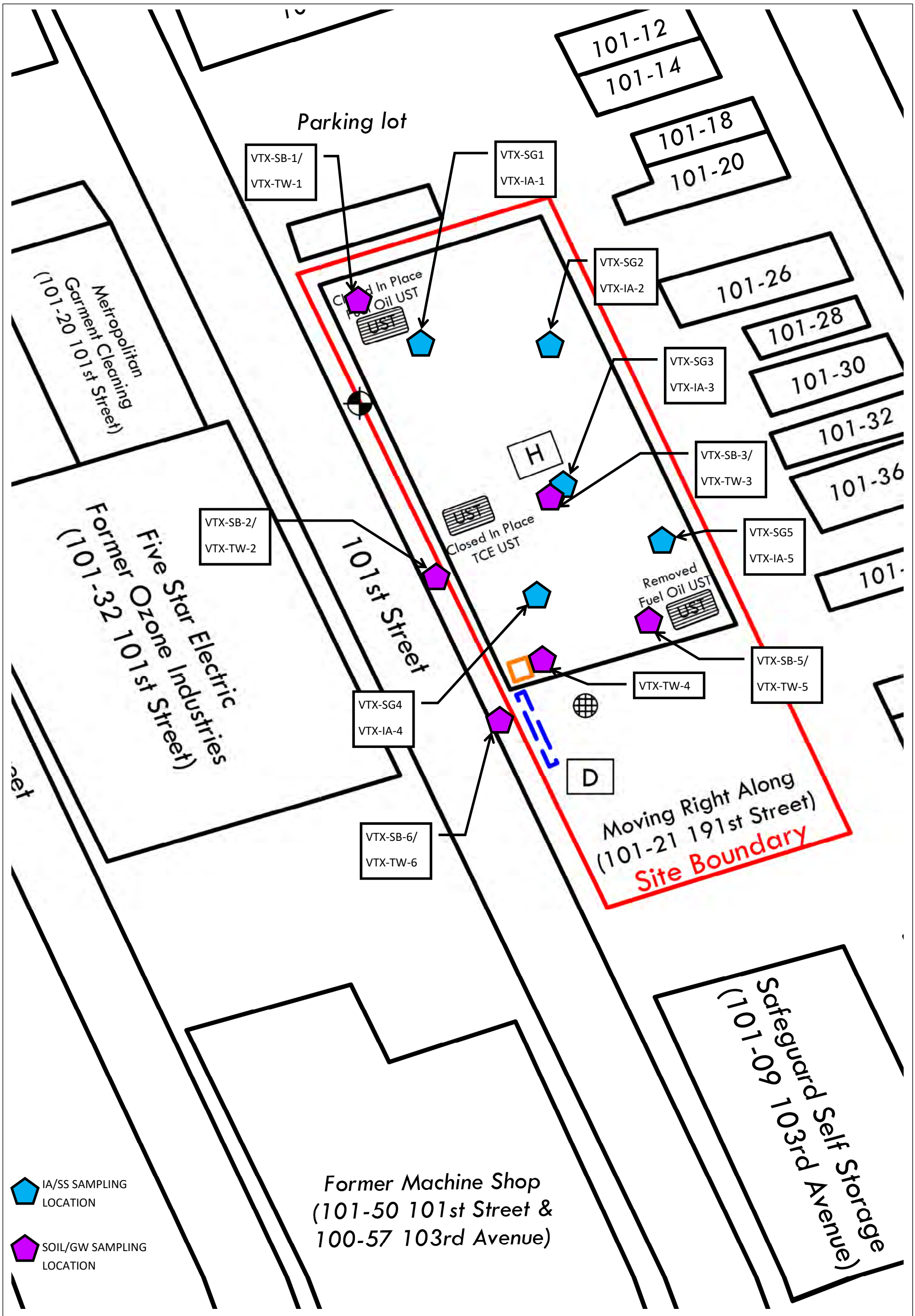
- Remediation of the identified impacts through the NYSDEC Brownfield Cleanup Program (BCP) or New York City Office of Environmental Remediation (NYC OER) Voluntary Cleanup Program (VCP) or other applicable program which may include:
- Hot spot excavation if a source is identified
- Possible groundwater treatment via in-situ chemical injections
- Characterization of surplus soil scheduled for excavation and offsite disposal prior to foundation excavation so the soil management costs can be understood in advance;
- Design and installation of a vapor barrier in the proposed building;
- Design and installation of a sub-slab depressurization system (SSDS) in the proposed building; and,
- Post-remediation indoor air sampling to confirm the effectiveness of the remediation.

FIGURES



NOTES:
SOURCE: UNITED STATES GEOLOGICAL SURVEY MAP
JAMAICA, NY QUADRANGLE 7.5 MINUTES SERIES (2019)

SITE LOCUS MAP			
Commercial Property 101-21 101st Street Queens, New York 11417	NOT TO SCALE Date: April 2022 Job No.: 78359	FIGURE 1	VERTEX 400 LIBBEY PARKWAY WEYMOUTH, MA 02189 (T): 781.952.6000 VERTEXENG.COM



N	**SAMPLING LOCATIONS** 101-21 101st Street Queens, New York 11417 VERTEX Project No. 78359	VERTEX **FIGURE NO. 2**

TABLES

Table 1 - Summary of Soil Sampling Results
101-21 101st Street
Queens, New York
VERTEX Project No. 79111

