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REMEDIAL INVESTIGATION WORK PLAN

300 East 12th Street Site

300 East 12th Street
New York, New York
Block 453, Lot 8
NYSDEC Site No. C231158

PREPARED FOR:

188 Second Equities Corp.
377 Park Avenue South, 3rd Floor
New York, New York 10016

PREPARED BY:

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LKB PROJECT NO: 10153.LK

NOVEMBER 6, 2023

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LIST OF ACRONYMS

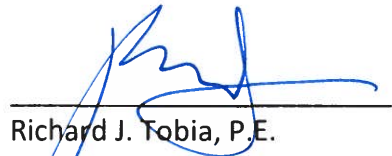
ACRONYM	DEFINITION
1,1-DCE	1,1-Dichloroethene
1,1,1-TCA	1,1,1-Trichloroethene
ACM	Asbestos-Containing Material
ACP	Asbestos Control Program
AWQS	Ambient Water Quality Standards
BCA	Brownfield Cleanup Agreement
BCS	Below Cellar Slab
BCP	Brownfield Cleanup Program
BOD	Biological Oxygen Demand
cis-DCE	Cis-1,2-Dichloroethene
Class GA	Groundwater Effluent Limitation (Class GA)
COD	Chemical Oxygen Demand
CP Plan	Citizen Participation Plan
CVOC	Chlorinated Volatile Organic Compound
DER	Division of Environmental Remediation
DNAPL	Dense Non-Aqueous Phase Liquid
DOT	Department of Transportation
DUSR	Data Usability Summary Report
EDD	Electronic Data Deliverable
EFR	Enhanced Fluid Recovery
ELAP	Environmental Laboratory Accreditation Program
ESA	Environmental Site Assessment
FEMA	Federal Emergency Management Agency
GPR	Ground-Penetrating Radar
HASP	Health and Safety Plan
HAZWOPER	Hazardous Waste Operations and Emergency Response

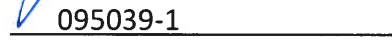
ACRONYM	DEFINITION
HDPE	High-Density Polyethylene
IDW	Investigation Derived Waste
IRM	Interim Remedial Measure
ISCO	In-Situ Chemical Oxidation
LNAPL	Light Non-Aqueous Phase Liquid
µg/L	Microgram per Liter
µg/m ³	Microgram per cubic meter
mg/kg	Milligrams per Kilogram
NYCDEP	New York City Department of Environmental Protection
NYCDOB	New York City Department of Buildings
NYCDOT	New York City Department of Transportation
NYCRR	New York Code, Rules, and Regulations
NYCOER	New York City Office of Environmental Remediation
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
ORP	Oxidation-Reduction Potential
OSHA	Occupational Safety and Health Administration
PCB	Polychlorinated Biphenyls
PCE	Tetrachloroethene
PFAS	Per-and Polyfluoroalkyl Substances
PID	Photoionization Detector
PPE	Personal Protective Equipment
PPM	Parts Per Million
PVC	Polyvinyl Chloride
QAPP	Quality Assurance Project Plan
QA/QC	Quality Assurance / Quality Control
RCRA	Resource Conservation and Recovery Act
RI	Remedial Investigation

ACRONYM	DEFINITION
RIR	Remedial Investigation Report
RIWP	Remedial Investigation Work Plan
RUSCO-C	Restricted Use Soil Cleanup Objectives - Commercial
RUSCO-R	Restricted Use Soil Cleanup Objectives – Residential
RUSCO-RR	Restricted Use Soil Cleanup Objectives – Restricted Residential
SCO	Soil Cleanup Objective
SIM	Select Ion Monitoring
SOD	Soil Oxidant Demand
SPEED	Searchable Property Environmental Electronic Database
SSDS	Sub-Slab Depressurization System
SVOC	Semi-Volatile Organic Compound
TAL	Target Analyte List
TCE	Trichloroethene
TCL	Target Compound List
TPP	Tenant Protection Plan
USDA	United States Department of Agriculture
USGS	United States Geological Survey
USEPA	United States Environmental Protection Agency
UUSCO	Unrestricted Use Soil Cleanup Objective
VOC	Volatile Organic Compound

CERTIFICATION

I, Richard J. Tobia, P.E., certify that I am currently a New York State registered professional engineer and that this Remedial Investigation Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).


Richard J. Tobia, P.E.


095039-1
License Number



Seal


Date

REMEDIAL INVESTIGATION WORK PLAN

300 East 12th Street Site

300 East 12th Street

New York, New York

Block 453, Lot 8

NYSDEC Site No. C231158

1.0 INTRODUCTION

This Remedial Investigation Work Plan (RIWP) has been developed for the 300 East 12th Street Site located at 300 East 12th Street in New York, New York (the Site). The Volunteer (188 Second Equities Corp.) is anticipated to be a party to a Brownfield Cleanup Agreement (BCA) pursuant to the New York State Brownfield Cleanup Program (BCP). The Site is identified with New York State Department of Environmental Conservation (NYSDEC) Site No. C231158.

This RIWP has been prepared in general accordance with NYSDEC Division of Environmental Remediation (DER)-10 / Technical Guidance for Site Investigation and Remediation (May 3, 2010).

1.1 Site Description

The Site is in the East Village section of Manhattan, New York and is identified as Block 453, Lot 8 on the New York City Tax Map. **Figure 1** shows the Site location. The Site encompasses 0.09-acres. The Site boundary is depicted in **Figure 2**. According to the New York City Department of Buildings (NYCDOB), the Site is identified with the following addresses: 188 Second Avenue and 300 East 12th Street, Manhattan. The Site is in an urban area with a mix of commercial and residential buildings and is located at the southeast corner of the intersection of Second Avenue and East 12th Street.

The Site is improved with a six-story building with a cellar. The Site building pad encompasses approximately 19,299 square feet and was constructed in 1920. The Site building's ground floor contains two vacant restaurant tenant spaces, both with access to separate cellar support areas.

The restaurant space at 188 2nd Avenue was most recently occupied by Strings Ramen. The restaurant space at 190 2nd Avenue/300 East 12th Street (Site) was most recently occupied by Dunhuang. Floors two through six of the Site building consist of 19 residential apartments. The Site building is serviced by municipal water (New York City Department of Environmental Protection [NYCDEP]), municipal sanitary and storm sewer (NYCDEP), electric (Consolidated Edison), and natural gas (Consolidated Edison). In addition, the Site is improved with an active 4,500-gallon No. 2 heating oil aboveground storage tank (AST), which is registered under Petroleum Bulk Storage (PBS) No. 2-406619 and located within a separate room in the cellar to which neither retail tenant has access. The building footprint covers the majority of the Site, with two small, cellar-level, concrete-paved courtyards located on the central and eastern portions of the property, and concrete-paved public sidewalks to the northwest (along Second Avenue) and northeast (along East 12th Street).

The Site is currently active, and there are no proposed use changes for the Site. Based on a review of the New York City Department of City Planning and Land Use Mapping program, the Site is zoned R7A and C1-5 (commercial overlay). The R7 (residential) zoning is described as a medium-density apartment house district. The C1-5 (commercial) zoning is a Local Retail and Local Services Commercial Overlay Zoning District that is mapped in residential zoning districts but allows for commercial use. The zone is primarily residential with commercial uses on the street level (i.e., retail, restaurants, and services for day to day needs of the residential neighborhood). The neighboring properties are currently used for a combination of commercial and residential uses.

The Site is generally flat. The entirety of the Site is covered with impervious surface (building footprint). Storm water drainage is expected to exit the Site via overland flow and enter the municipal storm drains located in the adjoining roadways.

1.2 Surrounding Land Use

The Site is in a highly developed urban area in Manhattan, New York. The surrounding properties are identified as the following:

North: East 12th Street, followed by the 12th Street Ale House (ground floor) and residential apartments (floors two through four) at 192 2nd Avenue, and a four-story residential building at 305 East 12th Street.

Northwest: East 12th Street and 2nd Avenue, followed by PlantShed Cafe (ground floor) and residential apartments (floors two through six) at 193 2nd Avenue.

South: The East Village Thrift Shop (ground floor) and residential apartments (floors two through five) at 186 2nd Avenue.

East: John's of 12th Street (ground floor) and residential apartments (floors two through five) at 302 East 12th Street.

West: 2nd Avenue, followed by the Village East Theatre at 181-189 2nd Avenue.

Based on visual observations made during a Site reconnaissance and a review of the New York City Office of Environmental Remediation (NYCOER) Searchable Property Environmental E-Database (SPEED) and the New York City Oasis mapping programs, the following sensitive human receptors (residences, park, healthcare facility and/or schools) were identified in the vicinity (500 feet) of the Site:

Sensitive Human Receptors				
Name	Address	Category	Distance/Direction from the Site	Gradient in Relation to the Site

Residences	186 Second Avenue & 302 East 12 th Street	Residential	Adjacent South & East	Up-gradient & Down-gradient
Residences	Various	Residential	Various distances in all directions	Various
Third Street Music School and Third Street Preschool	235 East 11 th Street	Day Care / Pre-K School	240 feet West	Up-gradient
Public School 19	185 1 st Street	Day Care / Pre-K School	250 feet Southeast	Cross-gradient
St. Mark's Church in-the-Bowery / New York Theater Ballet School	131 East 10 th Street	School (K-12)	275 feet Southwest	Up-gradient
Abe Lebewohl Park	Second Avenue & East 10 th Street	Park	350 feet Southwest	Up-gradient
New York Eye and Ear Infirmary of Mount Sinai	310 East 14 th Street	Healthcare Facility	415 feet Northeast	Cross-gradient

A map depicting the sensitive receptors in the vicinity of the Site is provided as **Figure 3**.

1.3 Historic Use of the Site

Based on a review of reasonably ascertainable historical information, the Site was improved with two structures by at least 1903, which consisted of a residential building (188 2nd Avenue) and mixed-use residential and commercial structure (190 2nd Avenue and 300 East 12th Street). The eastern portion of the commercial space, identified as 300 ½ East 12th Street, was noted as a Chinese laundry in 1903. The former buildings were razed in the early 1900s and in 1920, the current mixed-use residential and commercial structure was constructed. Prior to the 1950s, commercial tenants included a café, a tailor, a hair products store, and a plumbing and heating supply store. According to historic city directories, from at least 1956 to 1988, commercial tenants operated 190 2nd Avenue and 300 East 12th Street as a dry-cleaning facility (K&S Cleaners & Dyers and Leather Master Cleaners & Tailor). It should be noted that the current property owner purchased the Site in 1987, and at the time, the commercial tenant spaces had been renovated and there was no evidence of former on-site dry-cleaning activities. Both ground floor commercial tenant spaces were occupied by restaurants from the late 1980s to approximately 2020 and are currently vacant.

1.4 Site Geology and Hydrogeology

According to the United States Department of Agriculture (USDA) Web Soil Survey, soil at the Site consist primarily of Urban Land. Urban land soils are those that have been so altered by human activities that the soil has lost its original characteristics and is thus unidentifiable.

Based upon findings of the subsurface investigations completed, soils encountered below the footprint of the Site consist of fill material (brown and gray silt with brick and gravel) to approximately four (4) feet below cellar slab. From approximately 4 to 12 feet below cellar slab, the soil consists of brown and gray silt with clay and trace angular gravel. Drilling refusal was generally encountered between 10 and 12 feet below cellar slab. Bedrock was not encountered during the investigations.

The Bedrock and Engineering Geologic Maps of New York County and Parts of Kings and Queens Counties, New York, and Parts of Bergen and Hudson Counties, New Jersey (United States Geological Survey [USGS], 1994) indicate that bedrock underlying the Site is part of the Hartland Formation. This formation is comprised of a dark gray medium- to coarse-grained muscovite biotite-garnet (mica) schist and gray fine-grained quartz-feldspar granulite with biotite and garnet, with localized concentrations of granite and intrusions of coarse-grained granitic pegmatite.

Groundwater was encountered at depths ranging from approximately 3.5 to 8.5 feet below the cellar slab in the monitoring wells installed at the Site. Based on surveyed groundwater elevations at the Site, groundwater flow at the Site is east-northeast.

In accordance with New York Codes, Rules, and Regulations Title 6 (6 NYCRR) Part 701: Classifications -Surface Waters and Groundwater, groundwater at the site is identified as Class GA (fresh groundwater). There are no known groundwater supply wells on the Site, and currently there are no known deed restrictions on the use of groundwater at the Site. Groundwater in the vicinity of the Site is not utilized for industrial, agriculture, or public supply purposes.

1.5 Wetlands and Floodplain

Review of the U.S. Fish & Wildlife Service, National Wetlands Inventory, Wetlands Mapper program identified no Federally regulated wetlands on the Site. The closest wetland area is located approximately 3,600 feet to the east. A wetland map is included as **Figure 4**. No State-regulated wetlands were identified on the Site or close in proximity to the Site, based on a review of the NYSDEC tidal wetlands map.

No surface water bodies were observed on the Site or on the adjoining properties. The closest waterbody is the East River, located approximately 3,600 feet east of the Site.

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), the Site is located in Zone X, which is an area of minimal flood hazard.

2.0 PREVIOUS VAPOR INTRUSION, SOIL, AND GROUNDWATER CHARACTERIZATION

The following provides a summary of the Site characterization activities previously completed in September 2017 and November 2017 by Castleton Environmental, Inc. (Castleton). These investigation activities were documented in the Phase II Environmental Site Assessment (ESA) (Castleton, September 2017) and Supplemental Phase II ESA (Castleton, March 2018), and have been included in the BCP application submitted to the NYSDEC in August 2023.

In addition, the following provides a summary of the Site characterization activities completed in August 2022, September 2022, and February 2023 through April 2023 by LKB.

2.1 Phase II Environmental Site Assessment (September 2017)

A subsurface investigation was completed at the Site by Castleton in September 2017, to evaluate potential impacts associated with the former on-site dry-cleaning operations. The 2017 subsurface investigation consisted of the following:

- The installation of eight sub-slab soil vapor screening points to identify potentially impacted areas. The vapors from each point were screened with a photoionization detector (PID) and readings ranged from 3.2 parts per million (ppm) to 20 ppm.
- The installation of four soil borings (SB1 through SB4) to depths of 2 to 4 feet below grade for the purpose of soil sample collection. Groundwater was encountered at a depth of 3.5 feet below the cellar slab. The soil was screened with a PID, and readings ranged from 0 ppm to 131 ppm. The soil boring locations were chosen based on the sub-slab soil vapor screening results and biased towards the highest vapor readings. One soil sample was collected from each boring and analyzed for volatile organic compounds (VOCs).

Review of the soil analytical data identified the presence of elevated concentrations of chlorinated volatile organic compounds (CVOCs) including tetrachloroethene (PCE), trichloroethene (TCE), and cis-1,2-dichloroethene (cis-DCE). In soil boring SB2, PCE was detected at 5.2 milligrams per kilogram (mg/kg), which exceeds the NYSDEC Unrestricted Use Soil Cleanup Objective (UUSCO) and Protection of Groundwater criteria (1.3 mg/kg). The remaining soil detections were at concentrations below the most stringent NYSDEC Soil Cleanup Objectives (SCOs).

2.2 Supplemental Phase II Environmental Site Assessment

Castleton completed supplemental subsurface investigation activities at the Site in September and November 2017. The supplemental investigative activities included the following:

- Collection of two sub-slab soil vapor samples (SSV01 and SSV02), one indoor air sample, and one ambient air sample.
- Installation of nine soil borings to depths ranging from 7 to 9 feet below grade. Fourteen soil samples were collected from the soil borings and analyzed for VOCs. One soil sample (SB10 4-5) was also analyzed for semi-volatile organic compounds (SVOCs).
- The installation of one temporary monitoring well and the collection of one groundwater sample, which was analyzed for VOCs.

Elevated detections of PCE and TCE were identified in sub-slab soil vapor and indoor air, and review of the New York State Department of Health (NYSDOH) Vapor/Indoor Air Matrix Guidance confirmed that the detections of both compounds required mitigation and/or additional investigation. Soil analytical results identified elevated detections of CVOCs (PCE, TCE, cis-DCE, and vinyl chloride) exceeding NYSDEC SCOs. Groundwater analytical results also identified elevated detections of CVOCs (PCE, TCE, cis-DCE, vinyl chloride, trans-1,2-dichloroethene [trans-

DCE], and 1,1-dichloroethene [1,1-DCE]) exceeding the NYSDEC Ambient Water Quality Standards (AWQS).

2.3 Vapor Intrusion Evaluation (August 2022)

Five indoor air samples (IA-1 through IA-5) and one ambient air sample (AA-1) were collected at the Site on August 24, 2022. Prior to indoor air sampling, LKB evaluated building operations, storage of chemicals, and the building envelope that could influence indoor air results. In addition, ambient weather conditions, including temperature and atmospheric pressure, were recorded. The indoor air samples were collected from within the approximate breathing zone within the cellar spaces and the ambient air samples were collected from the Site building exterior along East 12th Street. The sample locations are depicted in **Figure 5**.

The sample locations were co-located proximate to, but collected in advance of, the sub-slab soil vapor sampling locations (discussed below). The air samples were collected using stainless steel 6-liter Summa® canisters over an 8-hour sample duration. The samples were submitted to Alpha Analytical (Alpha) in Westborough, Massachusetts [New York Environmental Laboratory Approval Program (ELAP) No. 11148] for laboratory analysis of VOCs by United States Environmental Protection Agency (USEPA) Method TO-15.

On August 25, 2022, seven sub-slab soil vapor samples (SG-1 through SG-7) were collected at the Site. The sub-slab soil vapor sample locations are depicted on **Figure 5**. Sub-slab soil vapor samples were completed by drilling 3/8-inch core holes through the existing concrete slab. Teflon tubing was installed into the drilled core hole to facilitate the collection of soil vapor from beneath the concrete slab into stainless steel 2.7-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. Prior to purging, PID readings were collected directly from the tubing to evaluate sub-slab conditions. The PID readings collected at the Site are presented in the table below:

SUB-SLAB SOIL VAPOR SAMPLE FIELD SCREENING SUMMARY			
Sample ID	Sample Time	Sub-Slab PID Readings (ppm)	Ambient PID Readings (ppm)
VTX-SG-1	12:15	2.4	0.0
VTX-SG-2	13:05	0.7	0.0
VTX-SG-3	13:00	0.0	0.0
VTX-SG-4	10:15	0.6	0.0
VTX-SG-5	11:10	2.7	0.0
VTX-SG-6	10:30	4.0	0.0
VTX-SG-7	10:55	2.0	0.0

ppm = parts per million; PID = photo-ionization detector

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 2.7-liter Summa canisters were opened to initiate sample collection. The sub-slab samples were collected over an approximate 2-hour timeframe. Following sample collection, the tubing was removed, and the concrete core holes were sealed with concrete. The sub-slab soil vapor samples were submitted to Alpha for laboratory analysis of VOCs by USEPA Method TO-15.

Field forms for the August 2022 vapor intrusion sampling event are included in **Appendix B**.

2.3.1 Sub-Slab Soil Vapor Analytical Results (August 2022)

The results of the sub-slab soil vapor sample analyses were compared to the NYSDOH Decision Matrix Criteria. The results of the sub-slab soil vapor sampling identified the following:

CONSTITUENTS IN SUB-SLAB SOIL VAPOR IN EXCESS OF NYSDOH MATRICES			
SAMPLE ID	MATRIX A	MATRIX B	MATRIX C
VTX-SG-1	TCE	PCE	No constituents
VTX-SG-2	No constituents	PCE	No constituents
VTX-SG-3	No constituents	No constituents	No constituents
VTX-SG-4	No constituents	No constituents	No constituents
VTX-SG-5	No constituents	PCE	No constituents
VTX-SG-6	No constituents	No constituents	No constituents
VTX-SG-7	No constituents	PCE	No constituents

Evaluation of the sub-slab soil vapor analytical data identified concentrations of PCE and TCE in exceedance of the NYSDOH matrix sub-slab soil vapor concentration criteria. PCE concentrations ranged from 59.2 to 315 ug/m³ and TCE concentrations ranged from non-detect to 11.3 ug/m³. The highest PCE and TCE detections were identified at sample location VTX-SG-1, which is located in the central portion of the Site, in an inferred down-gradient location to the subsurface sewer line.

The sub-slab soil vapor analytical results are presented as **Table 1** and are depicted on **Figure 5**. The laboratory data package for the sub-slab soil vapor samples collected in August 2022 is provided in **Appendix B**.

2.3.2 Indoor/Ambient Air Analytical Results (August 2022)

The results of the indoor/ambient air sample analyses were compared to the NYSDOH Decision Matrix Criteria as well as the NYSDOH Air Guidance Values. The results of the indoor air sampling identified the following:

CONSTITUENTS IN INDOOR AIR IN EXCESS OF NYSDOH MATRICES/AIR GUIDANCE VALUES				
SAMPLE ID	MATRIX A	MATRIX B	MATRIX C	AIR GUIDANCE VALUES
VTX-IA-1	Carbon tetrachloride	No constituents	No constituents	No constituents
VTX-IA-2	Carbon tetrachloride	No constituents	No constituents	No constituents
VTX-IA-3	Carbon tetrachloride	No constituents	No constituents	No constituents
VTX-IA-4	Carbon tetrachloride	No constituents	No constituents	No constituents
VTX-IA-5	Carbon tetrachloride	No constituents	No constituents	No constituents
VTX-AA-1	Carbon tetrachloride	No constituents	No constituents	No constituents

Evaluation of the indoor and ambient air analytical data identified concentrations of carbon tetrachloride in exceedance of the NYSDOH matrix indoor air concentration criteria. Carbon tetrachloride concentrations ranged from 0.465 to 0.516 ug/m³. None of the detected concentrations were identified in exceedance of the Indoor Air Quality Guidance Values (Table 3.1 in the NYSDOH *Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York* dated October 2006 and updated in September 2013 and August 2015). It should be noted that carbon tetrachloride was identified in the ambient air sample, collected on the exterior of the Site building, at relatively the same concentration as all indoor air detections. Based on this detection in the ambient air and the lack of carbon tetrachloride in soil vapor, the source of carbon tetrachloride detected in the indoor air is from an outdoor ambient air source.

The indoor air and ambient air sample collection data, compared to the NYSDOH Matrix Criteria is reported in **Table 2**, and the results compared to the NYSDOH air guidance values is presented

in **Table 3**. The analytical results are depicted in **Figure 5**. The laboratory data package for the indoor air and ambient air samples collected in August 2022 is provided in **Appendix C**.

2.3.3 NYSDOH Soil Vapor/Indoor Air Matrix Evaluation

To evaluate the potential vapor intrusion concerns at the Site, LKB 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. A NYSDOH matrix evaluation summary table is provided as **Table 4**. The following is a summary of the findings and recommended actions based on the matrices for the constituents identified in exceedance of the soil vapor and/or indoor air criteria.

No concentrations of 1,1,1-trichloroethane (1,1,1-TCA), 1,1-dichloroethene (1,1-DCE), or vinyl chloride were detected in any of the sub-slab soil vapor, indoor air, or ambient air samples. Based on the Soil Vapor/Indoor Air Matrix, no further action is required for these compounds.

Carbon Tetrachloride

Carbon tetrachloride was not detected in any of the sub-slab soil vapor sample locations. Concentrations in indoor air samples ranged from 0.465 micrograms per cubic meter (ug/m^3) to 0.516 ug/m^3 , which exceeded the Matrix Criteria of 0.2 ug/m^3 . It should be noted that carbon tetrachloride was identified in the ambient air sample at a concentration of 0.472 ug/m^3 which is similar to all the indoor air locations.

- At SG-1/IA-1, the soil vapor detection of non-detect and indoor air concentration of 0.465 ug/m^3 requires no further action.
- At SG-2/IA-2, the soil vapor detection of non-detect and indoor air concentration of 0.472 ug/m^3 requires no further action.

- At SG-3/IA-3, the soil vapor detection of non-detect and indoor air concentration of 0.516 ug/m³ requires no further action.
- At SG-4/IA-4, the soil vapor detection of non-detect and indoor air concentration of 0.459 ug/m³ requires no further action.
- At SG-7/IA-5, the soil vapor detection of non-detect and indoor air concentration of 0.447 ug/m³ requires no further action.

Cis-1,2-Dichloroethene

- At SG-1/IA-1, the soil vapor detection of 2.76 ug/m³ and indoor air concentration of non-detect requires no further action.
- At all other locations soil vapor and indoor air were non-detect and require no further action.

Methylene Chloride

- At SG-3/IA-3, the soil vapor detection of 1.89 ug/m³ and indoor air concentration of non-detect requires no further action.
- At SG-4/IA-4, the soil vapor detection of 1.89 ug/m³ and indoor air concentration of non-detect requires no further action.
- At all other locations soil vapor and indoor air were non-detect and require no further action.

Tetrachloroethene (PCE)

- At SG-1/IA-1, the soil vapor detection of 315 ug/m³ and indoor air concentration of 1.15 ug/m³ requires no further action.

- At SG-2/IA-2, the soil vapor detection of 144 ug/m³ and indoor air concentration of 1.31 ug/m³ requires no further action.
- At SG-3/IA-3, the soil vapor detection of 78.7 ug/m³ and indoor air concentration of 2.36 ug/m³ requires no further action.
- At SG-4/IA-4, the soil vapor detection of 60.8 ug/m³ and indoor air concentration of 2.15 ug/m³ requires no further action.
- At SG-7/IA-5, the soil vapor detection of 136 ug/m³ and indoor air concentration of 1.94 ug/m³ requires no further action.

Trichloroethene (TCE)

- At SG-1/IA-1, the soil vapor detection of 11.3 ug/m³ and indoor air concentration of non-detect requires no further action.
- At SG-2/IA-2, the soil vapor detection of 2.49 ug/m³ and indoor air concentration of non-detect requires no further action.
- At SG-3/IA-3, the soil vapor detection of non-detect and indoor air concentration of 0.118 ug/m³ requires no further action.
- At all other locations soil vapor and indoor air were non-detect and require no further action.

Evaluation of the soil vapor analytical data identified PCE at four locations (SG-1, SG-2, SG-5, and SG-7) and TCE at one location (SG-1) in exceedance of the NYSDOH matrix sub-slab soil vapor concentration criteria. However, review of the co-located indoor air concentration (IA-1, IA-2, and IA-5) confirmed that pursuant to the NYSDOH Soil Vapor/Indoor Air Matrix Guidance (May 2017), no action is warranted. All sample locations were identified as “No Further Action” with respect to the Soil Vapor/Indoor Air Matrices.

2.4 Soil and Groundwater Investigation (September 2022)

LKB retained the services of Hawk Drilling, Inc. (Hawk) of Hampton, New Jersey to advance 10 soil borings (B-1 through B-10) in the Site building cellar using a combination of hand auger and direct push (i.e., jackhammer probe) drilling techniques. The soil boring locations are depicted in **Figure 6**. The soil borings were advanced between September 7 and 8, 2022, under the oversight and supervision of LKB field staff. The locations of the soil borings were adjusted in the field based on the location of subsurface utilities, overhead clearance, and access limitations.

The following table provides a summary of the soil boring completion depth, observed depth to groundwater, and rationale for soil boring/temporary monitoring well location.

SOIL BORING SUMMARY			
Boring ID	Completion Depth ⁽¹⁾ (feet bcs)	Groundwater Depth (feet bgs)	Location Rationale
B-1	12.0	6.90	Installed in the exterior central courtyard to delineate soil and groundwater impacts and evaluate an area of potential drum/waste storage for the former on-site drycleaner.
B-2	11.0	8.04	Installed in the inferred down-gradient location to delineate soil and groundwater impacts. Refusal encountered at 11.0 feet bcs.
B-3	11.0	7.51	Installed to evaluate the suspected CVOC source area adjacent to the sanitary sewer line. Refusal encountered at 11.0 feet bcs.
B-4	10.0	N/A	Installed in an inferred up-gradient location to delineate soil impacts from the suspected source area. Refusal at 10.0 feet bgs.
B-5	11.5	N/A	Installed along a sewer line to evaluate potential releases from the line and to horizontally delineate the suspected source area. Refusal at 11.5 feet bcs.
B-6	12.0	5.56	Installed along the sewer line to evaluate potential releases from the line and to horizontally delineate soil and groundwater impacts from the suspected source area.

SOIL BORING SUMMARY			
Boring ID	Completion Depth ⁽¹⁾ (feet bcs)	Groundwater Depth (feet bgs)	Location Rationale
B-7	10.0	N/A	Installed in an inferred up-gradient location to delineate soil impacts from the suspected source area. Refusal at 10.0 feet bcs.
B-8	8.5	N/A	Installed in an inferred up-gradient location to delineate soil impacts from the suspected source area. Refusal at 10.0 feet bcs.
B-9	9.0	N/A	Installed to evaluate inferred up-gradient soil conditions. Refusal at 9.0 feet bcs.
B-10	9.5	4.14	Installed to evaluate inferred up-gradient soil and groundwater conditions. Refusal at 9.5 feet bcs.

bcs – below cellar slab

(1) Depths are approximate and are measured from the surface of the cellar slab. It should be noted that the cellar finished floor depth is approximately 8.0 feet below street grade.

Soil samples collected using the jackhammer probe were collected continuously and screened in the field for the presence of total volatile organic vapors using a PID calibrated to 100 ppm by volume of isobutylene. The observed soil types, field screening readings, and other notable observations were recorded on soil boring logs. Soil boring logs are included as **Appendix D**. Visual and olfactory observations were also utilized to assess the soil for evidence of suspected contaminants.

The following table provides a summary of the field observations of the soil samples collected.

SOIL SAMPLE SUMMARY		
Boring ID	Sample Depth (feet bcs)	Sampling Rationale
B-1	7.5-8.0	Faint solvent odor and elevated PID readings identified (50.8 ppm). Black staining observed from 7.5-8.0 and 9.5-10.0 feet bcs. Fill material (brown and gray silt with brick fragments) was observed from 0.5-2.5 feet bcs. Soil sample collected from interval with highest PID reading and staining.

SOIL SAMPLE SUMMARY		
Boring ID	Sample Depth (feet bcs)	Sampling Rationale
B-2	7.0-7.5	Strong solvent odor and elevated PID readings identified (greater than 15,000 ppm ⁽¹⁾). Fill material (brown and gray silt with brick fragments) was observed from 0.5-2.0 feet bcs. Soil sample collected from interval with highest PID reading and strong solvent odor.
B-3	5.5-6.0	Strong solvent odor and elevated PID readings identified (greater than 15,000 ppm). Fill material (brown and gray silt with brick fragments) was observed from 0.5-2.5 feet bcs. Soil sample collected from interval with highest PID reading and strong solvent odor.
B-4	7.0-7.5	A faint solvent odor (4.0-7.0 feet bgs) and black staining (7.0-8.0 feet bgs) were identified. Max PID reading was 4.2 ppm. Fill material (brown and gray silt) was observed from 0.5-4.0 feet bcs. Soil sampled from interval with staining.
B-5	8.5-9.0	Strong solvent odor and elevated PID readings (greater than 15,000 ppm) identified. Black silt observed from 10.5-11.5 feet bcs. Fill material (brown and gray silt with brick fragments) observed from 0.5-3.5 feet bcs. Soil sampled from interval with strong solvent odor and PID readings greater than 15,000 ppm.
B-6	9.0-9.5	Solvent odor and elevated PID readings (523 ppm) identified. Black staining observed from 7.5-8.0 and 9.5-10.0 feet bcs. Fill material (brown and gray silt with brick fragments) was observed from 0.5-2.5 feet bcs. Soil sample collected from interval with highest PID reading and solvent odor.
B-7	7.0-7.5	No odor identified. PID maximum was 3.0 ppm. Black staining observed from 7.0-8.5 feet bcs. Fill material (brown and gray silt with brick fragments) was observed from 0.5-4.0 feet bcs. Soil sampled from interval with staining.
B-8	1.0-1.5	No odors identified. Elevated PID readings (40.3 ppm) and black staining (6.0-8.5 bcs) noted. Fill material (brown and gray silt with brick fragments) was observed from 0.5-3.0 feet bcs. Soil sampled from shallow interval with elevated PID readings.
B-9	6.0-6.5	No odors identified. Elevated PID readings (28.8 ppm) and black staining (6.0-7.0 feet bcs). Fill material (brown and gray silt with brick fragments) observed from 0.5-3.0 feet bcs. Soil sampled from interval with black clayey silt.
B-10	5.5-6.0	No odors or elevated PID readings identified. Black silty clay observed from 6.0-7.0 feet bcs. Fill material (black and gray silt with brick fragments) observed from 0.5-2.0 feet bcs. Soil sampled from interval with silt to clay interface.

bcs – below cellar slab

ppm – parts per million

(1) PID readings listed as “greater than 15,000” exceeded maximum concentration capabilities of instrument.

The soil sample containers were labeled, placed in a laboratory-supplied cooler, and packed on ice (to maintain a temperature of 4°C). Sample coolers were picked up at the Site by a laboratory

courier and delivered to Alpha under proper chain of custody protocol for analysis of VOCs via USEPA Method 8260.

Five soil borings (B-1, B-2, B-3, B-6, and B-10) were converted into temporary monitoring wells for the collection of groundwater samples. The temporary monitoring well locations are depicted on **Figure 7**. Groundwater level measurements were taken from each well, and groundwater was encountered at depths ranging from approximately 4.14 to 8.04 feet below the cellar slab. The temporary monitoring wells were constructed of 1-inch diameter Schedule 40 slotted (0.010 inch) polyvinyl chloride (PVC) screen and 1-inch diameter PVC riser to grade. The screened interval for the temporary monitoring wells was installed to intersect the shallow groundwater table and extended to the completion depth of the well. The temporary monitoring wells were not surveyed.

Grab groundwater samples were collected from the temporary monitoring wells using a disposable bailer. Due to low recovery in the wells, well development was not conducted.

Groundwater samples were collected in laboratory-provided containers and submitted under proper chain-of-custody procedures to Alpha. All groundwater samples were analyzed for VOCs via USEPA Method 8260.

2.4.1 Soil Analytical Results (September 2022)

The soil analytical data was compared to the NYSDEC Restricted Use Soil Cleanup Objective – Commercial (RUSCO-C), Restricted Use Soil Cleanup Objective – Residential (RUSCO-R), Restricted Use Soil Cleanup Objective – Restricted Residential (RUSCO-RR), and UUSCO. Review of the soil analytical results identified the following constituents in soil samples in excess of SCOs:

CONSTITUENTS IN SOIL SAMPLES IN EXCESS OF SCOs					
SAMPLE LOCATION	SAMPLE DEPTH ⁽¹⁾	CONSTITUENTS >RUSCO-C	CONSTITUENTS >RUSCO-RR	CONSTITUENTS >RUSCO-R	CONSTITUENTS > UUSCO
B-1	7.5-8.0	No constituents	No constituents	No constituents	2-Butanone Acetone PCE Vinyl chloride
B-2	7.0-7.5	PCE Vinyl chloride	Cis-DCE PCE TCE Vinyl chloride	Cis-DCE PCE TCE Vinyl chloride	Cis-DCE PCE TCE Vinyl chloride
B-3	5.5-6.0	PCE	PCE	PCE TCE	Cis-DCE PCE TCE
B-4	7.0-7.5	No constituents	No constituents	No constituents	2-Butanone Acetone
B-5	8.5-9.0	PCE	PCE Vinyl chloride	PCE TCE Vinyl chloride	Cis-DCE PCE TCE Vinyl chloride
B-6	9.0-9.5	PCE	PCE	PCE TCE Vinyl chloride	Cis-DCE PCE TCE Vinyl chloride
B-7	7.0-7.5	No constituents	No constituents	No constituents	Acetone
B-8	1.0-1.5	No constituents	No constituents	No constituents	No constituents
B-9	6.0-6.5	No constituents	No constituents	No constituents	Acetone
B-10	5.5-6.0	No constituents	No constituents	No constituents	Acetone

(1) Feet below cellar slab

The soil analytical results are presented as **Table 5** and are depicted on **Figure 6**. The laboratory data package for the soil samples collected in August 2022 is provided in **Appendix E**.

2.4.2 Groundwater Analytical Results (September 2022)

The results of the groundwater sample analyses were compared to the AWQS and NYSDEC Groundwater Effluent Limitation (Class GA). Review of the groundwater analytical results identified the following constituents above NYSDEC standards:

CONSTITUENTS IN GROUNDWATER SAMPLES IN EXCESS OF NYSDEC STANDARDS		
Sample Location	Constituents >AWQS/Class GA (Concentration in ug/L)	AWQS and Class GA (Standard in ug/L)
TW1	cis-DCE (26) PCE (40) Vinyl chloride (27)	cis-DCE (5) PCE (5) Vinyl chloride (2)
TW2	cis-DCE (80,000) PCE (24,000) TCE (2,300) Vinyl chloride (19,000)	cis-DCE (5) PCE (5) TCE (5) Vinyl chloride (2)
TW3	cis-DCE (94,000) PCE (200,000) TCE (11,000) Vinyl chloride (20,000)	cis-DCE (5) PCE (5) TCE (5) Vinyl chloride (2)
TW6	cis-DCE (7,100) PCE (9,500) TCE (880) Vinyl chloride (1,200)	cis-DCE (5) PCE (5) TCE (5) Vinyl chloride (2)
TW10	No constituents	No exceedances

ug/L – Micrograms per liter

The groundwater analytical results are presented in **Table 6** and are depicted on **Figure 7**. The laboratory data package for the groundwater samples collected in September 2022 is provided in **Appendix F**.

2.5 Monitoring Well Installation (February 2023)

LKB retained the services of PAL Environmental Safety Corp. (PAL) of Long Island City, New York to install three permanent monitoring wells (MW-1 through MW-3) in the Site cellar. The monitoring well locations are depicted on **Figure 7**. Details of the monitoring well completion depths and construction information were recorded by LKB in the field. Boring logs for the monitoring wells are included in **Appendix D**.

Due to Site conditions including limited access and low ceiling height (approximately 7-8 feet tall), the monitoring wells were installed via direct-push drilling techniques via a Geoprobe® 420M portable drill rig. All three monitoring wells were installed by PAL on February 7, 2023, under LKB oversight. The three monitoring wells, which were all installed to a depth of approximately 12 feet below the cellar slab, were in the southern courtyard (MW-1), the hallway near the suspected source soil area (MW-2), and the eastern hallway near the bilco doors leading to East 12th Street (MW-3).

MW-1 was constructed of two-inch diameter Schedule 40 slotted (0.010 inch) PVC screen and two-inch diameter PVC riser to grade. MW-2 and MW-3 were constructed of two-inch diameter Schedule 40 slotted (0.020 inch) PVC screen and two-inch diameter PVC riser to grade. The well screen annulus was filled with sand pack from the base of the screen to 1 foot above the top of the screen. A bentonite/grout slurry was installed from the top of the sand pack to ground surface. The screened interval for the monitoring wells (10 feet) was installed to intersect the shallow groundwater table and extended to the completion depth of the well. Surface finishing consisted of a flush-mount traffic-rated manhole with a bolt-on lid set into a concrete pad. Additionally, an expandable locking cap was fitted to the top of the PVC riser in the well.

The monitoring wells were developed following installation to improve the hydraulic efficiency, by the removal of the fine-grained material generated during the drilling process. Groundwater

was purged from the monitoring wells using dedicated polyethylene tubing and a peristaltic pump with a check valve, until turbid-free water was observed. Purge development water was placed in a 55-gallon drum for off-site disposal at a later date.

The monitoring wells were positioned so that groundwater flow direction could be triangulated from the elevation information obtained following the gauging and surveying of the wells. VERTEX contracted a New York State-licensed surveyor, DPK Land Surveying LLC (New York Certificate of Authorization No. 0012585), to survey the monitoring well locations on February 22, 2023. A copy of the well survey map is provided in **Appendix G**.

2.6 Groundwater Sampling (February 2023)

The newly installed monitoring wells were allowed to stabilize and were sampled two weeks following installation and development. The groundwater sampling event on February 22, 2023, began with groundwater level measurements from each well using a product/water interface probe. Solvent odors were detected in all of the monitoring wells and the slight presence of dense non-aqueous phase liquid (DNAPL) was identified in MW-2. Light non-aqueous phase liquid (LNAPL) was not identified in the monitoring wells.

MONITORING WELL CONSTRUCTION AND ELEVATION INFORMATION – FEBRUARY 2023							
Well ID	Latitude ⁽¹⁾	Longitude ⁽¹⁾	Total Well Depth (feet bgs)	Screened Interval (feet bgs)	Top of Casing Elevation (feet msl)	Depth to Water (feet bgs)	Groundwater Elevation (feet msl)
MW-1	40.435039	73.590801	11.76	1.76 – 11.76	19.93	8.53	11.40
MW-2	40.435065	73.590835	11.63	1.63 – 11.63	19.98	5.44	14.54
MW-3	40.435089	73.590836	11.06	1.06 – 11.06	20.00	5.05	14.95

(1) World Geodetic System (WGS) 1984 geographic coordinate system (datum)
msl – mean sea level

Based on the groundwater elevation information of the Top of Casings and groundwater elevation collected in February 2023, groundwater flow at the Site is east-northeast. A groundwater contour map for the February 2023 sampling event is included as **Figure 8**.

Purging of the wells prior to sampling was conducted using low flow purging methodologies with dedicated high-density polyethylene (HDPE) tubing and a submersible pump. Field parameters were measured before and during the sampling and consisted of pH, specific conductance, oxidation-reduction potential (ORP), temperature, dissolved oxygen, and turbidity. A copy of the field sampling forms is included in **Appendix H**. Sample collection was conducted following a three well volume purge.

Groundwater samples were collected in laboratory-provided containers and submitted under proper chain-of-custody procedures to Alpha. All groundwater samples were analyzed for VOCs via USEPA Method 8260. All groundwater samples were collected as grab samples.

2.6.1 Groundwater Analytical Results (February 2023)

The results of the groundwater samples analyses were compared to the AWQS and Class GA. Review of the groundwater analytical results identified the following:

CONSTITUENTS IN GROUNDWATER IN EXCESS OF NYSDEC STANDARDS		
Sample Location	Constituents >AWQS and Class GA (Concentration in ug/L)	AWQS and Class GA (Standard in ug/L)
MW-1	cis-DCE (1,100) PCE (9,700) TCE (390) Vinyl chloride (50)	cis-DCE (5) PCE (5) TCE (5) Vinyl chloride (2)
MW-2	cis-DCE (86,000) PCE (180,000) TCE (11,000) Vinyl chloride (16,000)	cis-DCE (5) PCE (5) TCE (5) Vinyl chloride (2)

CONSTITUENTS IN GROUNDWATER IN EXCESS OF NYSDEC STANDARDS		
Sample Location	Constituents >AWQS and Class GA (Concentration in ug/L)	AWQS and Class GA (Standard in ug/L)
MW-3	cis-DCE (7,000) PCE (56,000) TCE (2,700) Vinyl chloride (1,400)	cis-DCE (5) PCE (5) TCE (5) Vinyl chloride (2)

ug/L = microgram per liter

Table 7 summarizes the groundwater sampling results for the permanent monitoring wells. The groundwater results for the CVOC contaminants of concern are depicted in **Figure 7**. The laboratory data package for the February 2023 groundwater sampling is provided as **Appendix I**.

2.7 Sewer Evaluation

To investigate potential preferential pathways for contaminants to enter the subsurface at the Site, a records request was submitted to the NYCDEP Bureau of Water and Sewer Operations to obtain water and sewer maps for the Site and immediate vicinity. Review of the documentation provided indicated a combined sewer is located to the west of the Site, along 2nd Avenue, and a combined sewer is located to the north of the Site, along East 12th Street. In addition, a 12-inch water line is also located along 2nd Avenue to the west and East 12th Street to the north. A copy of the sewer documentation obtained from the NYCDEP is included in **Appendix J**.

In addition, LKB coordinated with a contractor (GPRS, LLC) to perform a geophysical survey utilizing ground-penetrating radar (GPR) and perform a sanitary sewer evaluation consisting of a video inspection of the sanitary sewer piping within the Site building on March 1, 2023. Access to the sanitary sewer line was via a cleanout located in the cellar of the Site building. The sewer piping was observed to be approximately 7 to 10 inches below the cellar slab. A map of the sewer lines identified below the footprint of the Site building is provided in **Appendix J**. No obvious indication of damage or cracks was observed during the video inspection; however, it should be noted that

some standing water was encountered in the sewer lines, which limited observations. Grease was also observed throughout the sewer lines, which was likely a result of the former on-site restaurant operations. An inspection report was not prepared; however, LKB was on-site to confirm the field observations.

2.8 Groundwater Sampling (April 2023)

A second groundwater sampling event was conducted on April 27, 2023. The groundwater sampling event began with groundwater level measurements from each well using a product/water interface probe. Solvent odors were detected in all of the monitoring wells and the slight presence of DNAPL was identified in MW-2. LNAPL was not identified in the monitoring wells.

MONITORING WELL CONSTRUCTION AND ELEVATION INFORMATION – APRIL 2023							
Well ID	Latitude ⁽¹⁾	Longitude ⁽¹⁾	Total Well Depth (feet bgs)	Screened Interval (feet bgs)	Top of Casing Elevation (feet msl)	Depth to Water (feet bgs)	Groundwater Elevation (feet msl)
MW-1	40.435039	73.590801	11.76	1.76 – 11.76	19.93	8.35	11.58
MW-2	40.435065	73.590835	11.63	1.63 – 11.63	19.98	5.22	14.76
MW-3	40.435089	73.590836	11.06	1.06 – 11.06	20.00	4.99	15.01

(1) World Geodetic System (WGS) 1984 geographic coordinate system (datum)
msl – mean sea level

Based on the groundwater elevation information, groundwater flow at the Site was confirmed to be east-northeast, which was the same as the February 2023 event. A groundwater contour map (April 2023) is included as **Figure 9**.

Purging of the wells prior to sampling was conducted using low flow purging methodologies with dedicated HDPE tubing and a submersible pump. Field parameters were measured before and during the sampling and consisted of pH, specific conductance, ORP, temperature, dissolved

oxygen, and turbidity. A copy of the field sampling forms is included in **Appendix H**. Sample collection was conducted following a three well volume purge.

Groundwater samples were collected in laboratory-provided containers and submitted under proper chain-of-custody procedures to Alpha. All groundwater samples were analyzed for VOCs via USEPA Method 8260.

All groundwater samples were collected as grab samples.

2.8.1 Groundwater Analytical Results (April 2023)

The results of the groundwater samples analyses were compared to the AWQS and Class GA. Review of the groundwater analytical results identified the following exceedances and concentrations:

CONSTITUENTS IN GROUNDWATER IN EXCESS OF NYSDEC STANDARDS		
Sample Location	Constituents >AWQS and Class GA (Concentration in ug/L)	AWQS and Class GA (Standard in ug/L)
MW-1	1,1-DCE (9.6) cis-DCE (1,500) trans-DCE (9.4) TCE (1,000) Vinyl Chloride (440)	1,1-DCE (5) cis-DCE (5) trans-DCE (5) TCE (5) Vinyl Chloride (2)
MW-2	cis-DCE (73,000) PCE (210,000) TCE (12,000) Vinyl Chloride (14,000)	cis-DCE (5) PCE (5) TCE (5) Vinyl Chloride (2)
MW-3	cis-DCE (8,100) PCE (46,000) TCE (3,200) Vinyl Chloride (2,900)	cis-DCE (5) PCE (5) TCE (5) Vinyl Chloride (2)

ug/L = microgram per liter

Table 8 summarizes the groundwater sampling results for the permanent monitoring wells. The groundwater results for the CVOC contaminants of concern are depicted in **Figure 7**. The laboratory data package for the April 2023 groundwater sampling is provided as **Appendix K**.

3.0 INTERIM REMEDIAL MEASURES

The following provides a summary of the Interim Remedial Measure (IRM) activities completed in March and April 2023. The objectives of the IRM activities were to assess and remove contaminant mass via groundwater extraction in potential source area and install an engineering control (active sub-slab depressurization system [SSDS]) to collect and remove sub-slab contaminant vapors and prevent vapor intrusion for the protection of human health in the occupied Site building. The justification for the groundwater extraction procedure was to address what appeared to be perched groundwater in the area of elevated concentrations of the contaminants of concern.

3.1 Sub-Slab Depressurization System Installation

To safeguard the Site building from potential vapor intrusion associated with the documented sub-slab soil vapor, soil, and groundwater impacts, an active SSDS was designed and installed to prevent the potential migration of vapors that may build up beneath the slab to the indoor air of the Site building.

Based on the age of the Site building and the proposed SSDS design (piping runs pass through building walls, floors, and ceilings), a path of construction asbestos-containing materials (ACM) survey was performed in the building areas that were likely to be affected during the SSDS installation. No ACM was identified, and an Asbestos Assessment Report was submitted to the NYCDEP. A copy of the Asbestos Control Program (ACP)-5 form is included in **Appendix L**.

LKB subcontracted AWT Environmental Services, Inc. (AWT) of Sayreville, New Jersey to install an active SSDS at the Site. AWT coordinated with a permit expeditor to assist with permitting of the SSDS and ensure the SSDS was installed in accordance with NYCDOB requirements. A copy of the work permit, tenant protection plan (TPP) notice, and letter of completion from the NYCDOB is

included in **Appendix L**. The SSDS component installation was completed from March 14 to 30, 2023.

Dust (particulate matter) was controlled during the saw cutting and excavation of the SSDS piping trenches in the cellar of the Site building. Dust control measures were used during intrusive activities and excavation activities such that no visible dust migration was observed. The following dust suppression techniques were used: water application on or adjacent to the construction area; water spray equipment and trench faces; restricting square footage of open trenches; and hauling materials in properly covered containers.

The active SSDS at the Site consists of two horizontal extraction trenches and one vertical extraction point. The extraction trenches consist of two-inch diameter slotted PVC well screen (0.020-inch slot size) set in clean pea gravel with caps at the ends of each piping run. The single vertical extraction point consists of a one-foot length of slotted PVC well screen set in a pea gravel 1 cubic foot pit. The below-grade horizontal piping runs consist of solid two-inch Schedule 40 PVC pipe. Vertical and horizontal piping runs located inside the building consist of 2-inch and 4-inch diameter Schedule 40 steel pipe from the cellar floor to the building exterior. Building exterior runs consisted of 3-inch PVC pipe.

Three Dwyer Minihelic® 0-10 inches of water column pressure gauges are installed along the above grade piping runs to monitor system vacuums. Sample ports are installed within each pipe run to allow for monitoring of each individual extraction point.

System air flow is imparted with the use of one OBAR GBR 76-SOE high pressure, direct drive, blower (200 cubic feet per minute at five inches of water column). In accordance with NYSDOH guidance, the exhaust was located at least 10 feet from any operable openings or air intakes. The blower is connected electrically to its own circuit in an existing electrical panel in the cellar.

Four permanent, sub-slab monitoring points (Mini Vapor Pin®) were installed to be able to monitor below grade vacuum and contaminant concentrations.

An alarm (Radon Away™ Checkpoint IIA) was installed on the system to warn of a loss of system vacuum.

Drawings, signed and sealed by a PE who is licensed and registered in New York State, are included in **Appendix L**. **Figure 10** shows the location of the SSDS installed at the Site.

The system began operation on March 30, 2023, and an initial check of system operation, flow, and vacuum was performed to confirm the system was operating within design parameters. On April 12, 2023, LKB completed commissioning (diagnostic testing to establish a baseline for the operational parameters) of the SSDS. Commissioning was performed approximately two weeks after startup to allow for the system and subsurface conditions to come to a steady state. As part of the commissioning, the SSDS was checked for proper operation, and system readings for vacuum, air flow, etc. were collected at various points in the system and sub-slab environment. SSDS diagnostic measurements were obtained with direct reading instruments. A summary of the commissioning vacuum and flow readings is presented on **Figure 10**. Commissioning confirmed that the SSDS is operating within design parameters and is effectively creating a negative pressure gradient below the building slab to prevent vapor intrusion.

3.2 Groundwater Extraction Events

LKB subcontracted PAL to conduct two enhanced fluid recovery (EFR) events at the Site (March 28, 2023 and April 21, 2023). During each event, extraction was completed via a drum vacuum on monitoring wells MW-2 and MW-3 over a 5- to 6-hour timeframe. The drum vacuum could produce up to 185 inches water column and flow up to 89 cfm. A dip tube/hose was utilized to extract groundwater and vapors from each well. Limited groundwater (approximately 8 to 10

gallons) was extracted directly into sealed and labeled U.S. Department of Transportation (DOT)-approved 55-gallon drums. Air exhaust from the vacuum was treated on-site via activated carbon in a 55-gallon drum.

During the extraction events, LKB gauged the proximate well that was not being extracted at the time (i.e., if extraction was being conducted on MW-2, LKB was gauging MW-3) to determine if there was any influence on the other well (i.e., change in groundwater level). No observable influence was noted, which indicated that there is less than a 20-foot radius of influence in the formation below the cellar slab.

Based on field observations during the groundwater extraction and sampling events, it was noted that groundwater recharge is extremely slow at the Site. Review of the groundwater analytical results indicated no significant change in contaminant concentrations was observed following the completion of the groundwater extraction events.