SAMPLE ID:				VTX-SB-1 (30.0-30.5)				VTX-SB-2 (26.0-26.5)				VTX-SB-3 (10.0-10.5)				VTX-SB-5 (8.0-8.5)				VTX-SB-6 (23.5-24.0)			
LAB ID:				L2224545-01				L2224545-02				L2224545-03				L2224545-05				L2224545-06			
COLLECTION DATE:	NY-RESC	NY-RESGW	NY-UNRES	5/9/2022				5/9/2022				5/10/2022				5/10/2022				5/9/2022			
SAMPLE DEPTH:				30.0-30.5				26.0-26.5				10.0-10.5				8.0-8.5				23.5-24.0			
LOCATION:				Adjacent to F.O. UST (NW)				Adjacent to TCE UST				Adjacent to hydraulic elevator				Adjacent to removed F.O. UST				SW corner of building			
ANALYTE	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
VOLATILE ORGANICS BY EPA 5035																							
1,1,1,2-Tetrachloroethane	NS	NS	NS	ND		0.00057	0.00015	ND		0.00059	0.00016	ND		0.00071	0.00019	ND		0.00064	0.00017	ND		0.00066	0.00018
1,1,1-Trichloroethane	500	0.68	0.68	ND		0.00057	0.00019	ND		0.00059	0.0002	ND		0.00071	0.00024	ND		0.00064	0.00022	ND		0.00066	0.00022
1,1,2,2-Tetrachloroethane	NS	NS	NS	ND		0.00057	0.00019	ND		0.00059	0.0002	ND		0.00071	0.00024	ND		0.00064	0.00021	ND		0.00066	0.00022
1,1,2-Trichloroethane	NS	NS	NS	ND		0.0011	0.0003	ND		0.0012	0.00031	ND		0.0014	0.00038	ND		0.0013	0.00034	ND		0.0013	0.00036
1,1-Dichloroethane	240	0.27	0.27	ND		0.0011	0.00016	ND		0.0012	0.00017	ND		0.0014	0.00021	ND		0.0013	0.00019	ND		0.0013	0.00019
1,1-Dichloroethene	500	0.33	0.33	ND		0.0011	0.00027	ND		0.0012	0.00028	ND		0.0014	0.00034	ND		0.0013	0.00031	ND		0.0013	0.00032
1,1-Dichloropropene	NS	NS	NS	ND		0.00057	0.00018	ND		0.00059	0.00019	ND		0.00071	0.00023	ND		0.00064	0.0002	ND		0.00066	0.00021
1,2,3-Trichlorobenzene	NS	NS	NS	ND		0.0023	0.00037	ND		0.0024	0.00038	ND		0.0028	0.00046	ND		0.0026	0.00042	ND		0.0027	0.00043
1,2,3-Trichloropropane	NS	NS	NS	ND		0.0023	0.00014	ND		0.0024	0.00015	ND		0.0028	0.00018	ND		0.0026	0.00016	ND		0.0027	0.00017
1,2,4,5-Tetramethylbenzene	NS	NS	NS	ND		0.0023	0.00022	ND		0.0024	0.00022	ND		0.0028	0.00027	ND		0.0026	0.00025	ND		0.0027	0.00025
1,2,4-Trichlorobenzene	NS	NS	NS	ND		0.0023	0.00031	ND		0.0024	0.00032	ND		0.0028	0.00039	ND		0.0026	0.00035	ND		0.0027	0.00036
1,2,4-Trimethylbenzene	190	3.6	3.6	ND		0.0023	0.00038	ND		0.0024	0.00039	ND		0.0028	0.00048	ND		0.0026	0.00043	ND		0.0027	0.00044
1,2-Dibromo-3-chloropropane	NS	NS	NS	ND		0.0034	0.0011	ND		0.0035	0.0012	ND		0.0043	0.0014	ND		0.0039	0.0013	ND		0.004	0.0013
1,2-Dibromoethane	NS	NS	NS	ND		0.0011	0.00032	ND		0.0012	0.00033	ND		0.0014	0.0004	ND		0.0013	0.00036	ND		0.0013	0.00037
1,2-Dichlorobenzene	500	1.1	1.1	ND		0.0023	0.00016	ND		0.0024	0.00017	ND		0.0028	0.0002	ND		0.0026	0.00018	ND		0.0027	0.00019
1,2-Dichloroethane	30	0.02	0.02	ND		0.0011	0.00029	ND		0.0012	0.0003	ND		0.0014	0.00037	ND		0.0013	0.00033	ND		0.0013	0.00034
1,2-Dichloroethene, Total	NS	NS	NS	ND		0.0011	0.00016	ND		0.0012	0.00016	ND		0.0014	0.0002	ND		0.0013	0.00018	ND		0.0013	0.00018
1,2-Dichloropropane	NS	NS	NS	ND		0.0011	0.00014	ND		0.0012	0.00015	ND		0.0014	0.00018	ND		0.0013	0.00016	ND		0.0013	0.00017
1,3,5-Trimethylbenzene	190	8.4	8.4	ND		0.0023	0.00022	ND		0.0024	0.00023	ND		0.0028	0.00028	ND		0.0026	0.00025	ND		0.0027	0.00026
1,3-Dichlorobenzene	280	2.4	2.4	ND		0.0023	0.00017	ND		0.0024	0.00017	ND		0.0028	0.00021	ND		0.0026	0.00019	ND		0.0027	0.0002
1,3-Dichloropropane	NS	NS	NS	ND		0.0023	0.00019	ND		0.0024	0.0002	ND		0.0028	0.00024	ND		0.0026	0.00022	ND		0.0027	0.00022
1,3-Dichloropropene, Total	NS	NS	NS	ND		0.00057	0.00018	ND		0.00059	0.00019	ND		0.00071	0.00022	ND		0.00064	0.0002	ND		0.00066	0.00021
1,4-Dichlorobenzene	130	1.8	1.8	ND		0.0023	0.0002	ND		0.0024	0.0002	ND		0.0028	0.00024	ND		0.0026	0.00022	ND		0.0027	0.00023
1,4-Dioxane	130	0.1	0.1	ND		0.091	0.04	ND		0.094	0.041	*ND*		*0.11*	*0.05*	ND		0.1	0.045	*ND*		*0.11*	*0.047*
2,2-Dichloropropane	NS	NS	NS	ND		0.0023	0.00023	ND		0.0024	0.00024	ND		0.0028	0.00029	ND		0.0026	0.00026	ND		0.0027	0.00027
2-Butanone	500	0.12	0.12	ND		0.011	0.0025	ND		0.012	0.0026	ND		0.014	0.0032	ND		0.013	0.0029	ND		0.013	0.003
2-Hexanone	NS	NS	NS	ND		0.011	0.0013	ND		0.012	0.0014	ND		0.014	0.0017	ND		0.013	0.0015	ND		0.013	0.0016
4-Methyl-2-pentanone	NS	NS	NS	ND		0.011	0.0015	ND		0.012	0.0015	ND		0.014	0.0018	ND		0.013	0.0016	ND		0.013	0.0017
Acetone	500	0.05	0.05	ND		0.011	0.0055	ND		0.012	0.0057	ND		0.014	0.0069	ND		0.013	0.0062	ND		0.013	0.0064
Acrylonitrile	NS	NS	NS	ND		0.0046	0.0013	ND		0.0047	0.0014	ND		0.0057	0.0016	ND		0.0052	0.0015	ND		0.0053	0.0015
Benzene	44	0.06	0.06	ND		0.00057	0.00019	ND		0.00059	0.0002	ND		0.00071	0.00024	ND		0.00064	0.00021	ND		0.00066	0.00022
Bromobenzene	NS	NS	NS	ND		0.0023	0.00016	ND		0.0024	0.00017	ND		0.0028	0.00021	ND		0.0026	0.00019	ND		0.0027	0.00019
Bromochloromethane	NS	NS	NS	ND		0.0023	0.00023	ND		0.0024	0.00024	ND		0.0028	0.00029	ND		0.0026	0.00026	ND		0.0027	0.00027
Bromodichloromethane	NS	NS	NS	ND		0.00057	0.00012	ND		0.00059	0.00013	ND		0.00071	0.00016	ND		0.00064	0.00014	ND		0.00066	0.00014
Bromoform	NS	NS	NS	ND		0.0046	0.00028	ND		0.0047	0.00029	ND		0.0057	0.00035	ND		0.0052	0.00032	ND		0.0053	0.00033
Bromomethane	NS	NS	NS	ND		0.0023	0.00066	ND		0.0024	0.00068	ND		0.0028	0.00083	ND		0.0026	0.00075	ND		0.0027	0.00077
Carbon disulfide	NS	NS	NS	ND		0.011	0.0052	ND		0.012	0.0054	ND		0.014	0.0065	ND		0.013	0.0059	ND		0.013	0.006
Carbon tetrachloride	22	0.76	0.76	ND		0.0011	0.00026	ND		0.0012	0.00027	ND		0.0014	0.00033	ND		0.0013	0.0003	ND		0.0013	0.00031
Chlorobenzene	500	1.1	1.1	ND		0.00057	0.00014	ND		0.00059	0.00015	ND		0.00071	0.00018	ND		0.00064	0.00016	ND		0.00066	0.00017
Chloroethane	NS	NS	NS	ND		0.0023	0.00052	ND		0.0024	0.00053	ND		0.0028	0.00064	ND		0.0026	0.00058	ND		0.0027	0.0006
Chloroform	350	0.37	0.37	ND		0.0017	0.00016	ND		0.0018	0.00016	ND		0.0021	0.0002	ND		0.0019	0.00018	ND		0.002	0.00019
Chloromethane	NS	NS	NS	ND		0.0046	0.0011	ND		0.0047	0.0011	ND		0.0057	0.0013	ND		0.0052	0.0012	ND		0.0053	0.0012
cis-1,2-Dichloroethene	500	0.25	0.25	ND		0.0011	0.0002	ND		0.0012	0.00021	ND		0.0014	0.00025	ND		0.0013	0.00022	ND		0.0013	0.00023
cis-1,3-Dichloropropene	NS	NS	NS	ND		0.00057	0.00018	ND		0.00059	0.00019	ND		0.00071	0.00022	ND		0.00064	0.0002	ND		0.00066	0.00021
Dibromochloromethane	NS	NS	NS	ND		0.0011	0.00016	ND		0.0012	0.00016	ND		0.0014	0.0002	ND		0.0013	0.00018	ND		0.0013	0.00019
Dibromomethane	NS	NS	NS	ND		0.0023	0.00027	ND		0.0024	0.00028	ND		0.0028	0.00034	ND		0.0026	0.00031	ND		0.0027	0.00032
Dichlorodifluoromethane	NS	NS	NS	ND		0.011	0.001	ND		0.012	0.0011	ND		0.014	0.0013	ND		0.013	0.0012	ND		0.013	0.0012
Ethyl ether	NS	NS	NS	ND		0.0023	0.00039	ND		0.0024	0.0004	ND		0.0028	0.00049	ND		0.0026	0.00044	ND		0.0027	0.00045
Ethylbenzene	390	1	1	0.00016	J	0.0011	0.00016	0.00019	J	0.0012	0.00017	ND		0.0014	0.0002	ND		0.0013	0.00018	ND		0.0013	0.00019
Hexachlorobutadiene	NS	NS	NS	ND		0.0046	0.00019	ND		0.0047	0.0002	ND		0.0057	0.00024	ND		0.0052	0.00022	ND		0.0053	0.00022
Isopropylbenzene	NS	NS	NS	ND		0.0011	0.00012	ND		0.0012	0.00013	ND		0.0014	0.00016	ND		0.0013	0.00014	ND		0.0013	0.00014
Methyl tert butyl ether	500	0.93	0.93	ND		0.0023	0.00023	ND		0.0024	0.00024	ND		0.0028	0.00029	ND		0.0026	0.00026	ND		0.0027	0.00027
Methylene chloride	500	0.05	0.05	ND		0.0057	0.0026	ND		0.0059	0.0027	ND		0.0071	0.0033	ND		0.0064	0.003	ND		0.0066	0.003
Naphthalene	500	12	12	ND		0.0046	0.00074	ND		0.0047	0.00077	ND		0.0057	0.00093	ND		0.0052	0.00084	ND		0.0053	0.00086
n-Butylbenzene	500	12	12	ND		0.0011	0.00019	ND		0.0012	0.0002	ND		0.0014	0.00024	ND		0.0013	0.00022	ND		0.0013	0.00022
n-Propylbenzene	500	3.9	3.9	ND		0.0011	0.0002	ND		0.0012	0.0002	ND		0.0014	0.00024	ND		0.0013	0.00022	ND		0.0013	0.00023
o-Chlorotoluene	NS	NS	NS	ND		0.0023	0.00022	ND		0.0024	0.00022	ND		0.0028	0.00027	ND		0.0026	0.00025	ND		0.0027	0.00025
o-Xylene	NS	NS	NS	ND		0.0011	0.00033	ND		0.0012	0.00034	ND		0.0014	0.00042	ND		0.0013	0.00038	ND		0.0013	0.00039
p/m-Xylene	NS	NS	NS	0.00066	J	0.0023	0.00064	0.00086	J	0.0024	0.00066	0.00085	J	0.0028	0.0008	0.00073	J	0.0026	0.00072	0.00074	J	0.0027	0.00074
p-Chlorotoluene	NS	NS	NS	ND		0.0023	0.00012	ND		0.0024	0.00013	ND		0.0028	0.00015	ND		0.0026	0.00014	ND		0.0027	0.00014
p-Diethylbenzene	NS	NS	NS	ND		0.0023	0.0002	ND		0.0024	0.00021	ND		0.0028	0.00025	ND		0.0026	0.00023	ND		0.0027	0.00024
p-Ethyltoluene	NS	NS	NS	ND		0.0023	0.00044	ND		0.0024	0.00045	ND		0.0028	0.00055	ND		0.0026	0.0005	ND		0.0027	0.00051
p-Isopropyltoluene	NS	NS	NS	ND		0.0011	0.00012	ND		0.0012	0.00013	ND		0.0014	0.00016	ND		0.0013	0.00014	ND		0.0013	0.00014
sec-Butylbenzene	500	11	11	ND		0.0011	0.00017	ND		0.0012	0.00017	ND		0.0014	0.00021	ND		0.0013	0.00019	ND		0.0013	0.00019
Styrene	NS	NS	NS	ND		0.0011	0.00022	ND		0.0012	0.00023	ND		0.0014	0.00028	ND		0.0013	0.00025	ND		0.0013	0.00026
tert-Butylbenzene	500	5.9	5.9	ND		0.0023	0.00013	ND		0.0024	0.00014	ND		0.0028	0.00017	ND		0.0026	0.00015	ND		0.0027	0.00016
Tetrachloroethene	150	1.3	1.3	0.00056	J	0.00057	0.00022	0.0003	J	0.00059	0.00023	ND		0.00071	0.00028	ND		0.00064	0.00025	ND		0.00066	0.00026
Toluene	500	0.7	0.7	ND		0.0011	0.00062	ND		0.0012	0.00064	ND		0.0014	0.00077	ND		0.0013	0.0007	ND		0.0013	0.00072
trans-1,2-Dichloroethene	500	0.19	0.19	ND		0.0017	0.00016	ND		0.0018	0.00016	ND		0.0021	0.0002	ND		0.0019	0.00018	ND		0.002	0.00018
trans-1,3-Dichloropropene	NS	NS	NS	ND		0.0011	0.00031	ND		0.0012	0.00032	ND		0.0014	0.00039	ND		0.0013	0.00035	ND		0.0013	0.00036
trans-1,4-Dichloro-2-butene	NS	NS	NS	ND		0.0057	0.0016	ND		0.0059	0.0017	ND		0.0071	0.002	ND		0.0064	0.0018	ND		0.0066	0.0019
Trichloroethene	200	0.47	0.47	ND		0.00057	0.00016	0.00084		0.00059	0.00016	ND		0.00071	0.0002	0.00022	J	0.00064	0.00018	ND		0.00066	0.00018
Trichlorofluoromethane	NS	NS	NS	ND		0.0046	0.00079	ND		0.0047	0.00082	ND		0.0057	0.00099	ND		0.0052	0.0009	ND		0.0053	0.00092
Vinyl acetate	NS	NS	NS	ND		0.011	0.0024	ND		0.012	0.0025	ND		0.014	0.0031	ND		0.013	0.0028	ND		0.013	0.0029
Vinyl chloride	13	0.02	0.02	ND		0.0011	0.00038	ND		0.0012	0.0004	ND		0.0014	0.00048	ND		0.0013	0.00043	ND		0.0013	0.00045
Xylenes, Total	500	1.6	0.26	0.00066	J	0.0011	0.00033	0.00086	J	0.0012	0.00034	0.00085	J	0.0014	0.00042	0.00073	J	0.0013	0.00038	0.00074	J	0.0013	0.00039
Total VOCs	NS	NS	NS	0.00138	-	-	-	0.00219	-	-	-	0.00085	-	-	-	0.00095	-	-	-	0.00074	-	-	-

Table 1 - Summary of Soil Sampling Results
101-21 101st Street
Queens, New York
VERTEX Project No. 79111

SAMPLE ID:				VTX-SB-1 (30.0-30.5)				VTX-SB-2 (26.0-26.5)				VTX-SB-3 (10.0-10.5)				VTX-SB-5 (8.0-8.5)				VTX-SB-6 (23.5-24.0)			
LAB ID:				L2224545-01				L2224545-02				L2224545-03				L2224545-05				L2224545-06			
COLLECTION DATE:	NY-RESC	NY-RESGW	NY-UNRES	5/9/2022				5/9/2022				5/10/2022				5/10/2022				5/9/2022			
SAMPLE DEPTH:				30.0-30.5				26.0-26.5				10.0-10.5				8.0-8.5				23.5-24.0			
LOCATION:				Adjacent to F.O. UST (NW)				Adjacent to TCE UST				Adjacent to hydraulic elevator				Adjacent to removed F.O. UST				SW corner of building			
ANALYTE	(mg/kg)	(mg/kg)	(mg/kg)	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
SEMIVOLATILE ORGANICS BY GC/MS																							
1,2,4,5-Tetrachlorobenzene	NS	NS	NS	ND		0.18	0.018	-		-	-	-		-	-	ND		0.49	0.051	-	-	-	-
1,2,4-Trichlorobenzene	NS	NS	NS	ND		0.18	0.02	-		-	-	-		-	-	ND		0.49	0.056	-	-	-	-
1,2-Dichlorobenzene	500	1.1	1.1	ND		0.18	0.031	-		-	-	-		-	-	ND		0.49	0.088	-	-	-	-
1,3-Dichlorobenzene	280	2.4	2.4	ND		0.18	0.03	-		-	-	-		-	-	ND		0.49	0.084	-	-	-	-
1,4-Dichlorobenzene	130	1.8	1.8	ND		0.18	0.031	-		-	-	-		-	-	ND		0.49	0.085	-	-	-	-
1,4-Dioxane	130	0.1	0.1	ND		0.026	0.0081	-		-	-	-		-	-	ND		0.073	0.022	-	-	-	-
2,4,5-Trichlorophenol	NS	NS	NS	ND		0.18	0.034	-		-	-	-		-	-	ND		0.49	0.093	-	-	-	-
2,4,6-Trichlorophenol	NS	NS	NS	ND		0.1	0.033	-		-	-	-		-	-	ND		0.29	0.092	-	-	-	-
2,4-Dichlorophenol	NS	NS	NS	ND		0.16	0.028	-		-	-	-		-	-	ND		0.44	0.078	-	-	-	-
2,4-Dimethylphenol	NS	NS	NS	ND		0.18	0.058	-		-	-	-		-	-	ND		0.49	0.16	-	-	-	-
2,4-Dinitrophenol	NS	NS	NS	ND		0.84	0.082	-		-	-	-		-	-	ND		2.3	0.23	-	-	-	-
2,4-Dinitrotoluene	NS	NS	NS	ND		0.18	0.035	-		-	-	-		-	-	ND		0.49	0.098	-	-	-	-
2,6-Dinitrotoluene	NS	NS	NS	ND		0.18	0.03	-		-	-	-		-	-	ND		0.49	0.084	-	-	-	-
2-Chloronaphthalene	NS	NS	NS	ND		0.18	0.017	-		-	-	-		-	-	ND		0.49	0.048	-	-	-	-
2-Chlorophenol	NS	NS	NS	ND		0.18	0.021	-		-	-	-		-	-	ND		0.49	0.058	-	-	-	-
2-Methylnaphthalene	NS	NS	NS	ND		0.21	0.021	-		-	-	-		-	-	ND		0.58	0.059	-	-	-	-
2-Methylphenol	500	0.33	0.33	ND		0.18	0.027	-		-	-	-		-	-	*ND*		*0.49*	*0.076*	-	-	-	-
2-Nitroaniline	NS	NS	NS	ND		0.18	0.034	-		-	-	-		-	-	ND		0.49	0.094	-	-	-	-
2-Nitrophenol	NS	NS	NS	ND		0.38	0.066	-		-	-	-		-	-	ND		1	0.18	-	-	-	-
3,3'-Dichlorobenzidine	NS	NS	NS	ND		0.18	0.047	-		-	-	-		-	-	ND		0.49	0.13	-	-	-	-
3-Methylphenol/4-Methylphenol	500	0.33	0.33	ND		0.25	0.027	-		-	-	-		-	-	*ND*		*0.7*	*0.076*	-	-	-	-
3-Nitroaniline	NS	NS	NS	ND		0.18	0.033	-		-	-	-		-	-	ND		0.49	0.092	-	-	-	-
4,6-Dinitro-o-cresol	NS	NS	NS	ND		0.46	0.084	-		-	-	-		-	-	ND		1.3	0.23	-	-	-	-
4-Bromophenyl phenyl ether	NS	NS	NS	ND		0.18	0.027	-		-	-	-		-	-	ND		0.49	0.074	-	-	-	-
4-Chloroaniline	NS	NS	NS	ND		0.18	0.032	-		-	-	-		-	-	ND		0.49	0.089	-	-	-	-
4-Chlorophenyl phenyl ether	NS	NS	NS	ND		0.18	0.019	-		-	-	-		-	-	ND		0.49	0.052	-	-	-	-
4-Nitroaniline	NS	NS	NS	ND		0.18	0.073	-		-	-	-		-	-	ND		0.49	0.2	-	-	-	-
4-Nitrophenol	NS	NS	NS	ND		0.24	0.072	-		-	-	-		-	-	ND		0.68	0.2	-	-	-	-
Acenaphthene	500	98	20	ND		0.14	0.018	-		-	-	-		-	-	ND		0.39	0.05	-	-	-	-
Acenaphthylene	500	107	100	ND		0.14	0.027	-		-	-	-		-	-	ND		0.39	0.075	-	-	-	-
Acetophenone	NS	NS	NS	ND		0.18	0.022	-		-	-	-		-	-	ND		0.49	0.06	-	-	-	-
Anthracene	500	1000	100	ND		0.1	0.034	-		-	-	-		-	-	ND		0.29	0.095	-	-	-	-
Benzo(a)anthracene	5.6	1	1	ND		0.1	0.02	-		-	-	-		-	-	ND		0.29	0.055	-	-	-	-
Benzo(a)pyrene	1	22	1	ND		0.14	0.043	-		-	-	-		-	-	ND		0.39	0.12	-	-	-	-
Benzo(b)fluoranthene	5.6	1.7	1	ND		0.1	0.03	-		-	-	-		-	-	ND		0.29	0.082	-	-	-	-
Benzo(ghi)perylene	500	1000	100	ND		0.14	0.021	-		-	-	-		-	-	ND		0.39	0.057	-	-	-	-
Benzo(k)fluoranthene	56	1.7	0.8	ND		0.1	0.028	-		-	-	-		-	-	ND		0.29	0.078	-	-	-	-
Benzoic Acid	NS	NS	NS	ND		0.57	0.18	-		-	-	-		-	-	ND		1.6	0.49	-	-	-	-
Benzyl Alcohol	NS	NS	NS	ND		0.18	0.054	-		-	-	-		-	-	ND		0.49	0.15	-	-	-	-
Biphenyl	NS	NS	NS	ND		0.4	0.023	-		-	-	-		-	-	ND		1.1	0.063	-	-	-	-
Bis(2-chloroethoxy)methane	NS	NS	NS	ND		0.19	0.018	-		-	-	-		-	-	ND		0.53	0.049	-	-	-	-
Bis(2-chloroethyl)ether	NS	NS	NS	ND		0.16	0.024	-		-	-	-		-	-	ND		0.44	0.066	-	-	-	-
Bis(2-chloroisopropyl)ether	NS	NS	NS	ND		0.21	0.03	-		-	-	-		-	-	ND		0.58	0.083	-	-	-	-
Bis(2-ethylhexyl)phthalate	NS	NS	NS	ND		0.18	0.061	-		-	-	-		-	-	ND		0.49	0.17	-	-	-	-
Butyl benzyl phthalate	NS	NS	NS	ND		0.18	0.044	-		-	-	-		-	-	ND		0.49	0.12	-	-	-	-
Carbazole	NS	NS	NS	ND		0.18	0.017	-		-	-	-		-	-	ND		0.49	0.047	-	-	-	-
Chrysene	56	1	1	ND		0.1	0.018	-		-	-	-		-	-	ND		0.29	0.051	-	-	-	-
Dibenzo(a,h)anthracene	0.56	1000	0.33	ND		0.1	0.02	-		-	-	-		-	-	ND		0.29	0.056	-	-	-	-
Dibenzofuran	350	210	7	ND		0.18	0.016	-		-	-	-		-	-	ND		0.49	0.046	-	-	-	-
Diethyl phthalate	NS	NS	NS	ND		0.18	0.016	-		-	-	-		-	-	ND		0.49	0.045	-	-	-	-
Dimethyl phthalate	NS	NS	NS	ND		0.18	0.037	-		-	-	-		-	-	ND		0.49	0.1	-	-	-	-
Di-n-butylphthalate	NS	NS	NS	ND		0.18	0.033	-		-	-	-		-	-	ND		0.49	0.092	-	-	-	-
Di-n-octylphthalate	NS	NS	NS	ND		0.18	0.06	-		-	-	-		-	-	ND		0.49	0.16	-	-	-	-
Fluoranthene	500	1000	100	ND		0.1	0.02	-		-	-	-		-	-	ND		0.29	0.056	-	-	-	-
Fluorene	500	386	30	ND		0.18	0.017	-		-	-	-		-	-	ND		0.49	0.047	-	-	-	-
Hexachlorobenzene	6	3.2	0.33	ND		0.1	0.02	-		-	-	-		-	-	ND		0.29	0.055	-	-	-	-
Hexachlorobutadiene	NS	NS	NS	ND		0.18	0.026	-		-	-	-		-	-	ND		0.49	0.071	-	-	-	-
Hexachlorocyclopentadiene	NS	NS	NS	ND		0.5	0.16	-		-	-	-		-	-	ND		1.4	0.44	-	-	-	-
Hexachloroethane	NS	NS	NS	ND		0.14	0.028	-		-	-	-		-	-	ND		0.39	0.079	-	-	-	-
Indeno(1,2,3-cd)pyrene	5.6	8.2	0.5	ND		0.14	0.024	-		-	-	-		-	-	ND		0.39	0.068	-	-	-	-
Isophorone	NS	NS	NS	ND		0.16	0.023	-		-	-	-		-	-	ND		0.44	0.063	-	-	-	-
Naphthalene	500	12	12	ND		0.18	0.021	-		-	-	-		-	-	ND		0.49	0.059	-	-	-	-
NDPA/DPA	NS	NS	NS	ND		0.14	0.02	-		-	-	-		-	-	ND		0.39	0.055	-	-	-	-
Nitrobenzene	NS	NS	NS	ND		0.16	0.026	-		-	-	-		-	-	ND		0.44	0.072	-	-	-	-
n-Nitrosodi-n-propylamine	NS	NS	NS	ND		0.18	0.027	-		-	-	-		-	-	ND		0.49	0.075	-	-	-	-
p-Chloro-m-cresol	NS	NS	NS	ND		0.18	0.026	-		-	-	-		-	-	ND		0.49	0.073	-	-	-	-
Pentachlorophenol	6.7	0.8	0.8	ND		0.14	0.038	-		-	-	-		-	-	ND		0.39	0.11	-	-	-	-
Phenanthrene	500	1000	100	ND		0.1	0.021	-		-	-	-		-	-	ND		0.29	0.059	-	-	-	-
Phenol	500	0.33	0.33	ND		0.18	0.026	-		-	-	-		-	-	*ND*		*0.49*	*0.074*	-	-	-	-
Pyrene	500	1000	100	ND		0.1	0.017	-		-	-	-		-	-	ND		0.29	0.048	-	-	-	-
Total SVOCs	NS	NS	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
GENERAL CHEMISTRY																							
Solids, Total	NS	NS	NS	92.8		0.1	NA	86.5		0.1	NA	97.1		0.1	NA	97.3		0.1	NA	89.2		0.1	NA

Notes:
mg/kg - milligrams per kilogram
ND - Not detected
NY-RESC: New York NYCRR Part 375 Commercial Criteria, New York Restricted use Criteria
NY-RESGW: New York NYCRR Part 375 Groundwater Criteria, New York Restricted use Criteria
NY-UNRES: New York NYCRR Part 375 New York Unrestricted use Criteria
Italicized text indicates the reporting limit exceeds one or more criteria
J - Estimated concentration

Table 2 - Summary of Groundwater Sampling Results
101-21 101st Street
Queens, New York
VERTEX Project No. 79111