3.3 Investigation-Derived Waste Management

Investigation-derived waste (IDW) generated during the Site characterization and IRM activities included the following: soil cuttings generated during the monitoring well installations; purge development water generated during monitoring well development and sampling; groundwater generated during EFR events, soil generated from the trench installation for the SSDS below-grade piping; and concrete generated during the trenching for the SSDS piping. The soil, concrete, and groundwater were placed in sealed and labeled U.S. DOT-approved 55-gallon drums for off-site disposal at a permitted facility. The drums were labeled and stored inside the secured cellar at the Site, to be disposed of at a later date.

LKB coordinated for the removal and disposal of a total of seven drums of non-hazardous soil and concrete from 188 Second Avenue, and a total of one drum of hazardous groundwater and four

drums of hazardous soil and concrete from 300 East 12th Street. On April 27, 2023, all drums of IDW were transported off-site to Republic Environmental Systems (PA), LLC in Hatfield, Pennsylvania for disposal. The total volume of hazardous waste disposed from the Site was completed under an USEPA *de minimis* quantity exemption; therefore, a Resource Conservation and Recovery Act (RCRA) identification number was not required. A copy of the waste disposal manifests is included in **Appendix M**.

Disposable sampling equipment including spoons, gloves, bags, paper towels, etc. that came in contact with environmental media was double bagged and disposed as municipal trash in a facility trash dumpster as general refuse.

4.0 QUALITY ASSURANCE PROJECT PLAN

A Quality Assurance Project Plan (QAPP) was prepared to guide the implementation of the proposed RI activities. Quality assurance/quality control (QA/QC) procedures will be used to provide performance information with regard to accuracy, precision, sensitivity, representation, completeness, and comparability associated with the sampling and analysis for the RI at the Site.

4.1 Project Technical Personnel and Contractors

The table below summarizes the planned principal personnel to participate in the RI activities.

Project Technical Personnel and Contractors			
Name	Company	Responsibility	Contact Information
Timothy Biercz	The Vertex Companies, LLC	Project Manager	(908) 333-4317
Joseph Dultz	Lockwood, Kessler & Bartlett, Inc.	Project Manager / Technical Support	(908) 333-4312
Richard J. Tobia, P.E.	Lockwood, Kessler & Bartlett, Inc.	New York-licensed Professional Engineer	(908) 458-9604
Michael Baldwin	PAL Environmental Safety Corp.	Drilling Services	(718) 349-0900
Stephen Tomicki	AWT Environmental Services, Inc.	SSDS Installation Contractor	(732) 613-1660
Daniel Ashe, P.E.	Walter T. Gorman Engineering	Permit Expeditor	(212) 532-5970
Matt Fekelman	Ground Penetrating Radar Systems Inc.	Geophysical Contractor	(484) 889-5874
Nichole Hunt	Alpha Analytical Inc.	Laboratory Contact	(508) 439-5137
Crystal Piccirillo	DPK Land Surveying, LLC	Licensed Surveyor	(732) 764-0100
Lisa Baldwin	Innovative Recycling Technologies	Drum Disposal Contractor	(631) 225-3044

4.2 Sampling Methodology

All sampling will be conducted in accordance with NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation, dated May 3, 2010, and Sampling Guidelines and Protocols, dated March 1991.

Soil samples will be collected by VERTEX from discrete, six-inch intervals, from unique borings advanced at the Site via a track-mounted direct-push drill rig (e.g., Geoprobe®) and a limited-access direct push rig. The direct-push drill rig will advance a five-foot long stainless-steel macro-core sampler, while the limited access drill rig advances four-foot samplers. Per each advancement, a dedicated, disposable polybutyl acetate liner will be used in which the soil samples are held for field assessment. Continuous soil cores will be screened with a PID and visually and olfactory inspected. Disposable nitrile gloves will be worn during the soil screening process and sampling collection. The soil samples will be collected in dedicated laboratory-provided Encore samplers and laboratory-provided containers.

For the collection of groundwater samples from permanent monitoring wells, the wells will be purged with disposable polyethylene tubing and a submersible pump. Three well volumes will be purged using the volume averaged sampling method. Following purging, a grab groundwater sample will be collected using a polyethylene disposable bailer.

The sub-slab soil vapor sample will be collected using a 2.7-Liter stainless-steel Summa canister over a two-hour sample duration. The temporary sub-slab sample point will be installed by drilling a small diameter hole (approximately 3/8 inch) through the concrete floor slab. Sample tubing will be secured within the hole using Teflon tape and non-VOC modeling clay to ensure a tight seal. A leak check will be performed on the entire sample train using a tracer compound (e.g., helium) to confirm sampling methodology at the proposed location. The leak check will be

performed to ensure that there is less than 10% helium in the purged air. Prior to sample collection from the vapor probe/core hole, three purge volumes will be evacuated from the sample train at a flow rate not to exceed 200 milliliters per minute. Following sample collection, the core-hole will be filled with concrete, sealed, and the work area will be cleaned. The sampling procedures will be conducted in general accordance with NYSDOH guidance.

Equipment will be operated in accordance with the manufacturer's specifications, including calibration of all field instruments, which will be performed prior to the initiation of field work and on a schedule indicated by the manufacturer.

Following the sample collection, the sample containers will be secured, labeled, and placed in a storage/transportation cooler and cooled to acceptable temperatures (e.g., four degrees Celsius) with ice. Samples will then be transported by a field courier to the laboratory following proper chain of custody procedures. The courier will relinquish custody to the log-in sample custodian upon arrival at the laboratory.

4.3 Report Logs

Field logs and borings logs will be completed during the course of RI activities. A field log will be completed on a daily basis, which will describe all field activities including: project number and site address; date and time; weather conditions; on-site personnel and associated affiliations; description of field activities; pertinent sample collection information (sample identification, description of sample, sample location, sample collection time, sampling methodology, name of collector, field screening results, and analysis to be conducted). A boring log will be completed for each soil boring/monitoring well, which will include the following: project number and site address; date and time; drilling company name and drilling method; boring/monitoring well identification, total boring depth and water table depth; and pertinent sample collection

information (sample identification, sample depth, interval, recovery amount, color, composition, percent moisture, PID readings, and visual/olfactory observations).

4.4 Laboratory Summary

All samples collected during the RI activities will be submitted under proper chain-of-custody protocols to Alpha in Westborough, Massachusetts (New York ELAP No. 11627). A copy of the NYSDOH *Certificate of Approval for Laboratory Service* is included in **Appendix N**.

4.5 Analytical Method/Quality Assurance

As part of the RI activities, soil, groundwater, and soil vapor samples will be collected. The sampling, including matrix, frequency of collection, analytical parameter, analytical method, sample preservation, sample container volume and type, and holding time are provided in the summary tables below.

Analysis of all soil and groundwater samples will be conducted for the complete target compound list (TCL)/target analyte list (TAL) suite of analyses, which includes VOCs via USEPA Method 8260, SVOCs via USEPA Method 8270, pesticides/polychlorinated biphenyls (PCBs) via USEPA Methods 8081/8082, TAL metals via USEPA Methods 6010/7471, and cyanide via USEPA Method 9012. To address the NYSDEC's concern with emerging contaminants, initial groundwater samples will also be analyzed for 1,4-dioxane via USEPA Method 8270 selective ion monitoring (SIM) and per- and polyfluoroalkyl substances (PFAS) via USEPA Method 537. Following the review of the initial PFAS results in groundwater, consideration will be made to analyze soil samples for PFAS and/or the continued analysis of additional groundwater samples for PFAS.

Soil Sampling Summary					
Matrix Type	Analytical Parameter	Analytical Method	Sample Preservation	Sample Container	Sample Holding Time
Soil	VOC	8260	Cool, 4°C	Encore	48 Hours
Soil	SVOC	8270	Cool, 4°C	8 oz Glass Jar	14 Days
Soil	Pesticides/ PCB	8081/8082	Cool, 4°C	8 oz Glass Jar	14 Days
Soil	TAL Metals	6010/7471	None	8 oz Glass Jar	6 Months
Soil	Cyanide	9012	Cool, 4°C	8 oz Glass Jar	14 Days
Soil	1,4-Dioxane	8270	Cool, 4°C	8 oz Glass Jar	14 Days
Soil	PFAS	537 (m)	Cool, 4°C	8 oz Glass Jar	28 Days

Groundwater Sampling Summary					
Matrix Type	Analytical Parameter	Analytical Method	Sample Preservation	Sample Container	Sample Holding Time
Aqueous	VOC	8260	HCl, Cool, 4°C	40 ml Vials	14 days
Aqueous	SVOC	8270	Cool, 4°C	500 mL Amber Glass	7/40 days
Aqueous	Pesticides/ PCB	8081/8082	Cool, 4°C	500 mL Amber Glass	7/40 days
Aqueous	TAL Metals	6010/7471	HNO ₃ , Cool, 4°C	500 mL plastic	6 months
Aqueous	Cyanide	9012	NaOH, Cool, 4°C	500 mL plastic	14 days
Aqueous	1,4-Dioxane	8270	Cool, 4°C	500 mL Amber Glass	7/40 days

Groundwater Sampling Summary					
Matrix Type	Analytical Parameter	Analytical Method	Sample Preservation	Sample Container	Sample Holding Time
Aqueous	PFAS	537	Trizma, Cool, 4°C	(2) 250 ml Vials	14 Days

If either LNAPL and/or DNAPL are detected, appropriate samples will be collected for characterization and “fingerprint analysis” and required regulatory reporting (i.e., spills hotline) will be performed.

Analysis of all soil and groundwater samples will be conducted for VOCs via USEPA Method TO-15.

INDOOR AIR, AMBIENT AIR, AND SOIL VAPOR SAMPLING SUMMARY					
Matrix Type	Analytical Parameter	Analytical Method	Sample Preservation	Sample Container	Sample Holding Time
Soil Vapor	VOC	TO-15	None	2.7-L Summa Canister	30 days

A thorough evaluation of the laboratory data will be completed, and a Data Usability Summary Report (DUSR) will be prepared. The primary objective for the evaluation of analytical data will be to determine whether or not the data, as presented, meets the site-specific criteria for data quality and use. The preparation of the DUSR will be prepared by a qualified, independent data validation expert. The DUSR will be prepared in accordance with Appendix 2B, Guidance for Data Deliverables and the Development of Data Usability Summary Reports included in NYSDEC DER-10: Technical Guidance for Site Investigation and Remediation.

4.6 Quality Assurance Samples

Field blanks and trip blanks will be submitted to the laboratory to evaluate the quality and performance of the analytical laboratory's analysis and reporting of the soil and groundwater sample results. Field (equipment) blanks will be analyzed to assess any contamination contributed from sampling location conditions, and the transport, handling, and storage of the samples. The trip blank will be analyzed to determine if sample containers may have been contaminated during transportation and storage. In accordance with DER-10, field duplicates, aqueous trip blanks, and field blanks will be collected at a frequency of 1 per 20 samples and will be analyzed for the complete TCL/TAL suite of analyses (soil and groundwater) and VOCs via USEPA Method TO-15 (soil vapor).

5.0 HEALTH AND SAFETY PLAN

A Health and Safety Plan (HASP) was prepared to guide the conduct of the RI work in the event that petroleum hydrocarbons and/or hazardous substances are encountered during the performance of the field activities. A copy of the HASP is included as **Appendix O**. The purpose of the HASP is to minimize the likelihood of exposure of VERTEX employees to hazardous concentrations of chemicals encountered during field activities, minimize impacts to the environment, and provide safety guidelines for subcontractors.

Investigative work performed under this RIWP will be in full compliance with applicable health and safety laws and regulations, including site and Occupational Safety & Health Administration (OSHA) worker safety requirements and Hazardous Waste Operations and Emergency Response (HAZWOPER) requirements. Confined space entry, if any, will comply with OSHA requirements and industry standards, and will address potential risks. The parties performing the investigation work will ensure that performance of work is in compliance with the HASP and applicable laws and regulations. Field activities will be completed with OSHA level D personal protective equipment (PPE) consisting of hard hats, safety glasses, protective gloves and steel toed boots.

An emergency contact sheet with names and phone numbers for all pertinent project personnel as well as regulatory hotline information is included in the HASP. That document will define the specific project contacts for use in case of emergency.

Health and safety activities will be monitored throughout the RI activities, and the HASP will be subject to change, as necessary, based on new conditions that may be encountered during the field investigation.

6.0 REMEDIAL INVESTIGATION WORK PLAN

The objective of the RI is to further characterize sub-slab soil vapor, soil, and groundwater conditions, including the following: installation of soil borings and the collection of soil samples to further evaluate soil quality below the footprint of the exterior courtyards to evaluate potential additional source areas; to delineate the impacts; installation of permanent monitoring wells and the collection of groundwater sampling to confirm groundwater flow direction and delineate groundwater impacts; the collection of a sub-slab soil vapor sample in a portion of the Site cellar that was previously not accessible; to confirm SSDS effluent concentrations; and completion of an in-situ chemical oxidation (ISCO) pilot study to determine if the formation below the footprint of the Site can accept treatment chemicals to address the elevated CVOCs in groundwater.

6.1 Citizen Participation

In accordance with BCP requirements, a Citizens Participation Plan (CP Plan) will be prepared and submitted to the NYSDEC under separate cover. The CP Plan provides a summary of the BCP and citizen participation activities, site information, project contacts, and the RI process.

6.2 Permitting

Prior to the initiation of the drilling activities, LKB will coordinate with a New York-licensed driller to obtain the required New York City Department of Transportation (NYCDOT) permits for sidewalk opening, temporary pedestrian walkway, occupancy of sidewalk, occupancy of street, and sidewalk repair. These permits will need to be obtained for East 12th Street where drilling is proposed. The drilling activities are proposed to be performed during alternate side parking; however, if work is not conducted during that time, the posting of signage and placement of

water-filled barriers will be required. In accordance with NYCDOT permits, drilling activities will be conducted between 9 AM and 3 PM, Monday through Friday.

6.3 Utility Clearance and Geophysical Evaluation

As part of the RI activities, VERTEX's drilling subcontractor will contact the New York one call system prior to initiating the drilling activities. VERTEX will also retain the services of a geophysics subcontractor to conduct a below grade geophysical survey using GPR and electromagnetic evaluation to mark-out subsurface utilities and "clear" any proposed drilling locations prior to drilling. The drilling contractor will also utilize hand equipment and/or "soft" excavation techniques to physically clear the drilling locations of subsurface utilities or obstacles down to a depth of 4-5 feet below the cellar slab or sidewalk, as applicable.

6.4 Monitoring Well Installation

LKB will coordinate with a licensed driller for the installation of four additional permanent monitoring wells (MW-4, MW-5, MW-6, and MW-7) at the Site to further delineate the elevated CVOC concentrations. MW-4 will be in an exterior courtyard (cross-gradient to the suspected source area); MW-5 will be located up-gradient of the suspected source area; and MW-6 and MW-7 will be located down-gradient of the suspected source area, in the sidewalk along East 12th Street. The proposed monitoring well locations are depicted in **Figure 11**. LKB proposes to install the monitoring wells via direct-push drilling methodologies to limit the volume of soil cuttings generated during installation.

Details of the monitoring well completion depths and construction information will be recorded by LKB in the field. The monitoring wells will be constructed of 2-inch diameter Schedule 40 slotted (0.010 inch) PVC screen and 2-inch diameter PVC riser to grade. The well screen annulus will be filled with sand pack from the base of the screen to 1 to 2 feet above the top of the screen.

A bentonite/grout slurry will be installed from the top of the sand pack to the ground surface. LKB assumes that the interior monitoring well will be installed to a depth no greater than 12 feet below the cellar slab and the exterior monitoring wells will be installed to a depth no greater than 20 feet below grade. The screened interval for the monitoring wells (10 feet) will be installed to intersect the shallow groundwater table and will extend to the completion depth of the well. Surface finishing will consist of a flush-mount traffic-rated manhole with a bolt-on lid set into a concrete pad. Additionally, an expandable locking cap will be fitted to the top of the PVC riser in the well.

The monitoring wells will be developed following installation to improve the hydraulic efficiency, by the removal of the fine-grained material generated during the drilling process. Groundwater will be purged from the monitoring wells using disposable polyethylene tubing and a submersible pump, until turbid-free water is observed. Based on the documented groundwater impacts at the Site, purge development water will be containerized in 55-gallon drums for off-site disposal.

The monitoring wells are positioned so that groundwater flow direction can be triangulated from the elevation information obtained following the gauging and surveying of the wells. LKB will coordinate with a licensed surveyor to obtain the elevation of each monitoring well casing.

6.4.1 Groundwater Sampling

The newly installed monitoring wells will be allowed to stabilize and will be sampled a minimum of one week following installation and development. The sampling event will include the new monitoring wells and previously installed monitoring wells (MW-1 to MW-7). The groundwater sampling event will begin with groundwater level measurements from each well using a product/water interface probe. Purging of the wells prior to sampling will be conducted using low flow purging methodologies with disposable polyethylene tubing and a submersible pump. Field parameters to be measured before and during the sampling will consist of pH, specific

conductance, ORP, temperature, dissolved oxygen, and turbidity. The groundwater will be inspected for the presence of any odor and/or surface sheen. Sample collection will be conducted following a three well volume purge.

Groundwater samples will initially be analyzed for TCL/TAL and the emerging contaminants PFAS and 1,4-dioxane.

6.5 Soil Boring Installation

To evaluate if the two exterior courtyards at the Site may be potential additional source areas, this task will involve advancing two soil borings (B-11 and B-12). The locations of the soil borings are depicted in **Figure 11**. The soil borings will be installed via limited-access direct-push drilling methodologies to an anticipated maximum depth of 12 feet below the cellar slab, which is the same elevation as the courtyards.

6.5.1 Soil Sampling

Soil samples will be collected continuously and screened in the field for the presence of total volatile organic vapors using a PID calibrated to 100 ppm by volume of isobutylene. The PID readings, soil lithology, and field observations will be documented in the field by LKB. Samples will be biased to the interval with the strongest evidence of suspected impacts based on PID readings, odors, staining, etc. In the event no field evidence of hazardous constituents is observed, soil samples will be collected from drilling refusal, as warranted by field observations and conditions.

Soil samples will be collected and analyzed for TCL/TAL, the emerging contaminants PFAS and 1,4-dioxane. In addition, the soil samples will be analyzed for chemical oxygen demand (COD), biological oxygen demand (BOD), and soil oxidant demand (SOD), which are helpful in

determining the quantity of remediation chemical that would need to be injected during future implementation of a potential ISCO remedy for the Site. All soil samples will be grab samples; no composite soil samples are proposed. Following soil sample collection, boreholes will be backfilled with soil cuttings with an upper bentonite plug and capped with concrete patch.

6.6 Sub-Slab Soil Vapor Sampling

LKB was recently provided with access to a portion of the Site cellar that was previously locked. LKB proposes to collect one sub-slab soil vapor sample (SG-8) within the vacant room located in the easternmost portion of the Site cellar to rule out potential vapor intrusion in this portion of the building, which was not previously evaluated. The location of the sub-slab soil vapor sample is depicted in **Figure 11**.

The sub-slab soil vapor sample will be collected using a 2.7-Liter stainless-steel Summa canister over a two-hour sample duration. The temporary sub-slab sample point will be installed by drilling a small diameter hole (approximately 3/8 inch) through the concrete floor slab. Sample tubing will be secured within the hole using Teflon tape and non-VOC modeling clay to ensure a tight seal. A leak check will be performed on the entire sample train using a tracer compound (e.g., helium) to confirm sampling methodology at the proposed location. The leak check will be performed to ensure that there is less than 10% helium in the purged air. Prior to sample collection from the vapor probe/core hole, three purge volumes will be evacuated from the sample train at a flow rate not to exceed 200 milliliters per minute. Following sample collection, the core-hole will be filled with concrete, sealed, and the work area will be cleaned.

The sub-slab soil vapor sample will be analyzed for VOCs.

6.7 ISCO Pilot Study

The previously identified fine-grained soils at and above the perched groundwater table beneath the Site may not be favorable for dual-phase extraction, injection remedies, or other forms of active treatment technologies. Based on our experience at other similar sites with CVOC impacts, ISCO is opined to be a reliable and cost-effective remediation technology for PCE-impacted soils and groundwater with like concentrations. Due to the concerns with the tight subsurface soil conditions, LKB proposes the completion of an ISCO injection pilot study to determine if the formation can accept treatment chemicals to address the elevated CVOCs in groundwater. The pilot study will consist of the installation of three temporary injection points (IP-1, IP-2, and IP-3) in the vicinity of monitoring well MW-3. The injection point locations are depicted on **Figure 11**. The injection chemicals proposed for the pilot study include Klozur®SP (sodium persulfate) and a 25% solution sodium hydroxide (activator). A total of 248 pounds of sodium persulfate and 550 pounds activator solution will be mixed with water using 250-gallon mixing totes. It is estimated that each injection point will receive approximately 166 gallons of solution during the pilot study. Chemical information for the proposed ISCO treatment chemicals is provided in **Appendix P**.

The temporary injection points will be installed using direct-push drilling techniques. The ISCO solution will be injected under pressure and at different depth intervals to aid in distribution of the chemicals in the formation and monitored to prevent surfacing. Upon completion of the injections, the concrete floor will be restored in the drilling locations. A contractor specializing in chemical injection work will be subcontracted to perform the field work. Injection pressures, flow rates and other parameters will be measured to determine how the formation reacts to the injections. MW-3 will be monitored for influence. It is anticipated that a street parking permit and a sidewalk closure permit will be required to complete the pilot study work and to prevent pedestrian traffic from entering the injection chemical mixing area.

The injection contractor will obtain the required NYCDOT permits for sidewalk opening, temporary pedestrian walkway, occupancy of sidewalk, and occupancy of street. These permits will need to be obtained for East 12th Street where equipment staging is proposed.

Following the completion of the injection pilot study, two quarterly rounds of post-injection groundwater sampling will be completed in all monitoring wells starting 60 days after the injections. Sampling methodology will be like that discussed above.

Groundwater samples will be analyzed for TCL/TAL and the emerging contaminants PFAS and 1,4-dioxane during the first post-injection groundwater sampling event. If not detected above the AWQS, the parameters including the emerging contaminants will be removed from the subsequent sampling event, and analysis will only include VOCs. During both post-injection sampling events, additional parameters, beyond standard field parameters and VOCs, will be collected in MW-2, MW-3, and MW-6 to track the injection solution, which will include alkalinity, metals (calcium, sodium, potassium, iron), sulfate, chloride, and persulfate.

6.8 Investigation-Derived Waste Management

IDW generated during the RI activities would include soil cuttings generated during the soil boring and/or monitoring well installations and purge development water generated during monitoring well development and sampling.

Soil cuttings generated during the installation of the permanent monitoring wells will be placed in sealed and labeled U.S. DOT-approved 55-gallon drums pending off-site disposal at a permitted facility.

Based on the documented groundwater impacts at the site, purge development water will be containerized in DOT-approved 55-gallon drums for off-site disposal at a permitted facility.

During the installation of soil borings, the soil will be disposed at the site, within the borehole that generated them, unless free product or grossly contaminated soil are present in the cuttings. Contaminated soil cuttings, if encountered, will be placed in sealed and labeled DOT-approved 55-gallon drums pending off-site disposal at a permitted facility. All boreholes which require drill cuttings disposal would ultimately be filled with bentonite chips and hydrated.

Disposable sampling equipment including spoons, gloves, bags, paper towels, etc. that came in contact with environmental media will be double bagged and disposed as municipal trash in a facility trash dumpster as general refuse.

6.9 EQuIS® Deliverables

All data generated during the completion of the RI activities will be submitted to the NYSDEC in the standard EQuIS® electronic data deliverable (EDD) format. Confirmation of a successful upload of the EDD will be provided to the NYSDEC.

6.10 Reporting

LKB will prepare a Remedial Investigation Report (RIR) in accordance with NYSDEC DER-10: Technical Guidance for Site Investigation and Remediation. The RIR will present the findings of the RI activities, evaluate remedial alternatives, and provide a recommendation for a remedial strategy to address soil, groundwater, and/or vapor intrusion concerns.

Soil analytical results will be compared to the NYSDEC Part 375-6.8(a) Unrestricted Used Soil Cleanup Objectives and appropriate Part 375-6.8(b) Restricted Soil Cleanup Objectives. Groundwater analytical results will be compared to the NYSDEC Part 703 Groundwater Quality

Standards (Class GA) and Division of Water Technical and Operational Guidance Series (TOGS)

1.1.1 AWQS.

A thorough evaluation of the laboratory data will be completed and a DUSR will be prepared by a qualified, independent data validation expert. The DUSR will be prepared in accordance with Appendix 2B, Guidance for Data Deliverables and the Development of Data Usability Summary Reports included in NYSDEC DER-10: Technical Guidance for Site Investigation and Remediation.

The report will include site location and sample location figures, color photographic documentation, summary of methods, laboratory reports and data summaries, and other pertinent support documentation as required by applicable NYSDEC and NYSDOH regulations.

6.11 Implementation Schedule

The following is the estimated schedule to implement the RI activities.

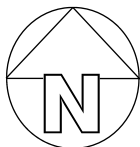
ESTIMATED PROJECT SCHEDULE	
ACTIVITIES	COMPLETION DATE
Brownfield Cleanup Program (BCP) Application & Remedial Investigation Work Plan (RIWP)	
Submit BCP Application & RIWP to NYSDEC	11/06/2023
NYSDEC Determines BCP Application is Complete	11/15/2023
Execute Brownfield Cleanup Agreement (BCA)	11/22/2023
NYSDEC Review	12/02/2023
Address NYSDEC Comments to RIWP	12/16/2023
Publish Environmental Notice Bulletin (ENB), Submit Citizen Participation (CP) Plan to NYSDEC, Distribute Fact Sheet & Public Comment Period (30 Days)	01/23/2024

ESTIMATED PROJECT SCHEDULE	
ACTIVITIES	COMPLETION DATE
NYSDEC Approval of RIWP	01/30/2024
Remedial Investigation	
Implement RI Activities (Well Installation; Soil, Groundwater & Soil Vapor Sampling; ISCO Pilot Study)	03/11/2024
Implement RI Activities – Post-Injection Groundwater Sampling (60 days Following Injection)	05/12/2024
Implement RI Activities – Post-Injection Groundwater Sampling (90 days Following Previous Sampling)	08/12/2024
Submit RIR to NYSDEC	09/03/2024

FIGURES



LKB Project No. 10153.LK



SITE LOCATION MAP

300 East 12th Street
New York, New York

USGS Topographic Map, Brooklyn, NY (2019); Scale 1:24,000



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SINCE 1889

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One Aerial Way - Syosset, NY 11791
516.938.0600 www.lkbinc.com

FIGURE NO. 1



SITE BOUNDARY MAP

300 East 12th Street, New York, New York

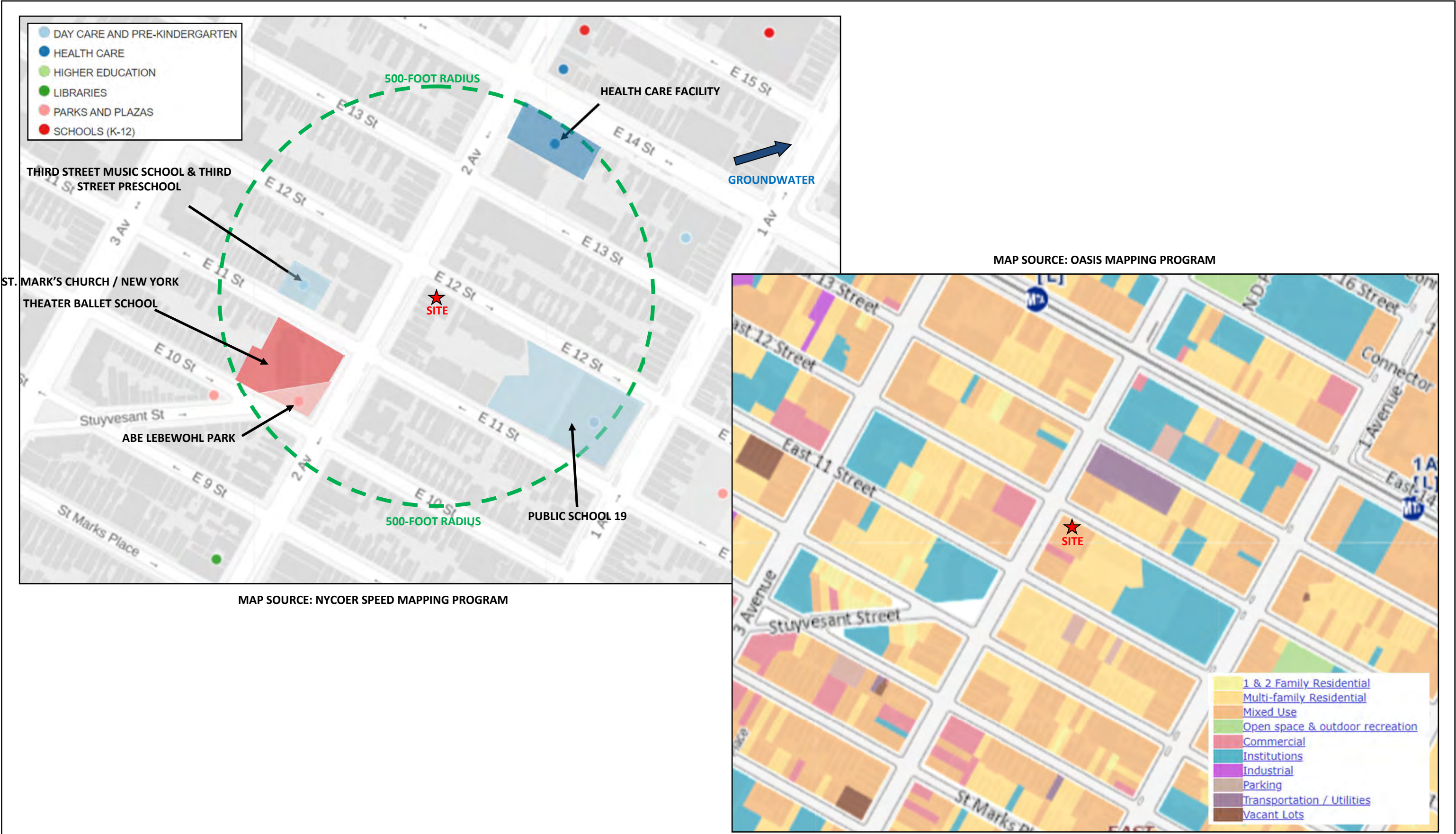
LKB Project No. 10153.LK



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FIGURE NO. 2

35 LOT
453 BLOCK



SENSITIVE RECEPTORS MAPS

300 EAST 12th STREET
NEW YORK, NEW YORK

FIGURE NO. 3

LKB Project No. 10153.LK



WETLANDS MAP

300 East 12th Street, New York, New York

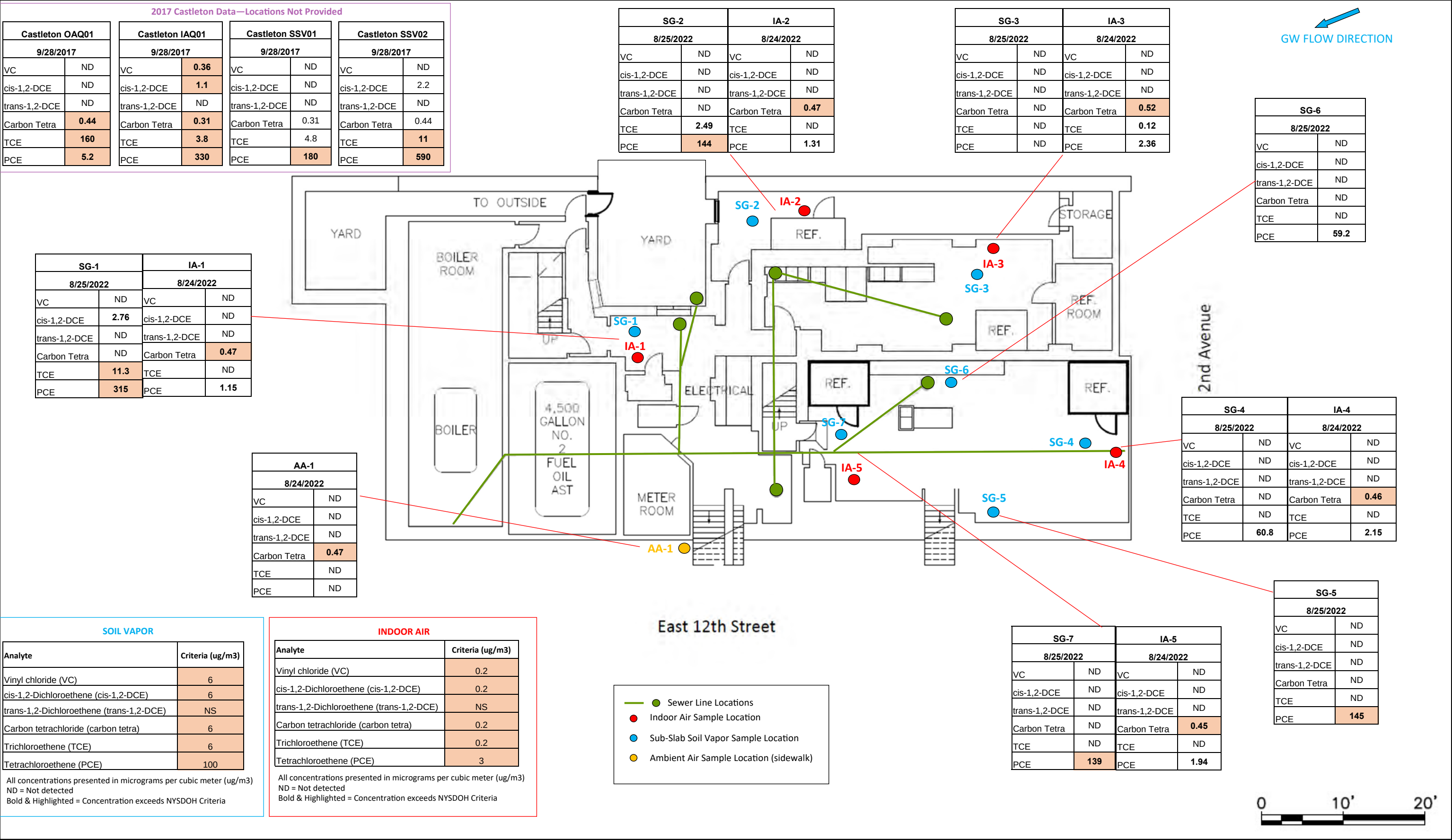
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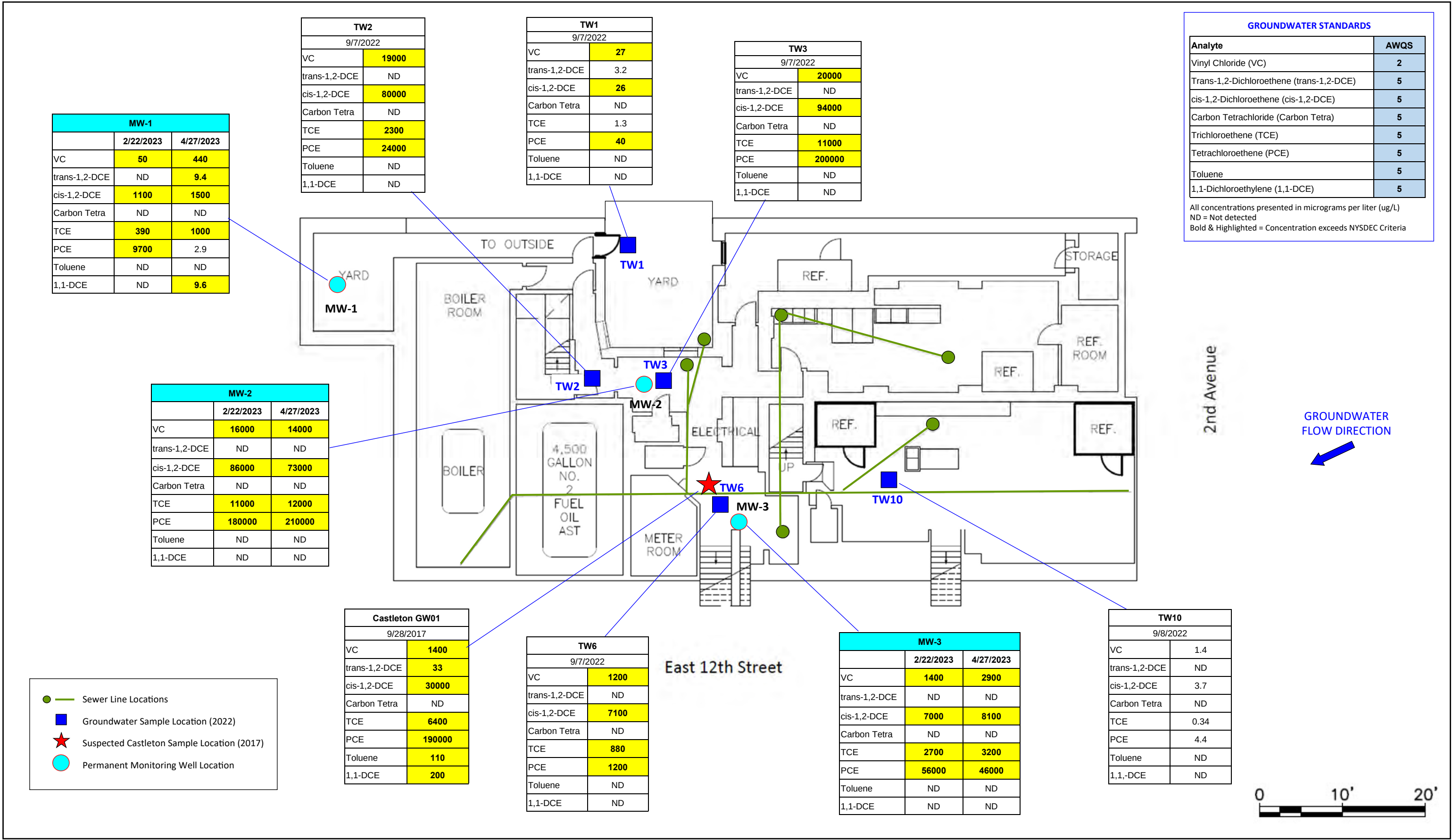


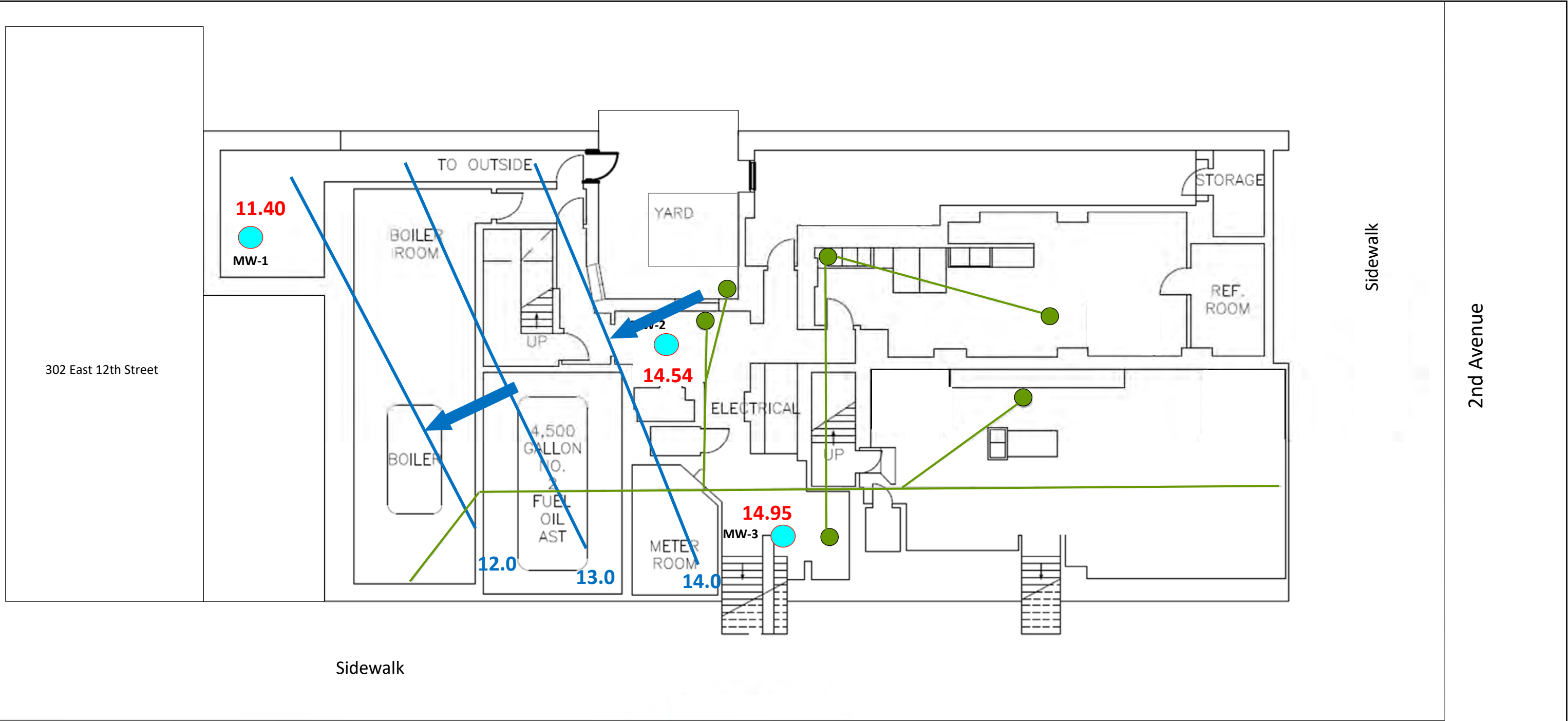
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FIGURE NO. 4







East 12th Street

Sewer Line Locations

Groundwater Monitoring Well Location

11.40

Groundwater Elevation (feet above mean sea level)



Map Source: *Basement Map - Plan*, VERTEX,
9/12/2022

SCALE: 1 inch ~ 10 feet

GROUNDWATER CONTOUR MAP—FEBRUARY 2023
300 EAST 12th STREET
NEW YORK, NEW YORK

LKB

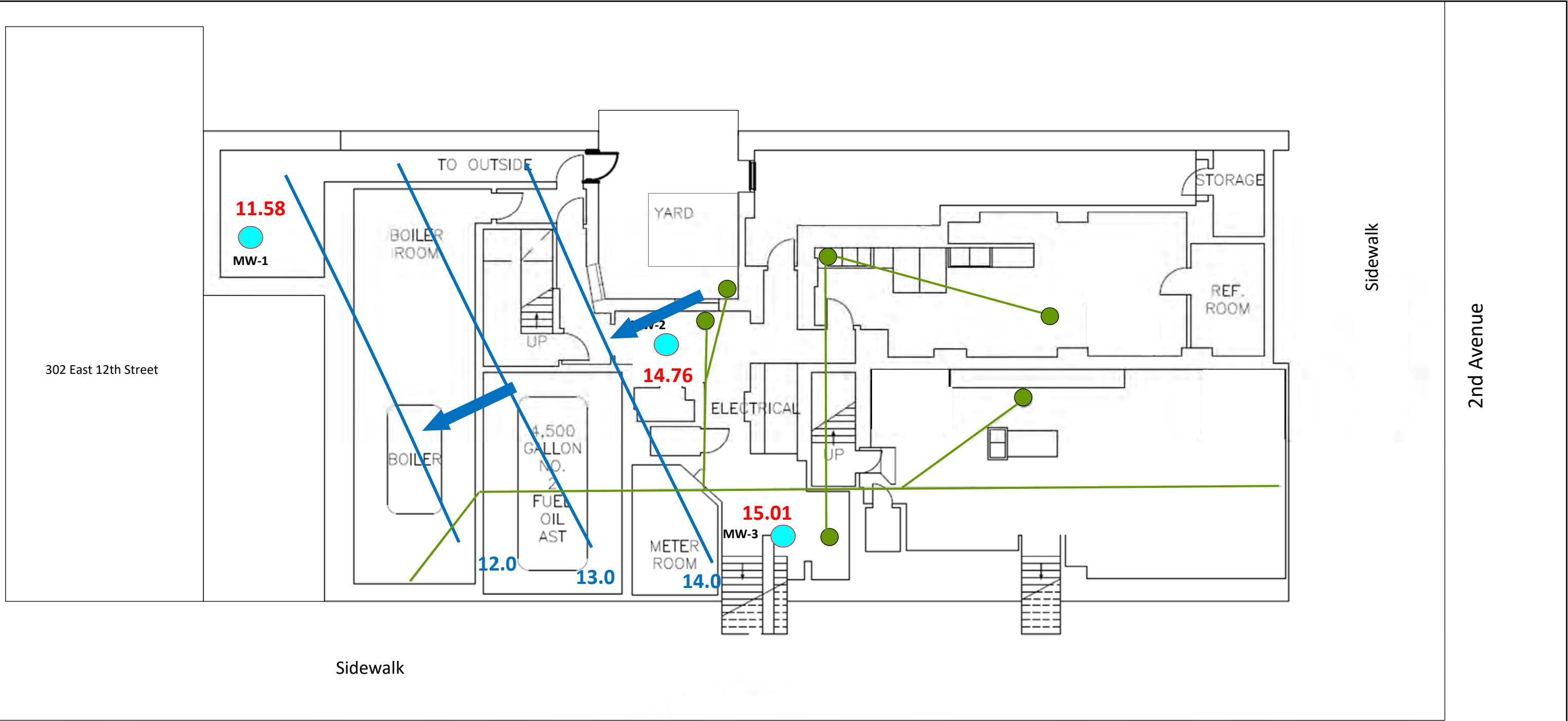
CONSULTING
ENGINEERS

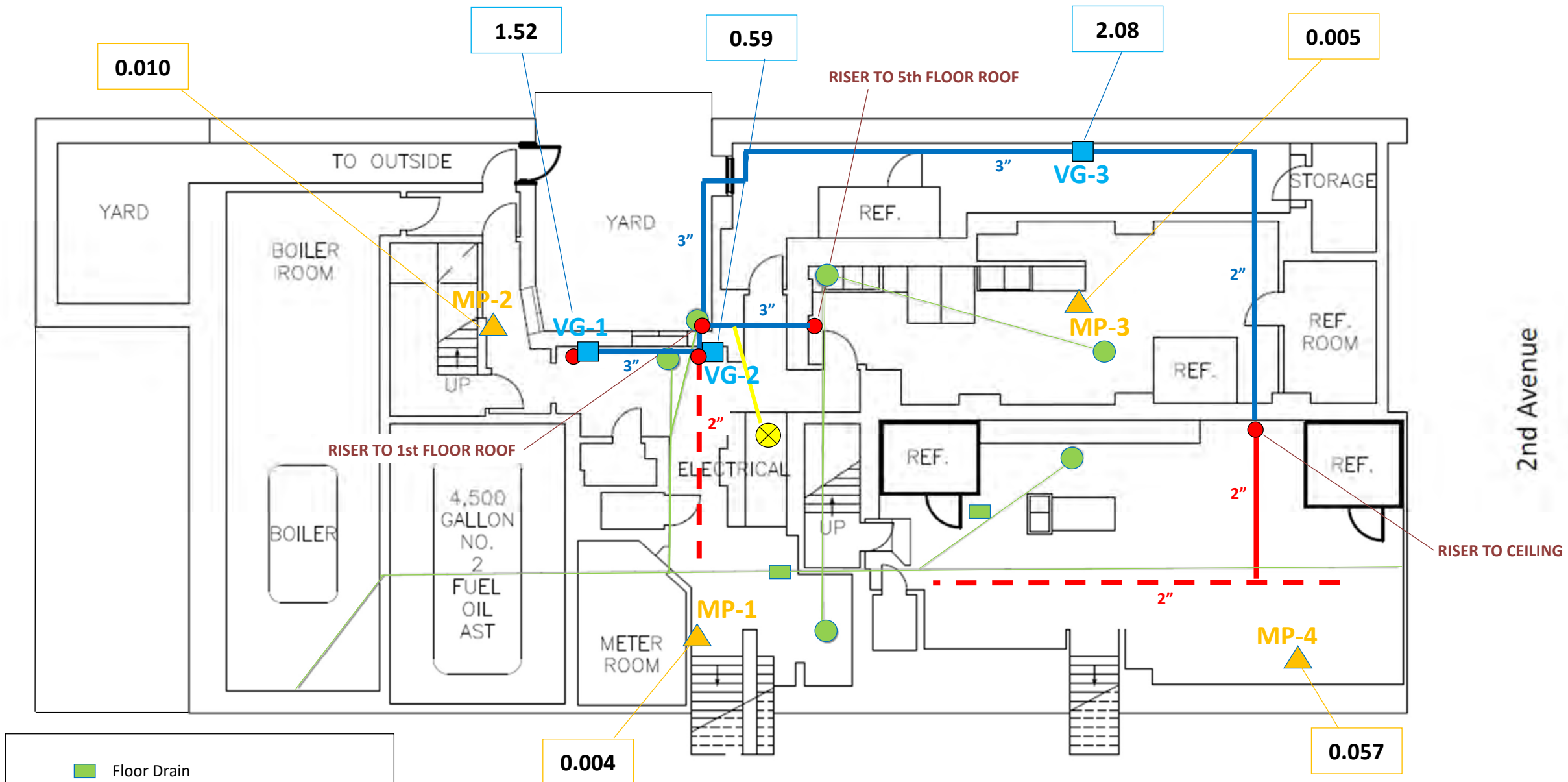
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FIGURE NO. 8

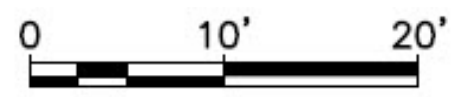
LKB Project No. 10153.LK





- Floor Drain
- Sewer Pipe Locations
- Riser Locations
- - - Slotted Pipe Locations (below grade)
- Solid Pipe Locations (below grade)
- Above Grade Pipe Locations
- ▲ Sub-Slab Monitoring Point
- Pipe Run/Riser Vacuum Gauge
- X Alarm

Commissioning Readings (April 2023))	
2.08	Vacuum (inches water column)
0.010	Vacuum (inches water column)



Map Source: Basement Map - Plan, VERTEX,
9/12/2022

SCALE: 1 inch ~ 10 feet

SSDS LAYOUT AND COMMISSIONING RESULTS (APRIL 2023)

300 EAST 12th STREET
NEW YORK, NEW YORK



FIGURE NO. 10

LKB Project No. 10153.LK

TABLES

Table 1 - Sub-Slab Soil Vapor Results
300 East 12th Street, New York, New York
LKB Project No. 10153.LK