SAMPLE ID:			VTX-TW-1				VTX-TW-2				VTX-TW-3				VTX-TW-4				VTX-TW-5				VTX-TW-6				B-4W			
LAB ID:			L2224545-07				L2224545-08				L2224545-09				L2224545-10				L2224545-11				L2224545-12				L2224545-13			
COLLECTION DATE:	NY-AWQS	NY-TOGS-GA	5/9/2022				5/9/2022				5/10/2022				5/10/2022				5/10/2022				5/9/2022				5/9/2022			
LOCATION:			Adjacent to F.O. UST (NW)				Adjacent to TCE UST				Adjacent to hydraulic elevator				Adjacent to former vault				Adjacent to removed F.O. UST				SW corner of building				Geotech MW in sidewalk along 101st			
ANALYTE	(ug/l)	(ug/l)	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
VOLATILE ORGANICS BY GC/MS																														
1,1,1,2-Tetrachloroethane	5	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
1,1,1-Trichloroethane	5	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
1,1,2,2-Tetrachloroethane	5	5	ND		0.5	0.17	ND		0.5	0.17	ND		0.5	0.17	ND		0.5	0.17	ND		0.5	0.17	ND		0.5	0.17	ND		0.5	0.17
1,1,2-Trichloroethane	1	1	*ND*		*1.5*	*0.5*	*ND*		*1.5*	*0.5*	*ND*		*1.5*	*0.5*	*ND*		*1.5*	*0.5*	*ND*		*1.5*	*0.5*	*ND*		*1.5*	*0.5*	*ND*		*1.5*	*0.5*
1,1-Dichloroethane	5	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
1,1-Dichloroethene	5	5	ND		0.5	0.17	ND		0.5	0.17	ND		0.5	0.17	ND		0.5	0.17	ND		0.5	0.17	ND		0.5	0.17	ND		0.5	0.17
1,1-Dichloropropene	5	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
1,2,3-Trichlorobenzene	5	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
1,2,3-Trichloropropane	0.04	0.04	*ND*		*2.5*	*0.7*	*ND*		*2.5*	*0.7*	*ND*		*2.5*	*0.7*	*ND*		*2.5*	*0.7*	*ND*		*2.5*	*0.7*	*ND*		*2.5*	*0.7*	*ND*		*2.5*	*0.7*
1,2,4,5-Tetramethylbenzene	5	5	ND		2	0.54	ND		2	0.54	ND		2	0.54	ND		2	0.54	ND		2	0.54	ND		2	0.54	ND		2	0.54
1,2,4-Trichlorobenzene	5	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
1,2,4-Trimethylbenzene	5	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
1,2-Dibromo-3-chloropropane	0.04	0.04	*ND*		*2.5*	*0.7*	*ND*		*2.5*	*0.7*	*ND*		*2.5*	*0.7*	*ND*		*2.5*	*0.7*	*ND*		*2.5*	*0.7*	*ND*		*2.5*	*0.7*	*ND*		*2.5*	*0.7*
1,2-Dibromoethane	0.0006	0.0006	*ND*		*2*	*0.65*	*ND*		*2*	*0.65*	*ND*		*2*	*0.65*	*ND*		*2*	*0.65*	*ND*		*2*	*0.65*	*ND*		*2*	*0.65*	*ND*		*2*	*0.65*
1,2-Dichlorobenzene	3	3	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
1,2-Dichloroethane	0.6	0.6	ND		0.5	0.13	ND		0.5	0.13	ND		0.5	0.13	ND		0.5	0.13	ND		0.5	0.13	ND		0.5	0.13	ND		0.5	0.13
1,2-Dichloroethene, Total	NS	NS	ND		2.5	0.7	ND		2.5	0.7	1.2	J	2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
1,2-Dichloropropane	1	1	ND		1	0.14	ND		1	0.14	ND		1	0.14	ND		1	0.14	ND		1	0.14	ND		1	0.14	ND		1	0.14
1,3,5-Trimethylbenzene	5	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
1,3-Dichlorobenzene	3	3	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
1,3-Dichloropropane	5	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
1,3-Dichloropropene, Total	NS	NS	ND		0.5	0.14	ND		0.5	0.14	ND		0.5	0.14	ND		0.5	0.14	ND		0.5	0.14	ND		0.5	0.14	ND		0.5	0.14
1,4-Dichlorobenzene	3	3	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
1,4-Dioxane	NS	NS	ND		250	61	ND		250	61	ND		250	61	ND		250	61	ND		250	61	ND		250	61	ND		250	61
2,2-Dichloropropane	5	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
2-Butanone	50	50	ND		5	1.9	ND		5	1.9	ND		5	1.9	ND		5	1.9	ND		5	1.9	ND		5	1.9	ND		5	1.9
2-Hexanone	50	50	ND		5	1	ND		5	1	ND		5	1	ND		5	1	ND		5	1	ND		5	1	ND		5	1
4-Methyl-2-pentanone	NS	NS	ND		5	1	ND		5	1	ND		5	1	ND		5	1	ND		5	1	ND		5	1	ND		5	1
Acetone	50	50	1.9	J	5	1.5	ND		5	1.5	ND		5	1.5	2.3	J	5	1.5	ND		5	1.5	1.5	J	5	1.5	ND		5	1.5
Acrylonitrile	5	5	ND		5	1.5	ND		5	1.5	ND		5	1.5	ND		5	1.5	ND		5	1.5	ND		5	1.5	ND		5	1.5
Benzene	1	1	ND		0.5	0.16	ND		0.5	0.16	ND		0.5	0.16	ND		0.5	0.16	ND		0.5	0.16	ND		0.5	0.16	ND		0.5	0.16
Bromobenzene	5	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
Bromochloromethane	5	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
Bromodichloromethane	50	50	ND		0.5	0.19	ND		0.5	0.19	ND		0.5	0.19	ND		0.5	0.19	ND		0.5	0.19	ND		0.5	0.19	ND		0.5	0.19
Bromoform	50	50	ND		2	0.65	ND		2	0.65	ND		2	0.65	ND		2	0.65	ND		2	0.65	ND		2	0.65	ND		2	0.65
Bromomethane	5	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
Carbon disulfide	60	60	ND		5	1	ND		5	1	ND		5	1	ND		5	1	ND		5	1	ND		5	1	ND		5	1
Carbon tetrachloride	5	5	ND		0.5	0.13	ND		0.5	0.13	ND		0.5	0.13	ND		0.5	0.13	ND		0.5	0.13	ND		0.5	0.13	ND		0.5	0.13
Chlorobenzene	5	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
Chloroethane	5	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
Chloroform	7	7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	2.2	J	2.5	0.7
Chloromethane	NS	NS	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
cis-1,2-Dichloroethene	5	5	ND		2.5	0.7	ND		2.5	0.7	1.2	J	2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
cis-1,3-Dichloropropene	0.4	0.4	*ND*		*0.5*	*0.14*	*ND*		*0.5*	*0.14*	*ND*		*0.5*	*0.14*	*ND*		*0.5*	*0.14*	*ND*		*0.5*	*0.14*	*ND*		*0.5*	*0.14*	*ND*		*0.5*	*0.14*
Dibromochloromethane	50	50	ND		0.5	0.15	ND		0.5	0.15	ND		0.5	0.15	ND		0.5	0.15	ND		0.5	0.15	ND		0.5	0.15	ND		0.5	0.15
Dibromomethane	5	5	ND		5	1	ND		5	1	ND		5	1	ND		5	1	ND		5	1	ND		5	1	ND		5	1
Dichlorodifluoromethane	5	5	ND		5	1	ND		5	1	ND		5	1	ND		5	1	ND		5	1	ND		5	1	ND		5	1
Ethyl ether	NS	NS	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
Ethylbenzene	5	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
Hexachlorobutadiene	0.5	0.5	*ND*		*2.5*	*0.7*	*ND*		*2.5*	*0.7*	*ND*		*2.5*	*0.7*	*ND*		*2.5*	*0.7*	*ND*		*2.5*	*0.7*	*ND*		*2.5*	*0.7*	*ND*		*2.5*	*0.7*
Isopropylbenzene	5	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
Methyl tert butyl ether	10	10	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
Methylene chloride	5	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
Naphthalene	10	10	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
n-Butylbenzene	5	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
n-Propylbenzene	5	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
o-Chlorotoluene	5	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
o-Xylene	5	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
p/m-Xylene	5	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
p-Chlorotoluene	5	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
p-Diethylbenzene	NS	NS	ND		2	0.7	ND		2	0.7	ND		2	0.7	ND		2	0.7	ND		2	0.7	ND		2	0.7	ND		2	0.7
p-Ethyltoluene	NS	NS	ND		2	0.7	ND		2	0.7	ND		2	0.7	ND		2	0.7	ND		2	0.7	ND		2	0.7	ND		2	0.7
p-Isopropyltoluene	5	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
sec-Butylbenzene	5	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
Styrene	5	930	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
tert-Butylbenzene	5	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
Tetrachloroethene	5	5	0.36	J	0.5	0.18	**7.7**		0.5	0.18	**7.2**		0.5	0.18	0.28	J	0.5	0.18	0.27	J	0.5	0.18	4		0.5	0.18	0.3	J	0.5	0.18
Toluene	5	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
trans-1,2-Dichloroethene	5	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
trans-1,3-Dichloropropene	0.4	0.4	*ND*		*0.5*	*0.16*	*ND*		*0.5*	*0.16*	*ND*		*0.5*	*0.16*	*ND*		*0.5*	*0.16*	*ND*		*0.5*	*0.16*	*ND*		*0.5*	*0.16*	*ND*		*0.5*	*0.16*
trans-1,4-Dichloro-2-butene	5	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