SAMPLE ID:	Matrix A	Matrix B	Matrix C	VTX-SG-1				VTX-SG-2				VTX-SG-3				VTX-SG-4				VTX-SG-5				VTX-SG-6				VTX-SG-7			
LAB ID:				L2246407-01				L2246407-02				L2246407-03				L2246407-04				L2246407-05				L2246407-06				L2246407-07			
COLLECTION DATE:				8/25/2022				8/25/2022				8/25/2022				8/25/2022				8/25/2022				8/25/2022				8/25/2022			
SAMPLE MATRIX:				Sub-Slab Soil Vapor				Sub-Slab Soil Vapor				Sub-Slab Soil Vapor				Sub-Slab Soil Vapor				Sub-Slab Soil Vapor				Sub-Slab Soil Vapor							
ANALYTE	(ug/m3)	(ug/m3)	(ug/m3)	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 ORGANIC COMPOUNDS (VOCs)																															
1,1,1-Trichloroethane	NS	100	NS	ND		1.09	-	ND		1.09	-	ND		1.09	-	ND		1.09	-	ND		1.09	-	ND		1.09	-	ND		1.09	-
1,1,2,2-Tetrachloroethane	NS	NS	NS	ND		1.37	-	ND		1.37	-	ND		1.37	-	ND		1.37	-	ND		1.37	-	ND		1.37	-	ND		1.37	-
1,1,2-Trichloroethane	NS	NS	NS	ND		1.09	-	ND		1.09	-	ND		1.09	-	ND		1.09	-	ND		1.09	-	ND		1.09	-	ND		1.09	-
1,1-Dichloroethane	NS	NS	NS	ND		0.809	-	ND		0.809	-	ND		0.809	-	ND		0.809	-	ND		0.809	-	ND		0.809	-	ND		0.809	-
1,1-Dichloroethene	6	NS	NS	ND		0.793	-	ND		0.793	-	ND		0.793	-	ND		0.793	-	ND		0.793	-	ND		0.793	-	ND		0.793	-
1,2,4-Trichlorobenzene	NS	NS	NS	ND		1.48	-	ND		1.48	-	ND		1.48	-	ND		1.48	-	ND		1.48	-	ND		1.48	-	ND		1.48	-
1,2,4-Trimethylbenzene	NS	NS	NS	20		0.983	-	1.17		0.983	-	ND		0.983	-	ND		0.983	-	ND		0.983	-	ND		0.983	-	ND		0.983	-
1,2-Dibromoethane	NS	NS	NS	ND		1.54	-	ND		1.54	-	ND		1.54	-	ND		1.54	-	ND		1.54	-	ND		1.54	-	ND		1.54	-
1,2-Dichlorobenzene	NS	NS	NS	ND		1.2	-	ND		1.2	-	ND		1.2	-	ND		1.2	-	ND		1.2	-	ND		1.2	-	ND		1.2	-
1,2-Dichloroethane	NS	NS	NS	ND		0.809	-	ND		0.809	-	ND		0.809	-	ND		0.809	-	ND		0.809	-	ND		0.809	-	ND		0.809	-
1,2-Dichloropropane	NS	NS	NS	ND		0.924	-	ND		0.924	-	ND		0.924	-	ND		0.924	-	ND		0.924	-	ND		0.924	-	ND		0.924	-
1,3,5-Trimethylbenzene	NS	NS	NS	12.7		0.983	-	ND		0.983	-	ND		0.983	-	ND		0.983	-	ND		0.983	-	ND		0.983	-	ND		0.983	-
1,3-Butadiene	NS	NS	NS	ND		0.442	-	ND		0.442	-	ND		0.442	-	ND		0.442	-	ND		0.442	-	0.65		0.442	-	ND		0.442	-
1,3-Dichlorobenzene	NS	NS	NS	ND		1.2	-	ND		1.2	-	ND		1.2	-	ND		1.2	-	ND		1.2	-	ND		1.2	-	ND		1.2	-
1,4-Dichlorobenzene	NS	NS	NS	ND		1.2	-	ND		1.2	-	ND		1.2	-	ND		1.2	-	ND		1.2	-	ND		1.2	-	ND		1.2	-
1,4-Dioxane	NS	NS	NS	ND		0.721	-	ND		0.721	-	ND		0.721	-	ND		0.721	-	ND		0.721	-	0.998		0.721	-	ND		0.721	-
2,2,4-Trimethylpentane	NS	NS	NS	ND		0.934	-	ND		0.934	-	ND		0.934	-	ND		0.934	-	ND		0.934	-	ND		0.934	-	ND		0.934	-
2-Butanone	NS	NS	NS	6.84		1.47	-	11		1.47	-	9.41		1.47	-	3.1		1.47	-	1.7		1.47	-	6.67		1.47	-	3.72		1.47	-
2-Hexanone	NS	NS	NS	1.09		0.82	-	1.37		0.82	-	0.975		0.82	-	ND		0.82	-	ND		0.82	-	1.33		0.82	-	0.959		0.82	-
3-Chloropropene	NS	NS	NS	ND		0.626	-	ND		0.626	-	ND		0.626	-	ND		0.626	-	ND		0.626	-	ND		0.626	-	ND		0.626	-
4-Ethyltoluene	NS	NS	NS	1.8		0.983	-	ND		0.983	-	ND		0.983	-	ND		0.983	-	ND		0.983	-	ND		0.983	-	ND		0.983	-
4-Methyl-2-pentanone	NS	NS	NS	ND		2.05	-	ND		2.05	-	ND		2.05	-	ND		2.05	-	ND		2.05	-	ND		2.05	-	ND		2.05	-
Acetone	NS	NS	NS	32.8		2.38	-	47.3		2.38	-	58.9		2.38	-	32.3		2.38	-	11.7		2.38	-	51.3		2.38	-	16.7		2.38	-
Benzene	NS	NS	NS	1.61		0.639	-	0.744		0.639	-	1.83		0.639	-	ND		0.639	-	0.677		0.639	-	3.42		0.639	-	1.03		0.639	-
Benzyl chloride	NS	NS	NS	ND		1.04	-	ND		1.04	-	ND		1.04	-	ND		1.04	-	ND		1.04	-	ND		1.04	-	ND		1.04	-
Bromodichloromethane	NS	NS	NS	31.7		1.34	-	ND		1.34	-	ND		1.34	-	ND		1.34	-	ND		1.34	-	ND		1.34	-	ND		1.34	-
Bromoform	NS	NS	NS	ND		2.07	-	ND		2.07	-	ND		2.07	-	ND		2.07	-	ND		2.07	-	ND		2.07	-	ND		2.07	-
Bromomethane	NS	NS	NS	ND		0.777	-	ND		0.777	-	ND		0.777	-	ND		0.777	-	ND		0.777	-	ND		0.777	-	ND		0.777	-
Carbon disulfide	NS	NS	NS	1.84		0.623	-	0.803		0.623	-	2.12		0.623	-	2.01		0.623	-	2.24		0.623	-	1.38		0.623	-	1.3		0.623	-
Carbon tetrachloride	6	NS	NS	ND		1.26	-	ND		1.26	-	ND		1.26	-	ND		1.26	-	ND		1.26	-	ND		1.26	-	ND		1.26	-
Chlorobenzene	NS	NS	NS	ND		0.921	-	ND		0.921	-	ND		0.921	-	ND		0.921	-	ND		0.921	-	ND		0.921	-	ND		0.921	-
Chloroethane	NS	NS	NS	ND		0.528	-	ND		0.528	-	ND		0.528	-	ND		0.528	-	ND		0.528	-	ND		0.528	-	ND		0.528	-
Chloroform	NS	NS	NS	389		0.977	-	19.8		0.977	-	1.18		0.977	-	1.56		0.977	-	7.76		0.977	-	40.1		0.977	-	8.99		0.977	-
Chloromethane	NS	NS	NS	0.663		0.413	-	1.18		0.413	-	1.15		0.413	-	1.4		0.413	-	0.702		0.413	-	1.09		0.413	-	1.03		0.413	-
cis-1,2-Dichloroethene	6	NS	NS	2.76		0.793	-	ND		0.793	-	ND		0.793	-	ND		0.793	-	ND		0.793	-	ND		0.793	-	ND		0.793	-
cis-1,3-Dichloropropene	NS	NS	NS	ND		0.908	-	ND		0.908	-	ND		0.908	-	ND		0.908	-	ND		0.908	-	ND		0.908	-	ND		0.908	-
Cyclohexane	NS	NS	NS	ND		0.688	-	ND		0.688	-	ND		0.688	-	ND		0.688	-	ND		0.688	-	ND		0.688	-	ND		0.688	-
Dibromochloromethane	NS	NS	NS	ND		1.7	-	ND		1.7	-	ND		1.7	-	ND		1.7	-	ND		1.7	-	ND		1.7	-	ND		1.7	-
Dichlorodifluoromethane	NS	NS	NS	2.14		0.989	-	2.18		0.989	-	2.1		0.989	-	2.07		0.989	-	2.28		0.989	-	2.19		0.989	-	2.05		0.989	-
Ethanol	NS	NS	NS	33		9.42	-	32		9.42	-	18.7		9.42	-	33.9		9.42	-	33.7		9.42	-	77.3		9.42	-	20		9.42	-
Ethyl Acetate	NS	NS	NS	ND		1.8	-	ND		1.8	-	ND		1.8	-	ND		1.8	-	1.95		1.8	-	ND		1.8	-	ND		1.8	-
Ethylbenzene	NS	NS	NS	ND		0.869	-	ND		0.869	-	ND		0.869	-	ND		0.869	-	ND		0.869	-	1.52		0.869	-	ND		0.869	-
Freon-113	NS	NS	NS	ND		1.53	-	ND		1.53	-	ND		1.53	-	ND		1.53	-	ND		1.53	-	ND		1.53	-	ND		1.53	-
Freon-114	NS	NS	NS	ND		1.4	-	ND		1.4	-	ND		1.4	-	ND		1.4	-	ND		1.4	-	ND		1.4	-	ND		1.4	-
Heptane	NS	NS	NS	1.14		0.82	-	ND		0.82	-	1.07		0.82	-	4.22															

LKB Project No. 10153.LK

Notes:

Matrix A: NYSDOH Matrix A Indoor Air Concentration Criteria (Updated May 2017)

Matrix B: NYSDOH Matrix B Indoor Air Concentration Criteria (Updated May 2017)

Matrix C: NYSDOH Matrix C Indoor Air Concentration Criteria (Updated May 2017)

NYSDOH: New York State Department of Health

ug/m3- micrograms per cubic meter - Parts per billion (ppb)

NS: No criteria

ND: Not detected

Bolded text indicates a detection

Bolded text and highlighted indicates an exceedance of a criteria

Table 3 - Indoor/Ambient Air Results - NYSDOH Air Guidance Values
300 East 12th Street, New York, New York
LKB Project No. 10153.LK

SAMPLE ID:	NYSDOH Air Guidance	VTX-IA-1				VTX-IA-2				VTX-IA-3				VTX-IA-4				VTX-IA-5				VTX-AA-1			
LAB ID:		L2246402-01				L2246402-02				L2246402-03				L2246402-04				L2246402-05				L2246402-06			
COLLECTION DATE:		8/24/2022				8/24/2022				8/24/2022				8/24/2022				8/24/2022				8/24/2022			
SAMPLE MATRIX:		Indoor Air				Indoor Air				Indoor Air				Indoor Air				Indoor Air				Ambient Air			
ANALYTE	(ug/m3)	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 ORGANIC COMPOUNDS (VOCs)																									
1,1,2,2-Tetrachloroethane	NS	ND		1.37	-	ND		1.37	-	ND		1.37	-	ND		1.37	-	ND		1.37	-	ND		1.37	-
1,1,2-Trichloroethane	NS	ND		1.09	-	ND		1.09	-	ND		1.09	-	ND		1.09	-	ND		1.09	-	ND		1.09	-
1,1-Dichloroethane	NS	ND		0.809	-	ND		0.809	-	ND		0.809	-	ND		0.809	-	ND		0.809	-	ND		0.809	-
1,2,4-Trichlorobenzene	NS	ND		1.48	-	ND		1.48	-	ND		1.48	-	ND		1.48	-	ND		1.48	-	ND		1.48	-
1,2,4-Trimethylbenzene	NS	2.55		0.983	-	1.56		0.983	-	2.41		0.983	-	0.998		0.983	-	1.07		0.983	-	1.05		0.983	-
1,2-Dibromoethane	NS	ND		1.54	-	ND		1.54	-	ND		1.54	-	ND		1.54	-	ND		1.54	-	ND		1.54	-
1,2-Dichlorobenzene	NS	ND		1.2	-	ND		1.2	-	ND		1.2	-	ND		1.2	-	ND		1.2	-	ND		1.2	-
1,2-Dichloroethane	NS	ND		0.809	-	ND		0.809	-	ND		0.809	-	ND		0.809	-	ND		0.809	-	ND		0.809	-
1,2-Dichloropropane	NS	ND		0.924	-	ND		0.924	-	ND		0.924	-	ND		0.924	-	ND		0.924	-	ND		0.924	-
1,3,5-Trimethylbenzene	NS	ND		0.983	-	ND		0.983	-	ND		0.983	-	ND		0.983	-	ND		0.983	-	ND		0.983	-
1,3-Butadiene	NS	ND		0.442	-	ND		0.442	-	ND		0.442	-	ND		0.442	-	ND		0.442	-	ND		0.442	-
1,3-Dichlorobenzene	NS	ND		1.2	-	ND		1.2	-	ND		1.2	-	ND		1.2	-	ND		1.2	-	1.74		1.2	-
1,4-Dichlorobenzene	NS	ND		1.2	-	ND		1.2	-	ND		1.2	-	ND		1.2	-	ND		1.2	-	ND		1.2	-
1,4-Dioxane	NS	ND		0.721	-	ND		0.721	-	ND		0.721	-	ND		0.721	-	ND		0.721	-	ND		0.721	-
2,2,4-Trimethylpentane	NS	ND		0.934	-	ND		0.934	-	ND		0.934	-	ND		0.934	-	ND		0.934	-	ND		0.934	-
2-Butanone	NS	ND		1.47	-	ND		1.47	-	1.87		1.47	-	1.79		1.47	-	1.89		1.47	-	4.28		1.47	-
2-Hexanone	NS	ND		0.82	-	ND		0.82	-	ND		0.82	-	ND		0.82	-	ND		0.82	-	ND		0.82	-
3-Chloropropene	NS	ND		0.626	-	ND		0.626	-	ND		0.626	-	ND		0.626	-	ND		0.626	-	ND		0.626	-
4-Ethyltoluene	NS	ND		0.983	-	ND		0.983	-	ND		0.983	-	ND		0.983	-	ND		0.983	-	ND		0.983	-
4-Methyl-2-pentanone	NS	ND		2.05	-	ND		2.05	-	ND		2.05	-	ND		2.05	-	ND		2.05	-	ND		2.05	-
Acetone	NS	16.2		2.38	-	14.7		2.38	-	46.6		2.38	-	20.3		2.38	-	22		2.38	-	64.6		2.38	-
Benzene	NS	ND		0.639	-	ND		0.639	-	0.655		0.639	-	ND		0.639	-	ND		0.639	-	2.42		0.639	-
Benzyl chloride	NS	ND		1.04	-	ND		1.04	-	ND		1.04	-	ND		1.04	-	ND		1.04	-	ND		1.04	-
Bromodichloromethane	NS	ND		1.34	-	ND		1.34	-	ND		1.34	-	ND		1.34	-	ND		1.34	-	ND		1.34	-
Bromoform	NS	ND		2.07	-	ND		2.07	-	ND		2.07	-	ND		2.07	-	ND		2.07	-	ND		2.07	-
Bromomethane	NS	ND		0.777	-	ND		0.777	-	ND		0.777	-	ND		0.777	-	ND		0.777	-	ND		0.777	-
Carbon disulfide	NS	ND		0.623	-	ND		0.623	-	ND		0.623	-	ND		0.623	-	ND		0.623	-	ND		0.623	-
Chlorobenzene	NS	ND		0.921	-	ND		0.921	-	ND		0.921	-	ND		0.921	-	ND		0.921	-	ND		0.921	-
Chloroethane	NS	ND		0.528	-	ND		0.528	-	ND		0.528	-	ND		0.528	-	ND		0.528	-	ND		0.528	-
Chloroform	NS	5.52		0.977	-	5.08		0.977	-	10.4		0.977	-	1.18		0.977	-	1.47		0.977	-	ND		0.977	-
Chloromethane	NS	1.21		0.413	-	1.18		0.413	-	1.29		0.413	-	1.26		0.413	-	1.28		0.413	-	1.32		0.413	-
cis-1,3-Dichloropropene	NS	ND		0.908	-	ND		0.908	-	ND		0.908	-	ND		0.908	-	ND		0.908	-	ND		0.908	-
Cyclohexane	NS	ND		0.688	-	ND		0.688	-	ND		0.688	-	ND		0.688	-	ND		0.688	-	ND		0.688	-
Dibromochloromethane	NS	ND		1.7	-	ND		1.7	-	ND		1.7	-	ND		1.7	-	ND		1.7	-	ND		1.7	-
Dichlorodifluoromethane	NS	2.52		0.989	-	2.54		0.989	-	2.53		0.989	-	2.49		0.989	-	2.43		0.989	-	2.47		0.989	-
Ethanol	NS	24.9		9.42	-	31.3		9.42	-	56		9.42	-	96.9		9.42	-	106		9.42	-	106		9.42	-
Ethyl Acetate	NS	2.32		1.8	-	1.93		1.8	-	5.01		1.8	-	4.47		1.8	-	2.63		1.8	-	45.4		1.8	-
Ethylbenzene	NS	ND		0.869	-	ND		0.869	-	ND		0.869	-	ND		0.869	-	ND		0.869	-	ND		0.869	-
Freon-113	NS	ND		1.53	-	ND		1.53	-	ND		1.53	-	ND		1.53	-	ND		1.53	-	ND		1.53	-
Freon-114	NS	ND		1.4	-	ND		1.4	-	ND		1.4	-	ND		1.4	-	ND		1.4	-	ND		1.4	-
Heptane	NS	ND		0.82	-	ND		0.82	-	ND		0.82	-	ND		0.82	-	ND		0.82	-	ND		0.82	-
Hexachlorobutadiene	NS	ND		2.13	-	ND		2.13	-	ND		2.13	-	ND		2.13	-	ND		2.13	-	ND		2.13	-
Isopropanol	NS	7.47		1.23	-	5.92		1.23	-	8.5		1.23	-	7.28		1.23	-	8.11		1.23	-	7.15		1.23	-
Methyl tert butyl ether	NS	ND		0.721	-	ND		0.721	-	ND		0.721	-	ND		0.721	-	ND		0.721	-	ND		0.721	-
Methylene chloride	60	ND		1.74	-	ND		1.74	-	ND		1.74	-	ND		1.74	-	ND		1.74	-	ND		1.74	-
n-Hexane	NS	ND		0.705	-	ND		0.705	-	ND		0.705	-	ND		0.705	-	ND		0.705	-	ND		0.705	-
o-Xylene	NS	ND		0.869	-	ND		0.869	-	ND		0.869	-	ND		0.869	-	ND		0.869	-	ND		0.869	-
p/m-Xylene	NS	ND		1.74	-	ND		1.74	-	1.75		1.74	-	ND		1.74	-	ND		1.74	-	1.9		1.74	-
Styrene	NS	ND		0.852	-	ND		0.852	-	ND		0.852	-	ND		0.852	-	ND		0.852	-	ND		0.852	-
Tertiary butyl Alcohol	NS	ND		1.52	-	ND		1.52	-	ND		1.52	-	ND		1.52	-	ND		1.52	-	7.91		1.52	-
Tetrahydrofuran	NS	ND		1.47	-	ND		1.47	-	ND		1.47	-	ND		1.47	-	ND		1.47	-	4.51		1.47	-
Toluene	NS	1.68		0.754	-	1.96		0.754	-	2.75		0.754	-	2.66		0.754	-	2.6		0.754	-	2.79		0.754	-
trans-1,2-Dichloroethene	NS	ND		0.793	-	ND		0.793	-	ND		0.793	-	ND		0.793	-	ND		0.793	-	ND		0.793	-
trans-1,3-Dichloropropene	NS	ND		0.908	-	ND		0.908	-	ND		0.908	-	ND		0.908	-	ND		0.908	-	ND		0.908	-
Trichlorofluoromethane	NS	1.33		1.12	-	1.51		1.12	-	1.28		1.12	-	1.19		1.12	-	1.18		1.12	-	1.21		1.12	-
Vinyl bromide	NS	ND		0.874	-	ND		0.874	-	ND		0.874	-	ND		0.874	-	ND		0.874	-	ND		0.874	-
VOLATILE ORGANIC COMPOUNDS BY SII																									
1,1,1-Trichloroethane	NS	ND		0.109	-	ND		0.109	-	ND		0.109	-	ND		0.109	-	ND		0.109	-	ND		0.109	-
1,1-Dichloroethene	NS	ND		0.079	-	ND		0.079	-	ND		0.079	-	ND		0.079	-	ND		0.079	-	ND		0.079	-
Carbon tetrachloride	NS	0.465																							

TABLE 6
NYSDOH Matrix Evaluation
300 East 12th Street
New York, New York

			Collocated Sample Location Concentrations (ug/m3)												
			VTX-SG-1 / IA-1		VTX-SG-2 / IA-2		VTX-SG-3 / IA-3		VTX-SG-4 / IA-4		VTX-SG-7 / IA-5				
			8/25/2022	8/24/2022	8/25/2022	8/24/2022	8/25/2022	8/24/2022	8/25/2022	8/24/2022	8/25/2022	8/24/2022	8/25/2022	8/24/2022	8/25/2022
Analyte	SSSV	IA	SSSV	IA	SSSV	IA	SSSV	IA	SSSV	IA	SSSV	IA	SSSV	SSSV	AA
1,1,1-Trichloroethane	100	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	6	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	6	0.2	ND	0.465	ND	0.472	ND	0.516	ND	0.459	ND	0.447	ND	ND	0.472
cis-1,2-Dichloroethene	6	0.2	2.76	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	100	3	ND	ND	ND	ND	1.89	ND	1.85	ND	ND	ND	ND	ND	ND
Tetrachloroethene	100	3	315	1.15	144	1.31	78.7	2.36	60.8	2.15	136	1.94	145	59.2	ND
Trichloroethene	6	0.2	11.3	ND	2.49	ND	ND	0.118	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	6	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
SSSV Sub-Slab Soil Vapor
IA Indoor Air
AA Ambient Air
ug/m3 Micrograms per cubic meter
Matrix Criteria from NYSDOH Soil Vapor/Indoor Air Decision Matrices (Updated May 2017)
Bold & Highlighted = Concentrations exceeds Soil Vapor or Indoor Air Matrix Criteria



Table 5 - Soil Analytical Results
300 East 12th Street, New York, New York
LKB Project No. 10153.LK

SAMPLE ID:	RUSCO-C	RUSCO-RR	RUSCO-R	UUSCO	B-1 (7.5-8.0)				B-2 (7.0-7.5)				B-3 (5.5-6.0)				B-4 (7.0-7.5)				B-5 (8.5-9.0)				B-6 (9.0-9.5)				B-7 (7.0-7.5)				B-8 (1.0-1.5)				B-9 (6.0-6.5)				B-10 (5.5-6.0)					
LAB ID:					L2248925-01				L2248925-02				L2248925-03				L2248925-04				L2248925-05				L2248925-06				L2248925-07				L2248925-08				L2248925-09				L2248925-10					
COLLECTION DATE:					9/7/2022				9/7/2022				9/7/2022				9/7/2022				9/8/2022				9/7/2022				9/7/2022				9/7/2022				9/8/2022				9/8/2022					
SAMPLE MATRIX:					SOIL				SOIL				SOIL				SOIL				SOIL				SOIL				SOIL				SOIL				SOIL				SOIL					
ANALYTE	(mg/kg)	(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	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	NS	ND		0.0025	0.00066	ND	12	3.2	ND	0.28	0.075	ND	0.00085	0.00022	ND	0.3	0.078	ND	0.65	0.17	ND	0.0007	0.00018	ND	0.00081	0.00021	ND	0.00079	0.00021	ND	0.00069	0.00018											
1,1,1-Trichloroethane	500	100	100	0.68	ND		0.0025	0.00084	ND	12	4.1	ND	0.28	0.095	ND	0.00085	0.00028	ND	0.3	0.099	ND	0.65	0.22	ND	0.0007	0.00023	ND	0.00081	0.00027	ND	0.00079	0.00026	ND	0.00069	0.00023											
1,1,2,2-Tetrachloroethane	NS	NS	NS	NS	ND		0.0025	0.00084	ND	12	4.1	ND	0.28	0.094	ND	0.00085	0.00028	ND	0.3	0.098	ND	0.65	0.22	ND	0.0007	0.00023	ND	0.00081	0.00027	ND	0.00079	0.00026	ND	0.00069	0.00023											
1,1,2-Trichloroethane	NS	NS	NS	NS	ND		0.005	0.0013	ND	25	6.6	ND	0.57	0.15	ND	0.0017	0.00045	ND	0.59	0.16	ND	1.3	0.35	ND	0.0014	0.00038	ND	0.0016	0.00043	ND	0.0016	0.00042	ND	0.0014	0.00037											
1,1-Dichloroethane	240	26	19	0.27	0.001	J	0.005	0.00073	ND	25	3.6	ND	0.57	0.082	0.00084	J	0.0017	0.00025	ND	0.59	0.086	ND	1.3	0.19	ND	0.0014	0.0002	ND	0.0016	0.00024	ND	0.0016	0.00023	ND	0.0014	0.0002										
1,1-Dichloroethene	500	100	100	0.33	ND		0.005	0.0012	ND	25	5.9	ND	0.57	0.14	ND	0.0017	0.0004	ND	0.59	0.14	ND	1.3	0.31	ND	0.0014	0.00033	ND	0.0016	0.00039	ND	0.0016	0.00038	ND	0.0014	0.00033											
1,1-Dichloropropene	NS	NS	NS	NS	ND		0.0025	0.0008	ND	12	3.9	ND	0.28	0.09	ND	0.00085	0.00027	ND	0.3	0.094	ND	0.65	0.21	ND	0.0007	0.00022	ND	0.00081	0.00026	ND	0.00079	0.00025	ND	0.00069	0.00022											
1,2,3-Trichlorobenzene	NS	NS	NS	NS	ND		0.01	0.0016	ND	49	7.9	ND	1.1	0.18	ND	0.0034	0.00055	ND	1.2	0.19	ND	2.6	0.42	ND	0.0028	0.00045	ND	0.0032	0.00052	ND	0.0032	0.00051	ND	0.0028	0.00044											
1,2,3-Trichloropropane	NS	NS	NS	NS	ND		0.01	0.00064	ND	49	3.1	ND	1.1	0.072	ND	0.0034	0.00022	ND	1.2	0.075	ND	2.6	0.16	ND	0.0028	0.00018	ND	0.0032	0.00021	ND	0.0032	0.0002	ND	0.0028	0.00017											
1,2,4,5-Tetramethylbenzene	NS	NS	NS	NS	ND		0.01	0.00096	ND	49	4.7	ND	1.1	0.11	ND	0.0034	0.00032	0.36	J	1.2	0.11	ND	2.6	0.25	ND	0.0028	0.00027	ND	0.0032	0.00031	ND	0.0032	0.0003	ND	0.0028	0.00026										
1,2,4-Trichlorobenzene	NS	NS	NS	NS	ND		0.01	0.0014	ND	49	6.7	ND	1.1	0.15	ND	0.0034	0.00046	ND	1.2	0.16	ND	2.6	0.35	ND	0.0028	0.00038	ND	0.0032	0.00044	ND	0.0032	0.00043	ND	0.0028	0.00037											
1,2,4-Trimethylbenzene	190	52	47	3.6	ND		0.01	0.0017	ND	49	8.2	ND	1.1	0.19	ND	0.0034	0.00057	ND	1.2	0.2	ND	2.6	0.43	ND	0.0028	0.00047	ND	0.0032	0.00054	ND	0.0032	0.00053	ND	0.0028	0.00046											
1,2-Dibromo-3-chloropropane	NS	NS	NS	NS	ND		0.015	0.005	ND	74	24	ND	1.7	0.57	ND	0.0051	0.0017	ND	1.8	0.59	ND	3.9	1.3	ND	0.0042	0.0014	ND	0.0049	0.0016	ND	0.0047	0.0016	ND	0.0041	0.0014											
1,2-Dibromothane	NS	NS	NS	NS	ND		0.005	0.0014	ND	25	6.9	ND	0.57	0.16	ND	0.0017	0.00047	ND	0.59	0.16	ND	1.3	0.36	ND	0.0014	0.00039	ND	0.0016	0.00045	ND	0.0016	0.00044	ND	0.0014	0.00038											
1,2-Dichlorobenzene	500	100	100	1.1	ND		0.01	0.00072	ND	49	3.5	ND	1.1	0.082	ND	0.0034	0.00024	ND	1.2	0.085	ND	2.6	0.19	ND	0.0028	0.0002	ND	0.0032	0.00023	ND	0.0032	0.00023	ND	0.0028	0.0002											
1,2-Dichloroethane	30	3.1	2.3	0.02	ND		0.005	0.0013	ND	25	6.3	ND	0.57	0.15	ND	0.0017	0.00044	ND	0.59	0.15	ND	1.3	0.33	ND	0.0014	0.00036	ND	0.0016	0.00042	ND	0.0016	0.0004	ND	0.0014	0.00035											
1,2-Dichloroethene, Total	NS	NS	NS	NS	0.16		0.005	0.00069	130	25	3.4	4.5	0.57	0.078	0.033		0.0017	0.00023	16		0.59	0.081	20	1.3	1.8	0.0036	0.0014	0.00019	0.0031	0.0016	0.00022	0.0086	J	0.0016	0.00022	0.0022	0.0014	0.00019								
1,2-Dichloropropane	NS	NS	NS	NS	ND		0.005	0.00063	ND	25	3.1	ND	0.57	0.071	ND	0.0017	0.00021	ND	0.59	0.074	ND	1.3	0.16	ND	0.0014	0.00018	ND	0.0016	0.0002	ND	0.0016	0.0002	ND	0.0014	0.00017											
1,3,5-Trimethylbenzene	190	52	47	8.4	ND		0.01	0.00097	ND	49	4.8	ND	1.1	0.11	ND	0.0034	0.00033	ND	1.2	0.11	ND	2.6	0.25	ND	0.0028	0.00027	ND	0.0032	0.00031	ND	0.0032	0.0003	ND	0.0028	0.00026											
1,3-Dichlorobenzene	280	49	17	2.4	ND		0.01	0.00074	ND	49	3.6	ND	1.1	0.084	ND	0.0034	0.00025	ND	1.2	0.088	ND	2.6	0.19	ND	0.0028	0.00021	ND	0.0032	0.00024	ND	0.0032	0.00023	ND	0.0028	0.0002											
1,3-Dichloropropane	NS	NS	NS	NS	ND		0.01	0.00084	ND	49	4.1	ND	1.1	0.095	ND	0.0034	0.00028	ND	1.2	0.099	ND	2.6	0.22	ND	0.0028	0.00023	ND	0.0032	0.00027	ND	0.0032	0.00026	ND	0.0028	0.00023											
1,3-Dichloropropene, Total	NS	NS	NS	NS	ND		0.0025	0.0008	ND	12	3.9	ND	0.28	0.09	ND	0.00085	0.00027	ND	0.3	0.094	ND	0.65	0.2	ND	0.0007	0.00022	ND	0.00081	0.00026	ND	0.00079	0.00025	ND	0.00069	0.00022											
1,4-Dichlorobenzene	130	13	9.8	1.8	ND		0.01	0.00086	ND	49	4.2	ND	1.1	0.097	ND	0.0034	0.00029	ND	1.2	0.1	ND	2.6	0.22	ND	0.0028	0.00024	ND	0.0032	0.00028	ND	0.0032	0.00027	ND	0.0028	0.00024											
1,4-Dioxane	130	13	9.8	0.1	ND		0.4	0.18	ND	2000	860	ND	46	20	ND	0.14	0.06	ND	47	21	ND	100	46	ND	0.11	0.049	ND	0.13	0.057	ND	0.13	0.055	ND	0.11	0.048											
2,2-Dichloropropane	NS	NS	NS	NS	ND		0.01	0.001	ND	49	5	ND	1.1	0.11	ND	0.0034	0.00034	ND	1.2	0.12	ND	2.6	0.26	ND	0.0028	0.00028	ND	0.0032	0.00033	ND	0.0032	0.00032	ND	0.0028	0.00028											
2-Butanone	500	100	100	0.12	0.28		0.05	0.011	ND	250	55	ND	5.7	1.3	0.22		0.017	0.0038	ND	5.9	1.3	ND	13	2.9	0.083	0.014	0.0031	0.013	J	0.016	0.0036	0.05	0.016	0.0035	0.054	0.014	0.003									
2-Hexanone	NS	NS	NS	NS	ND		0.05	0.0059	ND	250	29	ND	5.7	0.67	ND	0.017	0.002	ND	5.9	0.7	ND	13	1.5	ND	0.014	0.0016	ND	0.016	0.0019	ND	0.016	0.0019	ND	0.014	0.0016											

Table 6 - Groundwater Analytical Results - September 2022
300 East 12th Street, New York, New York
LKB Project No. 10153.LK

SAMPLE ID:	AWQS	Class GA	TW1				TW2				TW3				TW6				TW10			
LAB ID:			L2248924-03				L2248924-04				L2248924-02				L2248924-01				L2248924-05			
COLLECTION DATE:			9/7/2022				9/7/2022				9/7/2022				9/7/2022				9/8/2022			
SAMPLE MATRIX:			GROUNDWATER				GROUNDWATER				GROUNDWATER				GROUNDWATER				GROUNDWATER			
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
VOLATILE ORGANICS BY GC/MS																						
1,1,1,2-Tetrachloroethane	5	5	ND		2.5	0.7	ND		2500	700	ND		5000	1400	ND		250	70	ND		2.5	0.7
1,1,1-Trichloroethane	5	5	ND		2.5	0.7	ND		2500	700	ND		5000	1400	ND		250	70	ND		2.5	0.7
1,1,2,2-Tetrachloroethane	5	5	ND		0.5	0.17	ND		500	170	ND		1000	330	ND		50	17	ND		0.5	0.17
1,1,2-Trichloroethane	1	1	ND		1.5	0.5	ND		1500	500	ND		3000	1000	ND		150	50	ND		1.5	0.5
1,1-Dichloroethane	5	5	ND		2.5	0.7	ND		2500	700	ND		5000	1400	ND		250	70	ND		2.5	0.7
1,1-Dichloroethene	5	5	ND		0.5	0.17	ND		500	170	ND		1000	340	ND		50	17	ND		0.5	0.17
1,1-Dichloropropene	5	5	ND		2.5	0.7	ND		2500	700	ND		5000	1400	ND		250	70	ND		2.5	0.7
1,2,3-Trichlorobenzene	5	5	ND		2.5	0.7	ND		2500	700	ND		5000	1400	ND		250	70	ND		2.5	0.7
1,2,3-Trichloropropane	0.04	0.04	ND		2.5	0.7	ND		2500	700	ND		5000	1400	ND		250	70	ND		2.5	0.7
1,2,4,5-Tetramethylbenzene	5	5	ND		2	0.54	ND		2000	540	ND		4000	1100	ND		200	54	ND		2	0.54
1,2,4-Trichlorobenzene	5	5	ND		2.5	0.7	ND		2500	700	ND		5000	1400	ND		250	70	ND		2.5	0.7
1,2,4-Trimethylbenzene	5	5	ND		2.5	0.7	ND		2500	700	ND		5000	1400	ND		250	70	ND		2.5	0.7
1,2-Dibromo-3-chloropropane	0.04	0.04	ND		2.5	0.7	ND		2500	700	ND		5000	1400	ND		250	70	ND		2.5	0.7
1,2-Dibromoethane	0.0006	0.0006	ND		2	0.65	ND		2000	650	ND		4000	1300	ND		200	65	ND		2	0.65
1,2-Dichlorobenzene	3	3	ND		2.5	0.7	ND		2500	700	ND		5000	1400	ND		250	70	ND		2.5	0.7
1,2-Dichloroethane	0.6	0.6	ND		0.5	0.13	ND		500	130	ND		1000	260	ND		50	13	ND		0.5	0.13
1,2-Dichloroethene, Total	NS	NS	29		2.5	0.7	80000		2500	700	94000		5000	1400	7100		250	70	3.7		2.5	0.7
1,2-Dichloropropane	1	1	ND		1	0.14	ND		1000	140	ND		2000	270	ND		100	14	ND		1	0.14
1,3,5-Trimethylbenzene	5	5	ND		2.5	0.7	ND		2500	700	ND		5000	1400	ND		250	70	ND		2.5	0.7
1,3-Dichlorobenzene	3	3	ND		2.5	0.7	ND		2500	700	ND		5000	1400	ND		250	70	ND		2.5	0.7
1,3-Dichloropropane	5	5	ND		2.5	0.7	ND		2500	700	ND		5000	1400	ND		250	70	ND		2.5	0.7
1,3-Dichloropropene, Total	NS	NS	ND		0.5	0.14	ND		500	140	ND		1000	290	ND		50	14	ND		0.5	0.14
1,4-Dichlorobenzene	3	3	ND		2.5	0.7	ND		2500	700	ND		5000	1400	ND		250	70	ND		2.5	0.7
1,4-Dioxane	NS	NS	ND		250	61	ND		250000	61000	ND		500000	120000	ND		25000	6100	ND		250	61
2,2-Dichloropropane	5	5	ND		2.5	0.7	ND		2500	700	ND		5000	1400	ND		250	70	ND		2.5	0.7
2-Butanone	50	50	3.4	J	5	1.9	ND		5000	1900	ND		10000	3900	ND		500	190	ND		5	1.9
2-Hexanone	50	50	ND		5	1	ND		5000	1000	ND		10000	2000	ND		500	100	ND		5	1
4-Methyl-2-pentanone	NS	NS	ND		5	1	ND		5000	1000	ND		10000	2000	ND		500	100	ND		5	1
Acetone	50	50	16		5	1.5	ND		5000	1500	ND		10000	2900	ND		500	150	3.5	J	5	1.5
Acrylonitrile	5	5	ND		5	1.5	ND		5000	1500	ND		10000	3000	ND		500	150	ND		5	1.5
Benzene	1	1	0.22	J	0.5	0.16	ND		500	160	ND		1000	320	ND		50	16	ND		0.5	0.16
Bromobenzene	5	5	ND		2.5	0.7	ND		2500	700	ND		5000	1400	ND		250	70	ND		2.5	0.7
Bromochloromethane	5	5	ND		2.5	0.7	ND		2500	700	ND		5000	1400	ND		250	70	ND		2.5	0.7
Bromodichloromethane	50	50	ND		0.5	0.19	ND		500	190	ND		1000	380	ND		50	19	ND		0.5	0.19
Bromoform	50	50	ND		2	0.65	ND		2000	650	ND		4000	1300	ND		200	65	ND		2	0.65
Bromomethane	5	5	ND		2.5	0.7	ND		2500	700	ND		5000	1400	ND		250	70	ND		2.5	0.7
Carbon disulfide	60	60	ND		5	1	ND		5000	1000	ND		10000	2000	ND		500	100	ND		5	1
Carbon tetrachloride	5	5	ND		0.5	0.13	ND		500	130	ND		1000	270	ND		50	13	ND		0.5	0.13
Chlorobenzene	5	5	ND		2.5	0.7	ND		2500	700	ND		5000	1400	ND		250	70	ND		2.5	0.7
Chloroethane	5	5	ND		2.5	0.7	ND		2500	700	ND		5000	1400	ND		250	70	ND		2.5	0.7
Chloroform	7	7	ND		2.5	0.7	ND		2500	700	ND		5000	1400	ND		250	70	ND		2.5	0.7
Chloromethane	NS	NS	ND		2.5	0.7	ND		2500	700	ND		5000	1400	ND		250	70	ND		2.5	0.7
cis-1,2-Dichloroethene	5	5	26		2.5	0.7	80000		2500	700	94000		5000	1400	7100		250	70	3.7		2.5	0.7
cis-1,3-Dichloropropene	0.4	0.4	ND		0.5	0.14	ND		500	140	ND		1000	290	ND		50	14	ND		0.5	0.14
Dibromochloromethane	50	50	ND		0.5	0.15	ND		500	150	ND		1000	300	ND		50	15	ND		0.5	0.15
Dibromomethane	5	5	ND		5	1	ND		5000	1000	ND		10000	2000	ND		500	100	ND		5	1
Dichlorodifluoromethane	5	5	ND		5	1	ND		5000	1000	ND		10000	2000	ND		500	100	ND		5	1
Ethyl ether	NS	NS	ND		2.5	0.7	ND		2500	700	ND		5000	1400	ND		250	70	ND		2.5	0.7
Ethylbenzene	5	5	ND		2.5	0.7	ND		2500	700	ND		5000	1400	ND		250	70	ND		2.5	0.7
Hexachlorobutadiene	0.5	0.5	ND		2.5	0.7	ND		2500	700	ND		5000	1400	ND		250	70	ND		2.5	0.7
Isopropylbenzene	5	5	ND		2.5	0.7	ND		2500	700	ND		5000	1400	ND		250	70	ND		2.5	0.7
Methyl tert butyl ether	10	10	ND		2.5	0.7	ND		2500	700	ND		5000	1400	ND		250	70	ND		2.5	0.7
Methylene chloride	5	5	ND		2.5	0.7	ND		2500	700	ND		5000	1400	ND		250	70	ND		2.5	0.7
n-Butylbenzene	5	5	ND		2.5	0.7	ND		2500	700	ND		5000	1400	ND		250	70	ND		2.5	0.7
n-Propylbenzene	5	5	ND		2.5	0.7	ND		2500	700	ND		5000	1400	ND		250	70	ND		2.5	0.7
Naphthalene	10	10	ND		2.5	0.7	ND		2500	700	ND		5000	1400	ND		250	70	ND		2.5	0.7
o-Chlorotoluene	5	5	ND		2.5	0.7	ND		2500	700	ND		5000	1400	ND		250	70	ND		2.5	0.7
o-Xylene	5	5	ND		2.5	0.7	ND		2500	700	ND		5000	1400	ND		250	70	ND		2.5	0.7
p-Chlorotoluene	5	5	ND		2.5	0.7	ND		2500	700	ND		5000	1400	ND		250	70	ND		2.5	0.7
p-Diethylbenzene	NS	NS	ND		2	0.7	ND		2000	700	ND		4000	1400	ND		200	70	ND		2	0.7
p-Ethyltoluene	NS	NS	ND		2	0.7	ND		2000	700	ND		4000	1400	ND		200					

TABLE 7
Groundwater Analytical Results - February 2023
300 East 12th Street, New York, New York
LKB Project No. 10153.LK

SAMPLE ID:	AWQS	MW-1				MW-2				MW-3			
LAB ID:		L2309710-01				L2309710-02				L2309710-03			
COLLECTION DATE:		2/22/2023				2/22/2023				2/22/2023			
ANALYTE	(ug/l)	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
VOLATILE ORGANICS BY GC/MS													
1,1,1,2-Tetrachloroethane	5	ND		250	70	ND		2500	700	ND		1200	350
1,1,1-Trichloroethane	5	ND		250	70	ND		2500	700	ND		1200	350
1,1,2,2-Tetrachloroethane	5	ND		50	17	ND		500	170	ND		250	84
1,1,2-Trichloroethane	1	ND		150	50	ND		1500	500	ND		750	250
1,1-Dichloroethane	5	ND		250	70	ND		2500	700	ND		1200	350
1,1-Dichloroethene	5	ND		50	17	ND		500	170	ND		250	84
1,1-Dichloropropene	5	ND		250	70	ND		2500	700	ND		1200	350
1,2,3-Trichlorobenzene	5	ND		250	70	ND		2500	700	ND		1200	350
1,2,3-Trichloropropane	0.04	ND		250	70	ND		2500	700	ND		1200	350
1,2,4,5-Tetramethylbenzene	5	ND		200	54	ND		2000	540	ND		1000	270
1,2,4-Trichlorobenzene	5	ND		250	70	ND		2500	700	ND		1200	350
1,2,4-Trimethylbenzene	5	ND		250	70	ND		2500	700	ND		1200	350
1,2-Dibromo-3-chloropropane	0.04	ND		250	70	ND		2500	700	ND		1200	350
1,2-Dibromoethane	0.0006	ND		200	65	ND		2000	650	ND		1000	320
1,2-Dichlorobenzene	3	ND		250	70	ND		2500	700	ND		1200	350
1,2-Dichloroethane	0.6	ND		50	13	ND		500	130	ND		250	66
1,2-Dichloroethene, Total	NS	1100		250	70	86000		2500	700	7000		1200	350
1,2-Dichloropropane	1	ND		100	14	ND		1000	140	ND		500	68
1,3,5-Trimethylbenzene	5	ND		250	70	ND		2500	700	ND		1200	350
1,3-Dichlorobenzene	3	ND		250	70	ND		2500	700	ND		1200	350
1,3-Dichloropropane	5	ND		250	70	ND		2500	700	ND		1200	350
1,3-Dichloropropene, Total	NS	ND		50	14	ND		500	140	ND		250	72
1,4-Dichlorobenzene	3	ND		250	70	ND		2500	700	ND		1200	350
1,4-Dioxane	NS	ND		25000	6100	ND		250000	61000	ND		120000	30000
2,2-Dichloropropane	5	ND		250	70	ND		2500	700	ND		1200	350
2-Butanone	50	ND		500	190	ND		5000	1900	ND		2500	970
2-Hexanone	50	ND		500	100	ND		5000	1000	ND		2500	500
4-Methyl-2-pentanone	NS	ND		500	100	ND		5000	1000	ND		2500	500
Acetone	50	ND		500	150	ND		5000	1500	ND		2500	730
Acrylonitrile	5	ND		500	150	ND		5000	1500	ND		2500	750
Benzene	1	ND		50	16	ND		500	160	ND		250	80
Bromobenzene	5	ND		250	70	ND		2500	700	ND		1200	350
Bromochloromethane	5	ND		250	70	ND		2500	700	ND		1200	350
Bromodichloromethane	50	ND		50	19	ND		500	190	ND		250	96
Bromoform	50	ND		200	65	ND		2000	650	ND		1000	320
Bromomethane	5	ND		250	70	ND		2500	700	ND		1200	350
Carbon disulfide	60	ND		500	100	ND		5000	1000	ND		2500	500
Carbon tetrachloride	5	ND		50	13	ND		500	130	ND		250	67
Chlorobenzene	5	ND		250	70	ND		2500	700	ND		1200	350
Chloroethane	5	ND		250	70	ND		2500	700	ND		1200	350
Chloroform	7	ND		250	70	ND		2500	700	ND		1200	350
Chloromethane	NS	ND		250	70	ND		2500	700	ND		1200	350
cis-1,2-Dichloroethene	5	1100		250	70	86000		2500	700	7000		1200	350
cis-1,3-Dichloropropene	0.4	ND		50	14	ND		500	140	ND		250	72
Dibromochloromethane	50	ND		50	15	ND		500	150	ND		250	74
Dibromomethane	5	ND		500	100	ND		5000	1000	ND		2500	500
Dichlorodifluoromethane	5	ND		500	100	ND		5000	1000	ND		2500	500
Ethyl ether	NS	ND		250	70	ND		2500	700	ND		1200	350
Ethylbenzene	5	ND		250	70	ND		2500	700	ND		1200	350
Hexachlorobutadiene	0.5	ND		250	70	ND		2500	700	ND		1200	350
Isopropylbenzene	5	ND		250	70	ND		2500	700	ND		1200	350
Methyl tert butyl ether	10	ND		250	70	ND		2500	700	ND		1200	350
Methylene chloride	5	ND		250	70	ND		2500	700	ND		1200	350
Naphthalene	10	ND		250	70	ND		2500	700	ND		1200	350
n-Butylbenzene	5	ND		250	70	ND		2500	700	ND		1200	350
n-Propylbenzene	5	ND		250	70	ND		2500	700	ND		1200	350
o-Chlorotoluene	5	ND		250	70	ND		2500	700	ND		1200	350
o-Xylene	5	ND		250	70	ND		2500	700	ND		1200	350
p/m-Xylene	5	ND		250	70	ND		2500	700	ND		1200	350
p-Chlorotoluene	5	ND		250	70	ND		2500	700	ND		1200	350
p-Diethylbenzene	NS	ND		200	70	ND		2000	700	ND		1000	350
p-Ethyltoluene	NS	ND		200	70	ND		2000	700	ND		1000	350
p-Isopropyltoluene	5	ND		250	70	ND		2500	700	ND		1200	350
sec-Butylbenzene	5	ND		250	70	ND		2500	700	ND		1200	350
Styrene	5	ND		250	70	ND		2500	700	ND		1200	350
tert-Butylbenzene	5	ND		250	70	ND		2500	700	ND		1200	350
Tetrachloroethene	5	9700		50	18	180000		500	180	56000		250	90
Toluene	5	ND		250	70	ND		2500	700	ND		1200	350
trans-1,2-Dichloroethene	5	ND		250	70	ND		2500	700	ND		1200	350
trans-1,3-Dichloropropene	0.4	ND		50	16	ND		500	160	ND		250	82
trans-1,4-Dichloro-2-butene	5	ND		250	70	ND		2500	700	ND		1200	350
Trichloroethene	5	390		50	18	11000		500	180	2700		250	88
Trichlorofluoromethane	5	ND		250	70	ND		2500	700	ND		1200	350
Vinyl acetate	NS	ND		500	100	ND		5000	1000	ND		2500	500
Vinyl chloride	2	50	J	100	7.1	16000		1000	71	1400		500	36
Xylenes, Total	NS	ND		250	70	ND		2500	700	ND		1200	350

Notes:
AWQS - NYSDEC Ambient Water Quality Standards
ug/L - Micrograms per liter - Parts per billion (ppb)
ND - Not detected
NS - No standard
J - Estimated concentration
Bold & Highlighted - Concentrations exceed NYSDEC standard



TABLE 7
Groundwater Analytical Results - February 2023
300 East 12th Street, New York, New York
LKB Project No. 10153.LK

SAMPLE ID:	AWQS	FIELD BLANK				TRIP BLANK			
LAB ID:		L2309710-04				L2309710-05			
COLLECTION DATE:		2/22/2023				2/22/2023			
ANALYTE	(ug/l)	Conc	Q	RL	MDL	Conc	Q	RL	MDL
VOLATILE ORGANICS BY GC/MS									
1,1,1,2-Tetrachloroethane	5	ND		2.5	0.7	ND		2.5	0.7
1,1,1-Trichloroethane	5	ND		2.5	0.7	ND		2.5	0.7
1,1,2,2-Tetrachloroethane	5	ND		0.5	0.17	ND		0.5	0.17
1,1,2-Trichloroethane	1	ND		1.5	0.5	ND		1.5	0.5
1,1-Dichloroethane	5	ND		2.5	0.7	ND		2.5	0.7
1,1-Dichloroethene	5	ND		0.5	0.17	ND		0.5	0.17
1,1-Dichloropropene	5	ND		2.5	0.7	ND		2.5	0.7
1,2,3-Trichlorobenzene	5	ND		2.5	0.7	ND		2.5	0.7
1,2,3-Trichloropropane	0.04	ND		2.5	0.7	ND		2.5	0.7
1,2,4,5-Tetramethylbenzene	5	ND		2	0.54	ND		2	0.54
1,2,4-Trichlorobenzene	5	ND		2.5	0.7	ND		2.5	0.7
1,2,4-Trimethylbenzene	5	ND		2.5	0.7	ND		2.5	0.7
1,2-Dibromo-3-chloropropane	0.04	ND		2.5	0.7	ND		2.5	0.7
1,2-Dibromoethane	0.0006	ND		2	0.65	ND		2	0.65
1,2-Dichlorobenzene	3	ND		2.5	0.7	ND		2.5	0.7
1,2-Dichloroethane	0.6	ND		0.5	0.13	ND		0.5	0.13
1,2-Dichloroethene, Total	NS	ND		2.5	0.7	ND		2.5	0.7
1,2-Dichloropropane	1	ND		1	0.14	ND		1	0.14
1,3,5-Trimethylbenzene	5	ND		2.5	0.7	ND		2.5	0.7
1,3-Dichlorobenzene	3	ND		2.5	0.7	ND		2.5	0.7
1,3-Dichloropropane	5	ND		2.5	0.7	ND		2.5	0.7
1,3-Dichloropropene, Total	NS	ND		0.5	0.14	ND		0.5	0.14
1,4-Dichlorobenzene	3	ND		2.5	0.7	ND		2.5	0.7
1,4-Dioxane	NS	ND		250	61	ND		250	61
2,2-Dichloropropane	5	ND		2.5	0.7	ND		2.5	0.7
2-Butanone	50	ND		5	1.9	ND		5	1.9
2-Hexanone	50	ND		5	1	ND		5	1
4-Methyl-2-pentanone	NS	ND		5	1	ND		5	1
Acetone	50	ND		5	1.5	ND		5	1.5
Acrylonitrile	5	ND		5	1.5	ND		5	1.5
Benzene	1	ND		0.5	0.16	ND		0.5	0.16
Bromobenzene	5	ND		2.5	0.7	ND		2.5	0.7
Bromochloromethane	5	ND		2.5	0.7	ND		2.5	0.7
Bromodichloromethane	50	ND		0.5	0.19	ND		0.5	0.19
Bromoform	50	ND		2	0.65	ND		2	0.65
Bromomethane	5	ND		2.5	0.7	ND		2.5	0.7
Carbon disulfide	60	ND		5	1	ND		5	1
Carbon tetrachloride	5	ND		0.5	0.13	ND		0.5	0.13
Chlorobenzene	5	ND		2.5	0.7	ND		2.5	0.7
Chloroethane	5	ND		2.5	0.7	ND		2.5	0.7
Chloroform	7	ND		2.5	0.7	ND		2.5	0.7
Chloromethane	NS	ND		2.5	0.7	ND		2.5	0.7
cis-1,2-Dichloroethene	5	ND		2.5	0.7	ND		2.5	0.7
cis-1,3-Dichloropropene	0.4	ND		0.5	0.14	ND		0.5	0.14
Dibromochloromethane	50	ND		0.5	0.15	ND		0.5	0.15
Dibromomethane	5	ND		5	1	ND		5	1
Dichlorodifluoromethane	5	ND		5	1	ND		5	1
Ethyl ether	NS	ND		2.5	0.7	ND		2.5	0.7
Ethylbenzene	5	ND		2.5	0.7	ND		2.5	0.7
Hexachlorobutadiene	0.5	ND		2.5	0.7	ND		2.5	0.7
Isopropylbenzene	5	ND		2.5	0.7	ND		2.5	0.7
Methyl tert butyl ether	10	ND		2.5	0.7	ND		2.5	0.7
Methylene chloride	5	ND		2.5	0.7	ND		2.5	0.7
Naphthalene	10	ND		2.5	0.7	ND		2.5	0.7
n-Butylbenzene	5	ND		2.5	0.7	ND		2.5	0.7
n-Propylbenzene	5	ND		2.5	0.7	ND		2.5	0.7
o-Chlorotoluene	5	ND		2.5	0.7	ND		2.5	0.7
o-Xylene	5	ND		2.5	0.7	ND		2.5	0.7
p/m-Xylene	5	ND		2.5	0.7	ND		2.5	0.7
p-Chlorotoluene	5	ND		2.5	0.7	ND		2.5	0.7
p-Diethylbenzene	NS	ND		2	0.7	ND		2	0.7
p-Ethyltoluene	NS	ND		2	0.7	ND		2	0.7
p-Isopropyltoluene	5	ND		2.5	0.7	ND		2.5	0.7
sec-Butylbenzene	5	ND		2.5	0.7	ND		2.5	0.7
Styrene	5	ND		2.5	0.7	ND		2.5	0.7
tert-Butylbenzene	5	ND		2.5	0.7	ND		2.5	0.7
Tetrachloroethene	5	ND		0.5	0.18	ND		0.5	0.18
Toluene	5	ND		2.5	0.7	ND		2.5	0.7
trans-1,2-Dichloroethene	5	ND		2.5	0.7	ND		2.5	0.7
trans-1,3-Dichloropropene	0.4	ND		0.5	0.16	ND		0.5	0.16
trans-1,4-Dichloro-2-butene	5	ND		2.5	0.7	ND		2.5	0.7
Trichloroethene	5	ND		0.5	0.18	ND		0.5	0.18
Trichlorofluoromethane	5	ND		2.5	0.7	ND		2.5	0.7
Vinyl acetate	NS	ND		5	1	ND		5	1
Vinyl chloride	2	ND		1	0.07	ND		1	0.07
Xylenes, Total	NS	ND		2.5	0.7	ND		2.5	0.7

Notes:
AWQS - NYSDEC Ambient Water Quality Standards
ug/L - Micrograms per liter - Parts per billion (ppb)
ND - Not detected
NS - No standard
J - Estimated concentration
Bold & Highlighted - Concentrations exceed NYSDEC standard



TABLE 8
Groundwater Analytical Results - April 2023
300 East 12th Street, New York, New York
LKB Project No. 10153.LK

SAMPLE ID:	AWQS	MW-1				MW-2				MW-3			
LAB ID:		L2323040-01				L2323040-02				L2323040-03			
COLLECTION DATE:		4/27/2023				4/27/2023				4/27/2023			
ANALYTE	ug/L	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
VOLATILE ORGANIC COMPOUNDS (VOCs) - ug/L													
1,1,1,2-Tetrachloroethane	5	ND		25	7	ND		2500	700	ND		1000	280
1,1,1-Trichloroethane	5	ND		25	7	ND		2500	700	ND		1000	280
1,1,2,2-Tetrachloroethane	5	ND		5	1.7	ND		500	170	ND		200	67
1,1,2-Trichloroethane	1	ND		15	5	ND		1500	500	ND		600	200
1,1-Dichloroethane	5	ND		25	7	ND		2500	700	ND		1000	280
1,1-Dichloroethene	5	9.6		5	1.7	ND		500	170	ND		200	68
1,1-Dichloropropene	5	ND		25	7	ND		2500	700	ND		1000	280
1,2,3-Trichlorobenzene	5	ND		25	7	ND		2500	700	ND		1000	280
1,2,3-Trichloropropane	0.04	ND		25	7	ND		2500	700	ND		1000	280
1,2,4,5-Tetramethylbenzene	5	ND		20	5.4	ND		2000	540	ND		800	220
1,2,4-Trichlorobenzene	5	ND		25	7	ND		2500	700	ND		1000	280
1,2,4-Trimethylbenzene	5	ND		25	7	ND		2500	700	ND		1000	280
1,2-Dibromo-3-chloropropane	0.04	ND		25	7	ND		2500	700	ND		1000	280
1,2-Dibromoethane	0.0006	ND		20	6.5	ND		2000	650	ND		800	260
1,2-Dichlorobenzene	3	ND		25	7	ND		2500	700	ND		1000	280
1,2-Dichloroethane	0.6	ND		5	1.3	ND		500	130	ND		200	53
1,2-Dichloroethene, Total	NS	1500	J	25	7	73000		2500	700	8100		1000	280
1,2-Dichloropropane	1	ND		10	1.4	ND		1000	140	ND		400	55
1,3,5-Trimethylbenzene	5	ND		25	7	ND		2500	700	ND		1000	280
1,3-Dichlorobenzene	3	ND		25	7	ND		2500	700	ND		1000	280
1,3-Dichloropropane	5	ND		25	7	ND		2500	700	ND		1000	280
1,3-Dichloropropene, Total	NS	ND		5	1.4	ND		500	140	ND		200	58
1,4-Dichlorobenzene	3	ND		25	7	ND		2500	700	ND		1000	280
1,4-Dioxane	NS	ND		2500	610	ND		250000	61000	ND		100000	24000
2,2-Dichloropropane	5	ND		25	7	ND		2500	700	ND		1000	280
2-Butanone	50	ND		50	19	ND		5000	1900	ND		2000	780
2-Hexanone	50	ND		50	10	ND		5000	1000	ND		2000	400
4-Methyl-2-pentanone	NS	ND		50	10	ND		5000	1000	ND		2000	400
Acetone	50	ND		50	15	ND		5000	1500	ND		2000	580
Acrylonitrile	5	ND		50	15	ND		5000	1500	ND		2000	600
Benzene	1	ND		5	1.6	ND		500	160	ND		200	64
Bromobenzene	5	ND		25	7	ND		2500	700	ND		1000	280
Bromochloromethane	5	ND		25	7	ND		2500	700	ND		1000	280
Bromodichloromethane	50	ND		5	1.9	ND		500	190	ND		200	77
Bromoform	50	ND		20	6.5	ND		2000	650	ND		800	260
Bromomethane	5	ND		25	7	ND		2500	700	ND		1000	280
Carbon disulfide	60	10	J	50	10	ND		5000	1000	ND		2000	400
Carbon tetrachloride	5	ND		5	1.3	ND		500	130	ND		200	54
Chlorobenzene	5	ND		25	7	ND		2500	700	ND		1000	280
Chloroethane	5	ND		25	7	ND		2500	700	ND		1000	280
Chloroform	7	ND		25	7	ND		2500	700	ND		1000	280
Chloromethane	NS	ND		25	7	ND		2500	700	ND		1000	280
cis-1,2-Dichloroethene	5	1500		25	7	73000		2500	700	8100		1000	280
cis-1,3-Dichloropropene	0.4	ND		5	1.4	ND		500	140	ND		200	58
Dibromochloromethane	50	ND		5	1.5	ND		500	150	ND		200	60
Dibromomethane	5	ND		50	10	ND		5000	1000	ND		2000	400
Dichlorodifluoromethane	5	ND		50	10	ND		5000	1000	ND		2000	400
Ethyl ether	NS	ND		25	7	ND		2500	700	ND		1000	280
Ethylbenzene	5	ND		25	7	ND		2500	700	ND		1000	280
Hexachlorobutadiene	0.5	ND		25	7	ND		2500	700	ND		1000	280
Isopropylbenzene	5	ND		25	7	ND		2500	700	ND		1000	280
Methyl tert butyl ether	10	ND		25	7	ND		2500	700	ND		1000	280
Methylene chloride	5	ND		25	7	ND		2500	700	ND		1000	280
n-Butylbenzene	5	ND		25	7	ND		2500	700	ND		1000	280
n-Propylbenzene	5	ND		25	7	ND		2500	700	ND		1000	280
Naphthalene	10	8.8	J	25	7	ND		2500	700	ND		1000	280
o-Chlorotoluene	5	ND		25	7	ND		2500	700	ND		1000	280
o-Xylene	5	ND		25	7	ND		2500	700	ND		1000	280
p-Chlorotoluene	5	ND		25	7	ND		2500	700	ND		1000	280
p-Diethylbenzene	NS	ND		20	7	ND		2000	700	ND		800	280
p-Ethyltoluene	NS	ND		20	7	ND		2000	700	ND		800	280
p-Isopropyltoluene	5	ND		25	7	ND		2500	700	ND		1000	280
p/m-Xylene	5	ND		25	7	ND		2500	700	ND		1000	280
sec-Butylbenzene	5	ND		25	7	ND		2500	700	ND		1000	280
Styrene	5	ND		25	7	ND		2500	700	ND		1000	280
tert-Butylbenzene	5	ND		25	7	ND		2500	700	ND		1000	280
Tetrachloroethene	5	2.9	J	5	1.8	210000		2500	900	46000		200	72
Toluene	5	ND		25	7	ND		2500	700	ND		1000	280
trans-1,2-Dichloroethene	5	9.4	J	25	7	ND		2500	700	ND		1000	280
trans-1,3-Dichloropropene	0.4	ND		5	1.6	ND		500	160	ND		200	66
trans-1,4-Dichloro-2-butene	5	ND		25	7	ND		2500	700	ND		1000	280
Trichloroethene	5	1000		5	1.8	12000		500	180	3200		200	70
Trichlorofluoromethane	5	ND		25	7	ND		2500	700	ND		1000	280
Vinyl acetate	NS	ND		50	10	ND		5000	1000	ND		2000	400
Vinyl chloride	2	440		10	0.71	14000		1000	71	2900		400	28
Xylenes, Total	NS	ND		25	7	ND		2500	700	ND		1000	280

Notes:
AWQS - NYSDEC Ambient Water Quality Standards
ug/L - Micrograms per liter - Parts per billion (ppb)
ND - Not detected
NS - No standard
J - Estimated concentration
Bold & Highlighted - Concentrations exceed NYSDEC standard



TABLE 8
Groundwater Analytical Results - April 2023
300 East 12th Street, New York, New York
LKB Project No. 10153.LK

SAMPLE ID:	AWQS	FIELD BLANK				TRIP BLANK			
LAB ID:		L2323040-04				L2323040-05			
COLLECTION DATE:		4/27/2023				4/26/2023			
ANALYTE	ug/L	Conc	Q	RL	MDL	Conc	Q	RL	MDL
VOLATILE ORGANIC COMPOUNDS (VOCs)									
1,1,1,2-Tetrachloroethane	5	ND		2.5	0.7	ND		2.5	0.7
1,1,1-Trichloroethane	5	ND		2.5	0.7	ND		2.5	0.7
1,1,2,2-Tetrachloroethane	5	ND		0.5	0.17	ND		0.5	0.17
1,1,2-Trichloroethane	1	ND		1.5	0.5	ND		1.5	0.5
1,1-Dichloroethane	5	ND		2.5	0.7	ND		2.5	0.7
1,1-Dichloroethene	5	ND		0.5	0.17	ND		0.5	0.17
1,1-Dichloropropene	5	ND		2.5	0.7	ND		2.5	0.7
1,2,3-Trichlorobenzene	5	ND		2.5	0.7	ND		2.5	0.7
1,2,3-Trichloropropane	0.04	ND		2.5	0.7	ND		2.5	0.7
1,2,4,5-Tetramethylbenzene	5	ND		2	0.54	ND		2	0.54
1,2,4-Trichlorobenzene	5	ND		2.5	0.7	ND		2.5	0.7
1,2,4-Trimethylbenzene	5	ND		2.5	0.7	ND		2.5	0.7
1,2-Dibromo-3-chloropropane	0.04	ND		2.5	0.7	ND		2.5	0.7
1,2-Dibromoethane	0.0006	ND		2	0.65	ND		2	0.65
1,2-Dichlorobenzene	3	ND		2.5	0.7	ND		2.5	0.7
1,2-Dichloroethane	0.6	ND		0.5	0.13	ND		0.5	0.13
1,2-Dichloroethene, Total	NS	ND		2.5	0.7	ND		2.5	0.7
1,2-Dichloropropane	1	ND		1	0.14	ND		1	0.14
1,3,5-Trimethylbenzene	5	ND		2.5	0.7	ND		2.5	0.7
1,3-Dichlorobenzene	3	ND		2.5	0.7	ND		2.5	0.7
1,3-Dichloropropane	5	ND		2.5	0.7	ND		2.5	0.7
1,3-Dichloropropene, Total	NS	ND		0.5	0.14	ND		0.5	0.14
1,4-Dichlorobenzene	3	ND		2.5	0.7	ND		2.5	0.7
1,4-Dioxane	NS	ND		250	61	ND		250	61
2,2-Dichloropropane	5	ND		2.5	0.7	ND		2.5	0.7
2-Butanone	50	ND		5	1.9	ND		5	1.9
2-Hexanone	50	ND		5	1	ND		5	1
4-Methyl-2-pentanone	NS	ND		5	1	ND		5	1
Acetone	50	ND		5	1.5	ND		5	1.5
Acrylonitrile	5	ND		5	1.5	ND		5	1.5
Benzene	1	ND		0.5	0.16	ND		0.5	0.16
Bromobenzene	5	ND		2.5	0.7	ND		2.5	0.7
Bromochloromethane	5	ND		2.5	0.7	ND		2.5	0.7
Bromodichloromethane	50	ND		0.5	0.19	ND		0.5	0.19
Bromoform	50	ND		2	0.65	ND		2	0.65
Bromomethane	5	ND		2.5	0.7	ND		2.5	0.7
Carbon disulfide	60	ND		5	1	ND		5	1
Carbon tetrachloride	5	ND		0.5	0.13	ND		0.5	0.13
Chlorobenzene	5	ND		2.5	0.7	ND		2.5	0.7
Chloroethane	5	ND		2.5	0.7	ND		2.5	0.7
Chloroform	7	ND		2.5	0.7	ND		2.5	0.7
Chloromethane	NS	ND		2.5	0.7	ND		2.5	0.7
cis-1,2-Dichloroethene	5	ND		2.5	0.7	ND		2.5	0.7
cis-1,3-Dichloropropene	0.4	ND		0.5	0.14	ND		0.5	0.14
Dibromochloromethane	50	ND		0.5	0.15	ND		0.5	0.15
Dibromomethane	5	ND		5	1	ND		5	1
Dichlorodifluoromethane	5	ND		5	1	ND		5	1
Ethyl ether	NS	ND		2.5	0.7	ND		2.5	0.7
Ethylbenzene	5	ND		2.5	0.7	ND		2.5	0.7
Hexachlorobutadiene	0.5	ND		2.5	0.7	ND		2.5	0.7
Isopropylbenzene	5	ND		2.5	0.7	ND		2.5	0.7
Methyl tert butyl ether	10	ND		2.5	0.7	ND		2.5	0.7
Methylene chloride	5	ND		2.5	0.7	ND		2.5	0.7
n-Butylbenzene	5	ND		2.5	0.7	ND		2.5	0.7
n-Propylbenzene	5	ND		2.5	0.7	ND		2.5	0.7
Naphthalene	10	ND		2.5	0.7	ND		2.5	0.7
o-Chlorotoluene	5	ND		2.5	0.7	ND		2.5	0.7
o-Xylene	5	ND		2.5	0.7	ND		2.5	0.7
p-Chlorotoluene	5	ND		2.5	0.7	ND		2.5	0.7
p-Diethylbenzene	NS	ND		2	0.7	ND		2	0.7
p-Ethyltoluene	NS	ND		2	0.7	ND		2	0.7
p-Isopropyltoluene	5	ND		2.5	0.7	ND		2.5	0.7
p/m-Xylene	5	ND		2.5	0.7	ND		2.5	0.7
sec-Butylbenzene	5	ND		2.5	0.7	ND		2.5	0.7
Styrene	5	ND		2.5	0.7	ND		2.5	0.7
tert-Butylbenzene	5	ND		2.5	0.7	ND		2.5	0.7
Tetrachloroethene	5	ND		0.5	0.18	ND		0.5	0.18
Toluene	5	ND		2.5	0.7	ND		2.5	0.7
trans-1,2-Dichloroethene	5	ND		2.5	0.7	ND		2.5	0.7
trans-1,3-Dichloropropene	0.4	ND		0.5	0.16	ND		0.5	0.16
trans-1,4-Dichloro-2-butene	5	ND		2.5	0.7	ND		2.5	0.7
Trichloroethene	5	ND		0.5	0.18	ND		0.5	0.18
Trichlorofluoromethane	5	ND		2.5	0.7	ND		2.5	0.7
Vinyl acetate	NS	ND		5	1	ND		5	1
Vinyl chloride	2	ND		1	0.07	ND		1	0.07
Xylenes, Total	NS	ND		2.5	0.7	ND		2.5	0.7

Notes:
AWQS - NYSDEC Ambient Water Quality Standards
ug/L - Micrograms per liter - Parts per billion (ppb)
ND - Not detected
NS - No standard
J - Estimated concentration
Bold & Highlighted - Concentrations exceed NYSDEC standard



Appendix A: VI Investigation Field Forms

The Vertex Companies, LLC.					
Indoor Air Record					
Site:	188 2nd Ave, 81363			Date:	8/24/2022
Weather-Start:	75 degrees F, Clear		Barometric Pressure:	29.97	
Weather throughout day:	88 degress F, Clear		Barometric Pressure:	29.95	
Weather Overnight:	N/A		Barometric Pressure:	N/A	
Weather-End:	88 degress F, Clear		Barometric Pressure:	29.93	
Technician:	GG & TAB		Page 1 of 1		
Sample ID	Location	-	-	-	-
VTX-AA-1	N exterior on E 12th Street	-	-	-	-
Lab Can Pressure (Hg) (outgoing)	Flow ID	Can ID	Can Size (L)	Flow Readout	Batch Cert#
-29.3	1651	2713	6	10	L2244032-05
Start Time	Start Pressure (Hg)	Start Temp (F)	Start Baro. Press. (Hg)	Overnight Temp (F)	Overnight Press (Hg)
930	-30.20	77	29.97	-	-
End Time	End Pressure (Hg)	End Temp (F)	End Baro. Press. (Hg)	Precipitation during event?	
1545	-12.03	88	29.93	None	
Sample ID	Location	-	-	-	-
VTX-IA-1	119	-	-	-	-
Lab Can Pressure (Hg) (outgoing)	Flow ID	Can ID	Can Size (L)	Flow Readout	Batch Cert#
-29.2	2058	762	6	10	L2244032-04
Start Time	Start Pressure (Hg)	Start Temp (F)	Start Baro. Press. (Hg)	Overnight Temp (F)	Overnight Press (Hg)
853	-30.17	75	29.97	-	-
End Time	End Pressure (Hg)	End Temp (F)	End Baro. Press. (Hg)	Precipitation during event?	
1537	-10.98	88	29.93	None	
Sample ID	Location	-	-	-	-
VTX-IA-2	LL23	-	-	-	-
Lab Can Pressure (Hg) (outgoing)	Flow ID	Can ID	Can Size (L)	Flow Readout	Batch Cert#
-29.2	1670	3264	6	10	L2244032-05
Start Time	Start Pressure (Hg)	Start Temp (F)	Start Baro. Press. (Hg)	Overnight Temp (F)	Overnight Press (Hg)
859	-29.97	75	29.97	-	-
End Time	End Pressure (Hg)	End Temp (F)	End Baro. Press. (Hg)	Precipitation during event?	
1538	-10.58	88	29.93	None	

The Vertex Companies, LLC.					
Indoor Air Record					
Site:	188 2nd Ave, 81363			Date:	8/24/2022
Weather-Start:	75 degrees F, Clear		Barometric Pressure:	29.97	
Weather throughout day:	88 degress F, Clear		Barometric Pressure:	29.95	
Weather Overnight:	N/A		Barometric Pressure:	N/A	
Weather-End:	88 degress F, Clear		Barometric Pressure:	29.93	
Technician:	GG & TAB		Page 1 of 1		
Sample ID	Location	-	-	-	-
VTX-IA-3	LL12	-	-	-	-
Lab Can Pressure (Hg) (outgoing)	Flow ID	Can ID	Can Size (L)	Flow Readout	Batch Cert#
-29.2	1553	2367	6	10	L2244032-04
Start Time	Start Pressure (Hg)	Start Temp (F)	Start Baro. Press. (Hg)	Overnight Temp (F)	Overnight Press (Hg)
904	-30.19	75	29.97	-	-
End Time	End Pressure (Hg)	End Temp (F)	End Baro. Press. (Hg)	Precipitation during event?	
1540	-11.90	88	29.93	None	
Sample ID	Location	-	-	-	-
VTX-IA-4	Electrical Room	-	-	-	-
Lab Can Pressure (Hg) (outgoing)	Flow ID	Can ID	Can Size (L)	Flow Readout	Batch Cert#
-29.2	1615	3131	6	10	L2244032-04
Start Time	Start Pressure (Hg)	Start Temp (F)	Start Baro. Press. (Hg)	Overnight Temp (F)	Overnight Press (Hg)
839	-30.15	75	29.97	-	-
End Time	End Pressure (Hg)	End Temp (F)	End Baro. Press. (Hg)	Precipitation during event?	
1530	-9.90	88	29.93	None	
Sample ID	Location	-	-	-	-
VTX-IA-5	LL8	-	-	-	-
Lab Can Pressure (Hg) (outgoing)	Flow ID	Can ID	Can Size (L)	Flow Readout	Batch Cert#
-29.1	88	2524	6	10	L2244032-05
Start Time	Start Pressure (Hg)	Start Temp (F)	Start Baro. Press. (Hg)	Overnight Temp (F)	Overnight Press (Hg)
848	-29.99	75	29.97	-	-
End Time	End Pressure (Hg)	End Temp (F)	End Baro. Press. (Hg)	Precipitation during event?	
1531	-9.93	88	29.93	None	

Soil Gas Probe Monitoring Record							
Site: 188 2nd Ave, 81363				Date: 8/25/2022			
Weather: 85 F, clear				Barometric Pressure: 30.46			
Technician: MK & MU				Page 1 of 1			
Sample ID	Location	Probe Depth (inch.)	Probe Volume (ml)	Evac. Rate (ml/m)	Volume Purged (ml)	Helium (Shroud) %	Helium (Train) ppm
SG-1	SW basement near restroom	4	20	<200	60	20	0
Lab Can Pressure (Hg) (outgoing)	Flow ID	Can ID	Can Size (L)	Flow Readout	Batch Cert#		-
-29.3	1388	3224	2.7	18	L2244270-01		-
Start Time	Start Pressure (Hg)	Start Temp (F)	Start Baro. Press. (Hg)	-	-	-	-
1215	-29.93	82	30.42	-	-	-	-
End Time	End Pressure (Hg)	End Temp (F)	End Baro. Press. (Hg)	PID in tubing:	Amb. PID Reading:	-	-
1415	-7.12	85	30.46	2.4 ppm	0	-	-
Sample ID	Location	Probe Depth (inch.)	Probe Volume (ml)	Evac. Rate (ml/m)	Volume Purged (ml)	Helium (Shroud) %	Helium (Train) ppm
SG-2	Western basement	4	20	<200	60	20	250
Lab Can Pressure (Hg) (outgoing)	Flow ID	Can ID	Can Size (L)	Flow Readout	Batch Cert#		-
-29.2	1098	2239	2.7	18	L2244270-01		-
Start Time	Start Pressure (Hg)	Start Temp (F)	Start Baro. Press. (Hg)	-	-	-	-
1305	-29.84	83	30.44	-	-	-	-
End Time	End Pressure (Hg)	End Temp (F)	End Baro. Press. (Hg)	PID in tubing:	Amb. PID Reading:	-	-
1456	-9.46	85	30.46	660 ppb	0	-	-
Sample ID	Location	Probe Depth (inch.)	Probe Volume (ml)	Evac. Rate (ml/m)	Volume Purged (ml)	Helium (Shroud) %	Helium (Train) ppm
SG-3	NW basement	4	20	<200	60	20	600
Lab Can Pressure (Hg) (outgoing)	Flow ID	Can ID	Can Size (L)	Flow Readout	Batch Cert#		-
-29.5	1824	390	2.7	18	L2244270-01		-
Start Time	Start Pressure (Hg)	Start Temp (F)	Start Baro. Press. (Hg)	-	-	-	-
1300	-30.06	83	30.44	-	-	-	-
End Time	End Pressure (Hg)	End Temp (F)	End Baro. Press. (Hg)	PID in tubing:	Amb. PID Reading:	-	-
1450	-7.81	85	30.46	0	0	-	-
Sample ID	Location	Probe Depth (inch.)	Probe Volume (ml)	Evac. Rate (ml/m)	Volume Purged (ml)	Helium (Shroud) %	Helium (Train) ppm
SG-4	N basement small tenant space	4	20	<200	60	20	0
Lab Can Pressure (Hg) (outgoing)	Flow ID	Can ID	Can Size (L)	Flow Readout	Batch Cert#		-
-29.2	1716	196	2.7	18	L2244270-01		-
Start Time	Start Pressure (Hg)	Start Temp (F)	Start Baro. Press. (Hg)	-	-	-	-
1015	-29.95	77	30.41	-	-	-	-
End Time	End Pressure (Hg)	End Temp (F)	End Baro. Press. (Hg)	PID in tubing:	Amb. PID Reading:	-	-
1220	-6.64	82	30.42	572 ppb	0	-	-

Soil Gas Probe Monitoring Record							
Site: 188 2nd Ave, 81363				Date: 8/25/2022			
Weather: 85 F, clear				Barometric Pressure: 30.46			
Technician: MK & MU				Page 1 of 1			
Sample ID	Location	Probe Depth (inch.)	Probe Volume (ml)	Evac. Rate (ml/m)	Volume Purged (ml)	Helium (Shroud) %	Helium (Train) ppm
SG-5	NE basement small tenant space	4	20	<200	60	20	0
Lab Can Pressure (Hg) (outgoing)	Flow ID	Can ID	Can Size (L)	Flow Readout	Batch Cert#		-
-29.2	1552	2337	2.7	18	L2244270-01		-
Start Time	Start Pressure (Hg)	Start Temp (F)	Start Baro. Press. (Hg)	-	-	-	-
1110	-29.96	79	30.42	-	-	-	-
End Time	End Pressure (Hg)	End Temp (F)	End Baro. Press. (Hg)	PID in tubing:	Amb. PID Reading:	-	-
1310	-7.25	83	30.44	2.7 ppm	0	-	-
Sample ID	Location	Probe Depth (inch.)	Probe Volume (ml)	Evac. Rate (ml/m)	Volume Purged (ml)	Helium (Shroud) %	Helium (Train) ppm
SG-6	W portion of small tenant space	4	20	<200	60	20	0
Lab Can Pressure (Hg) (outgoing)	Flow ID	Can ID	Can Size (L)	Flow Readout	Batch Cert#		-
-29.3	1823	2036	2.7	18	L2244270-01		-
Start Time	Start Pressure (Hg)	Start Temp (F)	Start Baro. Press. (Hg)	-	-	-	-
1030	-30.01	77	30.41	-	-	-	-
End Time	End Pressure (Hg)	End Temp (F)	End Baro. Press. (Hg)	PID in tubing:	Amb. PID Reading:	-	-
1225	-8.53	82	30.42	4.0 ppm	0	-	-
Sample ID	Location	Probe Depth (inch.)	Probe Volume (ml)	Evac. Rate (ml/m)	Volume Purged (ml)	Helium (Shroud) %	Helium (Train) ppm
SG-7	S portion of small tenant space	4	20	<200	60	20	0
Lab Can Pressure (Hg) (outgoing)	Flow ID	Can ID	Can Size (L)	Flow Readout	Batch Cert#		-
-29.1	1384	3196	2.7	18	L2244270-01		-
Start Time	Start Pressure (Hg)	Start Temp (F)	Start Baro. Press. (Hg)	-	-	-	-
1055	-30.55	79	30.42	-	-	-	-
End Time	End Pressure (Hg)	End Temp (F)	End Baro. Press. (Hg)	PID in tubing:	Amb. PID Reading:	-	-
1255	-6.77	83	30.44	2.0 ppm	0	-	-

Appendix B:
Laboratory Report – Sub-Slab Soil Vapor



ANALYTICAL REPORT

Lab Number:	L2246407
Client:	The Vertex Companies, Inc. 3322 US Highway 22 West Suite 907 Branchburg, NJ 08876
ATTN:	Eugene Giardino
Phone:	(908) 448-2627
Project Name:	188 2ND AVE, NY
Project Number:	81363
Report Date:	09/07/22

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Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com



Project Name: 188 2ND AVE, NY
Project Number: 81363

Lab Number: L2246407
Report Date: 09/07/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2246407-01	VTX-SG-1	SOIL_VAPOR	EAST VILLAGE	08/25/22 14:15	08/26/22
L2246407-02	VTX-SG-2	SOIL_VAPOR	EAST VILLAGE	08/25/22 14:55	08/26/22
L2246407-03	VTX-SG-3	SOIL_VAPOR	EAST VILLAGE	08/25/22 14:50	08/26/22
L2246407-04	VTX-SG-4	SOIL_VAPOR	EAST VILLAGE	08/25/22 12:20	08/26/22
L2246407-05	VTX-SG-5	SOIL_VAPOR	EAST VILLAGE	08/25/22 13:10	08/26/22
L2246407-06	VTX-SG-6	SOIL_VAPOR	EAST VILLAGE	08/25/22 12:25	08/26/22
L2246407-07	VTX-SG-7	SOIL_VAPOR	EAST VILLAGE	08/25/22 12:55	08/26/22
L2246407-08	UNUSED #215	SOIL_VAPOR	EAST VILLAGE		08/26/22

Project Name: 188 2ND AVE, NY
Project Number: 81363

Lab Number: L2246407
Report Date: 09/07/22

Case Narrative

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

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

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

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

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

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

Project Name: 188 2ND AVE, NY
Project Number: 81363

Lab Number: L2246407
Report Date: 09/07/22

Case Narrative (continued)

Volatile Organics in Air

Canisters were released from the laboratory on August 23, 2022. The canister certification results are provided as an addendum.

The WG1683332-5 Laboratory Duplicate RPD for carbon disulfide (27%), performed on L2246407-03, is above the acceptance criteria; however, the sample and duplicate results are less than five times the reporting limit. Therefore, the RPD is valid.

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

Authorized Signature:  Christopher J. Anderson

Title: Technical Director/Representative

Date: 09/07/22

AIR

Project Name: 188 2ND AVE, NY**Project Number:** 81363**Lab Number:** L2246407**Report Date:** 09/07/22**SAMPLE RESULTS**

Lab ID: L2246407-01
 Client ID: VTX-SG-1
 Sample Location: EAST VILLAGE

Date Collected: 08/25/22 14:15
 Date Received: 08/26/22
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil_Vapor
 Analytical Method: 48,TO-15
 Analytical Date: 09/04/22 05:17
 Analyst: TS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.432	0.200	--	2.14	0.989	--		1
Chloromethane	0.321	0.200	--	0.663	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	17.5	5.00	--	33.0	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	13.8	1.00	--	32.8	2.38	--		1
Trichlorofluoromethane	0.208	0.200	--	1.17	1.12	--		1
Isopropanol	1.19	0.500	--	2.93	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	0.592	0.200	--	1.84	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	2.32	0.500	--	6.84	1.47	--		1
cis-1,2-Dichloroethene	0.695	0.200	--	2.76	0.793	--		1



Project Name: 188 2ND AVE, NY**Project Number:** 81363**Lab Number:** L2246407**Report Date:** 09/07/22**SAMPLE RESULTS**

Lab ID: L2246407-01

Client ID: VTX-SG-1

Sample Location: EAST VILLAGE

Date Collected: 08/25/22 14:15

Date Received: 08/26/22

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	79.7	0.200	--	389	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	0.337	0.200	--	1.19	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	0.504	0.200	--	1.61	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	4.73	0.200	--	31.7	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	2.11	0.200	--	11.3	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	0.278	0.200	--	1.14	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.845	0.200	--	3.18	0.754	--		1
2-Hexanone	0.266	0.200	--	1.09	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	46.5	0.200	--	315	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1



Project Name: 188 2ND AVE, NY**Lab Number:** L2246407**Project Number:** 81363**Report Date:** 09/07/22**SAMPLE RESULTS**

Lab ID: L2246407-01

Date Collected: 08/25/22 14:15

Client ID: VTX-SG-1

Date Received: 08/26/22

Sample Location: EAST VILLAGE

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
p/m-Xylene	0.670	0.400	--	2.91	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	0.286	0.200	--	1.24	0.869	--		1
4-Ethyltoluene	0.366	0.200	--	1.80	0.983	--		1
1,3,5-Trimethylbenzene	2.58	0.200	--	12.7	0.983	--		1
1,2,4-Trimethylbenzene	4.07	0.200	--	20.0	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	77		60-140
Bromochloromethane	67		60-140
chlorobenzene-d5	73		60-140



Project Name: 188 2ND AVE, NY**Project Number:** 81363**Lab Number:** L2246407**Report Date:** 09/07/22**SAMPLE RESULTS**

Lab ID: L2246407-02
 Client ID: VTX-SG-2
 Sample Location: EAST VILLAGE

Date Collected: 08/25/22 14:55
 Date Received: 08/26/22
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil_Vapor
 Analytical Method: 48,TO-15
 Analytical Date: 09/04/22 05:58
 Analyst: TS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.441	0.200	--	2.18	0.989	--		1
Chloromethane	0.572	0.200	--	1.18	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	17.0	5.00	--	32.0	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	19.9	1.00	--	47.3	2.38	--		1
Trichlorofluoromethane	0.229	0.200	--	1.29	1.12	--		1
Isopropanol	1.11	0.500	--	2.73	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	0.258	0.200	--	0.803	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	3.73	0.500	--	11.0	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1



Project Name: 188 2ND AVE, NY**Project Number:** 81363**Lab Number:** L2246407**Report Date:** 09/07/22**SAMPLE RESULTS**

Lab ID: L2246407-02

Client ID: VTX-SG-2

Sample Location: EAST VILLAGE

Date Collected: 08/25/22 14:55

Date Received: 08/26/22

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	4.06	0.200	--	19.8	0.977	--		1
Tetrahydrofuran	0.602	0.500	--	1.78	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	0.212	0.200	--	0.747	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	0.233	0.200	--	0.744	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	0.463	0.200	--	2.49	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.391	0.200	--	1.47	0.754	--		1
2-Hexanone	0.335	0.200	--	1.37	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	21.3	0.200	--	144	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1



Project Name: 188 2ND AVE, NY**Lab Number:** L2246407**Project Number:** 81363**Report Date:** 09/07/22**SAMPLE RESULTS**

Lab ID: L2246407-02

Date Collected: 08/25/22 14:55

Client ID: VTX-SG-2

Date Received: 08/26/22

Sample Location: EAST VILLAGE

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	0.239	0.200	--	1.17	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	75		60-140
Bromochloromethane	66		60-140
chlorobenzene-d5	71		60-140



Project Name: 188 2ND AVE, NY**Project Number:** 81363**Lab Number:** L2246407**Report Date:** 09/07/22**SAMPLE RESULTS**

Lab ID: L2246407-03
 Client ID: VTX-SG-3
 Sample Location: EAST VILLAGE

Date Collected: 08/25/22 14:50
 Date Received: 08/26/22
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil_Vapor
 Analytical Method: 48,TO-15
 Analytical Date: 09/04/22 06:37
 Analyst: TS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.424	0.200	--	2.10	0.989	--		1
Chloromethane	0.555	0.200	--	1.15	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	9.92	5.00	--	18.7	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	24.8	1.00	--	58.9	2.38	--		1
Trichlorofluoromethane	0.221	0.200	--	1.24	1.12	--		1
Isopropanol	1.18	0.500	--	2.90	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	0.544	0.500	--	1.89	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	0.682	0.200	--	2.12	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	3.19	0.500	--	9.41	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1



Project Name: 188 2ND AVE, NY**Lab Number:** L2246407**Project Number:** 81363**Report Date:** 09/07/22**SAMPLE RESULTS**

Lab ID: L2246407-03

Date Collected: 08/25/22 14:50

Client ID: VTX-SG-3

Date Received: 08/26/22

Sample Location: EAST VILLAGE

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	0.242	0.200	--	1.18	0.977	--		1
Tetrahydrofuran	0.912	0.500	--	2.69	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	0.245	0.200	--	0.863	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	0.574	0.200	--	1.83	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	0.260	0.200	--	1.07	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.579	0.200	--	2.18	0.754	--		1
2-Hexanone	0.238	0.200	--	0.975	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	11.6	0.200	--	78.7	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1



Project Name: 188 2ND AVE, NY**Lab Number:** L2246407**Project Number:** 81363**Report Date:** 09/07/22**SAMPLE RESULTS**

Lab ID: L2246407-03

Date Collected: 08/25/22 14:50

Client ID: VTX-SG-3

Date Received: 08/26/22

Sample Location: EAST VILLAGE

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	79		60-140
Bromochloromethane	69		60-140
chlorobenzene-d5	75		60-140



Project Name: 188 2ND AVE, NY**Project Number:** 81363**Lab Number:** L2246407**Report Date:** 09/07/22**SAMPLE RESULTS**

Lab ID: L2246407-04
 Client ID: VTX-SG-4
 Sample Location: EAST VILLAGE

Date Collected: 08/25/22 12:20
 Date Received: 08/26/22
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil_Vapor
 Analytical Method: 48,TO-15
 Analytical Date: 09/04/22 07:56
 Analyst: TS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.418	0.200	--	2.07	0.989	--		1
Chloromethane	0.680	0.200	--	1.40	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	18.0	5.00	--	33.9	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	13.6	1.00	--	32.3	2.38	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	1.37	0.500	--	3.37	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	0.532	0.500	--	1.85	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	0.645	0.200	--	2.01	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	1.05	0.500	--	3.10	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1



Project Name: 188 2ND AVE, NY**Project Number:** 81363**Lab Number:** L2246407**Report Date:** 09/07/22**SAMPLE RESULTS**

Lab ID: L2246407-04

Client ID: VTX-SG-4

Sample Location: EAST VILLAGE

Date Collected: 08/25/22 12:20

Date Received: 08/26/22

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	0.319	0.200	--	1.56	0.977	--		1
Tetrahydrofuran	0.692	0.500	--	2.04	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	0.223	0.200	--	0.786	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	1.03	0.200	--	4.22	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.542	0.200	--	2.04	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	8.96	0.200	--	60.8	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1



Project Name: 188 2ND AVE, NY**Lab Number:** L2246407**Project Number:** 81363**Report Date:** 09/07/22**SAMPLE RESULTS**

Lab ID: L2246407-04

Date Collected: 08/25/22 12:20

Client ID: VTX-SG-4

Date Received: 08/26/22

Sample Location: EAST VILLAGE

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	80		60-140
Bromochloromethane	70		60-140
chlorobenzene-d5	75		60-140



Project Name: 188 2ND AVE, NY**Project Number:** 81363**Lab Number:** L2246407**Report Date:** 09/07/22**SAMPLE RESULTS**

Lab ID: L2246407-05
 Client ID: VTX-SG-5
 Sample Location: EAST VILLAGE

Date Collected: 08/25/22 13:10
 Date Received: 08/26/22
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil_Vapor
 Analytical Method: 48,TO-15
 Analytical Date: 09/04/22 08:36
 Analyst: TS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.461	0.200	--	2.28	0.989	--		1
Chloromethane	0.340	0.200	--	0.702	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	17.9	5.00	--	33.7	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	4.92	1.00	--	11.7	2.38	--		1
Trichlorofluoromethane	0.215	0.200	--	1.21	1.12	--		1
Isopropanol	0.740	0.500	--	1.82	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	0.720	0.200	--	2.24	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	0.578	0.500	--	1.70	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1



Project Name: 188 2ND AVE, NY**Lab Number:** L2246407**Project Number:** 81363**Report Date:** 09/07/22**SAMPLE RESULTS**

Lab ID: L2246407-05

Date Collected: 08/25/22 13:10

Client ID: VTX-SG-5

Date Received: 08/26/22

Sample Location: EAST VILLAGE

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	0.541	0.500	--	1.95	1.80	--		1
Chloroform	1.59	0.200	--	7.76	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	0.212	0.200	--	0.677	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	0.201	0.200	--	0.824	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.395	0.200	--	1.49	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	21.4	0.200	--	145	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1



Project Name: 188 2ND AVE, NY**Lab Number:** L2246407**Project Number:** 81363**Report Date:** 09/07/22**SAMPLE RESULTS**

Lab ID: L2246407-05

Date Collected: 08/25/22 13:10

Client ID: VTX-SG-5

Date Received: 08/26/22

Sample Location: EAST VILLAGE

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	76		60-140
Bromochloromethane	66		60-140
chlorobenzene-d5	71		60-140



Project Name: 188 2ND AVE, NY**Project Number:** 81363**Lab Number:** L2246407**Report Date:** 09/07/22**SAMPLE RESULTS**

Lab ID: L2246407-06
 Client ID: VTX-SG-6
 Sample Location: EAST VILLAGE

Date Collected: 08/25/22 12:25
 Date Received: 08/26/22
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil_Vapor
 Analytical Method: 48,TO-15
 Analytical Date: 09/04/22 09:16
 Analyst: TS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.442	0.200	--	2.19	0.989	--		1
Chloromethane	0.527	0.200	--	1.09	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	0.294	0.200	--	0.650	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	41.0	5.00	--	77.3	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	21.6	1.00	--	51.3	2.38	--		1
Trichlorofluoromethane	0.227	0.200	--	1.28	1.12	--		1
Isopropanol	3.14	0.500	--	7.72	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	0.719	0.500	--	2.18	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	0.443	0.200	--	1.38	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	2.26	0.500	--	6.67	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1



Project Name: 188 2ND AVE, NY**Project Number:** 81363**Lab Number:** L2246407**Report Date:** 09/07/22**SAMPLE RESULTS**

Lab ID: L2246407-06

Client ID: VTX-SG-6

Sample Location: EAST VILLAGE

Date Collected: 08/25/22 12:25

Date Received: 08/26/22

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	8.21	0.200	--	40.1	0.977	--		1
Tetrahydrofuran	1.03	0.500	--	3.04	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	0.430	0.200	--	1.52	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	1.07	0.200	--	3.42	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	0.277	0.200	--	0.998	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	0.649	0.200	--	2.66	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	1.69	0.200	--	6.37	0.754	--		1
2-Hexanone	0.324	0.200	--	1.33	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	8.73	0.200	--	59.2	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	0.350	0.200	--	1.52	0.869	--		1



Project Name: 188 2ND AVE, NY**Lab Number:** L2246407**Project Number:** 81363**Report Date:** 09/07/22**SAMPLE RESULTS**

Lab ID: L2246407-06

Date Collected: 08/25/22 12:25

Client ID: VTX-SG-6

Date Received: 08/26/22

Sample Location: EAST VILLAGE

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
p/m-Xylene	0.444	0.400	--	1.93	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	2.01	0.200	--	8.56	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	76		60-140
Bromochloromethane	66		60-140
chlorobenzene-d5	72		60-140



Project Name: 188 2ND AVE, NY**Project Number:** 81363**Lab Number:** L2246407**Report Date:** 09/07/22**SAMPLE RESULTS**

Lab ID: L2246407-07
 Client ID: VTX-SG-7
 Sample Location: EAST VILLAGE

Date Collected: 08/25/22 12:55
 Date Received: 08/26/22
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil_Vapor
 Analytical Method: 48,TO-15
 Analytical Date: 09/04/22 09:56
 Analyst: TS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.414	0.200	--	2.05	0.989	--		1
Chloromethane	0.497	0.200	--	1.03	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	10.6	5.00	--	20.0	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	7.03	1.00	--	16.7	2.38	--		1
Trichlorofluoromethane	0.211	0.200	--	1.19	1.12	--		1
Isopropanol	0.683	0.500	--	1.68	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	0.418	0.200	--	1.30	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	1.26	0.500	--	3.72	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1



Project Name: 188 2ND AVE, NY**Lab Number:** L2246407**Project Number:** 81363**Report Date:** 09/07/22**SAMPLE RESULTS**

Lab ID: L2246407-07

Date Collected: 08/25/22 12:55

Client ID: VTX-SG-7

Date Received: 08/26/22

Sample Location: EAST VILLAGE

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	1.84	0.200	--	8.99	0.977	--		1
Tetrahydrofuran	1.93	0.500	--	5.69	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	0.202	0.200	--	0.712	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	0.323	0.200	--	1.03	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.691	0.200	--	2.60	0.754	--		1
2-Hexanone	0.234	0.200	--	0.959	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	20.0	0.200	--	136	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1



Project Name: 188 2ND AVE, NY**Lab Number:** L2246407**Project Number:** 81363**Report Date:** 09/07/22**SAMPLE RESULTS****Lab ID:** L2246407-07**Date Collected:** 08/25/22 12:55**Client ID:** VTX-SG-7**Date Received:** 08/26/22**Sample Location:** EAST VILLAGE**Field Prep:** Not Specified**Sample Depth:**

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	0.844	0.200	--	3.59	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	81		60-140
Bromochloromethane	72		60-140
chlorobenzene-d5	77		60-140



Project Name: 188 2ND AVE, NY

Lab Number: L2246407

Project Number: 81363

Report Date: 09/07/22

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 09/03/22 15:19

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-07 Batch: WG1683332-4								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1



Project Name: 188 2ND AVE, NY

Lab Number: L2246407

Project Number: 81363

Report Date: 09/07/22

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 09/03/22 15:19

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-07 Batch: WG1683332-4								
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1



Project Name: 188 2ND AVE, NY

Lab Number: L2246407

Project Number: 81363

Report Date: 09/07/22

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 09/03/22 15:19

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-07 Batch: WG1683332-4								
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1



Lab Control Sample Analysis Batch Quality Control

Project Name: 188 2ND AVE, NY

Project Number: 81363

Lab Number: L2246407

Report Date: 09/07/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-07 Batch: WG1683332-3								
Dichlorodifluoromethane	82		-		70-130	-		
Chloromethane	88		-		70-130	-		
Freon-114	91		-		70-130	-		
Vinyl chloride	81		-		70-130	-		
1,3-Butadiene	94		-		70-130	-		
Bromomethane	84		-		70-130	-		
Chloroethane	84		-		70-130	-		
Ethanol	93		-		40-160	-		
Vinyl bromide	89		-		70-130	-		
Acetone	91		-		40-160	-		
Trichlorofluoromethane	87		-		70-130	-		
Isopropanol	89		-		40-160	-		
1,1-Dichloroethene	87		-		70-130	-		
Tertiary butyl Alcohol	84		-		70-130	-		
Methylene chloride	96		-		70-130	-		
3-Chloropropene	86		-		70-130	-		
Carbon disulfide	72		-		70-130	-		
Freon-113	75		-		70-130	-		
trans-1,2-Dichloroethene	84		-		70-130	-		
1,1-Dichloroethane	88		-		70-130	-		
Methyl tert butyl ether	99		-		70-130	-		
2-Butanone	97		-		70-130	-		
cis-1,2-Dichloroethene	88		-		70-130	-		

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 188 2ND AVE, NY

Project Number: 81363

Lab Number: L2246407

Report Date: 09/07/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-07 Batch: WG1683332-3								
Ethyl Acetate	91		-		70-130	-		
Chloroform	95		-		70-130	-		
Tetrahydrofuran	94		-		70-130	-		
1,2-Dichloroethane	82		-		70-130	-		
n-Hexane	94		-		70-130	-		
1,1,1-Trichloroethane	96		-		70-130	-		
Benzene	100		-		70-130	-		
Carbon tetrachloride	101		-		70-130	-		
Cyclohexane	94		-		70-130	-		
1,2-Dichloropropane	97		-		70-130	-		
Bromodichloromethane	98		-		70-130	-		
1,4-Dioxane	88		-		70-130	-		
Trichloroethene	98		-		70-130	-		
2,2,4-Trimethylpentane	95		-		70-130	-		
Heptane	108		-		70-130	-		
cis-1,3-Dichloropropene	107		-		70-130	-		
4-Methyl-2-pentanone	112		-		70-130	-		
trans-1,3-Dichloropropene	91		-		70-130	-		
1,1,2-Trichloroethane	99		-		70-130	-		
Toluene	100		-		70-130	-		
2-Hexanone	110		-		70-130	-		
Dibromochloromethane	104		-		70-130	-		
1,2-Dibromoethane	105		-		70-130	-		

Lab Control Sample Analysis Batch Quality Control

Project Name: 188 2ND AVE, NY

Project Number: 81363

Lab Number: L2246407

Report Date: 09/07/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-07 Batch: WG1683332-3								
Tetrachloroethene	104		-		70-130	-		
Chlorobenzene	109		-		70-130	-		
Ethylbenzene	104		-		70-130	-		
p/m-Xylene	106		-		70-130	-		
Bromoform	108		-		70-130	-		
Styrene	107		-		70-130	-		
1,1,2,2-Tetrachloroethane	105		-		70-130	-		
o-Xylene	108		-		70-130	-		
4-Ethyltoluene	106		-		70-130	-		
1,3,5-Trimethylbenzene	109		-		70-130	-		
1,2,4-Trimethylbenzene	110		-		70-130	-		
Benzyl chloride	93		-		70-130	-		
1,3-Dichlorobenzene	113		-		70-130	-		
1,4-Dichlorobenzene	106		-		70-130	-		
1,2-Dichlorobenzene	102		-		70-130	-		
1,2,4-Trichlorobenzene	74		-		70-130	-		
Hexachlorobutadiene	80		-		70-130	-		

Project Name: 188 2ND AVE, NY
Project Number: 81363

Lab Duplicate Analysis

Batch Quality Control

Lab Number: L2246407
Report Date: 09/07/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-07 QC Batch ID: WG1683332-5 QC Sample: L2246407-03 Client ID: VTX-SG-3						
Dichlorodifluoromethane	0.424	0.440	ppbV	4		25
Chloromethane	0.555	0.553	ppbV	0		25
Freon-114	ND	ND	ppbV	NC		25
Vinyl chloride	ND	ND	ppbV	NC		25
1,3-Butadiene	ND	ND	ppbV	NC		25
Bromomethane	ND	ND	ppbV	NC		25
Chloroethane	ND	ND	ppbV	NC		25
Ethanol	9.92	10.6	ppbV	7		25
Vinyl bromide	ND	ND	ppbV	NC		25
Acetone	24.8	24.7	ppbV	0		25
Trichlorofluoromethane	0.221	0.221	ppbV	0		25
Isopropanol	1.18	1.19	ppbV	1		25
1,1-Dichloroethene	ND	ND	ppbV	NC		25
Tertiary butyl Alcohol	ND	ND	ppbV	NC		25
Methylene chloride	0.544	0.560	ppbV	3		25
3-Chloropropene	ND	ND	ppbV	NC		25
Carbon disulfide	0.682	0.893	ppbV	27	Q	25
Freon-113	ND	ND	ppbV	NC		25
trans-1,2-Dichloroethene	ND	ND	ppbV	NC		25
1,1-Dichloroethane	ND	ND	ppbV	NC		25
Methyl tert butyl ether	ND	ND	ppbV	NC		25

Project Name: 188 2ND AVE, NY
Project Number: 81363

Lab Duplicate Analysis

Batch Quality Control

Lab Number: L2246407
Report Date: 09/07/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-07 QC Batch ID: WG1683332-5 QC Sample: L2246407-03 Client ID: VTX-SG-3						
2-Butanone	3.19	3.22	ppbV	1		25
cis-1,2-Dichloroethene	ND	ND	ppbV	NC		25
Ethyl Acetate	ND	ND	ppbV	NC		25
Chloroform	0.242	0.250	ppbV	3		25
Tetrahydrofuran	0.912	0.811	ppbV	12		25
1,2-Dichloroethane	ND	ND	ppbV	NC		25
n-Hexane	0.245	0.253	ppbV	3		25
1,1,1-Trichloroethane	ND	ND	ppbV	NC		25
Benzene	0.574	0.576	ppbV	0		25
Carbon tetrachloride	ND	ND	ppbV	NC		25
Cyclohexane	ND	ND	ppbV	NC		25
1,2-Dichloropropane	ND	ND	ppbV	NC		25
Bromodichloromethane	ND	ND	ppbV	NC		25
1,4-Dioxane	ND	ND	ppbV	NC		25
Trichloroethene	ND	ND	ppbV	NC		25
2,2,4-Trimethylpentane	ND	ND	ppbV	NC		25
Heptane	0.260	0.264	ppbV	2		25
cis-1,3-Dichloropropene	ND	ND	ppbV	NC		25
4-Methyl-2-pentanone	ND	ND	ppbV	NC		25
trans-1,3-Dichloropropene	ND	ND	ppbV	NC		25
1,1,2-Trichloroethane	ND	ND	ppbV	NC		25