Trichloroethene	5	5	0.26	J	0.5	0.18	**7.6**		0.5	0.18	**26**		0.5	0.18	2.3		0.5	0.18	**7.5**		0.5	0.18	**22**		0.5	0.18	0.98		0.5	0.18
Trichlorofluoromethane	5	5	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
Vinyl acetate	NS	NS	ND		5	1	ND		5	1	ND		5	1	ND		5	1	ND		5	1	ND		5	1	ND		5	1
Vinyl chloride	2	2	ND		1	0.07	ND		1	0.07	ND		1	0.07	ND		1	0.07	ND		1	0.07	ND		1	0.07	ND		1	0.07
Xylenes, Total	NS	NS	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7
Total VOCs	NS	NS	2.52	-	-	-	15.3	-	-	-	34.4	-	-	-	4.88	-	-	-	7.77	-	-	-	27.5	-	-	-	3.48	-	-	-

Table 2 - Summary of Groundwater Sampling Results
101-21 101st Street
Queens, New York
VERTEX Project No. 79111

SAMPLE ID:			VTX-TW-1				VTX-TW-2				VTX-TW-3				VTX-TW-4				VTX-TW-5				VTX-TW-6				B-4W			
LAB ID:			L2224545-07				L2224545-08				L2224545-09				L2224545-10				L2224545-11				L2224545-12				L2224545-13			
COLLECTION DATE:	NY-AWQS	NY-TOGS-GA	5/9/2022				5/9/2022				5/10/2022				5/10/2022				5/10/2022				5/9/2022				5/9/2022			
LOCATION:			Adjacent to F.O. UST (NW)				Adjacent to TCE UST				Adjacent to hydraulic elevator				Adjacent to former vault				Adjacent to removed F.O. UST				SW corner of building				Geotech MW in sidewalk along 101st			
ANALYTE	(ug/l)	(ug/l)	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
SEMIVOLATILE ORGANICS BY GC/MS																														
1,2,4,5-Tetrachlorobenzene	5	5	*ND*		*10*	*0.44*	-				-				*ND*		*10*	*0.44*	*ND*		*10*	*0.44*	-				-			
1,2,4-Trichlorobenzene	5	5	ND		5	0.5	-				-				ND		5	0.5	ND		5	0.5	-				-			
1,2-Dichlorobenzene	3	3	ND		2	0.45	-				-				ND		2	0.45	ND		2	0.45	-				-			
1,3-Dichlorobenzene	3	3	ND		2	0.4	-				-				ND		2	0.4	ND		2	0.4	-				-			
1,4-Dichlorobenzene	3	3	ND		2	0.43	-				-				ND		2	0.43	ND		2	0.43	-				-			
2,4,5-Trichlorophenol	NS	NS	ND		5	0.77	-				-				ND		5	0.77	ND		5	0.77	-				-			
2,4,6-Trichlorophenol	NS	NS	ND		5	0.61	-				-				ND		5	0.61	ND		5	0.61	-				-			
2,4-Dichlorophenol	1	2	*ND*		*5*	*0.41*	-				-				*ND*		*5*	*0.41*	*ND*		*5*	*0.41*	-				-			
2,4-Dimethylphenol	50	2	*ND*		*5*	*1.8*	-				-				*ND*		*5*	*1.8*	*ND*		*5*	*1.8*	-				-			
2,4-Dinitrophenol	10	2	*ND*		*20*	*6.6*	-				-				*ND*		*20*	*6.6*	*ND*		*20*	*6.6*	-				-			
2,4-Dinitrotoluene	5	5	ND		5	1.2	-				-				ND		5	1.2	ND		5	1.2	-				-			
2,6-Dinitrotoluene	5	5	ND		5	0.93	-				-				ND		5	0.93	ND		5	0.93	-				-			
2-Chlorophenol	NS	NS	ND		2	0.48	-				-				ND		2	0.48	ND		2	0.48	-				-			
2-Methylphenol	NS	NS	ND		5	0.49	-				-				ND		5	0.49	ND		5	0.49	-				-			
2-Nitroaniline	5	5	ND		5	0.5	-				-				ND		5	0.5	ND		5	0.5	-				-			
2-Nitrophenol	NS	NS	ND		10	0.85	-				-				ND		10	0.85	ND		10	0.85	-				-			
3,3'-Dichlorobenzidine	5	5	ND		5	1.6	-				-				ND		5	1.6	ND		5	1.6	-				-			
3-Methylphenol/4-Methylphenol	NS	NS	ND		5	0.48	-				-				ND		5	0.48	ND		5	0.48	-				-			
3-Nitroaniline	5	5	ND		5	0.81	-				-				ND		5	0.81	ND		5	0.81	-				-			
4,6-Dinitro-o-cresol	NS	NS	ND		10	1.8	-				-				ND		10	1.8	ND		10	1.8	-				-			
4-Bromophenyl phenyl ether	NS	NS	ND		2	0.38	-				-				ND		2	0.38	ND		2	0.38	-				-			
4-Chloroaniline	5	5	ND		5	1.1	-				-				ND		5	1.1	ND		5	1.1	-				-			
4-Chlorophenyl phenyl ether	NS	NS	ND		2	0.49	-				-				ND		2	0.49	ND		2	0.49	-				-			
4-Nitroaniline	5	5	ND		5	0.8	-				-				ND		5	0.8	ND		5	0.8	-				-			
4-Nitrophenol	NS	NS	ND		10	0.67	-				-				ND		10	0.67	ND		10	0.67	-				-			
Acetophenone	NS	NS	ND		5	0.53	-				-				ND		5	0.53	ND		5	0.53	-				-			
Benzoic Acid	NS	NS	ND		50	2.6	-				-				ND		50	2.6	ND		50	2.6	-				-			
Benzyl Alcohol	NS	NS	ND		2	0.59	-				-				ND		2	0.59	ND		2	0.59	-				-			
Biphenyl	NS	NS	ND		2	0.46	-				-				ND		2	0.46	ND		2	0.46	-				-			
Bis(2-chloroethoxy)methane	5	5	ND		5	0.5	-				-				ND		5	0.5	ND		5	0.5	-				-			
Bis(2-chloroethyl)ether	1	1	*ND*		*2*	*0.5*	-				-				*ND*		*2*	*0.5*	*ND*		*2*	*0.5*	-				-			
Bis(2-chloroisopropyl)ether	5	5	ND		2	0.53	-				-				ND		2	0.53	ND		2	0.53	-				-			
Bis(2-ethylhexyl)phthalate	5	5	ND		3	1.5	-				-				2.2	J	3	1.5	ND		3	1.5	-				-			
Butyl benzyl phthalate	50	50	ND		5	1.2	-				-				ND		5	1.2	ND		5	1.2	-				-			
Carbazole	NS	NS	ND		2	0.49	-				-				ND		2	0.49	ND		2	0.49	-				-			
Dibenzofuran	NS	NS	ND		2	0.5	-				-				ND		2	0.5	ND		2	0.5	-				-			
Diethyl phthalate	50	50	0.66	J	5	0.38	-				-				0.96	J	5	0.38	ND		5	0.38	-				-			
Dimethyl phthalate	50	50	ND		5	1.8	-				-				ND		5	1.8	ND		5	1.8	-				-			
Di-n-butylphthalate	50	50	1.3	J	5	0.39	-				-				ND		5	0.39	ND		5	0.39	-				-			
Di-n-octylphthalate	50	50	ND		5	1.3	-				-				ND		5	1.3	ND		5	1.3	-				-			
Hexachlorocyclopentadiene	5	5	*ND*		*20*	*0.69*	-				-				*ND*		*20*	*0.69*	*ND*		*20*	*0.69*	-				-			
Isophorone	50	50	ND		5	1.2	-				-				ND		5	1.2	ND		5	1.2	-				-			
NDPA/DPA	50	50	ND		2	0.42	-				-				ND		*2*	0.42	ND		2	0.42	-				-			
Nitrobenzene	0.4	0.4	*ND*		*2*	*0.77*	-				-				*ND*		*2*	*0.77*	*ND*		*2*	*0.77*	-				-			
n-Nitrosodi-n-propylamine	NS	NS	ND		5	0.64	-				-				ND		5	0.64	ND		5	0.64	-				-			
p-Chloro-m-cresol	NS	NS	ND		2	0.35	-				-				ND		2	0.35	ND		2	0.35	-				-			
Phenol	1	2	*ND*		*5*	*0.57*	-				-				*ND*		*5*	*0.57*	*ND*		*5*	*0.57*	-				-			
Total SVOCs	NS	NS	1.96	-	-	-	-				-				3.16	-	-	-	-	-	-	-	-				-			
SEMIVOLATILE ORGANICS BY GC/MS-SIM																														
2-Chloronaphthalene	10	10	ND		0.2	0.02	-				-				ND		0.2	0.02	ND		0.2	0.02	-				-			
2-Methylnaphthalene	NS	NS	0.05	J	0.1	0.02	-				-				0.04	J	0.1	0.02	ND		0.1	0.02	-				-			
Acenaphthene	20	20	0.03	J	0.1	0.01	-				-				ND		0.1	0.01	0.03	J	0.1	0.01	-				-			
Acenaphthylene	NS	NS	0.02	J	0.1	0.01	-				-				0.01	J	0.1	0.01	0.04	J	0.1	0.01	-				-			
Anthracene	50	50	0.06	J	0.1	0.01	-				-				0.03	J	0.1	0.01	0.06	J	0.1	0.01	-				-			
Benzo(a)anthracene	0.002	0.002	**0.11**		0.1	0.02	-				-				**0.08**	J	0.1	0.02	**0.13**		0.1	0.02	-				-			
Benzo(a)pyrene	0	0	**0.07**	J	0.1	0.02	-				-				**0.06**	J	0.1	0.02	**0.12**		0.1	0.02	-				-			
Benzo(b)fluoranthene	0.002	0.002	**0.12**		0.1	0.01	-				-				**0.09**	J	0.1	0.01	**0.17**		0.1	0.01	-				-			
Benzo(ghi)perylene	NS	NS	0.08	J	0.1	0.01	-				-				0.06	J	0.1	0.01	0.12		0.1	0.01	-				-			
Benzo(k)fluoranthene	0.002	0.002	**0.08**	J	0.1	0.01	-				-				**0.04**	J	0.1	0.01	**0.09**	J	0.1	0.01	-				-			
Chrysene	0.002	0.002	**0.1**		0.1	0.01	-				-				**0.07**	J	0.1	0.01	**0.12**		0.1	0.01	-				-			
Dibenzo(a,h)anthracene	NS	NS	0.06	J	0.1	0.01	-				-				ND		0.1	0.01	0.06	J	0.1	0.01	-				-			
Fluoranthene	50	50	0.24		0.1	0.02	-				-				0.15		0.1	0.02	0.2		0.1	0.02	-				-			
Fluorene	50	50	0.05	J	0.1	0.01	-				-				0.02	J	0.1	0.01	0.05	J	0.1	0.01	-				-			
Hexachlorobenzene	0.04	0.04	*ND*		*0.8*	*0.01*	-				-				*ND*		*0.8*	*0.01*	*ND*		*0.8*	*0.01*	-				-			
Hexachlorobutadiene	0.5	0.5	ND		0.5	0.05	-				-				ND		0.5	0.05	ND		0.5	0.05	-				-			
Hexachloroethane	5	5	ND		0.8	0.06	-				-				ND		0.8	0.06	ND		0.8	0.06	-				-			
Indeno(1,2,3-cd)pyrene	0.002	0.002	**0.09**	J	0.1	0.01	-				-				**0.05**	J	0.1	0.01	**0.12**		0.1	0.01	-				-			
Naphthalene	10	10	0.09	J	0.1	0.05	-				-				0.06	J	0.1	0.05	0.05	J	0.1	0.05	-				-			
Pentachlorophenol	1	2	ND		0.8	0.01	-				-				ND		0.8	0.01	ND		0.8	0.01	-				-			
Phenanthrene	50	50	0.3		0.1	0.02	-				-				0.13		0.1	0.02	0.16		0.1	0.02	-				-			
Pyrene	50	50	0.19		0.1	0.02	-				-				0.12		0.1	0.02	0.18		0.1	0.02	-				-			
Total SVOCs	NS	NS	1.74	-	-	-	-				-				1.01	-	-	-	1.7	-	-	-	-				-			