Project Name: 188 2ND AVE, NY
Project Number: 81363

Lab Duplicate Analysis
Batch Quality Control

Lab Number: L2246407
Report Date: 09/07/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-07 QC Batch ID: WG1683332-5 QC Sample: L2246407-03 Client ID: VTX-SG-3						
Toluene	0.579	0.588	ppbV	2		25
2-Hexanone	0.238	0.226	ppbV	5		25
Dibromochloromethane	ND	ND	ppbV	NC		25
1,2-Dibromoethane	ND	ND	ppbV	NC		25
Tetrachloroethene	11.6	11.8	ppbV	2		25
Chlorobenzene	ND	ND	ppbV	NC		25
Ethylbenzene	ND	ND	ppbV	NC		25
p/m-Xylene	ND	ND	ppbV	NC		25
Bromoform	ND	ND	ppbV	NC		25
Styrene	ND	ND	ppbV	NC		25
1,1,2,2-Tetrachloroethane	ND	ND	ppbV	NC		25
o-Xylene	ND	ND	ppbV	NC		25
4-Ethyltoluene	ND	ND	ppbV	NC		25
1,3,5-Trimethylbenzene	ND	ND	ppbV	NC		25
1,2,4-Trimethylbenzene	ND	ND	ppbV	NC		25
Benzyl chloride	ND	ND	ppbV	NC		25
1,3-Dichlorobenzene	ND	ND	ppbV	NC		25
1,4-Dichlorobenzene	ND	ND	ppbV	NC		25
1,2-Dichlorobenzene	ND	ND	ppbV	NC		25
1,2,4-Trichlorobenzene	ND	ND	ppbV	NC		25
Hexachlorobutadiene	ND	ND	ppbV	NC		25

Project Name: 188 2ND AVE, NY

Serial_No:09072216:27
Lab Number: L2246407

Project Number: 81363

Report Date: 09/07/22

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controller Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L2246407-01	VTX-SG-1	01388	Flow 3	08/23/22	397309		-	-	-	Pass	18.0	16.2	11
L2246407-01	VTX-SG-1	3224	2.7L Can	08/23/22	397309	L2244270-01	Pass	-29.3	-6.4	-	-	-	-
L2246407-02	VTX-SG-2	01098	Flow 3	08/23/22	397309		-	-	-	Pass	18.0	16.3	10
L2246407-02	VTX-SG-2	2239	2.7L Can	08/23/22	397309	L2244270-01	Pass	-29.2	-8.7	-	-	-	-
L2246407-03	VTX-SG-3	01824	Flow 3	08/23/22	397309		-	-	-	Pass	18.0	17.2	5
L2246407-03	VTX-SG-3	390	2.7L Can	08/23/22	397309	L2244270-01	Pass	-29.5	-7.3	-	-	-	-
L2246407-04	VTX-SG-4	01716	Flow 3	08/23/22	397309		-	-	-	Pass	18.0	16.3	10
L2246407-04	VTX-SG-4	196	2.7L Can	08/23/22	397309	L2244270-01	Pass	-29.2	-5.7	-	-	-	-
L2246407-05	VTX-SG-5	01552	Flow 3	08/23/22	397309		-	-	-	Pass	18.0	16.8	7
L2246407-05	VTX-SG-5	2337	2.7L Can	08/23/22	397309	L2244270-01	Pass	-29.2	-6.2	-	-	-	-
L2246407-06	VTX-SG-6	01823	Flow 3	08/23/22	397309		-	-	-	Pass	18.0	16.8	7
L2246407-06	VTX-SG-6	2036	2.7L Can	08/23/22	397309	L2244270-01	Pass	-29.3	-7.6	-	-	-	-
L2246407-07	VTX-SG-7	01384	Flow 3	08/23/22	397309		-	-	-	Pass	18.0	17.5	3
L2246407-07	VTX-SG-7	3196	2.7L Can	08/23/22	397309	L2244270-01	Pass	-29.1	-5.3	-	-	-	-
L2246407-08	UNUSED #215	02179	Flow 3	08/23/22	397309		-	-	-	Pass	18.0	16.0	12

Project Name: 188 2ND AVE, NY
Project Number: 81363

Lab Number: L2246407
Report Date: 09/07/22

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controller Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L2246407-08	UNUSED #215	215	2.7L Can	08/23/22	397309	L2244270-01	Pass	-29.4	-28.9	-	-	-	-



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2244270
Report Date: 09/07/22

Air Canister Certification Results

Lab ID: L2244270-01
Client ID: CAN 370 SHELF 7
Sample Location:

Date Collected: 08/16/22 18:00
Date Received: 08/17/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Analytical Method: 48,TO-15
Analytical Date: 08/18/22 21:34
Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2244270
Report Date: 09/07/22

Air Canister Certification Results

Lab ID: L2244270-01
Client ID: CAN 370 SHELF 7
Sample Location:

Date Collected: 08/16/22 18:00
Date Received: 08/17/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2244270
Report Date: 09/07/22

Air Canister Certification Results

Lab ID: L2244270-01
Client ID: CAN 370 SHELF 7
Sample Location:

Date Collected: 08/16/22 18:00
Date Received: 08/17/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2244270
Report Date: 09/07/22

Air Canister Certification Results

Lab ID: L2244270-01
Client ID: CAN 370 SHELF 7
Sample Location:

Date Collected: 08/16/22 18:00
Date Received: 08/17/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2244270**Project Number:** CANISTER QC BAT**Report Date:** 09/07/22**Air Canister Certification Results**

Lab ID: L2244270-01

Date Collected: 08/16/22 18:00

Client ID: CAN 370 SHELF 7

Date Received: 08/17/22

Sample Location:

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								

Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds				

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	101		60-140
Bromochloromethane	100		60-140
chlorobenzene-d5	101		60-140



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2244270
Report Date: 09/07/22

Air Canister Certification Results

Lab ID: L2244270-01
Client ID: CAN 370 SHELF 7
Sample Location:

Date Collected: 08/16/22 18:00
Date Received: 08/17/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Analytical Method: 48,TO-15-SIM
Analytical Date: 08/18/22 21:34
Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2244270
Report Date: 09/07/22

Air Canister Certification Results

Lab ID: L2244270-01
Client ID: CAN 370 SHELF 7
Sample Location:

Date Collected: 08/16/22 18:00
Date Received: 08/17/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.100	--	ND	0.518	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2244270**Project Number:** CANISTER QC BAT**Report Date:** 09/07/22**Air Canister Certification Results**

Lab ID: L2244270-01

Date Collected: 08/16/22 18:00

Client ID: CAN 370 SHELF 7

Date Received: 08/17/22

Sample Location:

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	97		60-140
bromochloromethane	97		60-140
chlorobenzene-d5	100		60-140



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2244270
Report Date: 09/07/22

Air Canister Certification Results

Lab ID: L2244270-01
Client ID: CAN 370 SHELF 7
Sample Location:

Date Collected: 08/16/22 18:00
Date Received: 08/17/22
Field Prep: Not Specified

Sample Depth:

Matrix: Air
Analytical Method: 48,TO-15-SIM
Analytical Date: 08/22/22 18:58
Analyst: JB

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	97		60-140
bromochloromethane	97		60-140
chlorobenzene-d5	97		60-140



Project Name: 188 2ND AVE, NY
Project Number: 81363

Serial_No:09072216:27
Lab Number: L2246407
Report Date: 09/07/22

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
NA	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2246407-01A	Canister - 2.7 Liter	NA	NA			Y	Absent		TO15-LL(30)
L2246407-02A	Canister - 2.7 Liter	NA	NA			Y	Absent		TO15-LL(30)
L2246407-03A	Canister - 2.7 Liter	NA	NA			Y	Absent		TO15-LL(30)
L2246407-04A	Canister - 2.7 Liter	NA	NA			Y	Absent		TO15-LL(30)
L2246407-05A	Canister - 2.7 Liter	NA	NA			Y	Absent		TO15-LL(30)
L2246407-06A	Canister - 2.7 Liter	NA	NA			Y	Absent		TO15-LL(30)
L2246407-07A	Canister - 2.7 Liter	NA	NA			Y	Absent		TO15-LL(30)
L2246407-08A	Canister - 2.7 Liter	NA	NA			Y	Absent		CLEAN-FEE()

Project Name: 188 2ND AVE, NY
Project Number: 81363

Lab Number: L2246407
Report Date: 09/07/22

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
	Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report



Project Name: 188 2ND AVE, NY
Project Number: 81363

Lab Number: L2246407
Report Date: 09/07/22

Footnotes

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

Terms

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

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

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

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

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

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

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

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

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

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: Data Usability Report



Project Name: 188 2ND AVE, NY
Project Number: 81363

Lab Number: L2246407
Report Date: 09/07/22

Data Qualifiers

- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: 188 2ND AVE, NY
Project Number: 81363

Lab Number: L2246407
Report Date: 09/07/22

REFERENCES

- 48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

LIMITATION OF LIABILITIES

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

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



Certification Information

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

Westborough Facility

EPA 624/624.1: m/p-xylene, o-xylene, 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, SM4500CI-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

PAGE 1 OF 1

CHAIN OF CUSTODY

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

Client Information

Client: VERTEX
Address: 5322 Rte 22 W, Ste 907
Branchburg, NJ 08876
Phone: 908 448 2627
Fax: 908 450 1443

Email: egiardino@vortexeng.com

☐ These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments:

Project-Specific Target Compound List: ☐

Project Information

Project Name: 188 2nd Ave, NY
Project Location: East Village
Project #: 81363
Project Manager: Gene Giardino
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)

Date Due:

Time:

Date Rec'd in Lab: 8/27/22

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)

ALPHA Job #: L2246407

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program Res / Comm

NY

ANALYSIS

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	COLLECTION						Sample Matrix*	Sampler's Initials	Can Size	I D Can	I D - Flow Controller	TO-15	TO-15 SIM	APH	Sulfides & Mercaptans by TO-15	Fixed Gases	Sulfides & Mercaptans by TO-15	Sample Comments (i.e. PID)
		End Date	Start Time	End Time	Initial Vacuum	Final Vacuum													
46407-01	VTX-SG-1	8/25/22	1215	1415	-29.93	-7.12	SV	ML	2.7	3224	01588	X							
-02	VTX-SG-2		1305	1455	-29.84	-9.46			2.7	2239	01098	X							
-03	VTX-SG-3		1300	1450	-30.06	-7.81			2.7	390	01824	X							
-04	VTX-SG-4		1015	1220	-29.95	-6.64			2.7	196	01716	X							
-05	VTX-SG-5		1110	1310	-29.96	-7.25			2.7	2337	01552	X							
-06	VTX-SG-6		1030	1225	-30.01	-8.53			2.7	2056	01823	X							
-07	VTX-SG-7		1055	1255	-30.58	-6.77			2.7	3196	01324	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

Maddison Kulus mks 8/26/22 1100
Paul Macfella 8/26/22 1615
8/27/22 0750

Received By:

Date/Time:

Paul Macfella 8/26/22 1100
8/27/22 2015
8/27/22 0010

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.

Appendix C:
Laboratory Report – Indoor/Ambient Air



ANALYTICAL REPORT

Lab Number:	L2246402
Client:	The Vertex Companies, Inc. 3322 US Highway 22 West Suite 907 Branchburg, NJ 08876
ATTN:	Eugene Giardino
Phone:	(908) 448-2627
Project Name:	188 2ND AVE, NY
Project Number:	81363
Report Date:	09/01/22

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com



Project Name: 188 2ND AVE, NY
Project Number: 81363

Lab Number: L2246402
Report Date: 09/01/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2246402-01	VTX-IA-1	AIR	NY, NY	08/24/22 15:37	08/26/22
L2246402-02	VTX-IA-2	AIR	NY, NY	08/24/22 15:38	08/26/22
L2246402-03	VTX-IA-3	AIR	NY, NY	08/24/22 15:40	08/26/22
L2246402-04	VTX-IA-4	AIR	NY, NY	08/24/22 15:30	08/26/22
L2246402-05	VTX-IA-5	AIR	NY, NY	08/24/22 15:31	08/26/22
L2246402-06	VTX-AA-1	AIR	NY, NY	08/24/22 15:45	08/26/22
L2246402-07	UNUSED #970	AIR	NY, NY		08/26/22

Project Name: 188 2ND AVE, NY
Project Number: 81363

Lab Number: L2246402
Report Date: 09/01/22

Case Narrative

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

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

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

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

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

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

Project Name: 188 2ND AVE, NY
Project Number: 81363

Lab Number: L2246402
Report Date: 09/01/22

Case Narrative (continued)

Volatile Organics in Air

Canisters were released from the laboratory on August 23, 2022. The canister certification results are provided as an addendum.

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

Authorized Signature:  Christopher J. Anderson

Title: Technical Director/Representative

Date: 09/01/22

AIR

Project Name: 188 2ND AVE, NY**Project Number:** 81363**Lab Number:** L2246402**Report Date:** 09/01/22**SAMPLE RESULTS**

Lab ID: L2246402-01

Client ID: VTX-IA-1

Sample Location: NY, NY

Date Collected: 08/24/22 15:37

Date Received: 08/26/22

Field Prep: Not Specified

Sample Depth:

Matrix: Air

Analytical Method: 48,TO-15

Analytical Date: 08/31/22 19:44

Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.509	0.200	--	2.52	0.989	--		1
Chloromethane	0.587	0.200	--	1.21	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	13.2	5.00	--	24.9	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	6.82	1.00	--	16.2	2.38	--		1
Trichlorofluoromethane	0.236	0.200	--	1.33	1.12	--		1
Isopropanol	3.04	0.500	--	7.47	1.23	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Ethyl Acetate	0.643	0.500	--	2.32	1.80	--		1
Chloroform	1.13	0.200	--	5.52	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1



Project Name: 188 2ND AVE, NY**Project Number:** 81363**Lab Number:** L2246402**Report Date:** 09/01/22**SAMPLE RESULTS**

Lab ID: L2246402-01

Client ID: VTX-IA-1

Sample Location: NY, NY

Date Collected: 08/24/22 15:37

Date Received: 08/26/22

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.445	0.200	--	1.68	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1



Project Name: 188 2ND AVE, NY**Lab Number:** L2246402**Project Number:** 81363**Report Date:** 09/01/22**SAMPLE RESULTS**

Lab ID: L2246402-01

Client ID: VTX-IA-1

Sample Location: NY, NY

Date Collected: 08/24/22 15:37

Date Received: 08/26/22

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2,4-Trimethylbenzene	0.519	0.200	--	2.55	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	96		60-140
Bromochloromethane	96		60-140
chlorobenzene-d5	98		60-140



Project Name: 188 2ND AVE, NY**Project Number:** 81363**Lab Number:** L2246402**Report Date:** 09/01/22**SAMPLE RESULTS**

Lab ID: L2246402-01

Client ID: VTX-IA-1

Sample Location: NY, NY

Date Collected: 08/24/22 15:37

Date Received: 08/26/22

Field Prep: Not Specified

Sample Depth:

Matrix: Air

Analytical Method: 48,TO-15-SIM

Analytical Date: 08/31/22 19:44

Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	0.074	0.020	--	0.465	0.126	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	0.169	0.020	--	1.15	0.136	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	99		60-140
bromochloromethane	97		60-140
chlorobenzene-d5	98		60-140



Project Name: 188 2ND AVE, NY**Project Number:** 81363**Lab Number:** L2246402**Report Date:** 09/01/22**SAMPLE RESULTS**

Lab ID: L2246402-02

Client ID: VTX-IA-2

Sample Location: NY, NY

Date Collected: 08/24/22 15:38

Date Received: 08/26/22

Field Prep: Not Specified

Sample Depth:

Matrix: Air

Analytical Method: 48,TO-15

Analytical Date: 08/31/22 20:25

Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.513	0.200	--	2.54	0.989	--		1
Chloromethane	0.569	0.200	--	1.18	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	16.6	5.00	--	31.3	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	6.17	1.00	--	14.7	2.38	--		1
Trichlorofluoromethane	0.268	0.200	--	1.51	1.12	--		1
Isopropanol	2.41	0.500	--	5.92	1.23	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Ethyl Acetate	0.536	0.500	--	1.93	1.80	--		1
Chloroform	1.04	0.200	--	5.08	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1



Project Name: 188 2ND AVE, NY**Project Number:** 81363**Lab Number:** L2246402**Report Date:** 09/01/22**SAMPLE RESULTS**

Lab ID: L2246402-02

Client ID: VTX-IA-2

Sample Location: NY, NY

Date Collected: 08/24/22 15:38

Date Received: 08/26/22

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.520	0.200	--	1.96	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1



Project Name: 188 2ND AVE, NY**Lab Number:** L2246402**Project Number:** 81363**Report Date:** 09/01/22**SAMPLE RESULTS**

Lab ID: L2246402-02

Client ID: VTX-IA-2

Sample Location: NY, NY

Date Collected: 08/24/22 15:38

Date Received: 08/26/22

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2,4-Trimethylbenzene	0.317	0.200	--	1.56	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	94		60-140
Bromochloromethane	95		60-140
chlorobenzene-d5	96		60-140



Project Name: 188 2ND AVE, NY**Project Number:** 81363**Lab Number:** L2246402**Report Date:** 09/01/22**SAMPLE RESULTS**

Lab ID: L2246402-02

Client ID: VTX-IA-2

Sample Location: NY, NY

Date Collected: 08/24/22 15:38

Date Received: 08/26/22

Field Prep: Not Specified

Sample Depth:

Matrix: Air

Analytical Method: 48,TO-15-SIM

Analytical Date: 08/31/22 20:25

Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	0.075	0.020	--	0.472	0.126	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	0.193	0.020	--	1.31	0.136	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	98		60-140
bromochloromethane	96		60-140
chlorobenzene-d5	96		60-140



Project Name: 188 2ND AVE, NY**Project Number:** 81363**Lab Number:** L2246402**Report Date:** 09/01/22**SAMPLE RESULTS**

Lab ID: L2246402-03

Client ID: VTX-IA-3

Sample Location: NY, NY

Date Collected: 08/24/22 15:40

Date Received: 08/26/22

Field Prep: Not Specified

Sample Depth:

Matrix: Air

Analytical Method: 48,TO-15

Analytical Date: 08/31/22 21:07

Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.512	0.200	--	2.53	0.989	--		1
Chloromethane	0.623	0.200	--	1.29	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	29.7	5.00	--	56.0	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	19.6	1.00	--	46.6	2.38	--		1
Trichlorofluoromethane	0.228	0.200	--	1.28	1.12	--		1
Isopropanol	3.46	0.500	--	8.50	1.23	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	0.634	0.500	--	1.87	1.47	--		1
Ethyl Acetate	1.39	0.500	--	5.01	1.80	--		1
Chloroform	2.12	0.200	--	10.4	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1



Project Name: 188 2ND AVE, NY**Project Number:** 81363**Lab Number:** L2246402**Report Date:** 09/01/22**SAMPLE RESULTS**

Lab ID: L2246402-03

Client ID: VTX-IA-3

Sample Location: NY, NY

Date Collected: 08/24/22 15:40

Date Received: 08/26/22

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Benzene	0.205	0.200	--	0.655	0.639	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.729	0.200	--	2.75	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	0.403	0.400	--	1.75	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1



Project Name: 188 2ND AVE, NY**Lab Number:** L2246402**Project Number:** 81363**Report Date:** 09/01/22**SAMPLE RESULTS**

Lab ID: L2246402-03

Client ID: VTX-IA-3

Sample Location: NY, NY

Date Collected: 08/24/22 15:40

Date Received: 08/26/22

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2,4-Trimethylbenzene	0.490	0.200	--	2.41	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	92		60-140
Bromochloromethane	94		60-140
chlorobenzene-d5	94		60-140



Project Name: 188 2ND AVE, NY**Project Number:** 81363**Lab Number:** L2246402**Report Date:** 09/01/22**SAMPLE RESULTS**

Lab ID: L2246402-03

Client ID: VTX-IA-3

Sample Location: NY, NY

Date Collected: 08/24/22 15:40

Date Received: 08/26/22

Field Prep: Not Specified

Sample Depth:

Matrix: Air

Analytical Method: 48,TO-15-SIM

Analytical Date: 08/31/22 21:07

Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	0.082	0.020	--	0.516	0.126	--		1
Trichloroethene	0.022	0.020	--	0.118	0.107	--		1
Tetrachloroethene	0.348	0.020	--	2.36	0.136	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	96		60-140
bromochloromethane	95		60-140
chlorobenzene-d5	95		60-140



Project Name: 188 2ND AVE, NY**Project Number:** 81363**Lab Number:** L2246402**Report Date:** 09/01/22**SAMPLE RESULTS**

Lab ID: L2246402-04

Client ID: VTX-IA-4

Sample Location: NY, NY

Date Collected: 08/24/22 15:30

Date Received: 08/26/22

Field Prep: Not Specified

Sample Depth:

Matrix: Air

Analytical Method: 48,TO-15

Analytical Date: 08/31/22 21:48

Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.504	0.200	--	2.49	0.989	--		1
Chloromethane	0.612	0.200	--	1.26	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	51.4	5.00	--	96.9	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	8.53	1.00	--	20.3	2.38	--		1
Trichlorofluoromethane	0.211	0.200	--	1.19	1.12	--		1
Isopropanol	2.96	0.500	--	7.28	1.23	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	0.608	0.500	--	1.79	1.47	--		1
Ethyl Acetate	1.24	0.500	--	4.47	1.80	--		1
Chloroform	0.241	0.200	--	1.18	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1



Project Name: 188 2ND AVE, NY**Project Number:** 81363**Lab Number:** L2246402**Report Date:** 09/01/22**SAMPLE RESULTS**

Lab ID: L2246402-04

Client ID: VTX-IA-4

Sample Location: NY, NY

Date Collected: 08/24/22 15:30

Date Received: 08/26/22

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.706	0.200	--	2.66	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1



Project Name: 188 2ND AVE, NY**Lab Number:** L2246402**Project Number:** 81363**Report Date:** 09/01/22**SAMPLE RESULTS**

Lab ID: L2246402-04

Client ID: VTX-IA-4

Sample Location: NY, NY

Date Collected: 08/24/22 15:30

Date Received: 08/26/22

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2,4-Trimethylbenzene	0.203	0.200	--	0.998	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	96		60-140
Bromochloromethane	96		60-140
chlorobenzene-d5	101		60-140



Project Name: 188 2ND AVE, NY**Project Number:** 81363**Lab Number:** L2246402**Report Date:** 09/01/22**SAMPLE RESULTS**

Lab ID: L2246402-04

Client ID: VTX-IA-4

Sample Location: NY, NY

Date Collected: 08/24/22 15:30

Date Received: 08/26/22

Field Prep: Not Specified

Sample Depth:

Matrix: Air

Analytical Method: 48,TO-15-SIM

Analytical Date: 08/31/22 21:48

Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	0.073	0.020	--	0.459	0.126	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	0.317	0.020	--	2.15	0.136	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	101		60-140
bromochloromethane	98		60-140
chlorobenzene-d5	102		60-140



Project Name: 188 2ND AVE, NY**Project Number:** 81363**Lab Number:** L2246402**Report Date:** 09/01/22**SAMPLE RESULTS**

Lab ID: L2246402-05

Client ID: VTX-IA-5

Sample Location: NY, NY

Date Collected: 08/24/22 15:31

Date Received: 08/26/22

Field Prep: Not Specified

Sample Depth:

Matrix: Air

Analytical Method: 48,TO-15

Analytical Date: 08/31/22 22:28

Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.492	0.200	--	2.43	0.989	--		1
Chloromethane	0.619	0.200	--	1.28	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	56.4	5.00	--	106	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	9.25	1.00	--	22.0	2.38	--		1
Trichlorofluoromethane	0.210	0.200	--	1.18	1.12	--		1
Isopropanol	3.30	0.500	--	8.11	1.23	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	0.642	0.500	--	1.89	1.47	--		1
Ethyl Acetate	0.730	0.500	--	2.63	1.80	--		1
Chloroform	0.302	0.200	--	1.47	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1



Project Name: 188 2ND AVE, NY**Project Number:** 81363**Lab Number:** L2246402**Report Date:** 09/01/22**SAMPLE RESULTS**

Lab ID: L2246402-05

Client ID: VTX-IA-5

Sample Location: NY, NY

Date Collected: 08/24/22 15:31

Date Received: 08/26/22

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.690	0.200	--	2.60	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1



Project Name: 188 2ND AVE, NY**Lab Number:** L2246402**Project Number:** 81363**Report Date:** 09/01/22**SAMPLE RESULTS**

Lab ID: L2246402-05

Client ID: VTX-IA-5

Sample Location: NY, NY

Date Collected: 08/24/22 15:31

Date Received: 08/26/22

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2,4-Trimethylbenzene	0.217	0.200	--	1.07	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	97		60-140
Bromochloromethane	98		60-140
chlorobenzene-d5	99		60-140



Project Name: 188 2ND AVE, NY**Project Number:** 81363**Lab Number:** L2246402**Report Date:** 09/01/22**SAMPLE RESULTS**

Lab ID: L2246402-05

Client ID: VTX-IA-5

Sample Location: NY, NY

Date Collected: 08/24/22 15:31

Date Received: 08/26/22

Field Prep: Not Specified

Sample Depth:

Matrix: Air

Analytical Method: 48,TO-15-SIM

Analytical Date: 08/31/22 22:28

Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	0.071	0.020	--	0.447	0.126	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	0.286	0.020	--	1.94	0.136	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	101		60-140
bromochloromethane	100		60-140
chlorobenzene-d5	99		60-140



Project Name: 188 2ND AVE, NY**Project Number:** 81363**Lab Number:** L2246402**Report Date:** 09/01/22**SAMPLE RESULTS**

Lab ID: L2246402-06

Client ID: VTX-AA-1

Sample Location: NY, NY

Date Collected: 08/24/22 15:45

Date Received: 08/26/22

Field Prep: Not Specified

Sample Depth:

Matrix: Air

Analytical Method: 48,TO-15

Analytical Date: 08/31/22 19:03

Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.499	0.200	--	2.47	0.989	--		1
Chloromethane	0.639	0.200	--	1.32	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	56.4	5.00	--	106	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	27.2	1.00	--	64.6	2.38	--		1
Trichlorofluoromethane	0.216	0.200	--	1.21	1.12	--		1
Isopropanol	2.91	0.500	--	7.15	1.23	--		1
Tertiary butyl Alcohol	2.61	0.500	--	7.91	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	1.45	0.500	--	4.28	1.47	--		1
Ethyl Acetate	12.6	0.500	--	45.4	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	1.53	0.500	--	4.51	1.47	--		1



Project Name: 188 2ND AVE, NY**Project Number:** 81363**Lab Number:** L2246402**Report Date:** 09/01/22**SAMPLE RESULTS**

Lab ID: L2246402-06

Client ID: VTX-AA-1

Sample Location: NY, NY

Date Collected: 08/24/22 15:45

Date Received: 08/26/22

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Benzene	0.758	0.200	--	2.42	0.639	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.740	0.200	--	2.79	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	0.438	0.400	--	1.90	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1



Project Name: 188 2ND AVE, NY**Lab Number:** L2246402**Project Number:** 81363**Report Date:** 09/01/22**SAMPLE RESULTS**

Lab ID: L2246402-06

Client ID: VTX-AA-1

Sample Location: NY, NY

Date Collected: 08/24/22 15:45

Date Received: 08/26/22

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2,4-Trimethylbenzene	0.214	0.200	--	1.05	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	0.290	0.200	--	1.74	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	94		60-140
Bromochloromethane	94		60-140
chlorobenzene-d5	97		60-140



Project Name: 188 2ND AVE, NY**Project Number:** 81363**Lab Number:** L2246402**Report Date:** 09/01/22**SAMPLE RESULTS**

Lab ID: L2246402-06

Client ID: VTX-AA-1

Sample Location: NY, NY

Date Collected: 08/24/22 15:45

Date Received: 08/26/22

Field Prep: Not Specified

Sample Depth:

Matrix: Air

Analytical Method: 48,TO-15-SIM

Analytical Date: 08/31/22 19:03

Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	0.075	0.020	--	0.472	0.126	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	97		60-140
bromochloromethane	96		60-140
chlorobenzene-d5	97		60-140



Project Name: 188 2ND AVE, NY

Lab Number: L2246402

Project Number: 81363

Report Date: 09/01/22

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 08/31/22 16:49

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-06 Batch: WG1682072-4								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1



Project Name: 188 2ND AVE, NY

Lab Number: L2246402

Project Number: 81363

Report Date: 09/01/22

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 08/31/22 16:49

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-06 Batch: WG1682072-4								
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1



Project Name: 188 2ND AVE, NY

Lab Number: L2246402

Project Number: 81363

Report Date: 09/01/22

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 08/31/22 16:49

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-06 Batch: WG1682072-4								
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1



Project Name: 188 2ND AVE, NY

Lab Number: L2246402

Project Number: 81363

Report Date: 09/01/22

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15-SIM

Analytical Date: 08/31/22 16:49

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-06 Batch: WG1682095-4								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1

Lab Control Sample Analysis

Batch Quality Control

Project Name: 188 2ND AVE, NY

Project Number: 81363

Lab Number: L2246402

Report Date: 09/01/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-06 Batch: WG1682072-3								
Dichlorodifluoromethane	82		-		70-130	-		
Chloromethane	89		-		70-130	-		
Freon-114	93		-		70-130	-		
Vinyl chloride	86		-		70-130	-		
1,3-Butadiene	97		-		70-130	-		
Bromomethane	88		-		70-130	-		
Chloroethane	87		-		70-130	-		
Ethanol	79		-		40-160	-		
Vinyl bromide	91		-		70-130	-		
Acetone	93		-		40-160	-		
Trichlorofluoromethane	91		-		70-130	-		
Isopropanol	90		-		40-160	-		
1,1-Dichloroethene	91		-		70-130	-		
Tertiary butyl Alcohol	89		-		70-130	-		
Methylene chloride	96		-		70-130	-		
3-Chloropropene	119		-		70-130	-		
Carbon disulfide	94		-		70-130	-		
Freon-113	99		-		70-130	-		
trans-1,2-Dichloroethene	88		-		70-130	-		
1,1-Dichloroethane	91		-		70-130	-		
Methyl tert butyl ether	100		-		70-130	-		
2-Butanone	96		-		70-130	-		
cis-1,2-Dichloroethene	92		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: 188 2ND AVE, NY

Project Number: 81363

Lab Number: L2246402

Report Date: 09/01/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-06 Batch: WG1682072-3								
Ethyl Acetate	95		-		70-130	-		
Chloroform	97		-		70-130	-		
Tetrahydrofuran	93		-		70-130	-		
1,2-Dichloroethane	85		-		70-130	-		
n-Hexane	98		-		70-130	-		
1,1,1-Trichloroethane	97		-		70-130	-		
Benzene	101		-		70-130	-		
Carbon tetrachloride	100		-		70-130	-		
Cyclohexane	98		-		70-130	-		
1,2-Dichloropropane	98		-		70-130	-		
Bromodichloromethane	100		-		70-130	-		
1,4-Dioxane	90		-		70-130	-		
Trichloroethene	99		-		70-130	-		
2,2,4-Trimethylpentane	100		-		70-130	-		
Heptane	106		-		70-130	-		
cis-1,3-Dichloropropene	106		-		70-130	-		
4-Methyl-2-pentanone	108		-		70-130	-		
trans-1,3-Dichloropropene	91		-		70-130	-		
1,1,2-Trichloroethane	99		-		70-130	-		
Toluene	101		-		70-130	-		
2-Hexanone	107		-		70-130	-		
Dibromochloromethane	104		-		70-130	-		
1,2-Dibromoethane	104		-		70-130	-		

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 188 2ND AVE, NY

Project Number: 81363

Lab Number: L2246402

Report Date: 09/01/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-06 Batch: WG1682072-3								
Tetrachloroethene	105		-		70-130	-		
Chlorobenzene	106		-		70-130	-		
Ethylbenzene	104		-		70-130	-		
p/m-Xylene	106		-		70-130	-		
Bromoform	108		-		70-130	-		
Styrene	106		-		70-130	-		
1,1,2,2-Tetrachloroethane	105		-		70-130	-		
o-Xylene	108		-		70-130	-		
4-Ethyltoluene	103		-		70-130	-		
1,3,5-Trimethylbenzene	108		-		70-130	-		
1,2,4-Trimethylbenzene	108		-		70-130	-		
Benzyl chloride	95		-		70-130	-		
1,3-Dichlorobenzene	109		-		70-130	-		
1,4-Dichlorobenzene	107		-		70-130	-		
1,2-Dichlorobenzene	102		-		70-130	-		
1,2,4-Trichlorobenzene	75		-		70-130	-		
Hexachlorobutadiene	80		-		70-130	-		

Lab Control Sample Analysis Batch Quality Control

Project Name: 188 2ND AVE, NY

Project Number: 81363

Lab Number: L2246402

Report Date: 09/01/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-06 Batch: WG1682095-3								
Vinyl chloride	87		-		70-130	-		25
1,1-Dichloroethene	121		-		70-130	-		25
cis-1,2-Dichloroethene	92		-		70-130	-		25
1,1,1-Trichloroethane	95		-		70-130	-		25
Carbon tetrachloride	87		-		70-130	-		25
Trichloroethene	97		-		70-130	-		25
Tetrachloroethene	102		-		70-130	-		25

Lab Duplicate Analysis

Batch Quality Control

Project Name: 188 2ND AVE, NY

Project Number: 81363

Lab Number: L2246402

Report Date: 09/01/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG1682072-5 QC Sample: L2246402-05 Client ID: VTX-IA-5						
Dichlorodifluoromethane	0.492	0.480	ppbV	2		25
Chloromethane	0.619	0.615	ppbV	1		25
Freon-114	ND	ND	ppbV	NC		25
1,3-Butadiene	ND	ND	ppbV	NC		25
Bromomethane	ND	ND	ppbV	NC		25
Chloroethane	ND	ND	ppbV	NC		25
Ethanol	56.4	57.6	ppbV	2		25
Vinyl bromide	ND	ND	ppbV	NC		25
Acetone	9.25	9.14	ppbV	1		25
Trichlorofluoromethane	0.210	0.214	ppbV	2		25
Isopropanol	3.30	3.32	ppbV	1		25
Tertiary butyl Alcohol	ND	ND	ppbV	NC		25
Methylene chloride	ND	ND	ppbV	NC		25
3-Chloropropene	ND	ND	ppbV	NC		25
Carbon disulfide	ND	ND	ppbV	NC		25
Freon-113	ND	ND	ppbV	NC		25
trans-1,2-Dichloroethene	ND	ND	ppbV	NC		25
1,1-Dichloroethane	ND	ND	ppbV	NC		25
Methyl tert butyl ether	ND	ND	ppbV	NC		25
2-Butanone	0.642	0.639	ppbV	0		25
Ethyl Acetate	0.730	0.696	ppbV	5		25

Lab Duplicate Analysis Batch Quality Control

Project Name: 188 2ND AVE, NY

Project Number: 81363

Lab Number: L2246402

Report Date: 09/01/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG1682072-5 QC Sample: L2246402-05 Client ID: VTX-IA-5						
Chloroform	0.302	0.297	ppbV	2		25
Tetrahydrofuran	ND	ND	ppbV	NC		25
1,2-Dichloroethane	ND	ND	ppbV	NC		25
n-Hexane	ND	ND	ppbV	NC		25
Benzene	ND	ND	ppbV	NC		25
Cyclohexane	ND	ND	ppbV	NC		25
1,2-Dichloropropane	ND	ND	ppbV	NC		25
Bromodichloromethane	ND	ND	ppbV	NC		25
1,4-Dioxane	ND	ND	ppbV	NC		25
2,2,4-Trimethylpentane	ND	ND	ppbV	NC		25
Heptane	ND	ND	ppbV	NC		25
cis-1,3-Dichloropropene	ND	ND	ppbV	NC		25
4-Methyl-2-pentanone	ND	ND	ppbV	NC		25
trans-1,3-Dichloropropene	ND	ND	ppbV	NC		25
1,1,2-Trichloroethane	ND	ND	ppbV	NC		25
Toluene	0.690	0.622	ppbV	10		25
2-Hexanone	ND	ND	ppbV	NC		25
Dibromochloromethane	ND	ND	ppbV	NC		25
1,2-Dibromoethane	ND	ND	ppbV	NC		25
Chlorobenzene	ND	ND	ppbV	NC		25
Ethylbenzene	ND	ND	ppbV	NC		25

Lab Duplicate Analysis Batch Quality Control

Project Name: 188 2ND AVE, NY

Project Number: 81363

Lab Number: L2246402

Report Date: 09/01/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG1682072-5 QC Sample: L2246402-05 Client ID: VTX-IA-5						
p/m-Xylene	ND	ND	ppbV	NC		25
Bromoform	ND	ND	ppbV	NC		25
Styrene	ND	ND	ppbV	NC		25
1,1,2,2-Tetrachloroethane	ND	ND	ppbV	NC		25
o-Xylene	ND	ND	ppbV	NC		25
4-Ethyltoluene	ND	ND	ppbV	NC		25
1,3,5-Trimethylbenzene	ND	ND	ppbV	NC		25
1,2,4-Trimethylbenzene	0.217	ND	ppbV	NC		25
Benzyl chloride	ND	ND	ppbV	NC		25
1,3-Dichlorobenzene	ND	ND	ppbV	NC		25
1,4-Dichlorobenzene	ND	ND	ppbV	NC		25
1,2-Dichlorobenzene	ND	ND	ppbV	NC		25
1,2,4-Trichlorobenzene	ND	ND	ppbV	NC		25
Hexachlorobutadiene	ND	ND	ppbV	NC		25
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG1682095-5 QC Sample: L2246402-05 Client ID: VTX-IA-5						
Vinyl chloride	ND	ND	ppbV	NC		25
1,1-Dichloroethene	ND	ND	ppbV	NC		25
cis-1,2-Dichloroethene	ND	ND	ppbV	NC		25
1,1,1-Trichloroethane	ND	ND	ppbV	NC		25
Carbon tetrachloride	0.071	0.073	ppbV	3		25
Trichloroethene	ND	ND	ppbV	NC		25
Tetrachloroethene	0.286	0.256	ppbV	11		25

Project Name: 188 2ND AVE, NY

Serial_No:09012216:43
Lab Number: L2246402

Project Number: 81363

Report Date: 09/01/22

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controller Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L2246402-01	VTX-IA-1	02058	Flow 4	08/23/22	397309		-	-	-	Pass	10.0	9.0	11
L2246402-01	VTX-IA-1	762	6.0L Can	08/23/22	397309	L2244032-04	Pass	-29.2	-10.6	-	-	-	-
L2246402-02	VTX-IA-2	01670	Flow 4	08/23/22	397309		-	-	-	Pass	10.0	8.5	16
L2246402-02	VTX-IA-2	3264	6.0L Can	08/23/22	397309	L2244032-05	Pass	-29.2	-10.2	-	-	-	-
L2246402-03	VTX-IA-3	01553	Flow 4	08/23/22	397309		-	-	-	Pass	10.0	9.3	7
L2246402-03	VTX-IA-3	2367	6.0L Can	08/23/22	397309	L2244032-04	Pass	-29.2	-11.5	-	-	-	-
L2246402-04	VTX-IA-4	01615	Flow 4	08/23/22	397309		-	-	-	Pass	10.0	9.3	7
L2246402-04	VTX-IA-4	3131	6.0L Can	08/23/22	397309	L2244032-04	Pass	-29.2	-9.5	-	-	-	-
L2246402-05	VTX-IA-5	0088	Flow 4	08/23/22	397309		-	-	-	Pass	10.0	9.2	8
L2246402-05	VTX-IA-5	2524	6.0L Can	08/23/22	397309	L2244032-04	Pass	-29.1	-9.4	-	-	-	-
L2246402-06	VTX-AA-1	01651	Flow 4	08/23/22	397309		-	-	-	Pass	10.0	9.3	7
L2246402-06	VTX-AA-1	2713	6.0L Can	08/23/22	397309	L2244032-05	Pass	-29.3	-11.9	-	-	-	-
L2246402-07	UNUSED #970	01504	Flow 5	08/23/22	397309		-	-	-	Pass	10.0	8.8	13
L2246402-07	UNUSED #970	970	6.0L Can	08/23/22	397309	L2244032-05	Pass	-29.2	-29.7	-	-	-	-

Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2244032**Project Number:** CANISTER QC BAT**Report Date:** 09/01/22**Air Canister Certification Results**

Lab ID: L2244032-04

Client ID: CAN 2725 SHELF 46

Sample Location:

Date Collected: 08/15/22 18:00

Date Received: 08/16/22

Field Prep: Not Specified

Sample Depth:

Matrix: Air

Analytical Method: 48,TO-15

Analytical Date: 08/19/22 02:50

Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2244032
Report Date: 09/01/22

Air Canister Certification Results

Lab ID: L2244032-04
Client ID: CAN 2725 SHELF 46
Sample Location:

Date Collected: 08/15/22 18:00
Date Received: 08/16/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2244032
Report Date: 09/01/22

Air Canister Certification Results

Lab ID: L2244032-04
Client ID: CAN 2725 SHELF 46
Sample Location:

Date Collected: 08/15/22 18:00
Date Received: 08/16/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2244032
Report Date: 09/01/22

Air Canister Certification Results

Lab ID: L2244032-04
Client ID: CAN 2725 SHELF 46
Sample Location:

Date Collected: 08/15/22 18:00
Date Received: 08/16/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2244032**Project Number:** CANISTER QC BAT**Report Date:** 09/01/22**Air Canister Certification Results**

Lab ID: L2244032-04

Date Collected: 08/15/22 18:00

Client ID: CAN 2725 SHELF 46

Date Received: 08/16/22

Sample Location:

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								

Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds				

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	92		60-140
Bromochloromethane	91		60-140
chlorobenzene-d5	99		60-140



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2244032
Report Date: 09/01/22

Air Canister Certification Results

Lab ID: L2244032-04
Client ID: CAN 2725 SHELF 46
Sample Location:

Date Collected: 08/15/22 18:00
Date Received: 08/16/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Analytical Method: 48,TO-15-SIM
Analytical Date: 08/19/22 02:50
Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2244032
Report Date: 09/01/22

Air Canister Certification Results

Lab ID: L2244032-04
Client ID: CAN 2725 SHELF 46
Sample Location:

Date Collected: 08/15/22 18:00
Date Received: 08/16/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.100	--	ND	0.518	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2244032**Project Number:** CANISTER QC BAT**Report Date:** 09/01/22**Air Canister Certification Results**

Lab ID: L2244032-04

Date Collected: 08/15/22 18:00

Client ID: CAN 2725 SHELF 46

Date Received: 08/16/22

Sample Location:

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	87		60-140
bromochloromethane	90		60-140
chlorobenzene-d5	99		60-140



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2244032
Report Date: 09/01/22

Air Canister Certification Results

Lab ID: L2244032-04
Client ID: CAN 2725 SHELF 46
Sample Location:

Date Collected: 08/15/22 18:00
Date Received: 08/16/22
Field Prep: Not Specified

Sample Depth:

Matrix: Air
Analytical Method: 48,TO-15-SIM
Analytical Date: 08/21/22 20:37
Analyst: TS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	103		60-140
bromochloromethane	99		60-140
chlorobenzene-d5	97		60-140



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2244032
Report Date: 09/01/22

Air Canister Certification Results

Lab ID: L2244032-05
Client ID: CAN 2972 SHELF 47
Sample Location:

Date Collected: 08/15/22 18:00
Date Received: 08/16/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Analytical Method: 48,TO-15
Analytical Date: 08/19/22 03:20
Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2244032
Report Date: 09/01/22

Air Canister Certification Results

Lab ID: L2244032-05
Client ID: CAN 2972 SHELF 47
Sample Location:

Date Collected: 08/15/22 18:00
Date Received: 08/16/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2244032
Report Date: 09/01/22

Air Canister Certification Results

Lab ID: L2244032-05
Client ID: CAN 2972 SHELF 47
Sample Location:

Date Collected: 08/15/22 18:00
Date Received: 08/16/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2244032**Project Number:** CANISTER QC BAT**Report Date:** 09/01/22**Air Canister Certification Results**

Lab ID: L2244032-05

Date Collected: 08/15/22 18:00

Client ID: CAN 2972 SHELF 47

Date Received: 08/16/22

Sample Location:

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2244032**Project Number:** CANISTER QC BAT**Report Date:** 09/01/22**Air Canister Certification Results**

Lab ID: L2244032-05

Date Collected: 08/15/22 18:00

Client ID: CAN 2972 SHELF 47

Date Received: 08/16/22

Sample Location:

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								

Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds				

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	89		60-140
Bromochloromethane	89		60-140
chlorobenzene-d5	99		60-140



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2244032
Report Date: 09/01/22

Air Canister Certification Results

Lab ID: L2244032-05
Client ID: CAN 2972 SHELF 47
Sample Location:

Date Collected: 08/15/22 18:00
Date Received: 08/16/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Analytical Method: 48,TO-15-SIM
Analytical Date: 08/19/22 03:20
Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2244032**Project Number:** CANISTER QC BAT**Report Date:** 09/01/22**Air Canister Certification Results**

Lab ID: L2244032-05

Date Collected: 08/15/22 18:00

Client ID: CAN 2972 SHELF 47

Date Received: 08/16/22

Sample Location:

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.100	--	ND	0.518	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2244032**Project Number:** CANISTER QC BAT**Report Date:** 09/01/22**Air Canister Certification Results**

Lab ID: L2244032-05

Date Collected: 08/15/22 18:00

Client ID: CAN 2972 SHELF 47

Date Received: 08/16/22

Sample Location:

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	86		60-140
bromochloromethane	88		60-140
chlorobenzene-d5	98		60-140



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2244032
Report Date: 09/01/22

Air Canister Certification Results

Lab ID: L2244032-05
 Client ID: CAN 2972 SHELF 47
 Sample Location:

Date Collected: 08/15/22 18:00
 Date Received: 08/16/22
 Field Prep: Not Specified

Sample Depth:

Matrix: Air
 Analytical Method: 48,TO-15-SIM
 Analytical Date: 08/21/22 21:16
 Analyst: TS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	101		60-140
bromochloromethane	98		60-140
chlorobenzene-d5	97		60-140



Project Name: 188 2ND AVE, NY**Lab Number:** L2246402**Project Number:** 81363**Report Date:** 09/01/22**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information**Cooler** **Custody Seal**

NA Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2246402-01A	Canister - 6 Liter	NA	NA			Y	Absent		TO15-SIM(30),TO15-LL(30)
L2246402-02A	Canister - 6 Liter	NA	NA			Y	Absent		TO15-SIM(30),TO15-LL(30)
L2246402-03A	Canister - 6 Liter	NA	NA			Y	Absent		TO15-LL(30),TO15-SIM(30)
L2246402-04A	Canister - 6 Liter	NA	NA			Y	Absent		TO15-LL(30),TO15-SIM(30)
L2246402-05A	Canister - 6 Liter	NA	NA			Y	Absent		TO15-LL(30),TO15-SIM(30)
L2246402-06A	Canister - 6 Liter	NA	NA			Y	Absent		TO15-SIM(30),TO15-LL(30)
L2246402-07A	Canister - 6 Liter	NA	NA			Y	Absent		CLEAN-FEE()

Project Name: 188 2ND AVE, NY
Project Number: 81363

Lab Number: L2246402
Report Date: 09/01/22

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report



Project Name: 188 2ND AVE, NY
Project Number: 81363

Lab Number: L2246402
Report Date: 09/01/22

Footnotes

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

Terms

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

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

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

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

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

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

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

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

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

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: Data Usability Report



Project Name: 188 2ND AVE, NY
Project Number: 81363

Lab Number: L2246402
Report Date: 09/01/22

Data Qualifiers

- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: 188 2ND AVE, NY
Project Number: 81363

Lab Number: L2246402
Report Date: 09/01/22

REFERENCES

- 48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

LIMITATION OF LIABILITIES

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

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



Certification Information

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

Westborough Facility

EPA 624/624.1: m/p-xylene, o-xylene, 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, SM4500CI-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.

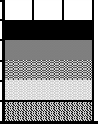
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

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

Appendix D: Soil Boring Logs

SOIL BORING/MONITORING WELL CONSTRUCTION LOG										DESIGNATION		B-1	
		PROJECT:		188 2nd Avenue						PROJECT NO.:		81363	
		LOCATION:		NY, NY						DRILLER:		Hawk	
		INSTALLATION DATES		9/7/2022						INSPECTOR:		Eugene Giardino	
								PAGE		1 of 1			
SAMPLER		CASING		CORE		GROUNDWATER DEPTH MEASUREMENTS							
TYPE	Jackhammer	TYPE	Sleeve	BARREL TYPE	Steel	ELEVATION INFORMATION		DATE:	9/7/2022				
SIZE (ID)	2 IN	MATERIAL	PVC	SIZE (ID)	2	DATUM:	-	TIME:	12:00				
HAMMER (LB.)	-	DIAMETER	2"	DIAMETER	2	TOC:	-	DEPTH (Ft):	6.90				
FALL (IN.)	-	LENGTH	4'			GS:	-	ELEVATION (Ft):	-				
SAMPLE INFORMATION						SOIL DESCRIPTION				WELL CONST		PID (PPM)	
DEPTH ELEVATION	INTERVAL	PEN / REC	BLOWS / 6"	SPT	STRATA CHANGE (Ft/EI.)							Background/ Actual	
0	0.0 - 4.0	4/2.0				0.0 - 0.5': Concrete.						0.0	
1						0.5 - 2.5': Brown and gray silt with brick fragments, dry to moist.						17.5	
2												8.9	
3												10.4	
4												7.9	
5	4.0 - 8.0	4/3.0										48.6	
6												7.8	
7												4.0	
8												58.0	
9												6.1	
10	8.0 - 12.0	4/1.75				2.5 - 12.0': Gray silt with trace angular gravel. Faint solvent odor at 3-4'. Wet at approximately 5'. Black staining at 7.5-8.0' and 9.5-10.0'.						11.6	
11												5.9	
12											9.2		
13											18.1		
14											33.2		
15	12.0 - 16.0	NA									50.8		
16											4.6		
17											3.0		
18											6.0		
19											16.2		
20	16.0 - 20.0	NA									7.6		
21											9.2		
22											5.6		
23											12.4		
24													
25	20.0 - 25.0	NA											
26													
27													
28													
29													
30	25.0 - 30.0	NA											
31													
32													
33													
34													
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 Riser Concrete Bentonite Native Sand Grout
10 - 20%	Little	Very loose	0 - 4	Very soft	<2	DEPTH:	15	DEPTH/TYPE PACK:	-				
20 - 35%	Some	Loose	4 - 10	Soft	2 - 4	DIAMETER (inches):	1.0	DEPTH/TYPE SEAL:	-				
35 - 50%	And	Medium Dense	10 - 30	Medium Stiff	4 - 8	MATERIAL:	PVC	BACKFILL MATERIAL:	-				
		Dense	30 - 50	Stiff	8 - 15	SLOT SIZE (inches):	0.01	SURFACE SEAL:	-				
		Very Dense	>50	Very Stiff	15 - 30	SCREEN INTERVAL:	5'-15'	ROADBOX DESC.:	-				
				Hard	>30	LENGTH OF RISER:	5						
NOTES:													
1. Soils are visually classified in general accordance with the Modified Burmister Soil Classification System.													