Notes:
ug/L - micrograms per liter
J - Estimated concentration
ND - Not detected
NY-AWQS: New York TOGS 111 Ambient Water Quality Standards
NY-TOGS-GA: New York TOGS 111 Groundwater Effluent Limitations
Highlighted and bolded text indicates an exceedance of one or more criteria
Italicized text indicates the reporting limit exceeds one or more of the criteria

Table 3 - Summary of Sub-Slab Soil Gas and Indoor Air Sampling Results
101-21 101st Street
Queens, New York
VERTEX Project No. 79111

LOCATION	NY-SSC-A	NY-IAC-A	NY-SSC-B	NY-IAC-B	NY-SSC-C	NY-IAC-C	Units	VTX-SG1		VTX-IA-1		VTX-SG2		VTX-IA-2		VTX-SG3		VTX-IA-3		VTX-SG4		VTX-IA-4		VTX-SG5		VTX-IA-5		VTX-AA-1	
SAMPLING DATE								5/9/2022		5/6/2022		5/9/2022		5/6/2022		5/9/2022		5/6/2022		5/9/2022		5/6/2022		5/9/2022		5/6/2022		5/6/2022	
LAB SAMPLE ID								L2224547-01		L2224240-01		L2224547-02		L2224240-02		L2224547-03		L2224240-03		L2224547-04		L2224240-04		L2224547-05		L2224240-05		L2224240-06	
SAMPLE TYPE								SOIL_VAPOR		AIR		SOIL_VAPOR		AIR		SOIL_VAPOR		AIR		SOIL_VAPOR		AIR		SOIL_VAPOR		AIR		AIR	
LOCATION																													
Volatile Organics in Air																													
1,1,1-Trichloroethane	NS	NS	100	3	NS	NS	ug/m3	61.7	U	0.153		42.9	U	0.169		**567**		0.169		**1450**		1.45		63.3		0.12		0.109	U
1,1,2,2-Tetrachloroethane	NS	NS	NS	NS	NS	NS	ug/m3	77.6	U	1.37	U	54	U	1.37	U	149	U	1.37	U	49.4	U	1.37	U	42.6	U	1.37	U	1.37	U
1,1,2-Trichloroethane	NS	NS	NS	NS	NS	NS	ug/m3	61.7	U	1.09	U	42.9	U	1.09	U	118	U	1.09	U	39.3	U	1.09	U	33.8	U	1.09	U	1.09	U
1,1-Dichloroethane	NS	NS	NS	NS	NS	NS	ug/m3	45.7	U	0.809	U	31.8	U	0.809	U	87.8	U	0.809	U	156		0.809	U	25.1	U	0.809	U	0.809	U
1,1-Dichloroethene	6	0.2	NS	NS	NS	NS	ug/m3	*44.8*	U	0.079	U	*31.2*	U	0.079	U	*86*	U	0.079	U	*28.5*	U	0.079	U	*24.6*	U	0.079	U	0.079	U
1,2,4-Trichlorobenzene	NS	NS	NS	NS	NS	NS	ug/m3	83.9	U	1.48	U	58.3	U	1.48	U	161	U	1.48	U	53.4	U	1.48	U	46	U	1.48	U	1.48	U
1,2,4-Trimethylbenzene	NS	NS	NS	NS	NS	NS	ug/m3	55.6	U	4.9		38.6	U	1.69		107	U	2.07		35.4	U	0.983	U	30.5	U	2.07		1.2	
1,2-Dibromoethane	NS	NS	NS	NS	NS	NS	ug/m3	86.8	U	1.54	U	60.4	U	1.54	U	167	U	1.54	U	55.3	U	1.54	U	47.6	U	1.54	U	1.54	U
1,2-Dichlorobenzene	NS	NS	NS	NS	NS	NS	ug/m3	67.9	U	1.2	U	47.3	U	1.2	U	130	U	1.2	U	43.3	U	1.2	U	37.3	U	1.2	U	1.2	U
1,2-Dichloroethane	NS	NS	NS	NS	NS	NS	ug/m3	45.7	U	0.809	U	31.8	U	0.809	U	87.8	U	0.809	U	29.1	U	0.809	U	25.1	U	0.809	U	0.809	U
1,2-Dichloropropane	NS	NS	NS	NS	NS	NS	ug/m3	52.2	U	0.924	U	36.3	U	0.924	U	100	U	0.924	U	33.3	U	0.924	U	28.7	U	0.924	U	0.924	U
1,3,5-Trimethylbenzene	NS	NS	NS	NS	NS	NS	ug/m3	55.6	U	1.33		38.6	U	0.983	U	107	U	0.983	U	35.4	U	0.983	U	30.5	U	0.983	U	0.983	U
1,3-Butadiene	NS	NS	NS	NS	NS	NS	ug/m3	25	U	0.442	U	17.4	U	0.442	U	48	U	0.442	U	15.9	U	0.442	U	13.7	U	0.442	U	0.442	U
1,3-Dichlorobenzene	NS	NS	NS	NS	NS	NS	ug/m3	67.9	U	1.2	U	47.3	U	1.2	U	130	U	1.2	U	43.3	U	1.2	U	37.3	U	1.2	U	1.2	U
1,4-Dichlorobenzene	NS	NS	NS	NS	NS	NS	ug/m3	67.9	U	4.32		47.3	U	5.04		130	U	1.2	U	43.3	U	1.2	U	37.3	U	1.2	U	1.2	U
1,4-Dioxane	NS	NS	NS	NS	NS	NS	ug/m3	40.7	U	0.721	U	28.3	U	0.721	U	78.2	U	0.721	U	25.9	U	0.721	U	22.3	U	0.721	U	0.721	U
2,2,4-Trimethylpentane	NS	NS	NS	NS	NS	NS	ug/m3	52.8	U	1.83		36.7	U	1.25		101	U	1.49		33.6	U	1.18		29	U	1.44		0.972	
2-Butanone	NS	NS	NS	NS	NS	NS	ug/m3	83.2	U	10.4		83.2		7.43		160	U	3.1		53.1	U	1.93		45.7	U	3.54		11.2	
2-Hexanone	NS	NS	NS	NS	NS	NS	ug/m3	46.3	U	0.82	U	32.2	U	0.82	U	88.9	U	0.82	U	29.5	U	0.82	U	25.4	U	0.82	U	0.82	U
3-Chloropropene	NS	NS	NS	NS	NS	NS	ug/m3	35.4	U	0.626	U	24.6	U	0.626	U	67.9	U	0.626	U	22.5	U	0.626	U	19.4	U	0.626	U	0.626	U
4-Ethyltoluene	NS	NS	NS	NS	NS	NS	ug/m3	55.6	U	0.983	U	38.6	U	0.983	U	107	U	0.983	U	35.4	U	0.983	U	30.5	U	0.983	U	0.983	U
4-Methyl-2-pentanone	NS	NS	NS	NS	NS	NS	ug/m3	116	U	2.05	U	80.3	U	2.05	U	223	U	2.05	U	73.8	U	2.05	U	63.5	U	2.05	U	2.05	U
Acetone	NS	NS	NS	NS	NS	NS	ug/m3	134	U	118		770		125		458		66		96.7		43.2		73.6	U	73.4		14.4	
Benzene	NS	NS	NS	NS	NS	NS	ug/m3	36.1	U	1.1		25.1	U	1.27		69.3	U	1.45		23	U	0.99		19.8	U	1.46		0.792	
Benzyl chloride	NS	NS	NS	NS	NS	NS	ug/m3	58.5	U	1.04	U	40.7	U	1.04	U	112	U	1.04	U	37.3	U	1.04	U	32.1	U	1.04	U	1.04	U
Bromodichloromethane	NS	NS	NS	NS	NS	NS	ug/m3	75.7	U	1.34	U	52.7	U	1.34	U	145	U	1.34	U	48.2	U	1.34	U	41.5	U	1.34	U	1.34	U
Bromoform	NS	NS	NS	NS	NS	NS	ug/m3	117	U	2.07	U	81.3	U	2.07	U	224	U	2.07	U	74.4	U	2.07	U	64.1	U	2.07	U	2.07	U
Bromomethane	NS	NS	NS	NS	NS	NS	ug/m3	43.9	U	0.777	U	30.5	U	0.777	U	84.3	U	0.777	U	28	U	0.777	U	24.1	U	0.777	U	0.777	U
Carbon disulfide	NS	NS	NS	NS	NS	NS	ug/m3	35.2	U	0.623	U	24.5	U	0.623	U	67.6	U	0.623	U	22.4	U	0.623	U	19.3	U	0.623	U	0.623	U
Carbon tetrachloride	6	0.2	NS	NS	NS	NS	ug/m3	*71.1*	U	**0.616**		*49.4*	U	**0.629**		*137*	U	**0.623**		*45.3*	U	**0.648**		*39*	U	**0.629**		**0.591**	
Chlorobenzene	NS	NS	NS	NS	NS	NS	ug/m3	52	U	0.921	U	36.2	U	0.921	U	99.9	U	0.921	U	33.2	U	0.921	U	28.6	U	0.921	U	0.921	U
Chloroethane	NS	NS	NS	NS	NS	NS	ug/m3	29.8	U	0.528	U	20.7	U	0.528	U	57.3	U	0.528	U	19	U	0.528	U	16.4	U	0.528	U	0.528	U
Chloroform	NS	NS	NS	NS	NS	NS	ug/m3	61.5		0.977	U	38.4	U	0.977	U	106	U	0.977	U	35.2	U	0.977	U	30.3	U	0.977	U	0.977	U
Chloromethane	NS	NS	NS	NS	NS	NS	ug/m3	23.3	U	1.43		16.2	U	1.61		44.8	U	1.48		14.9	U	1.5		12.8	U	1.49		1.45	
cis-1,2-Dichloroethene	6	0.2	NS	NS	NS	NS	ug/m3	**151**		**0.86**		**264**		**0.218**		**496**		0.163		**3270**		**0.262**		**991**		0.159		0.079	U
cis-1,3-Dichloropropene	NS	NS	NS	NS	NS	NS	ug/m3	51.3	U	0.908	U	35.7	U	0.908	U	98.5	U	0.908	U	32.7	U	0.908	U	28.1	U	0.908	U	0.908	U
Cyclohexane	NS	NS	NS	NS	NS	NS	ug/m3	38.9	U	0.688	U	27.1	U	0.688	U	74.7	U	0.688	U	24.8	U	0.688	U	21.3	U	0.688	U	0.688	U
Dibromochloromethane	NS	NS	NS	NS	NS	NS	ug/m3	96.3	U	1.7	U	67	U	1.7	U	185	U	1.7	U	61.3	U	1.7	U	52.8	U	1.7	U	1.7	U
Dichlorodifluoromethane	NS	NS	NS	NS	NS	NS	ug/m3	55.9	U	3.13		38.9	U	3.2		107	U	3.28		35.6	U	3.19		30.7	U	3.25		3.06	
Ethanol	NS	NS	NS	NS	NS	NS	ug/m3	531	U	147		369	U	185		1030	U	286		339	U	63.1		292	U	281		21.1	
Ethyl Acetate	NS	NS	NS	NS	NS	NS	ug/m3	102	U	2.79		70.6	U	2.21		196	U	1.8	U	64.9	U	3.93		55.9	U	1.8	U	2.03	
Ethylbenzene	NS	NS	NS	NS	NS	NS	ug/m3	49.1	U	5.52		821		3.79		94.3	U	7.21		31.3	U	1.46		26.9	U	12.3		0.869	U
Freon-113	NS	NS	NS	NS	NS	NS	ug/m3	86.6	U	1.53	U	60.2	U	1.53	U	166	U	1.53	U	55.2	U	1.53	U	47.5	U	1.53	U	1.53	U
Freon-114	NS	NS	NS	NS	NS	NS	ug/m3	79	U	1.4	U	54.9	U	1.4	U	152	U	1.4	U	50.3	U	1.4	U	43.3	U	1.4	U	1.4	U
Heptane	NS	NS	NS	NS	NS	NS	ug/m3	46.3	U	1.76		32.2	U	1.05		88.9	U	1.32		29.5	U	1.07		25.4	U	1.22		0.82	U
Hexachlorobutadiene	NS	NS	NS	NS	NS	NS	ug/m3	121	U	2.13	U	83.8	U	2.13	U	231	U	2.13	U	76.8	U	2.13	U	66.1	U	2.13	U	2.13	U
Isopropanol	NS	NS	NS	NS	NS	NS	ug/m3	69.3	U	20.1		48.2	U	20.5		134	U	32.2		44.2	U	20.4		38.1	U	49.2		7.1	
Methyl tert butyl ether	NS	NS	NS	NS	NS	NS	ug/m3	40.7	U	0.721	U	28.3	U	0.721	U	78.2	U	0.721	U	26	U	0.721	U	22.4	U	0.721	U	0.721	U
Methylene chloride	NS	NS	100	3	NS	NS	ug/m3	98	U	**16.7**		68.1	U	**25.4**		*189*	U	**129**		62.5	U	**11**		53.8	U	**102**		1.74	U
n-Hexane	NS	NS	NS	NS	NS	NS	ug/m3	39.8	U	2.22		27.7	U	1.13		76.5	U	1.6		25.4	U	0.93		21.9	U	1.69		0.705	U
o-Xylene	NS	NS	NS	NS	NS	NS	ug/m3	49.1	U	6.6		830		4.82		94.3	U	12.1		31.3	U	2.06		26.9	U	21.9		1.18	
p/m-Xylene	NS	NS	NS	NS	NS	NS	ug/m3	98.2	U	17		3020		13.3		189	U	34.5		62.5	U	5.91		53.9	U	61.7		2.88	
Styrene	NS	NS	NS	NS	NS	NS	ug/m3	48.1	U	0.852	U	33.5	U	0.852	U	92.4	U	1.84		30.7	U	0.852	U	26.4	U	3.02		0.852	U
Tertiary butyl Alcohol	NS	NS	NS	NS	NS	NS	ug/m3	85.5	U	1.52	U	59.4	U	1.52	U	165	U	1.52	U	54.6	U	1.52	U	47	U	1.52	U	1.52	U
Tetrachloroethene	NS	NS	100	3	NS	NS	ug/m3	**28000**		**21.6**		**2350**		**3.64**		**1760**		1.52		**374**		1.3		62.4		1.3		0.685	
Tetrahydrofuran	NS	NS	NS	NS	NS	NS	ug/m3	83.2	U	1.47	U	57.8	U	1.47	U	160	U	1.47	U	53.1	U	1.47	U	45.7	U	1.47	U	1.47	U
Toluene	NS	NS	NS	NS	NS	NS	ug/m3	42.6	U	27.1		29.6	U	10.4		81.8	U	17.2		27.1	U	10.9		23.4	U	18.1		5.05	
trans-1,2-Dichloroethene	NS	NS	NS	NS	NS	NS	ug/m3	44.8	U	0.793	U	31.2	U	0.793	U	86	U	0.793	U	99.1		0.793	U	43.6		0.793	U	0.793	U
trans-1,3-Dichloropropene	NS	NS	NS	NS	NS	NS	ug/m3	51.3	U	0.908	U	35.7	U	0.908	U	98.5	U	0.908	U	32.7	U	0.908	U	28.1	U	0.908	U	0.908	U
Trichloroethene	6	0.2	NS	NS	NS	NS	ug/m3	**3840**		**5.7**		**16300**		**4.22**		**47000**		**9.51**		**24000**		**5.08**		**15400**		**11.2**		0.107	
Trichlorofluoromethane	NS	NS	NS	NS	NS	NS	ug/m3	63.5	U	1.65		44.2	U	1.82		122	U	1.67		40.5	U	1.7		34.8	U	1.66		1.64	
Vinyl bromide	NS	NS	NS	NS	NS	NS	ug/m3	49.4	U	0.874	U	34.4	U	0.874	U	94.9	U	0.874	U	31.5	U	0.874	U	27.1	U	0.874	U	0.874	U
Vinyl chloride	NS	NS	NS	NS	6	0.2	ug/m3	*28.9*	U	0.051	U	*20.1*	U	0.051	U	*55.5*	U	0.051	U	*18.4*	U	0.051	U	*15.8*	U	0.051	U	0.051	U

Notes:
U - Not detected
ug/m3 - micrograms per cubic meter
NY-SSC/IAC-A: New York DOH Matrix A Sub-slab Vapor Concentrations or Indoor Air Concentrations Criteria
NY-SSC/IAC-B: New York DOH Matrix B Sub-slab Vapor Concentrations or Indoor Air Concentrations Criteria
NY-SSC/IAC-C: New York DOH Matrix C Sub-slab Vapor Concentrations or Indoor Air Concentrations Criteria
Italcized text indicates the reporting limit exceeds one or more of the criteria
Highlighted and bolded text indicates an exceedance of one or more of the criteria

APPENDIX A:

SOIL BORING LOGS

SOIL BORING/MONITORING WELL CONSTRUCTION LOG

DESIGNATION	VTX-SB-1		
PROJECT:	Ozone Park	PROJECT NO.:	79111
LOCATION:	101-21 101st Street, Queens, New York	DRILLER:	Clean Globe
		INSPECTOR:	Amanda Turner
INSTALLATION DATES	5/9/2022	PAGE	1 of 6

SAMPLER		CASING		CORE		GROUNDWATER DEPTH MEASUREMENTS			
TYPE	Geoprobe	TYPE	Sleeve	BARREL TYPE	Steel	ELEVATION INFORMATION		DATE:	5/9/2022
SIZE (ID)	2 IN	MATERIAL	PVC	SIZE (ID)	2	DATUM:	-	TIME:	10:50
HAMMER (LB.)	-	DIAMETER	2"	DIAMETER	2	TOC:	-	DEPTH (Ft):	35
FALL (IN.)	-	LENGTH	5'			GS:	-	ELEVATION (Ft):	-

SAMPLE INFORMATION						SOIL DESCRIPTION	WELL CONST	PID (PPM)
DEPTH ELEVATION	INTERVAL	PEN / REC	BLOWS / 6"	SPT	STRATA CHANGE (Ft/El.)			Background/ Actual
0	0.0 - 5.0	Hand Auger				0.0 - 0.5: Concrete and sub-base		0.0
								0.0
1								0.0
								0.0
2								0.0
								0.0
3		5/1.0						0.0
								0.0
4								0.0
								0.0
5	5.0 - 10.0	5/3.0						0.0
								0.0
6								0.0
								0.0
7								0.0
								0.0
8								0.0
								0.0
9								0.0
								0.0
10	10.0 -15.0	5/3.0						0.0
								0.0
11								0.0
								0.0
12								0.0
								0.0
13								0.0
								0.0
14								0.0
								0.0
15	15.0 - 20.0	5/2.75				0.5 - 35.0: Brown medium grain sand with trace sub-angular rock, dry to moist and wet at approx 30'; no staining or odors		0.0
								0.0
16								0.0
								0.0
17								0.0
								0.0
18								0.0
								0.0
19								0.0
								0.0
20	20.0 - 25.0	5/3.0						0.0
								0.0
21								0.0
								0.0
22								0.0
								0.0
23								0.0
								0.0
24								0.0
								0.0
25	25.0 - 30.0	5/1.75						0.0
								0.0
26								0.0
								0.0
27								0.0
								0.0
28								0.0
								0.0
29								0.0
								0.0
30	30.0 - 35.0	5/2.5						0.0
								0.0
31								0.0
								0.0
32								0.0
								0.0
33								0.0
								0.0
34								0.0
								0.0

Boring terminated at 35.0 ft bgs
Soil sample VTX-SB-1 collected at 11:37 hrs from 30.0-30.5ft bgs
Temporary monitoring well installed; depth to water 28.94 ft bgs
GW sample VTX-TW-1 collected at 12:14 hrs

MODIFIER		SAND AND GRAVEL		SILT AND CLAY	
1 - 10%	Trace	Density	Blows (N)	Consistency	Blows (N)
10 - 20%	Little	Very loose	0 - 4	Very soft	<2
20 - 35%	Some	Loose	4 - 10	Soft	2 - 4
35 - 50%	And	Medium Dense	10 - 30	Medium Stiff	4 - 8
		Dense	30 - 50	Stiff	8 - 15
		Very Dense	>50	Very Stiff	15 - 30
				Hard	>30

LOCATION:	Near NW corner of property		
MONITORING WELL CONSTRUCTION DATA			
DEPTH:	15	DEPTH/TYPE PACK:	-
DIAMETER (inches):	1.0	DEPTH/TYPE SEAL:	-
MATERIAL:	PVC	BACKFILL MATERIAL:	-
SLOT SIZE (inches):	0.01	SURFACE SEAL:	-
SCREEN INTERVAL:	5'-15'	ROADBOX DESC.:	-
LENGTH OF RISER:	5		

WELL CONSTRUCTION: Screen, Riser, Concrete, Bentonite, Native, Sand, Grout

NOTES:
1. Soils are visually classified in general accordance with the Modified Burmister Soil Classification System.

SOIL BORING/MONITORING WELL CONSTRUCTION LOG

DESIGNATION	VTX - SB - 2		
PROJECT:	Ozone Park	PROJECT NO.:	79111
LOCATION:	101-21 101st Street, Queens, New York	DRILLER:	Clean Globe
		INSPECTOR:	Amanda Turner
INSTALLATION DATES	5/9/2021	PAGE	6 of 6

SAMPLER		CASING		CORE		GROUNDWATER DEPTH MEASUREMENTS			
TYPE	Geoprobe	TYPE	Sleeve	BARREL TYPE	Steel	ELEVATION INFORMATION		DATE:	5/9/2022
SIZE (ID)	2 IN	MATERIAL	PVC	SIZE (ID)	2	DATUM:	-	TIME:	11:40
HAMMER (LB.)	-	DIAMETER	2"	DIAMETER	2	TOC:	-	DEPTH (Ft):	30
FALL (IN.)	-	LENGTH	5'			GS:	-	ELEVATION (Ft):	-

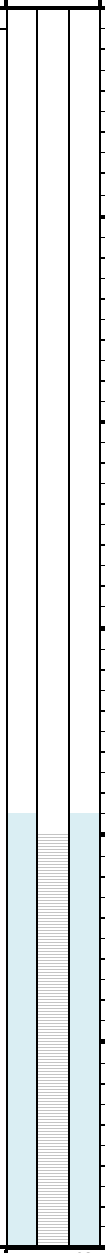
SAMPLE INFORMATION						SOIL DESCRIPTION	WELL CONST	PID (PPM)
DEPTH ELEVATION	INTERVAL	PEN / REC	BLOWS / 6"	SPT	STRATA CHANGE (Ft/El.)			Background/ Actual
0	0.0 - 5.0	hand auger				0.0 - 0.5: Concrete and sub-base		0.0
								0.0
1								0.0
								0.0
2								0.0
								0.0
3		5/1.0						0.0
								0.0
4								0.0
								0.0
5	5.0 - 10.0	5/3.0						0.0
								0.0
6								0.0
								0.0
7								0.0
								0.0
8								0.0
								0.0
9								0.0
								0.0
10	10.0 -15.0	5/2.75						0.0
								0.0
11								0.0
								0.0
12								0.0
								0.0
13								0.0
								0.0
14						0.5 - 30.0: Brown medium grain sand with trace sub-angular rock, dry to moist and wet at approx 27'; no staining or odors		0.0
								0.0
15	15.0 - 20.0	5/2.75						0.0
								0.0
16								0.0
								0.0
17								0.0
								0.0
18								0.0
								0.0
19								0.0
								0.0
20	20.0 - 25.0	5/3.0						0.0
								0.0
21								0.0
								0.0
22								0.0
								0.0
23								0.0
								0.0
24								0.0
								0.0
25	25.0 - 30.0	5/3.0						0.0
								0.0
26								0.0
								0.0
27								0.0
								0.0
28								0.0
								0.0
29								0.0
								0.0

MODIFIER		SAND AND GRAVEL		SILT AND CLAY	
1 - 10%	Trace	Density	Blows (N)	Consistency	Blows (N)
10 - 20%	Little	Very loose	0 - 4	Very soft	<2
20 - 35%	Some	Loose	4 - 10	Soft	2 - 4
35 - 50%	And	Medium Dense	10 - 30	Medium Stiff	4 - 8
		Dense	30 - 50	Stiff	8 - 15
		Very Dense	>50	Very Stiff	15 - 30
				Hard	>30

Boring terminated at 30.0 ft bgs
Soil sample VTX-SB-2 collected at 10:34 hrs from 26.0 - 26.5 ft bgs
Temporary monitoring well installed; depth to water 27.02 ft bgs
GW sample VTX-TW-2 collected at 11:06 hrs

LOCATION:	Near NW corner of property			
MONITORING WELL CONSTRUCTION DATA				
DEPTH:	15	DEPTH/TYPE PACK:	-	
DIAMETER (inches):	1.0	DEPTH/TYPE SEAL:	-	
MATERIAL:	PVC	BACKFILL MATERIAL:	-	
SLOT SIZE (inches):	0.01	SURFACE SEAL:	-	
SCREEN INTERVAL:	5'-15'	ROADBOX DESC.:	-	
LENGTH OF RISER:	5			

WELL CONSTRUCTION



Screen
Riser
Concrete
Bentonite
Native
Sand
Grout

NOTES:

1. Soils are visually classified in general accordance with the Modified Burmister Soil Classification System.
2. Sampled from interval above groundwater interface

SOIL BORING/MONITORING WELL CONSTRUCTION LOG						DESIGNATION	VTX-SB-3		
VERTEX	PROJECT:	Ozone Park				PROJECT NO.:	79111		
	LOCATION:	101-21 101st Street, Queens, New York				DRILLER:	Clean Globe		
						INSPECTOR:	Amanda Turner		
	INSTALLATION DATES	5/9/2022				PAGE	3 of 6		

SAMPLER		CASING		CORE		GROUNDWATER DEPTH MEASUREMENTS			
TYPE	Geoprobe	TYPE	Sleeve	BARREL TYPE	Steel	ELEVATION INFORMATION		DATE:	5/10/2022
SIZE (ID)	2 IN	MATERIAL	PVC	SIZE (ID)	2	DATUM:	-	TIME:	10:30
HAMMER (LB.)	-	DIAMETER	2"	DIAMETER	2	TOC:	-	DEPTH (Ft):	35
FALL (IN.)	-	LENGTH	5'			GS:	-	ELEVATION (Ft):	-

SAMPLE INFORMATION						SOIL DESCRIPTION	WELL CONST	PID (PPM)
DEPTH ELEVATION	INTERVAL	PEN / REC	BLOWS / 6"	SPT	STRATA CHANGE (Ft/El.)			Background/ Actual
0	0.0 - 5.0	Hand Auger				0.0 - 2.0: Concrete and sub-base		0.0
1								0.0
2								0.0
3		5/1.0						0.0
4								0.2
5	5.0 - 10.0	5/2.25						0.0
6								0.0
7								0.0
8								0.0
9								0.0
10	10.0 -15.0	5/2.5						0.0
11								0.0
12								0.0
13								0.0
14								0.0
15	15.0 - 20.0	5/2.75				2.0 - 35.0 Brown medium grain sand with trace sub-angular rock, dry to moist and wet at approx 27'; no staining or odors		0.0
16								0.0
17								0.0
18								0.0
19								0.0
20	20.0 - 25.0	5/2.75						0.0
21								0.0
22								0.0
23								0.0
24								0.0
25	25.0 - 30.0	5/2.5						0.0
26								0.0
27								0.0
28								0.0
29								0.0
30	30.0 - 35.0	5/2.25						0.0
31								0.0
32								0.0
33								0.0
34								0.0
						Boring terminated at 35.0 ft bgs Soil sample VTX-SB-3 collected at 11:10 hrs from 10.0 - 10.5 ft bgs Temporary monitoring well installed; depth to water 27.24 ft bgs GW sample VTX-TW-3 collected at 11:43 hrs		0.0

MODIFIER		SAND AND GRAVEL		SILT AND CLAY		LOCATION:	Near NW corner of property			WELL CONSTRUCTION
1 - 10%	Trace	Density	Blows (N)	Consistency	Blows (N)	MONITORING WELL CONSTRUCTION DATA				Screen
10 - 20%	Little	Very loose	0 - 4	Very soft	<2	DEPTH:	15	DEPTH/TYPE PACK:	-	Riser
20 - 35%	Some	Loose	4 - 10	Soft	2 - 4	DIAMETER (inches):	1.0	DEPTH/TYPE SEAL:	-	Concrete
35 - 50%	And	Medium Dense	10 - 30	Medium Stiff	4 - 8	MATERIAL:	PVC	BACKFILL MATERIAL:	-	Bentonite
		Dense	30 - 50	Stiff	8 - 15	SLOT SIZE (inches):	0.01	SURFACE SEAL:	-	Native
		Very Dense	>50	Very Stiff	15 - 30	SCREEN INTERVAL:	5'-15'	ROADBOX DESC.:	-	Sand
				Hard	>30	LENGTH OF RISER:	5			Grout

NOTES:

1. Soils are visually classified in general accordance with the Modified Burmister Soil Classification System.

SOIL BORING/MONITORING WELL CONSTRUCTION LOG						DESIGNATION	VTX-SB-3		
VERTEX	PROJECT:	Ozone Park				PROJECT NO.:	79111		
	LOCATION:	101-21 101st Street, Queens, New York				DRILLER:	Clean Globe		
						INSPECTOR:	Amanda Turner		
	INSTALLATION DATES	5/9/2022				PAGE	3 of 6		

SAMPLER		CASING		CORE		GROUNDWATER DEPTH MEASUREMENTS			
TYPE	Geoprobe	TYPE	Sleeve	BARREL TYPE	Steel	ELEVATION INFORMATION		DATE:	5/10/2022
SIZE (ID)	2 IN	MATERIAL	PVC	SIZE (ID)	2	DATUM:	-	TIME:	8:45
HAMMER (LB.)	-	DIAMETER	2"	DIAMETER	2	TOC:	-	DEPTH (Ft):	35
FALL (IN.)	-	LENGTH	5'			GS:	-	ELEVATION (Ft):	-

SAMPLE INFORMATION						SOIL DESCRIPTION	WELL CONST	PID (PPM)
DEPTH ELEVATION	INTERVAL	PEN / REC	BLOWS / 6"	SPT	STRATA CHANGE (Ft/El.)			Background/ Actual
0	0.0 - 5.0	Hand Auger				0.0 - 3.0: Concrete and sub-base		0.0
1								0.0
2		5/1.0				3.0 - 5.0: Dark brown fill material with some clay; no odors or staining		0.0
3								3.2
4								0.0
5	5.0 - 10.0	5/2.25						0.0
6								0.0
7								0.0
8								0.0
9								0.0
10	10.0 -15.0	5/2.5						0.0
11								0.0
12								0.0
13								0.0
14								0.0
15	15.0 - 20.0	5/2.75						0.0
16								0.0
17								0.0
18								0.0
19						5.0 - 35.0: Brown medium grain sand with trace sub-angular rock, dry to moist and wet at approx 27'; no staining or odors		0.0
20	20.0 - 25.0	5/2.75						0.0
21								0.0
22								0.0
23								0.0
24								0.0
25	25.0 - 30.0	5/2.5						0.0
26								0.0
27								0.0
28								0.0
29								0.0
30	30.0 - 35.0	2.25						0.0
31								0.0
32								0.0
33								0.0
34						Boring terminated at 35.0 ft bgs Soil sample VTX-SB-4 collected at 09:27 hrs from 3.5 - 4.0 ft bgs Temporary monitoring well installed; depth to water 27.36 ft bgs GW sample VTX-TW-4 collected at 10:32 hrs		0.0

MODIFIER		SAND AND GRAVEL		SILT AND CLAY		LOCATION:	Near NW corner of property			WELL CONSTRUCTION
1 - 10%	Trace	Density	Blows (N)	Consistency	Blows (N)	MONITORING WELL CONSTRUCTION DATA				Screen
10 - 20%	Little	Very loose	0 - 4	Very soft	<2	DEPTH:	15	DEPTH/TYPE PACK:	-	Riser
20 - 35%	Some	Loose	4 - 10	Soft	2 - 4	DIAMETER (inches):	1.0	DEPTH/TYPE SEAL:	-	Concrete
35 - 50%	And	Medium Dense	10 - 30	Medium Stiff	4 - 8	MATERIAL:	PVC	BACKFILL MATERIAL:	-	Bentonite
		Dense	30 - 50	Stiff	8 - 15	SLOT SIZE (inches):	0.01	SURFACE SEAL:	-	Native
		Very Dense	>50	Very Stiff	15 - 30	SCREEN INTERVAL:	5'-15'	ROADBOX DESC.:	-	Sand
				Hard	>30	LENGTH OF RISER:	5			Grout

NOTES:
1. Soils are visually classified in general accordance with the Modified Burmister Soil Classification System.
2. Sampled from interval below former trench and where elevated PID readings were observed

SOIL BORING/MONITORING WELL CONSTRUCTION LOG						DESIGNATION	VTX-SB-3		
VERTEX	PROJECT:	Ozone Park				PROJECT NO.:	79111		
	LOCATION:	101-21 101st Street, Queens, New York				DRILLER:	Clean Globe		
						INSPECTOR:	Amanda Turner		
	INSTALLATION DATES	5/9/2022				PAGE	3 of 6		

SAMPLER		CASING		CORE		GROUNDWATER DEPTH MEASUREMENTS			
TYPE	Geoprobe	TYPE	Sleeve	BARREL TYPE	Steel	ELEVATION INFORMATION		DATE:	5/10/2022
SIZE (ID)	2 IN	MATERIAL	PVC	SIZE (ID)	2	DATUM:	-	TIME:	8:45
HAMMER (LB.)	-	DIAMETER	2"	DIAMETER	2	TOC:	-	DEPTH (Ft):	35
FALL (IN.)	-	LENGTH	5'			GS:	-	ELEVATION (Ft):	-

SAMPLE INFORMATION						SOIL DESCRIPTION	WELL CONST	PID (PPM)
DEPTH ELEVATION	INTERVAL	PEN / REC	BLOWS / 6"	SPT	STRATA CHANGE (Ft/El.)			Background/ Actual
0	0.0 - 5.0	Hand Auger				0.0 - 2.0: Concrete and sub-base		0.0
1								0.0
2		5/0.0						0.0
3								0.0
4								0.0
5	5.0 - 10.0	5/1.75						0.0
6								0.0
7								0.0
8								0.0
9								0.0
10	10.0 -15.0	5/3.0						0.0
11								0.0
12								0.0
13								0.0
14								0.0
15	15.0 - 20.0	5/3.0				2.0 - 34.0: Brown medium grain sand with trace sub-angular rock, dry to moist and wet at approx 30'; no staining or odors		0.0
16								0.0
17								0.0
18								0.0
19								0.0
20	20.0 - 25.0	5/3.0						0.0
21								0.0
22								0.0
23								0.0
24								0.0
25	25.0 - 30.0	5/3.0						0.0
26								0.0
27								0.0
28								0.0
29								0.0
30	30.0 - 35.0	1.75						0.0
31								0.0
32								0.0
33								0.0
34								0.0
						Refusal at 34.0 ft bgs Soil sample VTX-SB-5 collected at 12:34 hrs from 8.0 - 8.5 ft bgs Temporary monitoring well installed; depth to water 27.44 ft bgs GW sample VTX-TW-5 collected at 12:51 hrs		0.0

MODIFIER		SAND AND GRAVEL		SILT AND CLAY		LOCATION:	Near NW corner of property			WELL CONSTRUCTION
1 - 10%	Trace	Density	Blows (N)	Consistency	Blows (N)	MONITORING WELL CONSTRUCTION DATA				Screen
10 - 20%	Little	Very loose	0 - 4	Very soft	<2	DEPTH:	15	DEPTH/TYPE PACK:	-	Riser
20 - 35%	Some	Loose	4 - 10	Soft	2 - 4	DIAMETER (inches):	1.0	DEPTH/TYPE SEAL:	-	Concrete
35 - 50%	And	Medium Dense	10 - 30	Medium Stiff	4 - 8	MATERIAL:	PVC	BACKFILL MATERIAL:	-	Bentonite
		Dense	30 - 50	Stiff	8 - 15	SLOT SIZE (inches):	0.01	SURFACE SEAL:	-	Native
		Very Dense	>50	Very Stiff	15 - 30	SCREEN INTERVAL:	5'-15'	ROADBOX DESC.:	-	Sand
				Hard	>30	LENGTH OF RISER:	5			Grout

NOTES:
1. Soils are visually classified in general accordance with the Modified Burmister Soil Classification System.
2. Sampled from interval below former trench and where elevated PID readings were observed

SOIL BORING/MONITORING WELL CONSTRUCTION LOG						DESIGNATION	VTX - SB - 6		
VERTEX®		PROJECT:	Ozone Park			PROJECT NO.:	79111		
		LOCATION:	101-21 101st Street, Queens, New York			DRILLER:	Clean Globe		
						INSPECTOR:	Amanda Turner		
		INSTALLATION DATES	5/9/2021			PAGE	6 of 6		

SAMPLER		CASING		CORE		GROUNDWATER DEPTH MEASUREMENTS				
TYPE	Geoprobe	TYPE	Sleeve	BARREL TYPE	Steel	ELEVATION INFORMATION		DATE:	NA	
SIZE (ID)	2 IN	MATERIAL	PVC	SIZE (ID)	2	DATUM:	-	TIME:	NA	
HAMMER (LB.)	-	DIAMETER	2"	DIAMETER	2	TOC:	-	DEPTH (Ft):	NA	
FALL (IN.)	-	LENGTH	5'			GS:	-	ELEVATION (Ft):	-	

SAMPLE INFORMATION						SOIL DESCRIPTION	WELL CONST	PID (PPM)
DEPTH ELEVATION	INTERVAL	PEN / REC	BLOWS / 6"	SPT	STRATA CHANGE (Ft/El.)			Background/ Actual
0	0.0 - 5.0	hand auger				0.0 - 0.5: Concrete and sub-base		0.0
1								0.0
2								0.0
3		5/1.0						0.0
4								0.0
5	5.0 - 10.0	5/1.75						0.0
6								0.0
7								0.0
8								0.0
9								0.0
10	10.0 -15.0	5/1.75						0.0
11								0.0
12								0.0
13								0.0
14						0.5 - 30.0: Brown medium grain sand with trace sub-angular rock, dry to moist and wet at approx 30'; no staining or odors		0.0
15	15.0 - 20.0	5/2.5						0.0
16								0.0
17								0.0
18								0.0
19								0.0
20	20.0 - 25.0	5/1.75						0.0
21								0.0
22								0.0
23								0.0
24								0.0
25	25.0 - 30.0	5/3.0						0.0
26								0.0
27								0.0
28								0.0
29						Boring terminated at 30.0 ft bgs Soil sample VTX-SB-6 collected at 13:50 hrs from 23.5 - 24.0 ft bgs Temporary monitoring well installed; depth to water 24.74 ft bgs GW sample VTX-TW-6 collected at 14:08 hrs		0.0

MODIFIER		SAND AND GRAVEL		SILT AND CLAY		LOCATION:	Near NW corner of property			WELL CONSTRUCTION
1 - 10%	Trace	Density	Blows (N)	Consistency	Blows (N)	MONITORING WELL CONSTRUCTION DATA				Screen
10 - 20%	Little	Very loose	0 - 4	Very soft	<2	DEPTH:	15	DEPTH/TYPE PACK:	-	Riser
20 - 35%	Some	Loose	4 - 10	Soft	2 - 4	DIAMETER (inches):	1.0	DEPTH/TYPE SEAL:	-	Concrete
35 - 50%	And	Medium Dense	10 - 30	Medium Stiff	4 - 8	MATERIAL:	PVC	BACKFILL MATERIAL:	-	Bentonite
		Dense	30 - 50	Stiff	8 - 15	SLOT SIZE (inches):	0.01	SURFACE SEAL:	-	Native
		Very Dense	>50	Very Stiff	15 - 30	SCREEN INTERVAL:	5'-15'	ROADBOX DESC.:	-	Sand
				Hard	>30	LENGTH OF RISER:	5			Grout

NOTES:

1. Soils are visually classified in general accordance with the Modified Burmister Soil Classification System.
2. Sampled from interval above groundwater interface

APPENDIX B:

LABORATORY ANALYTICAL REPORTS – SOIL AND GROUNDWATER

Certification Information

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

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

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

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

Westborough Facility:

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

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

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

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

NEW YORK CHAIN OF CUSTODY

ALPHA
Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

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

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

Page 1 of 2

Date Rec'd in Lab: 5/11/22

ALPHA Job #: L2224545

Project Information

Project Name: Ozone Park
Project Location: 101-21 101st St. Queens, NY
Project #: 79111
(Use Project name as Project #) ☐
Project Manager: Madalyn Wen
ALPHAQuote #:

Turn-Around Time

Standard ☐
Rush (only if pre approved) ☒
Due Date:
# of Days: 4 Days

Client Information

Client: VERTEX
Address: 3322 Rt-22 W Suite 907 Branchburg, NJ 08876
Phone:
Fax:
Email: mkilas@vertexeng.com

Deliverables

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

Billing Information

☑ Same as Client Info
PO #

Regulatory Requirement

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

Disposal Site Information

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

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	ANALYSIS: VOCs	SVOCs							Sample Specific Comments	Total Bottles
24545 1	VTX-SB-1 (30.0-30.5)	5/9/2022	11:37	S	AT	X	X								5
2	VTX-SB-2 (26.0-26.5)	5/9/2022	10:34	S	AT	X									4
3	VTX-SB-3 (10.0-10.5)	5/10/2022	11:10	S	AT	X									4
4	VTX-SB-4 (3.5-4.0)	5/10/2022	09:27	S	AT	X	X							On Hold	5
5	VTX-SB-5 (8.0-8.5)	5/10/2022	12:34	S	AT	X	X								5
6	VTX-SB-6 (23.5-24.0)	5/9/2022	13:50	S	AT	X									4

	VOCs	SVOCs						
Container Type	E	A						
Preservative	N	N						

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

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

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

Relinquished By:	Date/Time	Received By:	Date/Time
Amanda Turner	5/10/22 / 13:30	MSM [illegible]	5/10/22 13:30
MSM [illegible]	5/10/22 1930	[illegible]	5/10/22 [illegible]
[illegible]	5/10/22	[illegible]	5/11/22 0005
[illegible]	5/11/22 0200	Wendy Moreno	5/11/22 02:00

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

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

ALPHA

NEW YORK CHAIN OF CUSTODY

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

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

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

Page 2 of 2

Date Rec'd in Lab: 5/11/22

ALPHA Job #: L2224595

Client Information
Client: VERTEX
Address: 3322 Rt 22 W, Suite 907 Branchburg NJ 08876
Phone:
Fax:
Email: mvillas@vertexeng.com

Project Information
Project Name: ~~101-21 101st ST, Queens NY~~ STEELE PARK
Project Location: 101-21 101st St, Queens NY
Project #: 79111
(Use Project name as Project #)
Project Manager: Madalyn Villas
ALPHAQuote #:

Turn-Around Time
Standard ☐ Due Date:
Rush (only if pre approved) ☒ # of Days: 4-Days

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

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

Billing Information
☒ Same as Client Info
PO #

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

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

ANALYSIS

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

Sample Specific Comments

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs	SVOCs	Total Bottle
24545 7	VTX-TW-1	5/9/22	12:14	GW	AT	X	X	5
8	VTX-TW-2	5/9/22	11:06	GW	AT	X		3
9	VTX-TW-3	5/10/22	11:43	GW	AT	X		3
10	VTX-TW-4	5/10/22	10:32	GW	AT	X	X	5
11	VTX-TW-5	5/10/22	12:51	GW	AT	X	X	5
12	VTX-TW-6	5/9/22	14:08	GW	AT	X		3
13	VTX-SV-2	5/9/22	14:55	GW	AT	X		3

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

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

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

Container Type	V	A
Preservative	B	N

Relinquished By:	Date/Time	Received By:	Date/Time
Amanda Turner	5/9/22 13:30	[illegible]	5/10/22 13:30
[illegible]	5/10/22 15:30	[illegible]	[illegible]
[illegible]	5/10/22	[illegible]	5/11/22 0200
[illegible]	5/11/22 0200	Wendy Harvey	5/11/22 02:00

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

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

APPENDIX C:

Sub-Slab Soil Gas and Indoor Air

Certification Information

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

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

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

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

Westborough Facility:

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

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

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

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

AIR ANALYSIS

ALPHA ANALYTICAL — CHAIN OF CUSTODY

PAGE 1 OF 1

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

Date Rec'd in Lab: 5/11/22

ALPHA Job #: L2224547

Client Information

Client: Vertex
Address: 3322 US 22, Suite 907
Branchburg, NJ
Phone:
Fax:
Email: MKulus@VertexPAS.com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name:
Project Location: Queens, NY
Project #: 79111
Project Manager: Marilyn Kulus
ALPHA Quote #:

Turn-Around Time

☐ Standard ☒ RUSH (only confirmed if pre-approved!)
Date Due: 4-day Time:

Report Information - Data Deliverables

☐ FAX
☐ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☒ EMAIL (standard pdf report)
☐ Additional Deliverables:
Report to: (if different than Project Manager)

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Res / Comm
NYSDOH		

Other Project Specific Requirements/Comments:

Project-Specific Target Compound List: ☐

ANALYSIS

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	COLLECTION End Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	ID Can	ID - Flow Controller	TO-15	TO-15 SIM	APH Subset Non-petroleum HCs ☐	Fixed Gases	Sulfides & Mercaptans by TO-15	Sample Comments (i.e. PID)
24547-01	VTX-SG1	5/9/22	1030	1228	-30.61	-6.60	SV	EG	6	1988	01919	X					
02	VTX-SG2		1054	1258	-30.39	-8.61				2882	02170	X					
03	VTX-SG3		1145	1341	-30.27	-7.40				2943	02107	X					
04	VTX-SG4		1233	1450	-30.17	-8.40				3004	02142	X					
05	VTX-SG5		1249	1451	-30.16	-6.22				904	01527	X					

*SAMPLE MATRIX CODES
AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type: CS

Relinquished By:	Date/Time	Received By:	Date/Time:
[illegible] 13:46	5/10/22	MSMAGEE	5/10/22 13:42
[illegible]	5/10/22 21:40	[illegible]	5/10/22 2100
[illegible]	5/10/22	[illegible]	5/11/22 0005
[illegible]	5/11/22 0400	[illegible]	5/11/22 0400

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.