SOIL BORING/MONITORING WELL CONSTRUCTION LOG										DESIGNATION		B-2	
		PROJECT: 188 2nd Avenue				PROJECT NO.:		81363					
		LOCATION: NY, NY				DRILLER:		Hawk					
		INSTALLATION DATES: 9/7/2022				INSPECTOR:		Eugene Giardino					
SAMPLER		CASING		CORE		GROUNDWATER DEPTH MEASUREMENTS							
TYPE	Jackhammer	TYPE	Sleeve	BARREL TYPE	Steel	ELEVATION INFORMATION		DATE:	9/7/2022				
SIZE (ID)	2 IN	MATERIAL	PVC <th>SIZE (ID)</th> <td>2</td> <th>DATUM:</th> <td>-</td> <th>TIME:</th> <td colspan="3">11:10</td>	SIZE (ID)	2	DATUM:	-	TIME:	11:10				
HAMMER (LB.)	-	DIAMETER	2"	DIAMETER	2	TOC:	-	DEPTH (Ft):	8.04				
FALL (IN.)	-	LENGTH	4'			GS:	-	ELEVATION (Ft):	-				
SAMPLE INFORMATION						SOIL DESCRIPTION		WELL CONST		PID (PPM)			
DEPTH ELEVATION	INTERVAL	PEN / REC	BLOWS / 6"	SPT	STRATA CHANGE (Ft/EI.)					Background/	Actual		
0	0.0 - 4.0	4/2.0				0.0 - 0.5': Concrete.			0.0				
1						0.5 - 2.0': Brown and gray moist to wet silt with brick fragements.			2,693				
2									3,316				
3									394				
4									326				
5	4.0 - 8.0	4/3.75				109							
6						186							
7						58.6							
8						988							
9						171							
10	8.0 - 12.0	4/3.75				204							
11					64								
12					90								
13					236								
14					>15000								
15	12.0 - 16.0	NA			>15000								
16					214								
17					287								
18					1,000								
19					>15000								
20	16.0 - 20.0	NA			491								
21					307								
22													
23													
24													
25	20.0 - 25.0	NA											
26													
27													
28													
29													
30	25.0 - 30.0	NA											
31													
32													
33													
34													
Refusal at 11.0 ft bgs Soil sample B-2 (7.0-7.5) collected at 1010 from interval with highest PID Temporary monitoring well installed; depth to water 8.04 ft bgs GW sample TW2 collected at 1120													
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							
10 - 20%	Little	Very loose	0 - 4	Very soft	<2	DEPTH:	15	DEPTH/TYPE PACK:	-				
20 - 35%	Some	Loose	4 - 10	Soft	2 - 4	DIAMETER (inches):	1.0	DEPTH/TYPE SEAL:	-				
35 - 50%	And	Medium Dense	10 - 30	Medium Stiff	4 - 8	MATERIAL:	PVC	BACKFILL MATERIAL:	-				
		Dense	30 - 50	Stiff	8 - 15	SLOT SIZE (inches):	0.01	SURFACE SEAL:	-				
		Very Dense	>50	Very Stiff	15 - 30	SCREEN INTERVAL:	5'-15'	ROADBOX DESC.:	-				
				Hard	>30	LENGTH OF RISER:	5						

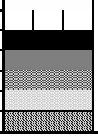
NOTES:
1. Soils are visually classified in general accordance with the Modified Burmister Soil Classification System.
2. PID reading of >15000 = PID exceeding maximum concentration
3. Poor recharge for temporary well

SOIL BORING/MONITORING WELL CONSTRUCTION LOG										DESIGNATION		B-3			
		PROJECT: 188 2nd Avenue				PROJECT NO.:		81363							
		LOCATION: NY, NY				DRILLER:		Hawk							
		INSTALLATION DATES: 9/7/2022				INSPECTOR:		Eugene Giardino							
SAMPLER		CASING		CORE		GROUNDWATER DEPTH MEASUREMENTS									
TYPE		Jackhammer		TYPE		Sleeve		BARREL TYPE		Steel		ELEVATION INFORMATION		DATE: 9/7/2022	
SIZE (ID)		2 IN		MATERIAL		PVC		SIZE (ID)		2		DATUM:		-	
HAMMER (LB.)		-		DIAMETER		2"		DIAMETER		2		TOC:		-	
FALL (IN.)		-		LENGTH		4'						GS:		-	
SAMPLE INFORMATION										SOIL DESCRIPTION		WELL CONST		PID (PPM)	
DEPTH ELEVATION	INTERVAL	PEN / REC	BLOWS / 6"	SPT	STRATA CHANGE (Ft/EI.)										
0	0.0 - 4.0	4/2.0				0.0 - 0.5': Concrete.			0.0						
1						317									
2						704									
3						760									
4						435									
5	4.0 - 8.0	4/4.0				0.5 - 2.5': Brown and gray silt with brick fragments, moist to wet.			366						
6						339									
7						355									
8						390									
9						550									
10	8.0 - 12.0	4/3.0				2.5 - 10.0': Gray wet silt. Strong solvent odor			>15000						
11						>15000									
12						>15000									
13						>15000									
14						>15000									
15	12.0 - 16.0	NA			10.0 - 11.0': Gray silt with clay. Moist. Strong solvent odor.			>15000							
16					>15000										
17					>15000										
18					>15000										
19					>15000										
20	16.0 - 20.0	NA			Refusal at 11.0 ft bgs Soil sample B-23 (5.5-6.0) collected at 0950 from interval with highest PID and strong solvent odor Temporary monitoring well installed; depth to water 7.51 ft bgs GW sample TW3 collected at 1145			>15000							
21						>15000									
22						>15000									
23						>15000									
24						>15000									
25	20.0 - 25.0	NA							>15000						
26						>15000									
27						>15000									
28						>15000									
29						>15000									
30	25.0 - 30.0	NA							>15000						
31						>15000									
32						>15000									
33						>15000									
34						>15000									

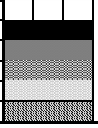
MODIFIER		SAND AND GRAVEL		SILT AND CLAY		LOCATION:		Near NW corner of property		WELL CONSTRUCTION	
1 - 10%	Trace	Density	Blows (N)	Consistency	Blows (N)	MONITORING WELL CONSTRUCTION DATA					
10 - 20%	Little	Very loose	0 - 4	Very soft	<2	DEPTH:	15	DEPTH/TYPE PACK:	-		Screen Riser Concrete Bentonite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

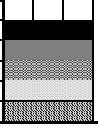
NOTES:

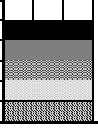
- Soils are visually classified in general accordance with the Modified Burmister Soil Classification System.
- PID reading of >15000 = PID exceeding maximum concentration
- Poor recharge for temporary well

SOIL BORING/MONITORING WELL CONSTRUCTION LOG										DESIGNATION		B-4	
		PROJECT:		188 2nd Avenue						PROJECT NO.:		81363	
		LOCATION:		NY, NY						DRILLER:		Hawk	
		INSTALLATION DATES		9/7/2022						INSPECTOR:		Eugene Giardino	
								PAGE		1		of 1	
SAMPLER		CASING		CORE		GROUNDWATER DEPTH MEASUREMENTS							
TYPE	Jackhammer	TYPE	Sleeve	BARREL TYPE	Steel	ELEVATION INFORMATION		DATE:		-			
SIZE (ID)	2 IN	MATERIAL	PVC	SIZE (ID)	2	DATUM:		-		TIME:		-	
HAMMER (LB.)	-	DIAMETER	2"	DIAMETER	2	TOC:		-		DEPTH (Ft):		-	
FALL (IN.)	-	LENGTH	4'			GS:		-		ELEVATION (Ft):		-	
SAMPLE INFORMATION						SOIL DESCRIPTION				WELL CONST		PID (PPM)	
DEPTH ELEVATION	INTERVAL	PEN / REC	BLOWS / 6"	SPT	STRATA CHANGE (Ft/EI.)							Background/ Actual	
0	0.0 - 4.0	4/2.0				0.0 - 0.5': Concrete.					0.0		
1						0.5 - 4.0': Dry to moist brown and gray silt. No staining/odor.					3.5		
2											2.0		
3											2.1		
4											1.3		
5	4.0 - 8.0	4/4.0				4.0 - 7.0': Moist to wet gray silt. Faint odor.					1.0		
6											1.2		
7											0.4		
8											3.4		
9											4.2		
10	8.0 - 12.0	4/2.0				7.0 - 8.0': Black silt with odor.					3.2		
11						8.0 - 10.0': Gray clayey silt, moist to wet. No staining/odor.					2.5		
12											2.8		
13											4.0		
14											4.0		
15	12.0 - 16.0	NA			Refusal at 10.0 ft bgs				1.4				
16					Soil sample B-4 (7.0-7.5) collected at 0930 from interval with staining/target interval				1.9				
17									1.5				
18									1.2				
19									0.9				
20	16.0 - 20.0	NA											
21													
22													
23													
24													
25	20.0 - 25.0	NA											
26													
27													
28													
29													
30	25.0 - 30.0	NA											
31													
32													
33													
34													
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							
10 - 20%	Little	Very loose	0 - 4	Very soft	<2	DEPTH:	15	DEPTH/TYPE PACK:	-				
20 - 35%	Some	Loose	4 - 10	Soft	2 - 4	DIAMETER (inches):	1.0	DEPTH/TYPE SEAL:	-				
35 - 50%	And	Medium Dense	10 - 30	Medium Stiff	4 - 8	MATERIAL:	PVC	BACKFILL MATERIAL:	-				
		Dense	30 - 50	Stiff	8 - 15	SLOT SIZE (inches):	0.01	SURFACE SEAL:	-				
		Very Dense	>50	Very Stiff	15 - 30	SCREEN INTERVAL:	5'-15'	ROADBOX DESC.:	-				
				Hard	>30	LENGTH OF RISER:	5						
NOTES:													
1. Soils are visually classified in general accordance with the Modified Burmister Soil Classification System.													

SOIL BORING/MONITORING WELL CONSTRUCTION LOG										DESIGNATION		B-5	
		PROJECT:		188 2nd Avenue						PROJECT NO.:		81363	
		LOCATION:		NY, NY						DRILLER:		Hawk	
		INSTALLATION DATES		9/8/2022						INSPECTOR:		Eugene Giardino	
								PAGE		1 of 1			
SAMPLER		CASING		CORE		GROUNDWATER DEPTH MEASUREMENTS							
TYPE	Jackhammer	TYPE	Sleeve	BARREL TYPE	Steel	ELEVATION INFORMATION		DATE:	-				
SIZE (ID)	2 IN	MATERIAL	PVC	SIZE (ID)	2	DATUM:	-	TIME:	-				
HAMMER (LB.)	-	DIAMETER	2"	DIAMETER	2	TOC:	-	DEPTH (Ft):	-				
FALL (IN.)	-	LENGTH	4'			GS:	-	ELEVATION (Ft):	-				
SAMPLE INFORMATION						SOIL DESCRIPTION				WELL CONST		PID (PPM)	
DEPTH ELEVATION	INTERVAL	PEN / REC	BLOWS / 6"	SPT	STRATA CHANGE (Ft/EI.)							Background/ Actual	
0	0.0 - 4.0	4/2.0				0.0 - 0.5': Concrete.		0.0					
1													
2							0.5 - 3.5': Brown and gray silt with brick fragments. Moist.		0.2				
3									1.3				
4									1.5				
5	4.0 - 8.0	4/2.75				3.5 - 10.5': Wet gray silt with strong solvent odor.		61.3					
6									12.8				
7									4.6				
8									98.4				
9									44.0				
10	8.0 - 12.0	4/2.5							64.0				
11									76.7				
12									108.9				
13									346				
14									10,000				
15	12.0 - 16.0	NA			Soil sample B-5 (8.5-9.0) collected at 0830 from interval with highest PID/strong solvent odor			2,500					
16									563				
17									>15000				
18									>15000				
19									>15000				
20	16.0 - 20.0	NA						328					
21								304					
22								329					
23													
24													
25	20.0 - 25.0	NA				Refusal at 11.5 ft bgs							
26													
27													
28													
29													
30	25.0 - 30.0	NA			Soil sample B-5 (8.5-9.0) collected at 0830 from interval with highest PID/strong solvent odor								
31													
32													
33													
34													
35							Refusal at 11.5 ft bgs						
36													
37													
38													
39													
40						Refusal at 11.5 ft bgs							
41													
42													
43													
44													
45					Refusal at 11.5 ft bgs								
46													
47													
48													
49													
50							Refusal at 11.5 ft bgs						
51													
52													
53													
54													
55						Refusal at 11.5 ft bgs							
56													
57													
58													
59													
60					Refusal at 11.5 ft bgs								
61													
62													
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64													
65							Refusal at 11.5 ft bgs						
66													
67													
68													
69													
70						Refusal at 11.5 ft bgs							
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72													
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75					Refusal at 11.5 ft bgs								
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77													
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79													
80							Refusal at 11.5 ft bgs						
81													
82													
83													
84													
85						Refusal at 11.5 ft bgs							
86													
87													
88													
89													
90					Refusal at 11.5 ft bgs								
91													
92													
93													
94													
95							Refusal at 11.5 ft bgs						
96													
97													
98													
99													
100						Refusal at 11.5 ft bgs							
101													
102													
103													
104													
105					Refusal at 11.5 ft bgs								
106													
107													
108													
109													
110							Refusal at 11.5 ft bgs						
111													
112													
113													
114													
115						Refusal at 11.5 ft bgs							
116													
117													
118													
119													
120					Refusal at 11.5 ft bgs								
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123													
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125							Refusal at 11.5 ft bgs						
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130						Refusal at 11.5 ft bgs							
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205						Refusal at 11.5 ft bgs							
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215							Refusal at 11.5 ft bgs						
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220						Refusal at 11.5 ft bgs							
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225					Refusal at 11.5 ft bgs								
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230							Refusal at 11.5 ft bgs						
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235						Refusal at 11.5 ft bgs							
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245							Refusal at 11.5 ft bgs						
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250						Refusal at 11.5 ft bgs							
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254													
255					Refusal at 11.5 ft bgs								
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257													
258													
259													
260							Refusal at 11.5 ft bgs						
261													
262													
263													
264													
265						Refusal at 11.5 ft bgs							
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269													
270					Refusal at 11.5 ft bgs								
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275							Refusal at 11.5 ft bgs						
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290							Refusal at 11.5 ft bgs						
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292													
293													
294													
295						Refusal at 11.5 ft bgs							
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297													
298													
299													
300				</									

SOIL BORING/MONITORING WELL CONSTRUCTION LOG										DESIGNATION		B-6	
		PROJECT:		188 2nd Avenue						PROJECT NO.:		81363	
		LOCATION:		NY, NY						DRILLER:		Hawk	
		INSTALLATION DATES		9/7/2022						INSPECTOR:		Eugene Giardino	
								PAGE		1 of 1			
SAMPLER		CASING		CORE		GROUNDWATER DEPTH MEASUREMENTS							
TYPE	Jackhammer	TYPE	Sleeve	BARREL TYPE	Steel	ELEVATION INFORMATION		DATE:	9/7/2022				
SIZE (ID)	2 IN	MATERIAL	PVC	SIZE (ID)	2	DATUM:	-	TIME:	10:20				
HAMMER (LB.)	-	DIAMETER	2"	DIAMETER	2	TOC:	-	DEPTH (Ft):	5.56				
FALL (IN.)	-	LENGTH	4'			GS:	-	ELEVATION (Ft):	-				
SAMPLE INFORMATION						SOIL DESCRIPTION				WELL CONST		PID (PPM)	
DEPTH ELEVATION	INTERVAL	PEN / REC	BLOWS / 6"	SPT	STRATA CHANGE (Ft/EI.)								
0	0.0 - 4.0	4/1.5				0.0 - 0.5': Concrete.						0.0	
1						0.5 - 2.5': Brown and gray silt with brick fragments, dry to moist.						3.9	
2												12.7	
3												77.7	
4												93.3	
5	4.0 - 8.0	4/3.5										108.6	
6												126.7	
7												190.3	
8												160.0	
9												62.3	
10	8.0 - 12.0	4/4.0				2.5 - 12.0': Gray silt with trace angular gravel. Faint solvent odor at 3-4'. Wet at approximately 5'. Black staining at 7.5-8.0' and 9.5-10.0'.						55.6	
11												21.8	
12											31.9		
13											24.8		
14											9.8		
15	12.0 - 16.0	NA									173.3		
16											33.4		
17											396		
18											523		
19											235		
20	16.0 - 20.0	NA									58.6		
21											25.3		
22											12.5		
23											9.6		
24													
25	20.0 - 25.0	NA											
26													
27													
28													
29													
30	25.0 - 30.0	NA											
31													
32													
33													
34													
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 Riser Concrete Bentonite Native Sand Grout
10 - 20%	Little	Very loose	0 - 4	Very soft	<2	DEPTH:	15	DEPTH/TYPE PACK:	-				
20 - 35%	Some	Loose	4 - 10	Soft	2 - 4	DIAMETER (inches):	1.0	DEPTH/TYPE SEAL:	-				
35 - 50%	And	Medium Dense	10 - 30	Medium Stiff	4 - 8	MATERIAL:	PVC	BACKFILL MATERIAL:	-				
		Dense	30 - 50	Stiff	8 - 15	SLOT SIZE (inches):	0.01	SURFACE SEAL:	-				
		Very Dense	>50	Very Stiff	15 - 30	SCREEN INTERVAL:	5'-15'	ROADBOX DESC.:	-				
				Hard	>30	LENGTH OF RISER:	5						
NOTES:													
1. Soils are visually classified in general accordance with the Modified Burmister Soil Classification System.													

SOIL BORING/MONITORING WELL CONSTRUCTION LOG										DESIGNATION		B-7	
		PROJECT:		188 2nd Avenue						PROJECT NO.:		81363	
		LOCATION:		NY, NY						DRILLER:		Hawk	
		INSTALLATION DATES		9/7/2022						INSPECTOR:		Eugene Giardino	
										PAGE		1 of 1	
SAMPLER		CASING		CORE		GROUNDWATER DEPTH MEASUREMENTS							
TYPE	Jackhammer	TYPE	Sleeve	BARREL TYPE	Steel	ELEVATION INFORMATION		DATE:					
SIZE (ID)	2 IN	MATERIAL	PVC	SIZE (ID)	2	DATUM:		-		TIME:			
HAMMER (LB.)	-	DIAMETER	2"	DIAMETER	2	TOC:		-		DEPTH (Ft):			
FALL (IN.)	-	LENGTH	4'			GS:		-		ELEVATION (Ft):			
SAMPLE INFORMATION						SOIL DESCRIPTION				WELL CONST		PID (PPM) Background/ Actual	
DEPTH ELEVATION	INTERVAL	PEN / REC	BLOWS / 6"	SPT	STRATA CHANGE (Ft/EI.)								
0	0.0 - 4.0	4/3.75				0.0 - 0.5': Concrete.					0.0		
1						0.5 - 4.0': Brown and gray silt with brick fragments, dry to moist. No staining/odor.					1.1		
2											1.3		
3											1.7		
4											2.3		
5	4.0 - 8.0	4/2.0				4.0 - 7.0': Wet gray silt. No staining/odor.					1.8		
6											1.2		
7											1.6		
8											2.2		
9											1.8		
10	8.0 - 12.0	4/1.75				7.0 - 8.5': Black stained silt. No odor.					1.1		
11											0.9		
12											0.4		
13											2.2		
14											3.0		
15	12.0 - 16.0	NA			8.5 - 10.0': Wet gray clayey silt.				1.4				
16									1.8				
17									0.5				
18									0.5				
19									0.3				
20	16.0 - 20.0	NA			Refusal at 10.0 ft bgs								
21					Soil sample B-7 (7.0-7.5) collected at 1335 from interval with staining/target interval								
22													
23													
24													
25	20.0 - 25.0	NA											
26													
27													
28													
29													
30	25.0 - 30.0	NA											
31													
32													
33													
34													
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							
10 - 20%	Little	Very loose	0 - 4	Very soft	<2	DEPTH:	15	DEPTH/TYPE PACK:	-		Screen Riser Concrete Bentonite Native Sand Grout		
20 - 35%	Some	Loose	4 - 10	Soft	2 - 4	DIAMETER (inches):	1.0	DEPTH/TYPE SEAL:	-				
35 - 50%	And	Medium Dense	10 - 30	Medium Stiff	4 - 8	MATERIAL:	PVC	BACKFILL MATERIAL:	-				
		Dense	30 - 50	Stiff	8 - 15	SLOT SIZE (inches):	0.01	SURFACE SEAL:	-				
		Very Dense	>50	Very Stiff	15 - 30	SCREEN INTERVAL:	5'-15'	ROADBOX DESC.:	-				
				Hard	>30	LENGTH OF RISER:	5						
NOTES:													
1. Soils are visually classified in general accordance with the Modified Burmister Soil Classification System.													

SOIL BORING/MONITORING WELL CONSTRUCTION LOG										DESIGNATION		B-8	
		PROJECT:		188 2nd Avenue						PROJECT NO.:		81363	
		LOCATION:		NY, NY						DRILLER:		Hawk	
		INSTALLATION DATES		9/7/2022						INSPECTOR:		Eugene Giardino	
										PAGE		1 of 1	
SAMPLER		CASING		CORE		GROUNDWATER DEPTH MEASUREMENTS							
TYPE	Jackhammer	TYPE	Sleeve	BARREL TYPE	Steel	ELEVATION INFORMATION		DATE:					
SIZE (ID)	2 IN	MATERIAL	PVC	SIZE (ID)	2	DATUM:		-		TIME:			
HAMMER (LB.)	-	DIAMETER	2"	DIAMETER	2	TOC:		-		DEPTH (Ft):			
FALL (IN.)	-	LENGTH	4'			GS:		-		ELEVATION (Ft):			
SAMPLE INFORMATION						SOIL DESCRIPTION				WELL CONST		PID (PPM)	
DEPTH ELEVATION	INTERVAL	PEN / REC	BLOWS / 6"	SPT	STRATA CHANGE (Ft/EI.)							Background/ Actual	
0	0.0 - 4.0	4/3.5				0.0 - 0.5': Concrete.					0.0		
1						0.5 - 3.0': Brown and gray silt with brick fragments.					9.1		
2											40.3		
3											29.7		
4											13.8		
5	4.0 - 8.0	4/2.0				3.0 - 6.0': Gray wet silt. No staining/odor.					17.9		
6											1.3		
7											4.2		
8											9.9		
9											21.4		
10	8.0 - 12.0	4/0.5				6.0 - 8.5': Black silt and gray clayey silt.					10.6		
11											8.6		
12											8.4		
13											6.3		
14											13.5		
15	12.0 - 16.0	NA			Refusal at 8.5 ft bgs				6.9				
16					Soil sample B-8 (1.0-1.5) collected from shallow interval adjacent to drain pipe/PID				7.5				
17													
18													
19													
20	16.0 - 20.0	NA											
21													
22													
23													
24													
25	20.0 - 25.0	NA											
26													
27													
28													
29													
30	25.0 - 30.0	NA											
31													
32													
33													
34													
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 Riser Concrete Bentonite Native Sand Grout
10 - 20%	Little	Very loose	0 - 4	Very soft	<2	DEPTH:	15	DEPTH/TYPE PACK:	-				
20 - 35%	Some	Loose	4 - 10	Soft	2 - 4	DIAMETER (inches):	1.0	DEPTH/TYPE SEAL:	-				
35 - 50%	And	Medium Dense	10 - 30	Medium Stiff	4 - 8	MATERIAL:	PVC	BACKFILL MATERIAL:	-				
		Dense	30 - 50	Stiff	8 - 15	SLOT SIZE (inches):	0.01	SURFACE SEAL:	-				
		Very Dense	>50	Very Stiff	15 - 30	SCREEN INTERVAL:	5'-15'	ROADBOX DESC.:	-				
				Hard	>30	LENGTH OF RISER:	5						
NOTES:													
1. Soils are visually classified in general accordance with the Modified Burmister Soil Classification System.													

SOIL BORING/MONITORING WELL CONSTRUCTION LOG										DESIGNATION		B-9	
		PROJECT:		188 2nd Avenue						PROJECT NO.:		81363	
		LOCATION:		NY, NY						DRILLER:		Hawk	
		INSTALLATION DATES		9/8/2022						INSPECTOR:		Eugene Giardino	
										PAGE		1 of 1	
SAMPLER		CASING		CORE		GROUNDWATER DEPTH MEASUREMENTS							
TYPE	Jackhammer	TYPE	Sleeve	BARREL TYPE	Steel	ELEVATION INFORMATION		DATE:					
SIZE (ID)	2 IN	MATERIAL	PVC	SIZE (ID)	2	DATUM:		-		TIME:			
HAMMER (LB.)	-	DIAMETER	2"	DIAMETER	2	TOC:		-		DEPTH (Ft):			
FALL (IN.)	-	LENGTH	4'			GS:		-		ELEVATION (Ft):			
SAMPLE INFORMATION						SOIL DESCRIPTION				WELL CONST		PID (PPM)	
DEPTH ELEVATION	INTERVAL	PEN / REC	BLOWS / 6"	SPT	STRATA CHANGE (Ft/EI.)							Background/ Actual	
0	0.0 - 4.0	4/2.0				0.0 - 0.5': Concrete.					0.0		
1						0.5 - 3.0': Brown and gray silt with brick fragments and angular gravel.					28.8		
2											11.7		
3											5.3		
4											11.8		
5	4.0 - 8.0	4/1.5				3.0 - 6.0': Brown moist to wet silt. No staining/odor.					4.2		
6											1.8		
7											1.4		
8											1.2		
9											1.1		
10	8.0 - 12.0	4/0.5				6.0 - 7.0': Dry black silt with clay.					1.3		
11											0.7		
12											0.8		
13											1.3		
14											2.0		
15	12.0 - 16.0	NA			7.0 - 9.0': Wet dark brown silt. No staining/odor.								
16													
17													
18													
19													
20	16.0 - 20.0	NA			Refusal at 9.0 ft bgs								
21					Soil sample B-9 (6.0-6.5) collected from interval with black silt/clay								
22													
23													
24													
25	20.0 - 25.0	NA											
26													
27													
28													
29													
30	25.0 - 30.0	NA											
31													
32													
33													
34													
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							
10 - 20%	Little	Very loose	0 - 4	Very soft	<2	DEPTH:	15	DEPTH/TYPE PACK:	-				
20 - 35%	Some	Loose	4 - 10	Soft	2 - 4	DIAMETER (inches):	1.0	DEPTH/TYPE SEAL:	-				
35 - 50%	And	Medium Dense	10 - 30	Medium Stiff	4 - 8	MATERIAL:	PVC	BACKFILL MATERIAL:	-				
		Dense	30 - 50	Stiff	8 - 15	SLOT SIZE (inches):	0.01	SURFACE SEAL:	-				
		Very Dense	>50	Very Stiff	15 - 30	SCREEN INTERVAL:	5'-15'	ROADBOX DESC.:	-				
				Hard	>30	LENGTH OF RISER:	5						
NOTES:													
1. Soils are visually classified in general accordance with the Modified Burmister Soil Classification System.													

SOIL BORING/MONITORING WELL CONSTRUCTION LOG										DESIGNATION		B-10	
		PROJECT:		188 2nd Avenue				PROJECT NO.:		81363			
		LOCATION:		NY, NY				DRILLER:		Hawk			
		INSTALLATION DATES		9/8/2022				INSPECTOR:		Eugene Giardino			
								PAGE		1 of 1			
SAMPLER		CASING		CORE		GROUNDWATER DEPTH MEASUREMENTS							
TYPE	Jackhammer	TYPE	Sleeve	BARREL TYPE	Steel	ELEVATION INFORMATION		DATE:	9/8/2022				
SIZE (ID)	2 IN	MATERIAL	PVC	SIZE (ID)	2	DATUM:	-	TIME:	10:10				
HAMMER (LB.)	-	DIAMETER	2"	DIAMETER	2	TOC:	-	DEPTH (Ft):	4.14				
FALL (IN.)	-	LENGTH	4'			GS:	-	ELEVATION (Ft):	-				
SAMPLE INFORMATION						SOIL DESCRIPTION			WELL CONST		PID (PPM)		
DEPTH ELEVATION	INTERVAL	PEN / REC	BLOWS / 6"	SPT	STRATA CHANGE (Ft/EI.)						Background/	Actual	
0	0.0 - 4.0	4/1.5				0.0 - 0.5': Concrete.					0.0		
1						0.5 - 2.0': Black and gray silt with brick fragments.					0.2		
2											0.7		
3						2.0 - 6.0': Brown and gray tightly packed silt, wet.					0.3		
4											0.5		
5	4.0 - 8.0	4/3.75										0.6	
6						6.0 - 7.0': Black silty clay.					0.5		
7											0.4		
8						7.0 - 9.5': Tightly packed gray clayey silt, moist to wet.					0.9		
9											0.4		
10	8.0 - 12.0	4/0.25				Refusal at 9.5 ft bgs					0.7		
11						Soil sample B-10 (5.5-6.0) collected at 0950 from wet gray silt to black silt with clay interface					2.1		
12						Temporary monitoring well installed; depth to water 4.14 ft bgs					0.8		
13						GW sample TW10 collected at 1010					0.9		
14											0.7		
15	12.0 - 16.0	NA										0.5	
16												0.4	
17												0.4	
18													
19													
20	16.0 - 20.0	NA											
21													
22													
23													
24													
25	20.0 - 25.0	NA											
26													
27													
28													
29													
30	25.0 - 30.0	NA											
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SOIL BORING/MONITORING WELL CONSTRUCTION LOG							DESIGNATION		MW-1			
		PROJECT:		300 East 12th Street			PROJECT NO.:		10153.LK			
		LOCATION:		NY, NY			DRILLER:		PAL			
		INSTALLATION DATES		2/7/2023			INSPECTOR:		Eugene Giardino			
							PAGE		1 of 1			
SAMPLER		CASING		CORE		GROUNDWATER DEPTH MEASUREMENTS						
TYPE	Geoprobe 420	TYPE	Sleeve	BARREL TYPE	Steel	ELEVATION INFORMATION		DATE:	2/7/2023			
SIZE (ID)	2 IN	MATERIAL	PVC	SIZE (ID)	2	DATUM:	-	TIME:	14:00			
HAMMER (LB.)	-	DIAMETER	2"	DIAMETER	2	TOC:	-	DEPTH (Ft):	10.50			
FALL (IN.)	-	LENGTH	3'			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 - 3.0	3/2.0				0.0 - 0.5': Concrete.			0.0			
1								0.0				
2								0.0				
3	3.0 - 6.0	3/2.5				0.5 - 5.0': Brown silt with weathered schist and rounded cobbles. Moist to wet at 4.0 feet bgs. No staining/odor.			0.0			
4									0.0			
5									0.0			
6	6.0 - 9.0	3/3.0					5.0 - 10.0': Gray silt with trace clay. Petroleum-like odor and staining.			0.8		
7										0.9		
8										1.1		
9	9.0 - 12.0	3/2.5				10.0 - 12.0': Gray silt and fine grain sand. Petroleum-like odor.				106.1		
10										137.4		
11										99.7		
12	12.0 - 16.0	NA			Boring terminated at 12.0 ft bgs Soil sample MW-1 (5.5-6.0) at 1240 from intercal with highest PID reading Permanent monitoring well installed. See construction details below.				62.9			
13									60.2			
14									80.3			
15	16.0 - 20.0	NA							19.6			
16									136.2			
17									86.2			
18	20.0 - 25.0	NA								48.9		
19										43.1		
20										30.2		
21	25.0 - 30.0	NA								15.6		
22										22.9		
23												
24												
25												
26												
27												
28												
29												
MODIFIER		SAND AND GRAVEL		SILT AND CLAY		LOCATION:		Eastern courtyard		WELL CONSTRUCTION		
1 - 10%	Trace	Density	Blows (N)	Consistency	Blows (N)	MONITORING WELL CONSTRUCTION DATA						Screen Riser Concrete Bentonite Native Sand Grout
10 - 20%	Little	Very loose	0 - 4	Very soft	<2	DEPTH:	12	DEPTH/TYPE PACK:	-			
20 - 35%	Some	Loose	4 - 10	Soft	2 - 4	DIAMETER (inches):	2.0	DEPTH/TYPE SEAL:	-			
35 - 50%	And	Medium Dense	10 - 30	Medium Stiff	4 - 8	MATERIAL:	PVC	BACKFILL MATERIAL:	-			
		Dense	30 - 50	Stiff	8 - 15	SLOT SIZE (inches):	0.01	SURFACE SEAL:	-			
		Very Dense	>50	Very Stiff	15 - 30	SCREEN INTERVAL:	2'-12'	ROADBOX DESC.:	-			
						LENGTH OF RISER:	2'					
NOTES:												
1. Soils are visually classified in general accordance with the Modified Burmister Soil Classification System.												

SOIL BORING/MONITORING WELL CONSTRUCTION LOG										DESIGNATION		MW-2							
		PROJECT:		300 East 12th Street						PROJECT NO.:		10153.LK							
		LOCATION:		NY, NY						DRILLER:		PAL							
		INSTALLATION DATES		2/7/2023						INSPECTOR:		Eugene Giardino							
										PAGE		1 of 1							
SAMPLER		CASING		CORE		GROUNDWATER DEPTH MEASUREMENTS													
TYPE		Geoprobe 420		TYPE		Sleeve		BARREL TYPE		Steel		ELEVATION INFORMATION		DATE:		2/7/2023			
SIZE (ID)		2 IN		MATERIAL		PVC		SIZE (ID)		2		DATUM:		-		TIME:		11:00	
HAMMER (LB.)		-		DIAMETER		2"		DIAMETER		2		TOC:		-		DEPTH (Ft):		5.31	
FALL (IN.)		-		LENGTH		3'						GS:		-		ELEVATION (Ft):		-	
SAMPLE INFORMATION										SOIL DESCRIPTION				WELL CONST		PID (PPM) Background/ Actual			
DEPTH ELEVATION		INTERVAL		PEN / REC		BLOWS / 6"		SPT										STRATA CHANGE (Ft/EI.)	
0		0.0 - 3.0		3/2.0								0.0 - 0.5': Concrete.						0.0	
																		223	
1																		619	
2																		572	
3		3.0 - 6.0		3/1.75								0.5 - 2.5': Brown and gray silt with brick fragments, moist to wet.						389	
																		322	
4																		277	
5																		251	
6		6.0 - 9.0		3/2.25								2.5 - 10.0': Gray wet silt. Strong solvent-like odor						306	
																		417	
7																		3,278	
8																		4,732	
9		9.0 - 12.0		3/2.0								10.0 - 11.5': Gray silt with trace clay. Wet. Strong solvent-like odor.						2,821	
																		>15,000	
10																		>15,000	
11																		>15,000	
12		12.0 - 16.0		NA								Refusal at 11.5 ft bgs. Permanent monitoring well installed. See construction details below.						893	
																		539	
13																		675	
14																			
15		16.0 - 20.0		NA															
16																			
17																			
18		20.0 - 25.0		NA															
19																			
20																			
21		25.0 - 30.0		NA															
22																			
23																			
24																			
25																			
26																			
27																			
28																			
29																			
MODIFIER		SAND AND GRAVEL		SILT AND CLAY		LOCATION:		Hallway near bathroom and drain pipe.						WELL CONSTRUCTION					
1 - 10%		Trace		Density		Blows (N)		Consistency		Blows (N)		MONITORING WELL CONSTRUCTION DATA							
10 - 20%		Little		Very loose		0 - 4		Very soft		<2		DEPTH:		11.5		DEPTH/TYPE PACK:		-	
20 - 35%		Some		Loose		4 - 10		Soft		2 - 4		DIAMETER (inches):		2.0		DEPTH/TYPE SEAL:		-	
35 - 50%		And		Medium Dense		10 - 30		Medium Stiff		4 - 8		MATERIAL:		PVC		BACKFILL MATERIAL:		-	
				Dense		30 - 50		Stiff		8 - 15		SLOT SIZE (inches):		0.02		SURFACE SEAL:		-	
				Very Dense		>50		Very Stiff		15 - 30		SCREEN INTERVAL:		1.5'-11.5'		ROADBOX DESC.:		-	
								Hard		>30		LENGTH OF RISER:		1.5					
NOTES:																			
1. Soils are visually classified in general accordance with the Modified Burmister Soil Classification System.																			

SOIL BORING/MONITORING WELL CONSTRUCTION LOG										DESIGNATION		MW-3		
		PROJECT:		300 East 12th Street						PROJECT NO.:		10153.LK		
		LOCATION:		NY, NY						DRILLER:		PAL		
		INSTALLATION DATES		2/7/2023						INSPECTOR:		Eugene Giardino		
										PAGE		1 of 1		
SAMPLER		CASING		CORE		GROUNDWATER DEPTH MEASUREMENTS								
TYPE	Geoprobe 420	TYPE	Sleeve	BARREL TYPE	Steel	ELEVATION INFORMATION		DATE:	2/7/2023					
SIZE (ID)	2 IN	MATERIAL	PVC	SIZE (ID)	2	DATUM:	-	TIME:	9:40					
HAMMER (LB.)	-	DIAMETER	2"	DIAMETER	2	TOC:	-	DEPTH (Ft):	5.33					
FALL (IN.)	-	LENGTH	3'			GS:	-	ELEVATION (Ft):	-					
SAMPLE INFORMATION						SOIL DESCRIPTION				WELL CONST		PID (PPM)		
DEPTH ELEVATION	INTERVAL	PEN / REC	BLOWS / 6"	SPT	STRATA CHANGE (Ft/EI.)							Background/ Actual		
0	0.0 - 3.0	3/1.5				0.0 - 0.5': Concrete.			0.0					
1						0.5 - 2.5': Brown and gray silt with brick fragments, dry to moist.			2.1					
2									3.6					
3				39.8										
4	3.0 - 6.0	3/2.25				68.9								
5						91.1								
6						103.6								
7	6.0 - 9.0	3/2.5				121.5								
8						144.1								
9						155.3								
10	9.0 - 12.0	3/2.0				29.3								
11						24.5								
12						30.7								
13	12.0 - 16.0	NA				10.8								
14						7.7								
15					43.6									
16	16.0 - 20.0	NA			173.1									
17					414									
18					366									
19	20.0 - 25.0	NA			284									
20					53.1									
21					20.2									
22	25.0 - 30.0	NA				Refusal at 11.0 ft bgs Permanent monitoring well installed. See construction details below.								
23														
24														
25														
26														
27														
28														
29														
MODIFIER		SAND AND GRAVEL		SILT AND CLAY					LOCATION:		Near basement stairwell/E. 12th Street.		WELL CONSTRUCTION	
1 - 10%	Trace	Density	BloWS (N)	Consistency	BloWS (N)				MONITORING WELL CONSTRUCTION DATA					
10 - 20%	Little	Very loose	0 - 4	Very soft	<2				DEPTH:	11	DEPTH/TYPE PACK:	-		Screen
20 - 35%	Some	Loose	4 - 10	Soft	2 - 4				DIAMETER (inches):	2.0	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):	0.02	SURFACE SEAL:	-		Native
		Very Dense	>50	Very Stiff	15 - 30				SCREEN INTERVAL:	1'-11'	ROADBOX DESC.:	-		Sand
				Hard	>30	LENGTH OF RISER:	1'			Grout				
NOTES:														
1. Soils are visually classified in general accordance with the Modified Burmister Soil Classification System.														

Appendix E:
Laboratory Report – Soil (September 2022)



ANALYTICAL REPORT

Lab Number:	L2248925
Client:	The Vertex Companies, Inc. 3322 US Highway 22 West Suite 907 Branchburg, NJ 08876
ATTN:	Tim Biercz
Phone:	(732) 414-2224
Project Name:	2ND AVE
Project Number:	81363
Report Date:	09/22/22

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

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



Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2248925-01	B-1 (7.5-8.0)	SOIL	NY, NY	09/07/22 10:55	09/08/22
L2248925-02	B-2 (7.0-7.5)	SOIL	NY, NY	09/07/22 10:10	09/08/22
L2248925-03	B-3 (5.5-6.0)	SOIL	NY, NY	09/07/22 09:50	09/08/22
L2248925-04	B-4 (7.0-7.5)	SOIL	NY, NY	09/07/22 09:30	09/08/22
L2248925-05	B-5 (8.5-9.0)	SOIL	NY, NY	09/08/22 08:30	09/08/22
L2248925-06	B-6 (9.0-9.5)	SOIL	NY, NY	09/07/22 09:10	09/08/22
L2248925-07	B-7 (7.0-7.5)	SOIL	NY, NY	09/07/22 13:35	09/08/22
L2248925-08	B-8 (1.0-1.5)	SOIL	NY, NY	09/07/22 13:15	09/08/22
L2248925-09	B-9 (6.0-6.5)	SOIL	NY, NY	09/08/22 09:30	09/08/22
L2248925-10	B-10 (5.5-6.0)	SOIL	NY, NY	09/08/22 09:50	09/08/22

Project Name: 2ND AVE
Project Number: 81363

Lab Number: L2248925
Report Date: 09/22/22

Case Narrative

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

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

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

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

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

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

Project Name: 2ND AVE
Project Number: 81363

Lab Number: L2248925
Report Date: 09/22/22

Case Narrative (continued)

Report Submission

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

Sample Receipt

L2248925-07: The collection date and time on the chain of custody was 07-SEP-22 13:55; however, the collection date/time on the container label was 07-SEP-22 13:35. At the client's request, the collection date/time is reported as 07-SEP-22 13:35.

Volatile Organics

L2248925-01 and -04: The sample was analyzed as a High Level Methanol in order to quantitate results within the calibration range. The result should be considered estimated, and is qualified with an E flag, for any compound that exceeded the calibration on the initial Low Level analysis. The results of both analyses are reported.

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

Authorized Signature:

 Cristin Walker

Title: Technical Director/Representative

Date: 09/22/22

ORGANICS

VOLATILES

Project Name: 2ND AVE**Lab Number:** L2248925**Project Number:** 81363**Report Date:** 09/22/22**SAMPLE RESULTS**

Lab ID: L2248925-01

Date Collected: 09/07/22 10:55

Client ID: B-1 (7.5-8.0)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 1,8260C

Analytical Date: 09/09/22 16:47

Analyst: NLK

Percent Solids: 38%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	25	12.	1
1,1-Dichloroethane	1.0	J	ug/kg	5.0	0.73	1
Chloroform	ND		ug/kg	7.6	0.70	1
Carbon tetrachloride	ND		ug/kg	5.0	1.2	1
1,2-Dichloropropane	ND		ug/kg	5.0	0.63	1
Dibromochloromethane	ND		ug/kg	5.0	0.70	1
1,1,2-Trichloroethane	ND		ug/kg	5.0	1.3	1
Tetrachloroethene	2900	E	ug/kg	2.5	0.99	1
Chlorobenzene	ND		ug/kg	2.5	0.64	1
Trichlorofluoromethane	ND		ug/kg	20	3.5	1
1,2-Dichloroethane	ND		ug/kg	5.0	1.3	1
1,1,1-Trichloroethane	ND		ug/kg	2.5	0.84	1
Bromodichloromethane	ND		ug/kg	2.5	0.55	1
trans-1,3-Dichloropropene	ND		ug/kg	5.0	1.4	1
cis-1,3-Dichloropropene	ND		ug/kg	2.5	0.80	1
1,3-Dichloropropene, Total	ND		ug/kg	2.5	0.80	1
1,1-Dichloropropene	ND		ug/kg	2.5	0.80	1
Bromoform	ND		ug/kg	20	1.2	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	2.5	0.84	1
Benzene	0.87	J	ug/kg	2.5	0.84	1
Toluene	ND		ug/kg	5.0	2.7	1
Ethylbenzene	ND		ug/kg	5.0	0.71	1
Chloromethane	ND		ug/kg	20	4.7	1
Bromomethane	ND		ug/kg	10	2.9	1
Vinyl chloride	28		ug/kg	5.0	1.7	1
Chloroethane	ND		ug/kg	10	2.3	1
1,1-Dichloroethene	ND		ug/kg	5.0	1.2	1
trans-1,2-Dichloroethene	14		ug/kg	7.6	0.69	1

Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248925-01

Date Collected: 09/07/22 10:55

Client ID: B-1 (7.5-8.0)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	60		ug/kg	2.5	0.69	1
1,2-Dichlorobenzene	ND		ug/kg	10	0.72	1
1,3-Dichlorobenzene	ND		ug/kg	10	0.74	1
1,4-Dichlorobenzene	ND		ug/kg	10	0.86	1
Methyl tert butyl ether	ND		ug/kg	10	1.0	1
p/m-Xylene	ND		ug/kg	10	2.8	1
o-Xylene	ND		ug/kg	5.0	1.5	1
Xylenes, Total	ND		ug/kg	5.0	1.5	1
cis-1,2-Dichloroethene	150		ug/kg	5.0	0.88	1
1,2-Dichloroethene, Total	160		ug/kg	5.0	0.69	1
Dibromomethane	ND		ug/kg	10	1.2	1
Styrene	ND		ug/kg	5.0	0.99	1
Dichlorodifluoromethane	ND		ug/kg	50	4.6	1
Acetone	1000		ug/kg	50	24.	1
Carbon disulfide	ND		ug/kg	50	23.	1
2-Butanone	280		ug/kg	50	11.	1
Vinyl acetate	ND		ug/kg	50	11.	1
4-Methyl-2-pentanone	ND		ug/kg	50	6.4	1
1,2,3-Trichloropropane	ND		ug/kg	10	0.64	1
2-Hexanone	ND		ug/kg	50	5.9	1
Bromochloromethane	ND		ug/kg	10	1.0	1
2,2-Dichloropropane	ND		ug/kg	10	1.0	1
1,2-Dibromoethane	ND		ug/kg	5.0	1.4	1
1,3-Dichloropropane	ND		ug/kg	10	0.84	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	2.5	0.66	1
Bromobenzene	ND		ug/kg	10	0.73	1
n-Butylbenzene	ND		ug/kg	5.0	0.84	1
sec-Butylbenzene	ND		ug/kg	5.0	0.74	1
tert-Butylbenzene	ND		ug/kg	10	0.59	1
o-Chlorotoluene	ND		ug/kg	10	0.96	1
p-Chlorotoluene	ND		ug/kg	10	0.54	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	15	5.0	1
Hexachlorobutadiene	ND		ug/kg	20	0.85	1
Isopropylbenzene	ND		ug/kg	5.0	0.55	1
p-Isopropyltoluene	ND		ug/kg	5.0	0.55	1
Naphthalene	ND		ug/kg	20	3.3	1
Acrylonitrile	ND		ug/kg	20	5.8	1

Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248925-01

Date Collected: 09/07/22 10:55

Client ID: B-1 (7.5-8.0)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	5.0	0.86	1
1,2,3-Trichlorobenzene	ND		ug/kg	10	1.6	1
1,2,4-Trichlorobenzene	ND		ug/kg	10	1.4	1
1,3,5-Trimethylbenzene	ND		ug/kg	10	0.97	1
1,2,4-Trimethylbenzene	ND		ug/kg	10	1.7	1
1,4-Dioxane	ND		ug/kg	400	180	1
p-Diethylbenzene	ND		ug/kg	10	0.89	1
p-Ethyltoluene	ND		ug/kg	10	1.9	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	10	0.96	1
Ethyl ether	ND		ug/kg	10	1.7	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	25	7.2	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	101		70-130

Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248925-01

Date Collected: 09/07/22 10:55

Client ID: B-1 (7.5-8.0)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 1,8260C

Analytical Date: 09/16/22 07:31

Analyst: JC

Percent Solids: 38%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Methylene chloride	ND		ug/kg	1200	550	1
1,1-Dichloroethane	ND		ug/kg	240	35.	1
Chloroform	ND		ug/kg	360	34.	1
Carbon tetrachloride	ND		ug/kg	240	56.	1
1,2-Dichloropropane	ND		ug/kg	240	30.	1
Dibromochloromethane	ND		ug/kg	240	34.	1
1,1,2-Trichloroethane	ND		ug/kg	240	65.	1
Tetrachloroethene	2400		ug/kg	120	47.	1
Chlorobenzene	ND		ug/kg	120	31.	1
Trichlorofluoromethane	ND		ug/kg	970	170	1
1,2-Dichloroethane	ND		ug/kg	240	62.	1
1,1,1-Trichloroethane	ND		ug/kg	120	40.	1
Bromodichloromethane	ND		ug/kg	120	26.	1
trans-1,3-Dichloropropene	ND		ug/kg	240	66.	1
cis-1,3-Dichloropropene	ND		ug/kg	120	38.	1
1,3-Dichloropropene, Total	ND		ug/kg	120	38.	1
1,1-Dichloropropene	ND		ug/kg	120	38.	1
Bromoform	ND		ug/kg	970	60.	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	120	40.	1
Benzene	ND		ug/kg	120	40.	1
Toluene	340		ug/kg	240	130	1
Ethylbenzene	49	J	ug/kg	240	34.	1
Chloromethane	ND		ug/kg	970	220	1
Bromomethane	ND		ug/kg	480	140	1
Vinyl chloride	ND		ug/kg	240	81.	1
Chloroethane	ND		ug/kg	480	110	1
1,1-Dichloroethene	ND		ug/kg	240	58.	1
trans-1,2-Dichloroethene	60	J	ug/kg	360	33.	1

Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248925-01

Date Collected: 09/07/22 10:55

Client ID: B-1 (7.5-8.0)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Trichloroethene	ND		ug/kg	120	33.	1
1,2-Dichlorobenzene	ND		ug/kg	480	35.	1
1,3-Dichlorobenzene	ND		ug/kg	480	36.	1
1,4-Dichlorobenzene	ND		ug/kg	480	41.	1
Methyl tert butyl ether	ND		ug/kg	480	49.	1
p/m-Xylene	ND		ug/kg	480	140	1
o-Xylene	ND		ug/kg	240	70.	1
Xylenes, Total	ND		ug/kg	240	70.	1
cis-1,2-Dichloroethene	93	J	ug/kg	240	42.	1
1,2-Dichloroethene, Total	150	J	ug/kg	240	33.	1
Dibromomethane	ND		ug/kg	480	58.	1
Styrene	90	J	ug/kg	240	47.	1
Dichlorodifluoromethane	ND		ug/kg	2400	220	1
Acetone	3000		ug/kg	2400	1200	1
Carbon disulfide	ND		ug/kg	2400	1100	1
2-Butanone	680	J	ug/kg	2400	540	1
Vinyl acetate	ND		ug/kg	2400	520	1
4-Methyl-2-pentanone	ND		ug/kg	2400	310	1
1,2,3-Trichloropropane	ND		ug/kg	480	31.	1
2-Hexanone	ND		ug/kg	2400	280	1
Bromochloromethane	ND		ug/kg	480	50.	1
2,2-Dichloropropane	ND		ug/kg	480	49.	1
1,2-Dibromoethane	ND		ug/kg	240	68.	1
1,3-Dichloropropane	ND		ug/kg	480	40.	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	120	32.	1
Bromobenzene	ND		ug/kg	480	35.	1
n-Butylbenzene	ND		ug/kg	240	40.	1
sec-Butylbenzene	ND		ug/kg	240	35.	1
tert-Butylbenzene	ND		ug/kg	480	28.	1
o-Chlorotoluene	ND		ug/kg	480	46.	1
p-Chlorotoluene	ND		ug/kg	480	26.	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	730	240	1
Hexachlorobutadiene	ND		ug/kg	970	41.	1
Isopropylbenzene	ND		ug/kg	240	26.	1
p-Isopropyltoluene	ND		ug/kg	240	26.	1
Naphthalene	ND		ug/kg	970	160	1
Acrylonitrile	ND		ug/kg	970	280	1

Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248925-01

Date Collected: 09/07/22 10:55

Client ID: B-1 (7.5-8.0)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
n-Propylbenzene	ND		ug/kg	240	41.	1
1,2,3-Trichlorobenzene	ND		ug/kg	480	78.	1
1,2,4-Trichlorobenzene	ND		ug/kg	480	66.	1
1,3,5-Trimethylbenzene	ND		ug/kg	480	47.	1
1,2,4-Trimethylbenzene	ND		ug/kg	480	81.	1
1,4-Dioxane	ND		ug/kg	19000	8500	1
p-Diethylbenzene	ND		ug/kg	480	43.	1
p-Ethyltoluene	ND		ug/kg	480	93.	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	480	46.	1
Ethyl ether	ND		ug/kg	480	82.	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	1200	340	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	95		70-130

Project Name: 2ND AVE**Lab Number:** L2248925**Project Number:** 81363**Report Date:** 09/22/22**SAMPLE RESULTS**

Lab ID: L2248925-02 D2

Date Collected: 09/07/22 10:10

Client ID: B-2 (7.0-7.5)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 1,8260C

Analytical Date: 09/14/22 12:41

Analyst: NLK

Percent Solids: 81%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Methylene chloride	ND		ug/kg	120000	56000	400
1,1-Dichloroethane	ND		ug/kg	25000	3600	400
Chloroform	ND		ug/kg	37000	3400	400
Carbon tetrachloride	ND		ug/kg	25000	5700	400
1,2-Dichloropropane	ND		ug/kg	25000	3100	400
Dibromochloromethane	ND		ug/kg	25000	3400	400
1,1,2-Trichloroethane	ND		ug/kg	25000	6600	400
Tetrachloroethene	12000000	E	ug/kg	12000	4800	400
Chlorobenzene	ND		ug/kg	12000	3100	400
Trichlorofluoromethane	ND		ug/kg	98000	17000	400
1,2-Dichloroethane	ND		ug/kg	25000	6300	400
1,1,1-Trichloroethane	ND		ug/kg	12000	4100	400
Bromodichloromethane	ND		ug/kg	12000	2700	400
trans-1,3-Dichloropropene	ND		ug/kg	25000	6700	400
cis-1,3-Dichloropropene	ND		ug/kg	12000	3900	400
1,3-Dichloropropene, Total	ND		ug/kg	12000	3900	400
1,1-Dichloropropene	ND		ug/kg	12000	3900	400
Bromoform	ND		ug/kg	98000	6000	400
1,1,2,2-Tetrachloroethane	ND		ug/kg	12000	4100	400
Benzene	ND		ug/kg	12000	4100	400
Toluene	ND		ug/kg	25000	13000	400
Ethylbenzene	ND		ug/kg	25000	3500	400
Chloromethane	ND		ug/kg	98000	23000	400
Bromomethane	ND		ug/kg	49000	14000	400
Vinyl chloride	16000	J	ug/kg	25000	8200	400
Chloroethane	ND		ug/kg	49000	11000	400
1,1-Dichloroethene	ND		ug/kg	25000	5900	400
trans-1,2-Dichloroethene	ND		ug/kg	37000	3400	400



Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248925-02 D2

Date Collected: 09/07/22 10:10

Client ID: B-2 (7.0-7.5)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Trichloroethene	140000		ug/kg	12000	3400	400
1,2-Dichlorobenzene	ND		ug/kg	49000	3500	400
1,3-Dichlorobenzene	ND		ug/kg	49000	3600	400
1,4-Dichlorobenzene	ND		ug/kg	49000	4200	400
Methyl tert butyl ether	ND		ug/kg	49000	5000	400
p/m-Xylene	ND		ug/kg	49000	14000	400
o-Xylene	ND		ug/kg	25000	7200	400
Xylenes, Total	ND		ug/kg	25000	7200	400
cis-1,2-Dichloroethene	130000		ug/kg	25000	4300	400
1,2-Dichloroethene, Total	130000		ug/kg	25000	3400	400
Dibromomethane	ND		ug/kg	49000	5900	400
Styrene	ND		ug/kg	25000	4800	400
Dichlorodifluoromethane	ND		ug/kg	250000	22000	400
Acetone	ND		ug/kg	250000	120000	400
Carbon disulfide	ND		ug/kg	250000	110000	400
2-Butanone	ND		ug/kg	250000	55000	400
Vinyl acetate	ND		ug/kg	250000	53000	400
4-Methyl-2-pentanone	ND		ug/kg	250000	32000	400
1,2,3-Trichloropropane	ND		ug/kg	49000	3100	400
2-Hexanone	ND		ug/kg	250000	29000	400
Bromochloromethane	ND		ug/kg	49000	5000	400
2,2-Dichloropropane	ND		ug/kg	49000	5000	400
1,2-Dibromoethane	ND		ug/kg	25000	6900	400
1,3-Dichloropropane	ND		ug/kg	49000	4100	400
1,1,1,2-Tetrachloroethane	ND		ug/kg	12000	3200	400
Bromobenzene	ND		ug/kg	49000	3600	400
n-Butylbenzene	ND		ug/kg	25000	4100	400
sec-Butylbenzene	ND		ug/kg	25000	3600	400
tert-Butylbenzene	ND		ug/kg	49000	2900	400
o-Chlorotoluene	ND		ug/kg	49000	4700	400
p-Chlorotoluene	ND		ug/kg	49000	2700	400
1,2-Dibromo-3-chloropropane	ND		ug/kg	74000	24000	400
Hexachlorobutadiene	ND		ug/kg	98000	4200	400
Isopropylbenzene	ND		ug/kg	25000	2700	400
p-Isopropyltoluene	ND		ug/kg	25000	2700	400
Naphthalene	ND		ug/kg	98000	16000	400
Acrylonitrile	ND		ug/kg	98000	28000	400

Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248925-02 D2

Date Collected: 09/07/22 10:10

Client ID: B-2 (7.0-7.5)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
n-Propylbenzene	ND		ug/kg	25000	4200	400
1,2,3-Trichlorobenzene	ND		ug/kg	49000	7900	400
1,2,4-Trichlorobenzene	ND		ug/kg	49000	6700	400
1,3,5-Trimethylbenzene	ND		ug/kg	49000	4800	400
1,2,4-Trimethylbenzene	ND		ug/kg	49000	8200	400
1,4-Dioxane	ND		ug/kg	2000000	860000	400
p-Diethylbenzene	ND		ug/kg	49000	4400	400
p-Ethyltoluene	ND		ug/kg	49000	9400	400
1,2,4,5-Tetramethylbenzene	ND		ug/kg	49000	4700	400
Ethyl ether	ND		ug/kg	49000	8400	400
trans-1,4-Dichloro-2-butene	ND		ug/kg	120000	35000	400

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	85		70-130
Dibromofluoromethane	107		70-130

Project Name: 2ND AVE**Lab Number:** L2248925**Project Number:** 81363**Report Date:** 09/22/22**SAMPLE RESULTS**

Lab ID: L2248925-02 D

Date Collected: 09/07/22 10:10

Client ID: B-2 (7.0-7.5)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 1,8260C

Analytical Date: 09/09/22 17:13

Analyst: NLK

Percent Solids: 81%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Tetrachloroethene	10000000		ug/kg	31000	12000	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	101		70-130

Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248925-03 D2

Date Collected: 09/07/22 09:50

Client ID: B-3 (5.5-6.0)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 1,8260C

Analytical Date: 09/15/22 02:22

Analyst: JC

Percent Solids: 87%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Methylene chloride	ND		ug/kg	2800	1300	10
1,1-Dichloroethane	ND		ug/kg	570	82.	10
Chloroform	ND		ug/kg	850	80.	10
Carbon tetrachloride	ND		ug/kg	570	130	10
1,2-Dichloropropane	ND		ug/kg	570	71.	10
Dibromochloromethane	ND		ug/kg	570	80.	10
1,1,2-Trichloroethane	ND		ug/kg	570	150	10
Tetrachloroethene	1000000	E	ug/kg	280	110	10
Chlorobenzene	ND		ug/kg	280	72.	10
Trichlorofluoromethane	ND		ug/kg	2300	400	10
1,2-Dichloroethane	ND		ug/kg	570	150	10
1,1,1-Trichloroethane	ND		ug/kg	280	95.	10
Bromodichloromethane	ND		ug/kg	280	62.	10
trans-1,3-Dichloropropene	ND		ug/kg	570	160	10
cis-1,3-Dichloropropene	ND		ug/kg	280	90.	10
1,3-Dichloropropene, Total	ND		ug/kg	280	90.	10
1,1-Dichloropropene	ND		ug/kg	280	90.	10
Bromoform	ND		ug/kg	2300	140	10
1,1,2,2-Tetrachloroethane	ND		ug/kg	280	94.	10
Benzene	ND		ug/kg	280	94.	10
Toluene	380	J	ug/kg	570	310	10
Ethylbenzene	87	J	ug/kg	570	80.	10
Chloromethane	ND		ug/kg	2300	530	10
Bromomethane	ND		ug/kg	1100	330	10
Vinyl chloride	ND		ug/kg	570	190	10
Chloroethane	ND		ug/kg	1100	260	10
1,1-Dichloroethene	ND		ug/kg	570	140	10
trans-1,2-Dichloroethene	ND		ug/kg	850	78.	10

Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248925-03 D2

Date Collected: 09/07/22 09:50

Client ID: B-3 (5.5-6.0)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Trichloroethene	15000		ug/kg	280	78.	10
1,2-Dichlorobenzene	ND		ug/kg	1100	82.	10
1,3-Dichlorobenzene	ND		ug/kg	1100	84.	10
1,4-Dichlorobenzene	ND		ug/kg	1100	97.	10
Methyl tert butyl ether	ND		ug/kg	1100	110	10
p/m-Xylene	ND		ug/kg	1100	320	10
o-Xylene	ND		ug/kg	570	160	10
Xylenes, Total	ND		ug/kg	570	160	10
cis-1,2-Dichloroethene	4500		ug/kg	570	100	10
1,2-Dichloroethene, Total	4500		ug/kg	570	78.	10
Dibromomethane	ND		ug/kg	1100	140	10
Styrene	110	J	ug/kg	570	110	10
Dichlorodifluoromethane	ND		ug/kg	5700	520	10
Acetone	ND		ug/kg	5700	2700	10
Carbon disulfide	ND		ug/kg	5700	2600	10
2-Butanone	ND		ug/kg	5700	1300	10
Vinyl acetate	ND		ug/kg	5700	1200	10
4-Methyl-2-pentanone	ND		ug/kg	5700	730	10
1,2,3-Trichloropropane	ND		ug/kg	1100	72.	10
2-Hexanone	ND		ug/kg	5700	670	10
Bromochloromethane	ND		ug/kg	1100	120	10
2,2-Dichloropropane	ND		ug/kg	1100	110	10
1,2-Dibromoethane	ND		ug/kg	570	160	10
1,3-Dichloropropane	ND		ug/kg	1100	95.	10
1,1,1,2-Tetrachloroethane	ND		ug/kg	280	75.	10
Bromobenzene	ND		ug/kg	1100	82.	10
n-Butylbenzene	ND		ug/kg	570	95.	10
sec-Butylbenzene	ND		ug/kg	570	83.	10
tert-Butylbenzene	ND		ug/kg	1100	67.	10
o-Chlorotoluene	ND		ug/kg	1100	110	10
p-Chlorotoluene	ND		ug/kg	1100	61.	10
1,2-Dibromo-3-chloropropane	ND		ug/kg	1700	570	10
Hexachlorobutadiene	ND		ug/kg	2300	96.	10
Isopropylbenzene	ND		ug/kg	570	62.	10
p-Isopropyltoluene	ND		ug/kg	570	62.	10
Naphthalene	420	J	ug/kg	2300	370	10
Acrylonitrile	ND		ug/kg	2300	650	10

Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248925-03 D2

Date Collected: 09/07/22 09:50

Client ID: B-3 (5.5-6.0)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
n-Propylbenzene	ND		ug/kg	570	97.	10
1,2,3-Trichlorobenzene	ND		ug/kg	1100	180	10
1,2,4-Trichlorobenzene	ND		ug/kg	1100	150	10
1,3,5-Trimethylbenzene	ND		ug/kg	1100	110	10
1,2,4-Trimethylbenzene	ND		ug/kg	1100	190	10
1,4-Dioxane	ND		ug/kg	46000	20000	10
p-Diethylbenzene	ND		ug/kg	1100	100	10
p-Ethyltoluene	ND		ug/kg	1100	220	10
1,2,4,5-Tetramethylbenzene	ND		ug/kg	1100	110	10
Ethyl ether	ND		ug/kg	1100	190	10
trans-1,4-Dichloro-2-butene	ND		ug/kg	2800	810	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	94		70-130

Project Name: 2ND AVE**Lab Number:** L2248925**Project Number:** 81363**Report Date:** 09/22/22**SAMPLE RESULTS**

Lab ID: L2248925-03 D

Date Collected: 09/07/22 09:50

Client ID: B-3 (5.5-6.0)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 1,8260C

Analytical Date: 09/15/22 02:02

Analyst: JC

Percent Solids: 87%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Tetrachloroethene	890000		ug/kg	5700	2200	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	94		70-130

Project Name: 2ND AVE**Lab Number:** L2248925**Project Number:** 81363**Report Date:** 09/22/22**SAMPLE RESULTS**

Lab ID: L2248925-04

Date Collected: 09/07/22 09:30

Client ID: B-4 (7.0-7.5)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 1,8260C

Analytical Date: 09/09/22 18:05

Analyst: NLK

Percent Solids: 83%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	8.5	3.9	1
1,1-Dichloroethane	0.84	J	ug/kg	1.7	0.25	1
Chloroform	ND		ug/kg	2.5	0.24	1
Carbon tetrachloride	ND		ug/kg	1.7	0.39	1
1,2-Dichloropropane	ND		ug/kg	1.7	0.21	1
Dibromochloromethane	ND		ug/kg	1.7	0.24	1
1,1,2-Trichloroethane	ND		ug/kg	1.7	0.45	1
Tetrachloroethene	190		ug/kg	0.85	0.33	1
Chlorobenzene	ND		ug/kg	0.85	0.22	1
Trichlorofluoromethane	ND		ug/kg	6.8	1.2	1
1,2-Dichloroethane	ND		ug/kg	1.7	0.44	1
1,1,1-Trichloroethane	ND		ug/kg	0.85	0.28	1
Bromodichloromethane	ND		ug/kg	0.85	0.18	1
trans-1,3-Dichloropropene	ND		ug/kg	1.7	0.46	1
cis-1,3-Dichloropropene	ND		ug/kg	0.85	0.27	1
1,3-Dichloropropene, Total	ND		ug/kg	0.85	0.27	1
1,1-Dichloropropene	ND		ug/kg	0.85	0.27	1
Bromoform	ND		ug/kg	6.8	0.42	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.85	0.28	1
Benzene	0.58	J	ug/kg	0.85	0.28	1
Toluene	ND		ug/kg	1.7	0.92	1
Ethylbenzene	ND		ug/kg	1.7	0.24	1
Chloromethane	ND		ug/kg	6.8	1.6	1
Bromomethane	ND		ug/kg	3.4	0.99	1
Vinyl chloride	1.4	J	ug/kg	1.7	0.57	1
Chloroethane	ND		ug/kg	3.4	0.77	1
1,1-Dichloroethene	ND		ug/kg	1.7	0.40	1
trans-1,2-Dichloroethene	8.1		ug/kg	2.5	0.23	1

Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248925-04

Date Collected: 09/07/22 09:30

Client ID: B-4 (7.0-7.5)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	4.3		ug/kg	0.85	0.23	1
1,2-Dichlorobenzene	ND		ug/kg	3.4	0.24	1
1,3-Dichlorobenzene	ND		ug/kg	3.4	0.25	1
1,4-Dichlorobenzene	ND		ug/kg	3.4	0.29	1
Methyl tert butyl ether	ND		ug/kg	3.4	0.34	1
p/m-Xylene	ND		ug/kg	3.4	0.95	1
o-Xylene	ND		ug/kg	1.7	0.49	1
Xylenes, Total	ND		ug/kg	1.7	0.49	1
cis-1,2-Dichloroethene	25		ug/kg	1.7	0.30	1
1,2-Dichloroethene, Total	33		ug/kg	1.7	0.23	1
Dibromomethane	ND		ug/kg	3.4	0.40	1
Styrene	ND		ug/kg	1.7	0.33	1
Dichlorodifluoromethane	ND		ug/kg	17	1.6	1
Acetone	860	E	ug/kg	17	8.2	1
Carbon disulfide	ND		ug/kg	17	7.7	1
2-Butanone	220		ug/kg	17	3.8	1
Vinyl acetate	ND		ug/kg	17	3.6	1
4-Methyl-2-pentanone	ND		ug/kg	17	2.2	1
1,2,3-Trichloropropane	ND		ug/kg	3.4	0.22	1
2-Hexanone	ND		ug/kg	17	2.0	1
Bromochloromethane	ND		ug/kg	3.4	0.35	1
2,2-Dichloropropane	ND		ug/kg	3.4	0.34	1
1,2-Dibromoethane	ND		ug/kg	1.7	0.47	1
1,3-Dichloropropane	ND		ug/kg	3.4	0.28	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.85	0.22	1
Bromobenzene	ND		ug/kg	3.4	0.25	1
n-Butylbenzene	ND		ug/kg	1.7	0.28	1
sec-Butylbenzene	ND		ug/kg	1.7	0.25	1
tert-Butylbenzene	ND		ug/kg	3.4	0.20	1
o-Chlorotoluene	ND		ug/kg	3.4	0.32	1
p-Chlorotoluene	ND		ug/kg	3.4	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.1	1.7	1
Hexachlorobutadiene	ND		ug/kg	6.8	0.29	1
Isopropylbenzene	ND		ug/kg	1.7	0.18	1
p-Isopropyltoluene	ND		ug/kg	1.7	0.18	1
Naphthalene	ND		ug/kg	6.8	1.1	1
Acrylonitrile	ND		ug/kg	6.8	2.0	1

Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248925-04

Date Collected: 09/07/22 09:30

Client ID: B-4 (7.0-7.5)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	1.7	0.29	1
1,2,3-Trichlorobenzene	ND		ug/kg	3.4	0.55	1
1,2,4-Trichlorobenzene	ND		ug/kg	3.4	0.46	1
1,3,5-Trimethylbenzene	ND		ug/kg	3.4	0.33	1
1,2,4-Trimethylbenzene	ND		ug/kg	3.4	0.57	1
1,4-Dioxane	ND		ug/kg	140	60.	1
p-Diethylbenzene	ND		ug/kg	3.4	0.30	1
p-Ethyltoluene	ND		ug/kg	3.4	0.65	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	3.4	0.32	1
Ethyl ether	ND		ug/kg	3.4	0.58	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	8.5	2.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	103		70-130

Project Name: 2ND AVE**Lab Number:** L2248925**Project Number:** 81363**Report Date:** 09/22/22**SAMPLE RESULTS**

Lab ID: L2248925-04

Date Collected: 09/07/22 09:30

Client ID: B-4 (7.0-7.5)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 1,8260C

Analytical Date: 09/16/22 07:57

Analyst: JC

Percent Solids: 83%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Methylene chloride	ND		ug/kg	480	220	1
1,1-Dichloroethane	ND		ug/kg	96	14.	1
Chloroform	ND		ug/kg	140	14.	1
Carbon tetrachloride	ND		ug/kg	96	22.	1
1,2-Dichloropropane	ND		ug/kg	96	12.	1
Dibromochloromethane	ND		ug/kg	96	14.	1
1,1,2-Trichloroethane	ND		ug/kg	96	26.	1
Tetrachloroethene	530		ug/kg	48	19.	1
Chlorobenzene	ND		ug/kg	48	12.	1
Trichlorofluoromethane	ND		ug/kg	390	67.	1
1,2-Dichloroethane	ND		ug/kg	96	25.	1
1,1,1-Trichloroethane	ND		ug/kg	48	16.	1
Bromodichloromethane	ND		ug/kg	48	10.	1
trans-1,3-Dichloropropene	ND		ug/kg	96	26.	1
cis-1,3-Dichloropropene	ND		ug/kg	48	15.	1
1,3-Dichloropropene, Total	ND		ug/kg	48	15.	1
1,1-Dichloropropene	ND		ug/kg	48	15.	1
Bromoform	ND		ug/kg	390	24.	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	48	16.	1
Benzene	ND		ug/kg	48	16.	1
Toluene	ND		ug/kg	96	52.	1
Ethylbenzene	ND		ug/kg	96	14.	1
Chloromethane	ND		ug/kg	390	90.	1
Bromomethane	ND		ug/kg	190	56.	1
Vinyl chloride	ND		ug/kg	96	32.	1
Chloroethane	ND		ug/kg	190	44.	1
1,1-Dichloroethene	ND		ug/kg	96	23.	1
trans-1,2-Dichloroethene	260		ug/kg	140	13.	1

Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248925-04

Date Collected: 09/07/22 09:30

Client ID: B-4 (7.0-7.5)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Trichloroethene	ND		ug/kg	48	13.	1
1,2-Dichlorobenzene	ND		ug/kg	190	14.	1
1,3-Dichlorobenzene	ND		ug/kg	190	14.	1
1,4-Dichlorobenzene	ND		ug/kg	190	16.	1
Methyl tert butyl ether	ND		ug/kg	190	19.	1
p/m-Xylene	ND		ug/kg	190	54.	1
o-Xylene	ND		ug/kg	96	28.	1
Xylenes, Total	ND		ug/kg	96	28.	1
cis-1,2-Dichloroethene	120		ug/kg	96	17.	1
1,2-Dichloroethene, Total	380		ug/kg	96	13.	1
Dibromomethane	ND		ug/kg	190	23.	1
Styrene	ND		ug/kg	96	19.	1
Dichlorodifluoromethane	ND		ug/kg	960	88.	1
Acetone	1200		ug/kg	960	460	1
Carbon disulfide	ND		ug/kg	960	440	1
2-Butanone	370	J	ug/kg	960	210	1
Vinyl acetate	ND		ug/kg	960	210	1
4-Methyl-2-pentanone	ND		ug/kg	960	120	1
1,2,3-Trichloropropane	ND		ug/kg	190	12.	1
2-Hexanone	ND		ug/kg	960	110	1
Bromochloromethane	ND		ug/kg	190	20.	1
2,2-Dichloropropane	ND		ug/kg	190	20.	1
1,2-Dibromoethane	ND		ug/kg	96	27.	1
1,3-Dichloropropane	ND		ug/kg	190	16.	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	48	13.	1
Bromobenzene	ND		ug/kg	190	14.	1
n-Butylbenzene	ND		ug/kg	96	16.	1
sec-Butylbenzene	ND		ug/kg	96	14.	1
tert-Butylbenzene	ND		ug/kg	190	11.	1
o-Chlorotoluene	ND		ug/kg	190	18.	1
p-Chlorotoluene	ND		ug/kg	190	10.	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	290	96.	1
Hexachlorobutadiene	ND		ug/kg	390	16.	1
Isopropylbenzene	ND		ug/kg	96	10.	1
p-Isopropyltoluene	ND		ug/kg	96	10.	1
Naphthalene	ND		ug/kg	390	63.	1
Acrylonitrile	ND		ug/kg	390	110	1

Project Name: 2ND AVE**Lab Number:** L2248925**Project Number:** 81363**Report Date:** 09/22/22**SAMPLE RESULTS****Lab ID:** L2248925-04**Date Collected:** 09/07/22 09:30**Client ID:** B-4 (7.0-7.5)**Date Received:** 09/08/22**Sample Location:** NY, NY**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
n-Propylbenzene	ND		ug/kg	96	16.	1
1,2,3-Trichlorobenzene	ND		ug/kg	190	31.	1
1,2,4-Trichlorobenzene	ND		ug/kg	190	26.	1
1,3,5-Trimethylbenzene	ND		ug/kg	190	19.	1
1,2,4-Trimethylbenzene	ND		ug/kg	190	32.	1
1,4-Dioxane	ND		ug/kg	7700	3400	1
p-Diethylbenzene	ND		ug/kg	190	17.	1
p-Ethyltoluene	ND		ug/kg	190	37.	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	190	18.	1
Ethyl ether	ND		ug/kg	190	33.	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	480	140	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	95		70-130

Project Name: 2ND AVE**Lab Number:** L2248925**Project Number:** 81363**Report Date:** 09/22/22**SAMPLE RESULTS**

Lab ID: L2248925-05 D2

Date Collected: 09/08/22 08:30

Client ID: B-5 (8.5-9.0)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 1,8260C

Analytical Date: 09/13/22 13:06

Analyst: AJK

Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Tetrachloroethene	1200000		ug/kg	5900	2300	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	92		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	101		70-130

Project Name: 2ND AVE**Lab Number:** L2248925**Project Number:** 81363**Report Date:** 09/22/22**SAMPLE RESULTS**

Lab ID: L2248925-05 D

Date Collected: 09/08/22 08:30

Client ID: B-5 (8.5-9.0)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 1,8260C

Analytical Date: 09/09/22 18:31

Analyst: NLK

Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Methylene chloride	ND		ug/kg	3000	1400	10
1,1-Dichloroethane	ND		ug/kg	590	86.	10
Chloroform	ND		ug/kg	890	83.	10
Carbon tetrachloride	ND		ug/kg	590	140	10
1,2-Dichloropropane	ND		ug/kg	590	74.	10
Dibromochloromethane	ND		ug/kg	590	83.	10
1,1,2-Trichloroethane	ND		ug/kg	590	160	10
Tetrachloroethene	1200000	E	ug/kg	300	120	10
Chlorobenzene	ND		ug/kg	300	75.	10
Trichlorofluoromethane	ND		ug/kg	2400	410	10
1,2-Dichloroethane	ND		ug/kg	590	150	10
1,1,1-Trichloroethane	ND		ug/kg	300	99.	10
Bromodichloromethane	ND		ug/kg	300	65.	10
trans-1,3-Dichloropropene	ND		ug/kg	590	160	10
cis-1,3-Dichloropropene	ND		ug/kg	300	94.	10
1,3-Dichloropropene, Total	ND		ug/kg	300	94.	10
1,1-Dichloropropene	ND		ug/kg	300	94.	10
Bromoform	ND		ug/kg	2400	150	10
1,1,2,2-Tetrachloroethane	ND		ug/kg	300	98.	10
Benzene	ND		ug/kg	300	98.	10
Toluene	ND		ug/kg	590	320	10
Ethylbenzene	ND		ug/kg	590	84.	10
Chloromethane	ND		ug/kg	2400	550	10
Bromomethane	ND		ug/kg	1200	340	10
Vinyl chloride	2400		ug/kg	590	200	10
Chloroethane	ND		ug/kg	1200	270	10
1,1-Dichloroethene	ND		ug/kg	590	140	10
trans-1,2-Dichloroethene	ND		ug/kg	890	81.	10

Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248925-05 D

Date Collected: 09/08/22 08:30

Client ID: B-5 (8.5-9.0)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Trichloroethene	14000		ug/kg	300	81.	10
1,2-Dichlorobenzene	ND		ug/kg	1200	85.	10
1,3-Dichlorobenzene	ND		ug/kg	1200	88.	10
1,4-Dichlorobenzene	ND		ug/kg	1200	100	10
Methyl tert butyl ether	ND		ug/kg	1200	120	10
p/m-Xylene	ND		ug/kg	1200	330	10
o-Xylene	ND		ug/kg	590	170	10
Xylenes, Total	ND		ug/kg	590	170	10
cis-1,2-Dichloroethene	16000		ug/kg	590	100	10
1,2-Dichloroethene, Total	16000		ug/kg	590	81.	10
Dibromomethane	ND		ug/kg	1200	140	10
Styrene	ND		ug/kg	590	120	10
Dichlorodifluoromethane	ND		ug/kg	5900	540	10
Acetone	ND		ug/kg	5900	2800	10
Carbon disulfide	ND		ug/kg	5900	2700	10
2-Butanone	ND		ug/kg	5900	1300	10
Vinyl acetate	ND		ug/kg	5900	1300	10
4-Methyl-2-pentanone	ND		ug/kg	5900	760	10
1,2,3-Trichloropropane	ND		ug/kg	1200	75.	10
2-Hexanone	ND		ug/kg	5900	700	10
Bromochloromethane	ND		ug/kg	1200	120	10
2,2-Dichloropropane	ND		ug/kg	1200	120	10
1,2-Dibromoethane	ND		ug/kg	590	160	10
1,3-Dichloropropane	ND		ug/kg	1200	99.	10
1,1,1,2-Tetrachloroethane	ND		ug/kg	300	78.	10
Bromobenzene	ND		ug/kg	1200	86.	10
n-Butylbenzene	130	J	ug/kg	590	99.	10
sec-Butylbenzene	92	J	ug/kg	590	87.	10
tert-Butylbenzene	ND		ug/kg	1200	70.	10
o-Chlorotoluene	ND		ug/kg	1200	110	10
p-Chlorotoluene	ND		ug/kg	1200	64.	10
1,2-Dibromo-3-chloropropane	ND		ug/kg	1800	590	10
Hexachlorobutadiene	ND		ug/kg	2400	100	10
Isopropylbenzene	ND		ug/kg	590	65.	10
p-Isopropyltoluene	ND		ug/kg	590	65.	10
Naphthalene	ND		ug/kg	2400	380	10
Acrylonitrile	ND		ug/kg	2400	680	10

Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248925-05 D

Date Collected: 09/08/22 08:30

Client ID: B-5 (8.5-9.0)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
n-Propylbenzene	ND		ug/kg	590	100	10
1,2,3-Trichlorobenzene	ND		ug/kg	1200	190	10
1,2,4-Trichlorobenzene	ND		ug/kg	1200	160	10
1,3,5-Trimethylbenzene	ND		ug/kg	1200	110	10
1,2,4-Trimethylbenzene	ND		ug/kg	1200	200	10
1,4-Dioxane	ND		ug/kg	47000	21000	10
p-Diethylbenzene	ND		ug/kg	1200	100	10
p-Ethyltoluene	ND		ug/kg	1200	230	10
1,2,4,5-Tetramethylbenzene	360	J	ug/kg	1200	110	10
Ethyl ether	ND		ug/kg	1200	200	10
trans-1,4-Dichloro-2-butene	ND		ug/kg	3000	840	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	101		70-130

Project Name: 2ND AVE**Lab Number:** L2248925**Project Number:** 81363**Report Date:** 09/22/22**SAMPLE RESULTS**

Lab ID: L2248925-06 D2

Date Collected: 09/07/22 09:10

Client ID: B-6 (9.0-9.5)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 1,8260C

Analytical Date: 09/13/22 12:39

Analyst: AJK

Percent Solids: 80%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Tetrachloroethene	570000		ug/kg	3200	1300	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	94		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	102		70-130

Project Name: 2ND AVE**Lab Number:** L2248925**Project Number:** 81363**Report Date:** 09/22/22**SAMPLE RESULTS**

Lab ID: L2248925-06 D

Date Collected: 09/07/22 09:10

Client ID: B-6 (9.0-9.5)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 1,8260C

Analytical Date: 09/09/22 18:58

Analyst: NLK

Percent Solids: 80%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Methylene chloride	ND		ug/kg	6500	3000	20
1,1-Dichloroethane	ND		ug/kg	1300	190	20
Chloroform	ND		ug/kg	2000	180	20
Carbon tetrachloride	ND		ug/kg	1300	300	20
1,2-Dichloropropane	ND		ug/kg	1300	160	20
Dibromochloromethane	ND		ug/kg	1300	180	20
1,1,2-Trichloroethane	ND		ug/kg	1300	350	20
Tetrachloroethene	560000	E	ug/kg	650	260	20
Chlorobenzene	ND		ug/kg	650	160	20
Trichlorofluoromethane	ND		ug/kg	5200	900	20
1,2-Dichloroethane	ND		ug/kg	1300	330	20
1,1,1-Trichloroethane	ND		ug/kg	650	220	20
Bromodichloromethane	ND		ug/kg	650	140	20
trans-1,3-Dichloropropene	ND		ug/kg	1300	360	20
cis-1,3-Dichloropropene	ND		ug/kg	650	200	20
1,3-Dichloropropene, Total	ND		ug/kg	650	200	20
1,1-Dichloropropene	ND		ug/kg	650	210	20
Bromoform	ND		ug/kg	5200	320	20
1,1,2,2-Tetrachloroethane	ND		ug/kg	650	220	20
Benzene	ND		ug/kg	650	220	20
Toluene	ND		ug/kg	1300	710	20
Ethylbenzene	ND		ug/kg	1300	180	20
Chloromethane	ND		ug/kg	5200	1200	20
Bromomethane	ND		ug/kg	2600	760	20
Vinyl chloride	450	J	ug/kg	1300	440	20
Chloroethane	ND		ug/kg	2600	590	20
1,1-Dichloroethene	ND		ug/kg	1300	310	20
trans-1,2-Dichloroethene	ND		ug/kg	2000	180	20

Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248925-06 D

Date Collected: 09/07/22 09:10

Client ID: B-6 (9.0-9.5)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Trichloroethene	12000		ug/kg	650	180	20
1,2-Dichlorobenzene	ND		ug/kg	2600	190	20
1,3-Dichlorobenzene	ND		ug/kg	2600	190	20
1,4-Dichlorobenzene	ND		ug/kg	2600	220	20
Methyl tert butyl ether	ND		ug/kg	2600	260	20
p/m-Xylene	ND		ug/kg	2600	730	20
o-Xylene	ND		ug/kg	1300	380	20
Xylenes, Total	ND		ug/kg	1300	380	20
cis-1,2-Dichloroethene	20000		ug/kg	1300	230	20
1,2-Dichloroethene, Total	20000		ug/kg	1300	180	20
Dibromomethane	ND		ug/kg	2600	310	20
Styrene	ND		ug/kg	1300	260	20
Dichlorodifluoromethane	ND		ug/kg	13000	1200	20
Acetone	ND		ug/kg	13000	6300	20
Carbon disulfide	ND		ug/kg	13000	5900	20
2-Butanone	ND		ug/kg	13000	2900	20
Vinyl acetate	ND		ug/kg	13000	2800	20
4-Methyl-2-pentanone	ND		ug/kg	13000	1700	20
1,2,3-Trichloropropane	ND		ug/kg	2600	160	20
2-Hexanone	ND		ug/kg	13000	1500	20
Bromochloromethane	ND		ug/kg	2600	270	20
2,2-Dichloropropane	ND		ug/kg	2600	260	20
1,2-Dibromoethane	ND		ug/kg	1300	360	20
1,3-Dichloropropane	ND		ug/kg	2600	220	20
1,1,1,2-Tetrachloroethane	ND		ug/kg	650	170	20
Bromobenzene	ND		ug/kg	2600	190	20
n-Butylbenzene	ND		ug/kg	1300	220	20
sec-Butylbenzene	ND		ug/kg	1300	190	20
tert-Butylbenzene	ND		ug/kg	2600	150	20
o-Chlorotoluene	ND		ug/kg	2600	250	20
p-Chlorotoluene	ND		ug/kg	2600	140	20
1,2-Dibromo-3-chloropropane	ND		ug/kg	3900	1300	20
Hexachlorobutadiene	ND		ug/kg	5200	220	20
Isopropylbenzene	ND		ug/kg	1300	140	20
p-Isopropyltoluene	ND		ug/kg	1300	140	20
Naphthalene	ND		ug/kg	5200	840	20
Acrylonitrile	ND		ug/kg	5200	1500	20

Project Name: 2ND AVE**Lab Number:** L2248925**Project Number:** 81363**Report Date:** 09/22/22**SAMPLE RESULTS**

Lab ID: L2248925-06 D

Date Collected: 09/07/22 09:10

Client ID: B-6 (9.0-9.5)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
n-Propylbenzene	ND		ug/kg	1300	220	20
1,2,3-Trichlorobenzene	ND		ug/kg	2600	420	20
1,2,4-Trichlorobenzene	ND		ug/kg	2600	350	20
1,3,5-Trimethylbenzene	ND		ug/kg	2600	250	20
1,2,4-Trimethylbenzene	ND		ug/kg	2600	430	20
1,4-Dioxane	ND		ug/kg	100000	46000	20
p-Diethylbenzene	ND		ug/kg	2600	230	20
p-Ethyltoluene	ND		ug/kg	2600	500	20
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2600	250	20
Ethyl ether	ND		ug/kg	2600	440	20
trans-1,4-Dichloro-2-butene	ND		ug/kg	6500	1800	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	100		70-130

Project Name: 2ND AVE**Lab Number:** L2248925**Project Number:** 81363**Report Date:** 09/22/22**SAMPLE RESULTS**

Lab ID: L2248925-07

Date Collected: 09/07/22 13:35

Client ID: B-7 (7.0-7.5)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 1,8260C

Analytical Date: 09/14/22 10:01

Analyst: NLK

Percent Solids: 80%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	7.0	3.2	1
1,1-Dichloroethane	ND		ug/kg	1.4	0.20	1
Chloroform	ND		ug/kg	2.1	0.20	1
Carbon tetrachloride	ND		ug/kg	1.4	0.32	1
1,2-Dichloropropane	ND		ug/kg	1.4	0.18	1
Dibromochloromethane	ND		ug/kg	1.4	0.20	1
1,1,2-Trichloroethane	ND		ug/kg	1.4	0.38	1
Tetrachloroethene	9.0		ug/kg	0.70	0.28	1
Chlorobenzene	ND		ug/kg	0.70	0.18	1
Trichlorofluoromethane	ND		ug/kg	5.6	0.98	1
1,2-Dichloroethane	ND		ug/kg	1.4	0.36	1
1,1,1-Trichloroethane	ND		ug/kg	0.70	0.23	1
Bromodichloromethane	ND		ug/kg	0.70	0.15	1
trans-1,3-Dichloropropene	ND		ug/kg	1.4	0.38	1
cis-1,3-Dichloropropene	ND		ug/kg	0.70	0.22	1
1,3-Dichloropropene, Total	ND		ug/kg	0.70	0.22	1
1,1-Dichloropropene	ND		ug/kg	0.70	0.22	1
Bromoform	ND		ug/kg	5.6	0.35	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.70	0.23	1
Benzene	ND		ug/kg	0.70	0.23	1
Toluene	ND		ug/kg	1.4	0.76	1
Ethylbenzene	ND		ug/kg	1.4	0.20	1
Chloromethane	ND		ug/kg	5.6	1.3	1
Bromomethane	ND		ug/kg	2.8	0.82	1
Vinyl chloride	ND		ug/kg	1.4	0.47	1
Chloroethane	ND		ug/kg	2.8	0.64	1
1,1-Dichloroethene	ND		ug/kg	1.4	0.33	1
trans-1,2-Dichloroethene	ND		ug/kg	2.1	0.19	1

Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248925-07

Date Collected: 09/07/22 13:35

Client ID: B-7 (7.0-7.5)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.70	0.19	1
1,2-Dichlorobenzene	ND		ug/kg	2.8	0.20	1
1,3-Dichlorobenzene	ND		ug/kg	2.8	0.21	1
1,4-Dichlorobenzene	ND		ug/kg	2.8	0.24	1
Methyl tert butyl ether	ND		ug/kg	2.8	0.28	1
p/m-Xylene	ND		ug/kg	2.8	0.79	1
o-Xylene	ND		ug/kg	1.4	0.41	1
Xylenes, Total	ND		ug/kg	1.4	0.41	1
cis-1,2-Dichloroethene	3.6		ug/kg	1.4	0.25	1
1,2-Dichloroethene, Total	3.6		ug/kg	1.4	0.19	1
Dibromomethane	ND		ug/kg	2.8	0.33	1
Styrene	ND		ug/kg	1.4	0.28	1
Dichlorodifluoromethane	ND		ug/kg	14	1.3	1
Acetone	200		ug/kg	14	6.8	1
Carbon disulfide	ND		ug/kg	14	6.4	1
2-Butanone	83		ug/kg	14	3.1	1
Vinyl acetate	ND		ug/kg	14	3.0	1
4-Methyl-2-pentanone	ND		ug/kg	14	1.8	1
1,2,3-Trichloropropane	ND		ug/kg	2.8	0.18	1
2-Hexanone	ND		ug/kg	14	1.6	1
Bromochloromethane	ND		ug/kg	2.8	0.29	1
2,2-Dichloropropane	ND		ug/kg	2.8	0.28	1
1,2-Dibromoethane	ND		ug/kg	1.4	0.39	1
1,3-Dichloropropane	ND		ug/kg	2.8	0.23	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.70	0.18	1
Bromobenzene	ND		ug/kg	2.8	0.20	1
n-Butylbenzene	ND		ug/kg	1.4	0.23	1
sec-Butylbenzene	ND		ug/kg	1.4	0.20	1
tert-Butylbenzene	ND		ug/kg	2.8	0.16	1
o-Chlorotoluene	ND		ug/kg	2.8	0.27	1
p-Chlorotoluene	ND		ug/kg	2.8	0.15	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	4.2	1.4	1
Hexachlorobutadiene	ND		ug/kg	5.6	0.24	1
Isopropylbenzene	ND		ug/kg	1.4	0.15	1
p-Isopropyltoluene	ND		ug/kg	1.4	0.15	1
Naphthalene	ND		ug/kg	5.6	0.91	1
Acrylonitrile	ND		ug/kg	5.6	1.6	1

Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248925-07

Date Collected: 09/07/22 13:35

Client ID: B-7 (7.0-7.5)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	1.4	0.24	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.8	0.45	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.8	0.38	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.8	0.27	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.8	0.47	1
1,4-Dioxane	ND		ug/kg	110	49.	1
p-Diethylbenzene	ND		ug/kg	2.8	0.25	1
p-Ethyltoluene	ND		ug/kg	2.8	0.54	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.8	0.27	1
Ethyl ether	ND		ug/kg	2.8	0.48	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	7.0	2.0	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	87		70-130
Dibromofluoromethane	106		70-130

Project Name: 2ND AVE**Lab Number:** L2248925**Project Number:** 81363**Report Date:** 09/22/22**SAMPLE RESULTS**

Lab ID: L2248925-08

Date Collected: 09/07/22 13:15

Client ID: B-8 (1.0-1.5)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 1,8260C

Analytical Date: 09/12/22 15:36

Analyst: NLK

Percent Solids: 88%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	8.1	3.7	1
1,1-Dichloroethane	ND		ug/kg	1.6	0.24	1
Chloroform	ND		ug/kg	2.4	0.23	1
Carbon tetrachloride	ND		ug/kg	1.6	0.37	1
1,2-Dichloropropane	ND		ug/kg	1.6	0.20	1
Dibromochloromethane	ND		ug/kg	1.6	0.23	1
1,1,2-Trichloroethane	ND		ug/kg	1.6	0.43	1
Tetrachloroethene	51		ug/kg	0.81	0.32	1
Chlorobenzene	ND		ug/kg	0.81	0.21	1
Trichlorofluoromethane	ND		ug/kg	6.5	1.1	1
1,2-Dichloroethane	ND		ug/kg	1.6	0.42	1
1,1,1-Trichloroethane	ND		ug/kg	0.81	0.27	1
Bromodichloromethane	ND		ug/kg	0.81	0.18	1
trans-1,3-Dichloropropene	ND		ug/kg	1.6	0.44	1
cis-1,3-Dichloropropene	ND		ug/kg	0.81	0.26	1
1,3-Dichloropropene, Total	ND		ug/kg	0.81	0.26	1
1,1-Dichloropropene	ND		ug/kg	0.81	0.26	1
Bromoform	ND		ug/kg	6.5	0.40	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.81	0.27	1
Benzene	ND		ug/kg	0.81	0.27	1
Toluene	ND		ug/kg	1.6	0.88	1
Ethylbenzene	ND		ug/kg	1.6	0.23	1
Chloromethane	ND		ug/kg	6.5	1.5	1
Bromomethane	ND		ug/kg	3.2	0.94	1
Vinyl chloride	0.71	J	ug/kg	1.6	0.54	1
Chloroethane	ND		ug/kg	3.2	0.74	1
1,1-Dichloroethene	ND		ug/kg	1.6	0.39	1
trans-1,2-Dichloroethene	ND		ug/kg	2.4	0.22	1

Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248925-08

Date Collected: 09/07/22 13:15

Client ID: B-8 (1.0-1.5)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	0.28	J	ug/kg	0.81	0.22	1
1,2-Dichlorobenzene	ND		ug/kg	3.2	0.23	1
1,3-Dichlorobenzene	ND		ug/kg	3.2	0.24	1
1,4-Dichlorobenzene	ND		ug/kg	3.2	0.28	1
Methyl tert butyl ether	ND		ug/kg	3.2	0.33	1
p/m-Xylene	ND		ug/kg	3.2	0.91	1
o-Xylene	ND		ug/kg	1.6	0.47	1
Xylenes, Total	ND		ug/kg	1.6	0.47	1
cis-1,2-Dichloroethene	3.1		ug/kg	1.6	0.28	1
1,2-Dichloroethene, Total	3.1		ug/kg	1.6	0.22	1
Dibromomethane	ND		ug/kg	3.2	0.39	1
Styrene	ND		ug/kg	1.6	0.32	1
Dichlorodifluoromethane	ND		ug/kg	16	1.5	1
Acetone	29		ug/kg	16	7.8	1
Carbon disulfide	ND		ug/kg	16	7.4	1
2-Butanone	13	J	ug/kg	16	3.6	1
Vinyl acetate	ND		ug/kg	16	3.5	1
4-Methyl-2-pentanone	ND		ug/kg	16	2.1	1
1,2,3-Trichloropropane	ND		ug/kg	3.2	0.21	1
2-Hexanone	ND		ug/kg	16	1.9	1
Bromochloromethane	ND		ug/kg	3.2	0.33	1
2,2-Dichloropropane	ND		ug/kg	3.2	0.33	1
1,2-Dibromoethane	ND		ug/kg	1.6	0.45	1
1,3-Dichloropropane	ND		ug/kg	3.2	0.27	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.81	0.21	1
Bromobenzene	ND		ug/kg	3.2	0.24	1
n-Butylbenzene	ND		ug/kg	1.6	0.27	1
sec-Butylbenzene	ND		ug/kg	1.6	0.24	1
tert-Butylbenzene	ND		ug/kg	3.2	0.19	1
o-Chlorotoluene	ND		ug/kg	3.2	0.31	1
p-Chlorotoluene	ND		ug/kg	3.2	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	4.9	1.6	1
Hexachlorobutadiene	ND		ug/kg	6.5	0.27	1
Isopropylbenzene	ND		ug/kg	1.6	0.18	1
p-Isopropyltoluene	ND		ug/kg	1.6	0.18	1
Naphthalene	ND		ug/kg	6.5	1.0	1
Acrylonitrile	ND		ug/kg	6.5	1.9	1

Project Name: 2ND AVE**Lab Number:** L2248925**Project Number:** 81363**Report Date:** 09/22/22**SAMPLE RESULTS****Lab ID:** L2248925-08**Date Collected:** 09/07/22 13:15**Client ID:** B-8 (1.0-1.5)**Date Received:** 09/08/22**Sample Location:** NY, NY**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	1.6	0.28	1
1,2,3-Trichlorobenzene	ND		ug/kg	3.2	0.52	1
1,2,4-Trichlorobenzene	ND		ug/kg	3.2	0.44	1
1,3,5-Trimethylbenzene	ND		ug/kg	3.2	0.31	1
1,2,4-Trimethylbenzene	ND		ug/kg	3.2	0.54	1
1,4-Dioxane	ND		ug/kg	130	57.	1
p-Diethylbenzene	ND		ug/kg	3.2	0.29	1
p-Ethyltoluene	ND		ug/kg	3.2	0.62	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	3.2	0.31	1
Ethyl ether	ND		ug/kg	3.2	0.55	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	8.1	2.3	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	74		70-130

Project Name: 2ND AVE**Lab Number:** L2248925**Project Number:** 81363**Report Date:** 09/22/22**SAMPLE RESULTS**

Lab ID: L2248925-09

Date Collected: 09/08/22 09:30

Client ID: B-9 (6.0-6.5)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 1,8260C

Analytical Date: 09/12/22 16:03

Analyst: NLK

Percent Solids: 68%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	7.9	3.6	1
1,1-Dichloroethane	ND		ug/kg	1.6	0.23	1
Chloroform	ND		ug/kg	2.4	0.22	1
Carbon tetrachloride	ND		ug/kg	1.6	0.36	1
1,2-Dichloropropane	ND		ug/kg	1.6	0.20	1
Dibromochloromethane	ND		ug/kg	1.6	0.22	1
1,1,2-Trichloroethane	ND		ug/kg	1.6	0.42	1
Tetrachloroethene	67		ug/kg	0.79	0.31	1
Chlorobenzene	ND		ug/kg	0.79	0.20	1
Trichlorofluoromethane	ND		ug/kg	6.3	1.1	1
1,2-Dichloroethane	ND		ug/kg	1.6	0.40	1
1,1,1-Trichloroethane	ND		ug/kg	0.79	0.26	1
Bromodichloromethane	ND		ug/kg	0.79	0.17	1
trans-1,3-Dichloropropene	ND		ug/kg	1.6	0.43	1
cis-1,3-Dichloropropene	ND		ug/kg	0.79	0.25	1
1,3-Dichloropropene, Total	ND		ug/kg	0.79	0.25	1
1,1-Dichloropropene	ND		ug/kg	0.79	0.25	1
Bromoform	ND		ug/kg	6.3	0.39	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.79	0.26	1
Benzene	ND		ug/kg	0.79	0.26	1
Toluene	ND		ug/kg	1.6	0.86	1
Ethylbenzene	ND		ug/kg	1.6	0.22	1
Chloromethane	ND		ug/kg	6.3	1.5	1
Bromomethane	ND		ug/kg	3.2	0.92	1
Vinyl chloride	0.60	J	ug/kg	1.6	0.53	1
Chloroethane	ND		ug/kg	3.2	0.71	1
1,1-Dichloroethene	ND		ug/kg	1.6	0.38	1
trans-1,2-Dichloroethene	1.6	J	ug/kg	2.4	0.22	1

Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248925-09

Date Collected: 09/08/22 09:30

Client ID: B-9 (6.0-6.5)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	0.56	J	ug/kg	0.79	0.22	1
1,2-Dichlorobenzene	ND		ug/kg	3.2	0.23	1
1,3-Dichlorobenzene	ND		ug/kg	3.2	0.23	1
1,4-Dichlorobenzene	ND		ug/kg	3.2	0.27	1
Methyl tert butyl ether	ND		ug/kg	3.2	0.32	1
p/m-Xylene	ND		ug/kg	3.2	0.88	1
o-Xylene	ND		ug/kg	1.6	0.46	1
Xylenes, Total	ND		ug/kg	1.6	0.46	1
cis-1,2-Dichloroethene	7.0		ug/kg	1.6	0.28	1
1,2-Dichloroethene, Total	8.6	J	ug/kg	1.6	0.22	1
Dibromomethane	ND		ug/kg	3.2	0.38	1
Styrene	ND		ug/kg	1.6	0.31	1
Dichlorodifluoromethane	ND		ug/kg	16	1.4	1
Acetone	110		ug/kg	16	7.6	1
Carbon disulfide	ND		ug/kg	16	7.2	1
2-Butanone	50		ug/kg	16	3.5	1
Vinyl acetate	ND		ug/kg	16	3.4	1
4-Methyl-2-pentanone	ND		ug/kg	16	2.0	1
1,2,3-Trichloropropane	ND		ug/kg	3.2	0.20	1
2-Hexanone	ND		ug/kg	16	1.9	1
Bromochloromethane	ND		ug/kg	3.2	0.32	1
2,2-Dichloropropane	ND		ug/kg	3.2	0.32	1
1,2-Dibromoethane	ND		ug/kg	1.6	0.44	1
1,3-Dichloropropane	ND		ug/kg	3.2	0.26	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.79	0.21	1
Bromobenzene	ND		ug/kg	3.2	0.23	1
n-Butylbenzene	ND		ug/kg	1.6	0.26	1
sec-Butylbenzene	ND		ug/kg	1.6	0.23	1
tert-Butylbenzene	ND		ug/kg	3.2	0.19	1
o-Chlorotoluene	ND		ug/kg	3.2	0.30	1
p-Chlorotoluene	ND		ug/kg	3.2	0.17	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	4.7	1.6	1
Hexachlorobutadiene	ND		ug/kg	6.3	0.27	1
Isopropylbenzene	ND		ug/kg	1.6	0.17	1
p-Isopropyltoluene	ND		ug/kg	1.6	0.17	1
Naphthalene	ND		ug/kg	6.3	1.0	1
Acrylonitrile	ND		ug/kg	6.3	1.8	1

Project Name: 2ND AVE**Lab Number:** L2248925**Project Number:** 81363**Report Date:** 09/22/22**SAMPLE RESULTS****Lab ID:** L2248925-09**Date Collected:** 09/08/22 09:30**Client ID:** B-9 (6.0-6.5)**Date Received:** 09/08/22**Sample Location:** NY, NY**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	1.6	0.27	1
1,2,3-Trichlorobenzene	ND		ug/kg	3.2	0.51	1
1,2,4-Trichlorobenzene	ND		ug/kg	3.2	0.43	1
1,3,5-Trimethylbenzene	ND		ug/kg	3.2	0.30	1
1,2,4-Trimethylbenzene	ND		ug/kg	3.2	0.53	1
1,4-Dioxane	ND		ug/kg	130	55.	1
p-Diethylbenzene	ND		ug/kg	3.2	0.28	1
p-Ethyltoluene	ND		ug/kg	3.2	0.60	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	3.2	0.30	1
Ethyl ether	ND		ug/kg	3.2	0.54	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	7.9	2.2	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	101		70-130

Project Name: 2ND AVE**Lab Number:** L2248925**Project Number:** 81363**Report Date:** 09/22/22**SAMPLE RESULTS**

Lab ID: L2248925-10

Date Collected: 09/08/22 09:50

Client ID: B-10 (5.5-6.0)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 1,8260C

Analytical Date: 09/14/22 09:34

Analyst: NLK

Percent Solids: 81%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	6.9	3.2	1
1,1-Dichloroethane	ND		ug/kg	1.4	0.20	1
Chloroform	ND		ug/kg	2.1	0.19	1
Carbon tetrachloride	ND		ug/kg	1.4	0.32	1
1,2-Dichloropropane	ND		ug/kg	1.4	0.17	1
Dibromochloromethane	ND		ug/kg	1.4	0.19	1
1,1,2-Trichloroethane	ND		ug/kg	1.4	0.37	1
Tetrachloroethene	3.6		ug/kg	0.69	0.27	1
Chlorobenzene	ND		ug/kg	0.69	0.17	1
Trichlorofluoromethane	ND		ug/kg	5.5	0.96	1
1,2-Dichloroethane	ND		ug/kg	1.4	0.35	1
1,1,1-Trichloroethane	ND		ug/kg	0.69	0.23	1
Bromodichloromethane	ND		ug/kg	0.69	0.15	1
trans-1,3-Dichloropropene	ND		ug/kg	1.4	0.38	1
cis-1,3-Dichloropropene	ND		ug/kg	0.69	0.22	1
1,3-Dichloropropene, Total	ND		ug/kg	0.69	0.22	1
1,1-Dichloropropene	ND		ug/kg	0.69	0.22	1
Bromoform	ND		ug/kg	5.5	0.34	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.69	0.23	1
Benzene	ND		ug/kg	0.69	0.23	1
Toluene	ND		ug/kg	1.4	0.75	1
Ethylbenzene	ND		ug/kg	1.4	0.19	1
Chloromethane	ND		ug/kg	5.5	1.3	1
Bromomethane	ND		ug/kg	2.8	0.80	1
Vinyl chloride	ND		ug/kg	1.4	0.46	1
Chloroethane	ND		ug/kg	2.8	0.62	1
1,1-Dichloroethene	ND		ug/kg	1.4	0.33	1
trans-1,2-Dichloroethene	ND		ug/kg	2.1	0.19	1

Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248925-10

Date Collected: 09/08/22 09:50

Client ID: B-10 (5.5-6.0)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.69	0.19	1
1,2-Dichlorobenzene	ND		ug/kg	2.8	0.20	1
1,3-Dichlorobenzene	ND		ug/kg	2.8	0.20	1
1,4-Dichlorobenzene	ND		ug/kg	2.8	0.24	1
Methyl tert butyl ether	ND		ug/kg	2.8	0.28	1
p/m-Xylene	ND		ug/kg	2.8	0.77	1
o-Xylene	ND		ug/kg	1.4	0.40	1
Xylenes, Total	ND		ug/kg	1.4	0.40	1
cis-1,2-Dichloroethene	2.2		ug/kg	1.4	0.24	1
1,2-Dichloroethene, Total	2.2		ug/kg	1.4	0.19	1
Dibromomethane	ND		ug/kg	2.8	0.33	1
Styrene	ND		ug/kg	1.4	0.27	1
Dichlorodifluoromethane	ND		ug/kg	14	1.2	1
Acetone	130		ug/kg	14	6.6	1
Carbon disulfide	ND		ug/kg	14	6.3	1
2-Butanone	54		ug/kg	14	3.0	1
Vinyl acetate	ND		ug/kg	14	3.0	1
4-Methyl-2-pentanone	ND		ug/kg	14	1.8	1
1,2,3-Trichloropropane	ND		ug/kg	2.8	0.17	1
2-Hexanone	ND		ug/kg	14	1.6	1
Bromochloromethane	ND		ug/kg	2.8	0.28	1
2,2-Dichloropropane	ND		ug/kg	2.8	0.28	1
1,2-Dibromoethane	ND		ug/kg	1.4	0.38	1
1,3-Dichloropropane	ND		ug/kg	2.8	0.23	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.69	0.18	1
Bromobenzene	ND		ug/kg	2.8	0.20	1
n-Butylbenzene	ND		ug/kg	1.4	0.23	1
sec-Butylbenzene	ND		ug/kg	1.4	0.20	1
tert-Butylbenzene	ND		ug/kg	2.8	0.16	1
o-Chlorotoluene	ND		ug/kg	2.8	0.26	1
p-Chlorotoluene	ND		ug/kg	2.8	0.15	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	4.1	1.4	1
Hexachlorobutadiene	ND		ug/kg	5.5	0.23	1
Isopropylbenzene	ND		ug/kg	1.4	0.15	1
p-Isopropyltoluene	ND		ug/kg	1.4	0.15	1
Naphthalene	ND		ug/kg	5.5	0.89	1
Acrylonitrile	ND		ug/kg	5.5	1.6	1

Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248925-10

Date Collected: 09/08/22 09:50

Client ID: B-10 (5.5-6.0)

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	1.4	0.24	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.8	0.44	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.8	0.37	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.8	0.26	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.8	0.46	1
1,4-Dioxane	ND		ug/kg	110	48.	1
p-Diethylbenzene	ND		ug/kg	2.8	0.24	1
p-Ethyltoluene	ND		ug/kg	2.8	0.53	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.8	0.26	1
Ethyl ether	ND		ug/kg	2.8	0.47	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	6.9	2.0	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	86		70-130
Dibromofluoromethane	107		70-130

Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 09/09/22 11:59
 Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01,04 Batch: WG1686673-5					
Methylene chloride	ND		ug/kg	5.0	2.3
1,1-Dichloroethane	ND		ug/kg	1.0	0.14
Chloroform	ND		ug/kg	1.5	0.14
Carbon tetrachloride	ND		ug/kg	1.0	0.23
1,2-Dichloropropane	ND		ug/kg	1.0	0.12
Dibromochloromethane	ND		ug/kg	1.0	0.14
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.27
Tetrachloroethene	ND		ug/kg	0.50	0.20
Chlorobenzene	ND		ug/kg	0.50	0.13
Trichlorofluoromethane	ND		ug/kg	4.0	0.70
1,2-Dichloroethane	ND		ug/kg	1.0	0.26
1,1,1-Trichloroethane	ND		ug/kg	0.50	0.17
Bromodichloromethane	ND		ug/kg	0.50	0.11
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.27
cis-1,3-Dichloropropene	ND		ug/kg	0.50	0.16
1,3-Dichloropropene, Total	ND		ug/kg	0.50	0.16
1,1-Dichloropropene	ND		ug/kg	0.50	0.16
Bromoform	ND		ug/kg	4.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	0.17
Benzene	ND		ug/kg	0.50	0.17
Toluene	ND		ug/kg	1.0	0.54
Ethylbenzene	ND		ug/kg	1.0	0.14
Chloromethane	ND		ug/kg	4.0	0.93
Bromomethane	ND		ug/kg	2.0	0.58
Vinyl chloride	ND		ug/kg	1.0	0.34
Chloroethane	ND		ug/kg	2.0	0.45
1,1-Dichloroethene	ND		ug/kg	1.0	0.24
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14
Trichloroethene	ND		ug/kg	0.50	0.14

Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 09/09/22 11:59
 Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01,04 Batch: WG1686673-5					
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.14
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.15
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17
Methyl tert butyl ether	ND		ug/kg	2.0	0.20
p/m-Xylene	ND		ug/kg	2.0	0.56
o-Xylene	ND		ug/kg	1.0	0.29
Xylenes, Total	ND		ug/kg	1.0	0.29
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14
Dibromomethane	ND		ug/kg	2.0	0.24
Styrene	ND		ug/kg	1.0	0.20
Dichlorodifluoromethane	ND		ug/kg	10	0.92
Acetone	ND		ug/kg	10	4.8
Carbon disulfide	ND		ug/kg	10	4.6
2-Butanone	ND		ug/kg	10	2.2
Vinyl acetate	ND		ug/kg	10	2.2
4-Methyl-2-pentanone	ND		ug/kg	10	1.3
1,2,3-Trichloropropane	ND		ug/kg	2.0	0.13
2-Hexanone	ND		ug/kg	10	1.2
Bromochloromethane	ND		ug/kg	2.0	0.20
2,2-Dichloropropane	ND		ug/kg	2.0	0.20
1,2-Dibromoethane	ND		ug/kg	1.0	0.28
1,3-Dichloropropane	ND		ug/kg	2.0	0.17
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.50	0.13
Bromobenzene	ND		ug/kg	2.0	0.14
n-Butylbenzene	ND		ug/kg	1.0	0.17
sec-Butylbenzene	ND		ug/kg	1.0	0.15
tert-Butylbenzene	ND		ug/kg	2.0	0.12
o-Chlorotoluene	ND		ug/kg	2.0	0.19

Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 09/09/22 11:59
 Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01,04 Batch: WG1686673-5					
p-Chlorotoluene	ND		ug/kg	2.0	0.11
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	1.0
Hexachlorobutadiene	ND		ug/kg	4.0	0.17
Isopropylbenzene	ND		ug/kg	1.0	0.11
p-Isopropyltoluene	ND		ug/kg	1.0	0.11
Naphthalene	ND		ug/kg	4.0	0.65
Acrylonitrile	ND		ug/kg	4.0	1.2
n-Propylbenzene	ND		ug/kg	1.0	0.17
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.32
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.27
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.19
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.33
1,4-Dioxane	ND		ug/kg	80	35.
p-Diethylbenzene	ND		ug/kg	2.0	0.18
p-Ethyltoluene	ND		ug/kg	2.0	0.38
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.0	0.19
Ethyl ether	ND		ug/kg	2.0	0.34
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	1.4

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	98		70-130



Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 09/09/22 11:59
 Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 02,05-06 Batch: WG1686781-5					
Methylene chloride	ND		ug/kg	250	110
1,1-Dichloroethane	ND		ug/kg	50	7.2
Chloroform	ND		ug/kg	75	7.0
Carbon tetrachloride	ND		ug/kg	50	12.
1,2-Dichloropropane	ND		ug/kg	50	6.2
Dibromochloromethane	ND		ug/kg	50	7.0
1,1,2-Trichloroethane	ND		ug/kg	50	13.
Tetrachloroethene	ND		ug/kg	25	9.8
Chlorobenzene	ND		ug/kg	25	6.4
Trichlorofluoromethane	ND		ug/kg	200	35.
1,2-Dichloroethane	ND		ug/kg	50	13.
1,1,1-Trichloroethane	ND		ug/kg	25	8.4
Bromodichloromethane	ND		ug/kg	25	5.4
trans-1,3-Dichloropropene	ND		ug/kg	50	14.
cis-1,3-Dichloropropene	ND		ug/kg	25	7.9
1,3-Dichloropropene, Total	ND		ug/kg	25	7.9
1,1-Dichloropropene	ND		ug/kg	25	8.0
Bromoform	ND		ug/kg	200	12.
1,1,2,2-Tetrachloroethane	ND		ug/kg	25	8.3
Benzene	ND		ug/kg	25	8.3
Toluene	ND		ug/kg	50	27.
Ethylbenzene	ND		ug/kg	50	7.0
Chloromethane	ND		ug/kg	200	47.
Bromomethane	ND		ug/kg	100	29.
Vinyl chloride	ND		ug/kg	50	17.
Chloroethane	ND		ug/kg	100	23.
1,1-Dichloroethene	ND		ug/kg	50	12.
trans-1,2-Dichloroethene	ND		ug/kg	75	6.8
Trichloroethene	ND		ug/kg	25	6.8

Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 09/09/22 11:59
 Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 02,05-06 Batch: WG1686781-5					
1,2-Dichlorobenzene	ND		ug/kg	100	7.2
1,3-Dichlorobenzene	ND		ug/kg	100	7.4
1,4-Dichlorobenzene	ND		ug/kg	100	8.6
Methyl tert butyl ether	ND		ug/kg	100	10.
p/m-Xylene	ND		ug/kg	100	28.
o-Xylene	ND		ug/kg	50	14.
Xylenes, Total	ND		ug/kg	50	14.
cis-1,2-Dichloroethene	ND		ug/kg	50	8.8
1,2-Dichloroethene, Total	ND		ug/kg	50	6.8
Dibromomethane	ND		ug/kg	100	12.
Styrene	ND		ug/kg	50	9.8
Dichlorodifluoromethane	ND		ug/kg	500	46.
Acetone	ND		ug/kg	500	240
Carbon disulfide	ND		ug/kg	500	230
2-Butanone	ND		ug/kg	500	110
Vinyl acetate	ND		ug/kg	500	110
4-Methyl-2-pentanone	ND		ug/kg	500	64.
1,2,3-Trichloropropane	ND		ug/kg	100	6.4
2-Hexanone	ND		ug/kg	500	59.
Bromochloromethane	ND		ug/kg	100	10.
2,2-Dichloropropane	ND		ug/kg	100	10.
1,2-Dibromoethane	ND		ug/kg	50	14.
1,3-Dichloropropane	ND		ug/kg	100	8.4
1,1,1,2-Tetrachloroethane	ND		ug/kg	25	6.6
Bromobenzene	ND		ug/kg	100	7.2
n-Butylbenzene	ND		ug/kg	50	8.4
sec-Butylbenzene	ND		ug/kg	50	7.3
tert-Butylbenzene	ND		ug/kg	100	5.9
o-Chlorotoluene	ND		ug/kg	100	9.6

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 09/09/22 11:59
 Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 02,05-06 Batch: WG1686781-5					
p-Chlorotoluene	ND		ug/kg	100	5.4
1,2-Dibromo-3-chloropropane	ND		ug/kg	150	50.
Hexachlorobutadiene	ND		ug/kg	200	8.4
Isopropylbenzene	ND		ug/kg	50	5.4
p-Isopropyltoluene	ND		ug/kg	50	5.4
Naphthalene	ND		ug/kg	200	32.
Acrylonitrile	ND		ug/kg	200	58.
n-Propylbenzene	ND		ug/kg	50	8.6
1,2,3-Trichlorobenzene	ND		ug/kg	100	16.
1,2,4-Trichlorobenzene	ND		ug/kg	100	14.
1,3,5-Trimethylbenzene	ND		ug/kg	100	9.6
1,2,4-Trimethylbenzene	ND		ug/kg	100	17.
1,4-Dioxane	ND		ug/kg	4000	1800
p-Diethylbenzene	ND		ug/kg	100	8.8
p-Ethyltoluene	ND		ug/kg	100	19.
1,2,4,5-Tetramethylbenzene	ND		ug/kg	100	9.6
Ethyl ether	ND		ug/kg	100	17.
trans-1,4-Dichloro-2-butene	ND		ug/kg	250	71.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	98		70-130



Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 09/12/22 09:04
 Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 08-09 Batch: WG1686984-5					
Methylene chloride	ND		ug/kg	5.0	2.3
1,1-Dichloroethane	ND		ug/kg	1.0	0.14
Chloroform	ND		ug/kg	1.5	0.14
Carbon tetrachloride	ND		ug/kg	1.0	0.23
1,2-Dichloropropane	ND		ug/kg	1.0	0.12
Dibromochloromethane	ND		ug/kg	1.0	0.14
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.27
Tetrachloroethene	ND		ug/kg	0.50	0.20
Chlorobenzene	ND		ug/kg	0.50	0.13
Trichlorofluoromethane	ND		ug/kg	4.0	0.70
1,2-Dichloroethane	ND		ug/kg	1.0	0.26
1,1,1-Trichloroethane	ND		ug/kg	0.50	0.17
Bromodichloromethane	ND		ug/kg	0.50	0.11
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.27
cis-1,3-Dichloropropene	ND		ug/kg	0.50	0.16
1,3-Dichloropropene, Total	ND		ug/kg	0.50	0.16
1,1-Dichloropropene	ND		ug/kg	0.50	0.16
Bromoform	ND		ug/kg	4.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	0.17
Benzene	ND		ug/kg	0.50	0.17
Toluene	ND		ug/kg	1.0	0.54
Ethylbenzene	ND		ug/kg	1.0	0.14
Chloromethane	ND		ug/kg	4.0	0.93
Bromomethane	ND		ug/kg	2.0	0.58
Vinyl chloride	ND		ug/kg	1.0	0.34
Chloroethane	ND		ug/kg	2.0	0.45
1,1-Dichloroethene	ND		ug/kg	1.0	0.24
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14
Trichloroethene	ND		ug/kg	0.50	0.14

Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 09/12/22 09:04
 Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 08-09 Batch: WG1686984-5					
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.14
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.15
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17
Methyl tert butyl ether	ND		ug/kg	2.0	0.20
p/m-Xylene	ND		ug/kg	2.0	0.56
o-Xylene	ND		ug/kg	1.0	0.29
Xylenes, Total	ND		ug/kg	1.0	0.29
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14
Dibromomethane	ND		ug/kg	2.0	0.24
Styrene	ND		ug/kg	1.0	0.20
Dichlorodifluoromethane	ND		ug/kg	10	0.92
Acetone	ND		ug/kg	10	4.8
Carbon disulfide	ND		ug/kg	10	4.6
2-Butanone	ND		ug/kg	10	2.2
Vinyl acetate	ND		ug/kg	10	2.2
4-Methyl-2-pentanone	ND		ug/kg	10	1.3
1,2,3-Trichloropropane	ND		ug/kg	2.0	0.13
2-Hexanone	ND		ug/kg	10	1.2
Bromochloromethane	ND		ug/kg	2.0	0.20
2,2-Dichloropropane	ND		ug/kg	2.0	0.20
1,2-Dibromoethane	ND		ug/kg	1.0	0.28
1,3-Dichloropropane	ND		ug/kg	2.0	0.17
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.50	0.13
Bromobenzene	ND		ug/kg	2.0	0.14
n-Butylbenzene	ND		ug/kg	1.0	0.17
sec-Butylbenzene	ND		ug/kg	1.0	0.15
tert-Butylbenzene	ND		ug/kg	2.0	0.12
o-Chlorotoluene	ND		ug/kg	2.0	0.19

Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 09/12/22 09:04
 Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 08-09 Batch: WG1686984-5					
p-Chlorotoluene	ND		ug/kg	2.0	0.11
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	1.0
Hexachlorobutadiene	ND		ug/kg	4.0	0.17
Isopropylbenzene	ND		ug/kg	1.0	0.11
p-Isopropyltoluene	ND		ug/kg	1.0	0.11
Naphthalene	ND		ug/kg	4.0	0.65
Acrylonitrile	ND		ug/kg	4.0	1.2
n-Propylbenzene	ND		ug/kg	1.0	0.17
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.32
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.27
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.19
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.33
1,4-Dioxane	ND		ug/kg	80	35.
p-Diethylbenzene	ND		ug/kg	2.0	0.18
p-Ethyltoluene	ND		ug/kg	2.0	0.38
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.0	0.19
Ethyl ether	ND		ug/kg	2.0	0.34
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	1.4

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	97		70-130



Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 09/13/22 09:28
 Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 05-06 Batch: WG1687032-5					
Methylene chloride	ND		ug/kg	250	110
1,1-Dichloroethane	ND		ug/kg	50	7.2
Chloroform	ND		ug/kg	75	7.0
Carbon tetrachloride	ND		ug/kg	50	12.
1,2-Dichloropropane	ND		ug/kg	50	6.2
Dibromochloromethane	ND		ug/kg	50	7.0
1,1,2-Trichloroethane	ND		ug/kg	50	13.
Tetrachloroethene	ND		ug/kg	25	9.8
Chlorobenzene	ND		ug/kg	25	6.4
Trichlorofluoromethane	ND		ug/kg	200	35.
1,2-Dichloroethane	ND		ug/kg	50	13.
1,1,1-Trichloroethane	ND		ug/kg	25	8.4
Bromodichloromethane	ND		ug/kg	25	5.4
trans-1,3-Dichloropropene	ND		ug/kg	50	14.
cis-1,3-Dichloropropene	ND		ug/kg	25	7.9
1,3-Dichloropropene, Total	ND		ug/kg	25	7.9
1,1-Dichloropropene	ND		ug/kg	25	8.0
Bromoform	ND		ug/kg	200	12.
1,1,2,2-Tetrachloroethane	ND		ug/kg	25	8.3
Benzene	ND		ug/kg	25	8.3
Toluene	ND		ug/kg	50	27.
Ethylbenzene	ND		ug/kg	50	7.0
Chloromethane	ND		ug/kg	200	47.
Bromomethane	74	J	ug/kg	100	29.
Vinyl chloride	ND		ug/kg	50	17.
Chloroethane	ND		ug/kg	100	23.
1,1-Dichloroethene	ND		ug/kg	50	12.
trans-1,2-Dichloroethene	ND		ug/kg	75	6.8
Trichloroethene	ND		ug/kg	25	6.8

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 09/13/22 09:28
 Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 05-06 Batch: WG1687032-5					
1,2-Dichlorobenzene	ND		ug/kg	100	7.2
1,3-Dichlorobenzene	ND		ug/kg	100	7.4
1,4-Dichlorobenzene	ND		ug/kg	100	8.6
Methyl tert butyl ether	ND		ug/kg	100	10.
p/m-Xylene	ND		ug/kg	100	28.
o-Xylene	ND		ug/kg	50	14.
Xylenes, Total	ND		ug/kg	50	14.
cis-1,2-Dichloroethene	ND		ug/kg	50	8.8
1,2-Dichloroethene, Total	ND		ug/kg	50	6.8
Dibromomethane	ND		ug/kg	100	12.
Styrene	ND		ug/kg	50	9.8
Dichlorodifluoromethane	ND		ug/kg	500	46.
Acetone	ND		ug/kg	500	240
Carbon disulfide	ND		ug/kg	500	230
2-Butanone	ND		ug/kg	500	110
Vinyl acetate	ND		ug/kg	500	110
4-Methyl-2-pentanone	ND		ug/kg	500	64.
1,2,3-Trichloropropane	ND		ug/kg	100	6.4
2-Hexanone	ND		ug/kg	500	59.
Bromochloromethane	ND		ug/kg	100	10.
2,2-Dichloropropane	ND		ug/kg	100	10.
1,2-Dibromoethane	ND		ug/kg	50	14.
1,3-Dichloropropane	ND		ug/kg	100	8.4
1,1,1,2-Tetrachloroethane	ND		ug/kg	25	6.6
Bromobenzene	ND		ug/kg	100	7.2
n-Butylbenzene	ND		ug/kg	50	8.4
sec-Butylbenzene	ND		ug/kg	50	7.3
tert-Butylbenzene	ND		ug/kg	100	5.9
o-Chlorotoluene	ND		ug/kg	100	9.6

Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 09/13/22 09:28
 Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 05-06 Batch: WG1687032-5					
p-Chlorotoluene	ND		ug/kg	100	5.4
1,2-Dibromo-3-chloropropane	ND		ug/kg	150	50.
Hexachlorobutadiene	ND		ug/kg	200	8.4
Isopropylbenzene	ND		ug/kg	50	5.4
p-Isopropyltoluene	ND		ug/kg	50	5.4
Naphthalene	ND		ug/kg	200	32.
Acrylonitrile	ND		ug/kg	200	58.
n-Propylbenzene	ND		ug/kg	50	8.6
1,2,3-Trichlorobenzene	ND		ug/kg	100	16.
1,2,4-Trichlorobenzene	ND		ug/kg	100	14.
1,3,5-Trimethylbenzene	ND		ug/kg	100	9.6
1,2,4-Trimethylbenzene	ND		ug/kg	100	17.
1,4-Dioxane	ND		ug/kg	4000	1800
p-Diethylbenzene	ND		ug/kg	100	8.8
p-Ethyltoluene	ND		ug/kg	100	19.
1,2,4,5-Tetramethylbenzene	ND		ug/kg	100	9.6
Ethyl ether	ND		ug/kg	100	17.
trans-1,4-Dichloro-2-butene	ND		ug/kg	250	71.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	107		70-130



Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 09/14/22 19:08
 Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 03 Batch: WG1687815-5					
Methylene chloride	ND		ug/kg	250	110
1,1-Dichloroethane	ND		ug/kg	50	7.2
Chloroform	ND		ug/kg	75	7.0
Carbon tetrachloride	ND		ug/kg	50	12.
1,2-Dichloropropane	ND		ug/kg	50	6.2
Dibromochloromethane	ND		ug/kg	50	7.0
1,1,2-Trichloroethane	ND		ug/kg	50	13.
Tetrachloroethene	ND		ug/kg	25	9.8
Chlorobenzene	ND		ug/kg	25	6.4
Trichlorofluoromethane	ND		ug/kg	200	35.
1,2-Dichloroethane	ND		ug/kg	50	13.
1,1,1-Trichloroethane	ND		ug/kg	25	8.4
Bromodichloromethane	ND		ug/kg	25	5.4
trans-1,3-Dichloropropene	ND		ug/kg	50	14.
cis-1,3-Dichloropropene	ND		ug/kg	25	7.9
1,3-Dichloropropene, Total	ND		ug/kg	25	7.9
1,1-Dichloropropene	ND		ug/kg	25	8.0
Bromoform	ND		ug/kg	200	12.
1,1,2,2-Tetrachloroethane	ND		ug/kg	25	8.3
Benzene	ND		ug/kg	25	8.3
Toluene	ND		ug/kg	50	27.
Ethylbenzene	ND		ug/kg	50	7.0
Chloromethane	ND		ug/kg	200	47.
Bromomethane	ND		ug/kg	100	29.
Vinyl chloride	ND		ug/kg	50	17.
Chloroethane	ND		ug/kg	100	23.
1,1-Dichloroethene	ND		ug/kg	50	12.
trans-1,2-Dichloroethene	ND		ug/kg	75	6.8
Trichloroethene	ND		ug/kg	25	6.8

Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C

Analytical Date: 09/14/22 19:08

Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 03 Batch: WG1687815-5					
1,2-Dichlorobenzene	ND		ug/kg	100	7.2
1,3-Dichlorobenzene	ND		ug/kg	100	7.4
1,4-Dichlorobenzene	ND		ug/kg	100	8.6
Methyl tert butyl ether	ND		ug/kg	100	10.
p/m-Xylene	ND		ug/kg	100	28.
o-Xylene	ND		ug/kg	50	14.
Xylenes, Total	ND		ug/kg	50	14.
cis-1,2-Dichloroethene	ND		ug/kg	50	8.8
1,2-Dichloroethene, Total	ND		ug/kg	50	6.8
Dibromomethane	ND		ug/kg	100	12.
Styrene	ND		ug/kg	50	9.8
Dichlorodifluoromethane	ND		ug/kg	500	46.
Acetone	ND		ug/kg	500	240
Carbon disulfide	ND		ug/kg	500	230
2-Butanone	ND		ug/kg	500	110
Vinyl acetate	ND		ug/kg	500	110
4-Methyl-2-pentanone	ND		ug/kg	500	64.
1,2,3-Trichloropropane	ND		ug/kg	100	6.4
2-Hexanone	ND		ug/kg	500	59.
Bromochloromethane	ND		ug/kg	100	10.
2,2-Dichloropropane	ND		ug/kg	100	10.
1,2-Dibromoethane	ND		ug/kg	50	14.
1,3-Dichloropropane	ND		ug/kg	100	8.4
1,1,1,2-Tetrachloroethane	ND		ug/kg	25	6.6
Bromobenzene	ND		ug/kg	100	7.2
n-Butylbenzene	ND		ug/kg	50	8.4
sec-Butylbenzene	ND		ug/kg	50	7.3
tert-Butylbenzene	ND		ug/kg	100	5.9
o-Chlorotoluene	ND		ug/kg	100	9.6

Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 09/14/22 19:08
 Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 03 Batch: WG1687815-5					
p-Chlorotoluene	ND		ug/kg	100	5.4
1,2-Dibromo-3-chloropropane	ND		ug/kg	150	50.
Hexachlorobutadiene	ND		ug/kg	200	8.4
Isopropylbenzene	ND		ug/kg	50	5.4
p-Isopropyltoluene	ND		ug/kg	50	5.4
Naphthalene	ND		ug/kg	200	32.
Acrylonitrile	ND		ug/kg	200	58.
n-Propylbenzene	ND		ug/kg	50	8.6
1,2,3-Trichlorobenzene	ND		ug/kg	100	16.
1,2,4-Trichlorobenzene	ND		ug/kg	100	14.
1,3,5-Trimethylbenzene	ND		ug/kg	100	9.6
1,2,4-Trimethylbenzene	ND		ug/kg	100	17.
1,4-Dioxane	ND		ug/kg	4000	1800
p-Diethylbenzene	ND		ug/kg	100	8.8
p-Ethyltoluene	ND		ug/kg	100	19.
1,2,4,5-Tetramethylbenzene	ND		ug/kg	100	9.6
Ethyl ether	ND		ug/kg	100	17.
trans-1,4-Dichloro-2-butene	ND		ug/kg	250	71.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	93		70-130



Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 09/14/22 09:07
 Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 02 Batch: WG1687921-5					
Methylene chloride	ND		ug/kg	250	110
1,1-Dichloroethane	ND		ug/kg	50	7.2
Chloroform	ND		ug/kg	75	7.0
Carbon tetrachloride	ND		ug/kg	50	12.
1,2-Dichloropropane	ND		ug/kg	50	6.2
Dibromochloromethane	ND		ug/kg	50	7.0
1,1,2-Trichloroethane	ND		ug/kg	50	13.
Tetrachloroethene	ND		ug/kg	25	9.8
Chlorobenzene	ND		ug/kg	25	6.4
Trichlorofluoromethane	ND		ug/kg	200	35.
1,2-Dichloroethane	ND		ug/kg	50	13.
1,1,1-Trichloroethane	ND		ug/kg	25	8.4
Bromodichloromethane	ND		ug/kg	25	5.4
trans-1,3-Dichloropropene	ND		ug/kg	50	14.
cis-1,3-Dichloropropene	ND		ug/kg	25	7.9
1,3-Dichloropropene, Total	ND		ug/kg	25	7.9
1,1-Dichloropropene	ND		ug/kg	25	8.0
Bromoform	ND		ug/kg	200	12.
1,1,2,2-Tetrachloroethane	ND		ug/kg	25	8.3
Benzene	ND		ug/kg	25	8.3
Toluene	ND		ug/kg	50	27.
Ethylbenzene	ND		ug/kg	50	7.0
Chloromethane	ND		ug/kg	200	47.
Bromomethane	ND		ug/kg	100	29.
Vinyl chloride	ND		ug/kg	50	17.
Chloroethane	ND		ug/kg	100	23.
1,1-Dichloroethene	ND		ug/kg	50	12.
trans-1,2-Dichloroethene	ND		ug/kg	75	6.8
Trichloroethene	ND		ug/kg	25	6.8

Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C

Analytical Date: 09/14/22 09:07

Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 02 Batch: WG1687921-5					
1,2-Dichlorobenzene	ND		ug/kg	100	7.2
1,3-Dichlorobenzene	ND		ug/kg	100	7.4
1,4-Dichlorobenzene	ND		ug/kg	100	8.6
Methyl tert butyl ether	ND		ug/kg	100	10.
p/m-Xylene	ND		ug/kg	100	28.
o-Xylene	ND		ug/kg	50	14.
Xylenes, Total	ND		ug/kg	50	14.
cis-1,2-Dichloroethene	ND		ug/kg	50	8.8
1,2-Dichloroethene, Total	ND		ug/kg	50	6.8
Dibromomethane	ND		ug/kg	100	12.
Styrene	ND		ug/kg	50	9.8
Dichlorodifluoromethane	ND		ug/kg	500	46.
Acetone	ND		ug/kg	500	240
Carbon disulfide	ND		ug/kg	500	230
2-Butanone	ND		ug/kg	500	110
Vinyl acetate	ND		ug/kg	500	110
4-Methyl-2-pentanone	ND		ug/kg	500	64.
1,2,3-Trichloropropane	ND		ug/kg	100	6.4
2-Hexanone	ND		ug/kg	500	59.
Bromochloromethane	ND		ug/kg	100	10.
2,2-Dichloropropane	ND		ug/kg	100	10.
1,2-Dibromoethane	ND		ug/kg	50	14.
1,3-Dichloropropane	ND		ug/kg	100	8.4
1,1,1,2-Tetrachloroethane	ND		ug/kg	25	6.6
Bromobenzene	ND		ug/kg	100	7.2
n-Butylbenzene	ND		ug/kg	50	8.4
sec-Butylbenzene	ND		ug/kg	50	7.3
tert-Butylbenzene	ND		ug/kg	100	5.9
o-Chlorotoluene	ND		ug/kg	100	9.6

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 09/14/22 09:07
 Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 02 Batch: WG1687921-5					
p-Chlorotoluene	ND		ug/kg	100	5.4
1,2-Dibromo-3-chloropropane	ND		ug/kg	150	50.
Hexachlorobutadiene	ND		ug/kg	200	8.4
Isopropylbenzene	ND		ug/kg	50	5.4
p-Isopropyltoluene	ND		ug/kg	50	5.4
Naphthalene	ND		ug/kg	200	32.
Acrylonitrile	ND		ug/kg	200	58.
n-Propylbenzene	ND		ug/kg	50	8.6
1,2,3-Trichlorobenzene	ND		ug/kg	100	16.
1,2,4-Trichlorobenzene	ND		ug/kg	100	14.
1,3,5-Trimethylbenzene	ND		ug/kg	100	9.6
1,2,4-Trimethylbenzene	ND		ug/kg	100	17.
1,4-Dioxane	ND		ug/kg	4000	1800
p-Diethylbenzene	ND		ug/kg	100	8.8
p-Ethyltoluene	ND		ug/kg	100	19.
1,2,4,5-Tetramethylbenzene	ND		ug/kg	100	9.6
Ethyl ether	ND		ug/kg	100	17.
trans-1,4-Dichloro-2-butene	ND		ug/kg	250	71.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	91		70-130
Dibromofluoromethane	104		70-130



Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 09/14/22 09:07
 Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 07,10 Batch: WG1687936-5					
Methylene chloride	ND		ug/kg	5.0	2.3
1,1-Dichloroethane	ND		ug/kg	1.0	0.14
Chloroform	ND		ug/kg	1.5	0.14
Carbon tetrachloride	ND		ug/kg	1.0	0.23
1,2-Dichloropropane	ND		ug/kg	1.0	0.12
Dibromochloromethane	ND		ug/kg	1.0	0.14
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.27
Tetrachloroethene	ND		ug/kg	0.50	0.20
Chlorobenzene	ND		ug/kg	0.50	0.13
Trichlorofluoromethane	ND		ug/kg	4.0	0.70
1,2-Dichloroethane	ND		ug/kg	1.0	0.26
1,1,1-Trichloroethane	ND		ug/kg	0.50	0.17
Bromodichloromethane	ND		ug/kg	0.50	0.11
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.27
cis-1,3-Dichloropropene	ND		ug/kg	0.50	0.16
1,3-Dichloropropene, Total	ND		ug/kg	0.50	0.16
1,1-Dichloropropene	ND		ug/kg	0.50	0.16
Bromoform	ND		ug/kg	4.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	0.17
Benzene	ND		ug/kg	0.50	0.17
Toluene	ND		ug/kg	1.0	0.54
Ethylbenzene	ND		ug/kg	1.0	0.14
Chloromethane	ND		ug/kg	4.0	0.93
Bromomethane	ND		ug/kg	2.0	0.58
Vinyl chloride	ND		ug/kg	1.0	0.34
Chloroethane	ND		ug/kg	2.0	0.45
1,1-Dichloroethene	ND		ug/kg	1.0	0.24
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14
Trichloroethene	ND		ug/kg	0.50	0.14

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 09/14/22 09:07
 Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 07,10 Batch: WG1687936-5					
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.14
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.15
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17
Methyl tert butyl ether	ND		ug/kg	2.0	0.20
p/m-Xylene	ND		ug/kg	2.0	0.56
o-Xylene	ND		ug/kg	1.0	0.29
Xylenes, Total	ND		ug/kg	1.0	0.29
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14
Dibromomethane	ND		ug/kg	2.0	0.24
Styrene	ND		ug/kg	1.0	0.20
Dichlorodifluoromethane	ND		ug/kg	10	0.92
Acetone	ND		ug/kg	10	4.8
Carbon disulfide	ND		ug/kg	10	4.6
2-Butanone	ND		ug/kg	10	2.2
Vinyl acetate	ND		ug/kg	10	2.2
4-Methyl-2-pentanone	ND		ug/kg	10	1.3
1,2,3-Trichloropropane	ND		ug/kg	2.0	0.13
2-Hexanone	ND		ug/kg	10	1.2
Bromochloromethane	ND		ug/kg	2.0	0.20
2,2-Dichloropropane	ND		ug/kg	2.0	0.20
1,2-Dibromoethane	ND		ug/kg	1.0	0.28
1,3-Dichloropropane	ND		ug/kg	2.0	0.17
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.50	0.13
Bromobenzene	ND		ug/kg	2.0	0.14
n-Butylbenzene	ND		ug/kg	1.0	0.17
sec-Butylbenzene	ND		ug/kg	1.0	0.15
tert-Butylbenzene	ND		ug/kg	2.0	0.12
o-Chlorotoluene	ND		ug/kg	2.0	0.19



Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 09/14/22 09:07
 Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 07,10 Batch: WG1687936-5					
p-Chlorotoluene	ND		ug/kg	2.0	0.11
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	1.0
Hexachlorobutadiene	ND		ug/kg	4.0	0.17
Isopropylbenzene	ND		ug/kg	1.0	0.11
p-Isopropyltoluene	ND		ug/kg	1.0	0.11
Naphthalene	ND		ug/kg	4.0	0.65
Acrylonitrile	ND		ug/kg	4.0	1.2
n-Propylbenzene	ND		ug/kg	1.0	0.17
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.32
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.27
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.19
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.33
1,4-Dioxane	ND		ug/kg	80	35.
p-Diethylbenzene	ND		ug/kg	2.0	0.18
p-Ethyltoluene	ND		ug/kg	2.0	0.38
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.0	0.19
Ethyl ether	ND		ug/kg	2.0	0.34
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	1.4

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	91		70-130
Dibromofluoromethane	104		70-130



Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 09/16/22 07:05
 Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 01,04 Batch: WG1689164-5					
Methylene chloride	ND		ug/kg	250	110
1,1-Dichloroethane	ND		ug/kg	50	7.2
Chloroform	ND		ug/kg	75	7.0
Carbon tetrachloride	ND		ug/kg	50	12.
1,2-Dichloropropane	ND		ug/kg	50	6.2
Dibromochloromethane	ND		ug/kg	50	7.0
1,1,2-Trichloroethane	ND		ug/kg	50	13.
Tetrachloroethene	ND		ug/kg	25	9.8
Chlorobenzene	ND		ug/kg	25	6.4
Trichlorofluoromethane	ND		ug/kg	200	35.
1,2-Dichloroethane	ND		ug/kg	50	13.
1,1,1-Trichloroethane	ND		ug/kg	25	8.4
Bromodichloromethane	ND		ug/kg	25	5.4
trans-1,3-Dichloropropene	ND		ug/kg	50	14.
cis-1,3-Dichloropropene	ND		ug/kg	25	7.9
1,3-Dichloropropene, Total	ND		ug/kg	25	7.9
1,1-Dichloropropene	ND		ug/kg	25	8.0
Bromoform	ND		ug/kg	200	12.
1,1,2,2-Tetrachloroethane	ND		ug/kg	25	8.3
Benzene	ND		ug/kg	25	8.3
Toluene	ND		ug/kg	50	27.
Ethylbenzene	ND		ug/kg	50	7.0
Chloromethane	ND		ug/kg	200	47.
Bromomethane	ND		ug/kg	100	29.
Vinyl chloride	ND		ug/kg	50	17.
Chloroethane	ND		ug/kg	100	23.
1,1-Dichloroethene	ND		ug/kg	50	12.
trans-1,2-Dichloroethene	ND		ug/kg	75	6.8
Trichloroethene	ND		ug/kg	25	6.8

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 09/16/22 07:05
 Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 01,04 Batch: WG1689164-5					
1,2-Dichlorobenzene	ND		ug/kg	100	7.2
1,3-Dichlorobenzene	ND		ug/kg	100	7.4
1,4-Dichlorobenzene	ND		ug/kg	100	8.6
Methyl tert butyl ether	ND		ug/kg	100	10.
p/m-Xylene	ND		ug/kg	100	28.
o-Xylene	ND		ug/kg	50	14.
Xylenes, Total	ND		ug/kg	50	14.
cis-1,2-Dichloroethene	ND		ug/kg	50	8.8
1,2-Dichloroethene, Total	ND		ug/kg	50	6.8
Dibromomethane	ND		ug/kg	100	12.
Styrene	ND		ug/kg	50	9.8
Dichlorodifluoromethane	ND		ug/kg	500	46.
Acetone	ND		ug/kg	500	240
Carbon disulfide	ND		ug/kg	500	230
2-Butanone	ND		ug/kg	500	110
Vinyl acetate	ND		ug/kg	500	110
4-Methyl-2-pentanone	ND		ug/kg	500	64.
1,2,3-Trichloropropane	ND		ug/kg	100	6.4
2-Hexanone	ND		ug/kg	500	59.
Bromochloromethane	ND		ug/kg	100	10.
2,2-Dichloropropane	ND		ug/kg	100	10.
1,2-Dibromoethane	ND		ug/kg	50	14.
1,3-Dichloropropane	ND		ug/kg	100	8.4
1,1,1,2-Tetrachloroethane	ND		ug/kg	25	6.6
Bromobenzene	ND		ug/kg	100	7.2
n-Butylbenzene	ND		ug/kg	50	8.4
sec-Butylbenzene	ND		ug/kg	50	7.3
tert-Butylbenzene	ND		ug/kg	100	5.9
o-Chlorotoluene	ND		ug/kg	100	9.6

Project Name: 2ND AVE

Lab Number: L2248925

Project Number: 81363

Report Date: 09/22/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 09/16/22 07:05
 Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 01,04 Batch: WG1689164-5					
p-Chlorotoluene	ND		ug/kg	100	5.4
1,2-Dibromo-3-chloropropane	ND		ug/kg	150	50.
Hexachlorobutadiene	ND		ug/kg	200	8.4
Isopropylbenzene	ND		ug/kg	50	5.4
p-Isopropyltoluene	ND		ug/kg	50	5.4
Naphthalene	ND		ug/kg	200	32.
Acrylonitrile	ND		ug/kg	200	58.
n-Propylbenzene	ND		ug/kg	50	8.6
1,2,3-Trichlorobenzene	ND		ug/kg	100	16.
1,2,4-Trichlorobenzene	ND		ug/kg	100	14.
1,3,5-Trimethylbenzene	ND		ug/kg	100	9.6
1,2,4-Trimethylbenzene	ND		ug/kg	100	17.
1,4-Dioxane	ND		ug/kg	4000	1800
p-Diethylbenzene	ND		ug/kg	100	8.8
p-Ethyltoluene	ND		ug/kg	100	19.
1,2,4,5-Tetramethylbenzene	ND		ug/kg	100	9.6
Ethyl ether	ND		ug/kg	100	17.
trans-1,4-Dichloro-2-butene	ND		ug/kg	250	71.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	94		70-130



Lab Control Sample Analysis

Batch Quality Control

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01,04 Batch: WG1686673-3 WG1686673-4								
Methylene chloride	95		91		70-130	4		30
1,1-Dichloroethane	102		96		70-130	6		30
Chloroform	105		98		70-130	7		30
Carbon tetrachloride	103		95		70-130	8		30
1,2-Dichloropropane	99		93		70-130	6		30
Dibromochloromethane	103		98		70-130	5		30
1,1,2-Trichloroethane	104		100		70-130	4		30
Tetrachloroethene	102		93		70-130	9		30
Chlorobenzene	93		88		70-130	6		30
Trichlorofluoromethane	89		81		70-139	9		30
1,2-Dichloroethane	105		98		70-130	7		30
1,1,1-Trichloroethane	107		100		70-130	7		30
Bromodichloromethane	105		100		70-130	5		30
trans-1,3-Dichloropropene	108		101		70-130	7		30
cis-1,3-Dichloropropene	110		103		70-130	7		30
1,1-Dichloropropene	109		100		70-130	9		30
Bromoform	104		99		70-130	5		30
1,1,2,2-Tetrachloroethane	97		90		70-130	7		30
Benzene	104		98		70-130	6		30
Toluene	92		86		70-130	7		30
Ethylbenzene	96		89		70-130	8		30
Chloromethane	80		75		52-130	6		30
Bromomethane	84		77		57-147	9		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01,04 Batch: WG1686673-3 WG1686673-4								
Vinyl chloride	73		67		67-130	9		30
Chloroethane	66		60		50-151	10		30
1,1-Dichloroethene	100		92		65-135	8		30
trans-1,2-Dichloroethene	100		94		70-130	6		30
Trichloroethene	103		98		70-130	5		30
1,2-Dichlorobenzene	92		85		70-130	8		30
1,3-Dichlorobenzene	92		86		70-130	7		30
1,4-Dichlorobenzene	91		84		70-130	8		30
Methyl tert butyl ether	117		111		66-130	5		30
p/m-Xylene	94		86		70-130	9		30
o-Xylene	94		88		70-130	7		30
cis-1,2-Dichloroethene	101		95		70-130	6		30
Dibromomethane	105		99		70-130	6		30
Styrene	92		86		70-130	7		30
Dichlorodifluoromethane	69		63		30-146	9		30
Acetone	103		90		54-140	13		30
Carbon disulfide	93		86		59-130	8		30
2-Butanone	106		96		70-130	10		30
Vinyl acetate	95		79		70-130	18		30
4-Methyl-2-pentanone	103		98		70-130	5		30
1,2,3-Trichloropropane	100		95		68-130	5		30
2-Hexanone	94		89		70-130	5		30
Bromochloromethane	99		94		70-130	5		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01,04 Batch: WG1686673-3 WG1686673-4								
2,2-Dichloropropane	110		101		70-130	9		30
1,2-Dibromoethane	102		97		70-130	5		30
1,3-Dichloropropane	106		100		69-130	6		30
1,1,1,2-Tetrachloroethane	98		93		70-130	5		30
Bromobenzene	94		87		70-130	8		30
n-Butylbenzene	93		85		70-130	9		30
sec-Butylbenzene	90		82		70-130	9		30
tert-Butylbenzene	89		80		70-130	11		30
o-Chlorotoluene	92		84		70-130	9		30
p-Chlorotoluene	91		84		70-130	8		30
1,2-Dibromo-3-chloropropane	104		98		68-130	6		30
Hexachlorobutadiene	109		100		67-130	9		30
Isopropylbenzene	90		82		70-130	9		30
p-Isopropyltoluene	90		83		70-130	8		30
Naphthalene	96		89		70-130	8		30
Acrylonitrile	105		99		70-130	6		30
n-Propylbenzene	92		84		70-130	9		30
1,2,3-Trichlorobenzene	104		96		70-130	8		30
1,2,4-Trichlorobenzene	101		94		70-130	7		30
1,3,5-Trimethylbenzene	90		82		70-130	9		30
1,2,4-Trimethylbenzene	90		82		70-130	9		30
1,4-Dioxane	141	Q	127		65-136	10		30
p-Diethylbenzene	90		82		70-130	9		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCS %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01,04 Batch: WG1686673-3 WG1686673-4								
p-Ethyltoluene	90		82		70-130	9		30
1,2,4,5-Tetramethylbenzene	91		84		70-130	8		30
Ethyl ether	115		108		67-130	6		30
trans-1,4-Dichloro-2-butene	92		87		70-130	6		30

Surrogate	LCS %Recovery	Qual	LCS %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	109		107		70-130
Toluene-d8	96		96		70-130
4-Bromofluorobenzene	97		96		70-130
Dibromofluoromethane	103		102		70-130

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 02,05-06 Batch: WG1686781-3 WG1686781-4								
Methylene chloride	95		91		70-130	4		30
1,1-Dichloroethane	102		96		70-130	6		30
Chloroform	105		98		70-130	7		30
Carbon tetrachloride	103		95		70-130	8		30
1,2-Dichloropropane	99		93		70-130	6		30
Dibromochloromethane	103		98		70-130	5		30
1,1,2-Trichloroethane	104		100		70-130	4		30
Tetrachloroethene	102		93		70-130	9		30
Chlorobenzene	93		88		70-130	6		30
Trichlorofluoromethane	89		81		70-139	9		30
1,2-Dichloroethane	105		98		70-130	7		30
1,1,1-Trichloroethane	107		100		70-130	7		30
Bromodichloromethane	105		100		70-130	5		30
trans-1,3-Dichloropropene	108		101		70-130	7		30
cis-1,3-Dichloropropene	110		103		70-130	7		30
1,1-Dichloropropene	109		100		70-130	9		30
Bromoform	104		99		70-130	5		30
1,1,2,2-Tetrachloroethane	97		90		70-130	7		30
Benzene	104		98		70-130	6		30
Toluene	92		86		70-130	7		30
Ethylbenzene	96		89		70-130	8		30
Chloromethane	80		75		52-130	6		30
Bromomethane	84		77		57-147	9		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 02,05-06 Batch: WG1686781-3 WG1686781-4								
Vinyl chloride	73		67		67-130	9		30
Chloroethane	66		60		50-151	10		30
1,1-Dichloroethene	100		92		65-135	8		30
trans-1,2-Dichloroethene	100		94		70-130	6		30
Trichloroethene	103		98		70-130	5		30
1,2-Dichlorobenzene	92		85		70-130	8		30
1,3-Dichlorobenzene	92		86		70-130	7		30
1,4-Dichlorobenzene	91		84		70-130	8		30
Methyl tert butyl ether	117		111		66-130	5		30
p/m-Xylene	94		86		70-130	9		30
o-Xylene	94		88		70-130	7		30
cis-1,2-Dichloroethene	101		95		70-130	6		30
Dibromomethane	105		99		70-130	6		30
Styrene	92		86		70-130	7		30
Dichlorodifluoromethane	69		63		30-146	9		30
Acetone	103		90		54-140	13		30
Carbon disulfide	93		86		59-130	8		30
2-Butanone	106		96		70-130	10		30
Vinyl acetate	95		79		70-130	18		30
4-Methyl-2-pentanone	103		98		70-130	5		30
1,2,3-Trichloropropane	100		95		68-130	5		30
2-Hexanone	94		89		70-130	5		30
Bromochloromethane	99		94		70-130	5		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 02,05-06 Batch: WG1686781-3 WG1686781-4								
2,2-Dichloropropane	110		101		70-130	9		30
1,2-Dibromoethane	102		97		70-130	5		30
1,3-Dichloropropane	106		100		69-130	6		30
1,1,1,2-Tetrachloroethane	98		93		70-130	5		30
Bromobenzene	94		87		70-130	8		30
n-Butylbenzene	93		85		70-130	9		30
sec-Butylbenzene	90		82		70-130	9		30
tert-Butylbenzene	89		80		70-130	11		30
o-Chlorotoluene	92		84		70-130	9		30
p-Chlorotoluene	91		84		70-130	8		30
1,2-Dibromo-3-chloropropane	104		98		68-130	6		30
Hexachlorobutadiene	109		100		67-130	9		30
Isopropylbenzene	90		82		70-130	9		30
p-Isopropyltoluene	90		83		70-130	8		30
Naphthalene	96		89		70-130	8		30
Acrylonitrile	105		99		70-130	6		30
n-Propylbenzene	92		84		70-130	9		30
1,2,3-Trichlorobenzene	104		96		70-130	8		30
1,2,4-Trichlorobenzene	101		94		70-130	7		30
1,3,5-Trimethylbenzene	90		82		70-130	9		30
1,2,4-Trimethylbenzene	90		82		70-130	9		30
1,4-Dioxane	141	Q	127		65-136	10		30
p-Diethylbenzene	90		82		70-130	9		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 02,05-06 Batch: WG1686781-3 WG1686781-4								
p-Ethyltoluene	90		82		70-130	9		30
1,2,4,5-Tetramethylbenzene	91		84		70-130	8		30
Ethyl ether	115		108		67-130	6		30
trans-1,4-Dichloro-2-butene	92		87		70-130	6		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	108		107		70-130
Toluene-d8	97		96		70-130
4-Bromofluorobenzene	97		96		70-130
Dibromofluoromethane	103		102		70-130

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 08-09 Batch: WG1686984-3 WG1686984-4								
Methylene chloride	84		82		70-130	2		30
1,1-Dichloroethane	92		90		70-130	2		30
Chloroform	93		91		70-130	2		30
Carbon tetrachloride	100		97		70-130	3		30
1,2-Dichloropropane	87		87		70-130	0		30
Dibromochloromethane	95		97		70-130	2		30
1,1,2-Trichloroethane	93		94		70-130	1		30
Tetrachloroethene	105		105		70-130	0		30
Chlorobenzene	91		92		70-130	1		30
Trichlorofluoromethane	81		78		70-139	4		30
1,2-Dichloroethane	87		87		70-130	0		30
1,1,1-Trichloroethane	100		98		70-130	2		30
Bromodichloromethane	92		91		70-130	1		30
trans-1,3-Dichloropropene	99		100		70-130	1		30
cis-1,3-Dichloropropene	95		94		70-130	1		30
1,1-Dichloropropene	102		100		70-130	2		30
Bromoform	98		99		70-130	1		30
1,1,2,2-Tetrachloroethane	87		88		70-130	1		30
Benzene	94		92		70-130	2		30
Toluene	90		90		70-130	0		30
Ethylbenzene	94		94		70-130	0		30
Chloromethane	73		70		52-130	4		30
Bromomethane	74		72		57-147	3		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 08-09 Batch: WG1686984-3 WG1686984-4								
Vinyl chloride	63	Q	60	Q	67-130	5		30
Chloroethane	56		54		50-151	4		30
1,1-Dichloroethene	94		92		65-135	2		30
trans-1,2-Dichloroethene	93		91		70-130	2		30
Trichloroethene	93		91		70-130	2		30
1,2-Dichlorobenzene	91		92		70-130	1		30
1,3-Dichlorobenzene	94		94		70-130	0		30
1,4-Dichlorobenzene	92		93		70-130	1		30
Methyl tert butyl ether	97		96		66-130	1		30
p/m-Xylene	92		92		70-130	0		30
o-Xylene	91		92		70-130	1		30
cis-1,2-Dichloroethene	90		89		70-130	1		30
Dibromomethane	87		86		70-130	1		30
Styrene	87		87		70-130	0		30
Dichlorodifluoromethane	57		55		30-146	4		30
Acetone	72		72		54-140	0		30
Carbon disulfide	85		82		59-130	4		30
2-Butanone	77		76		70-130	1		30
Vinyl acetate	80		80		70-130	0		30
4-Methyl-2-pentanone	86		85		70-130	1		30
1,2,3-Trichloropropane	88		90		68-130	2		30
2-Hexanone	77		77		70-130	0		30
Bromochloromethane	86		86		70-130	0		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 08-09 Batch: WG1686984-3 WG1686984-4								
2,2-Dichloropropane	104		101		70-130	3		30
1,2-Dibromoethane	92		93		70-130	1		30
1,3-Dichloropropane	96		97		69-130	1		30
1,1,1,2-Tetrachloroethane	95		96		70-130	1		30
Bromobenzene	94		95		70-130	1		30
n-Butylbenzene	96		96		70-130	0		30
sec-Butylbenzene	94		94		70-130	0		30
tert-Butylbenzene	93		93		70-130	0		30
o-Chlorotoluene	92		92		70-130	0		30
p-Chlorotoluene	92		92		70-130	0		30
1,2-Dibromo-3-chloropropane	93		92		68-130	1		30
Hexachlorobutadiene	120		121		67-130	1		30
Isopropylbenzene	93		93		70-130	0		30
p-Isopropyltoluene	95		95		70-130	0		30
Naphthalene	89		89		70-130	0		30
Acrylonitrile	82		82		70-130	0		30
n-Propylbenzene	95		95		70-130	0		30
1,2,3-Trichlorobenzene	103		105		70-130	2		30
1,2,4-Trichlorobenzene	104		105		70-130	1		30
1,3,5-Trimethylbenzene	93		93		70-130	0		30
1,2,4-Trimethylbenzene	92		92		70-130	0		30
1,4-Dioxane	106		110		65-136	4		30
p-Diethylbenzene	95		95		70-130	0		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCS %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 08-09 Batch: WG1686984-3 WG1686984-4								
p-Ethyltoluene	94		94		70-130	0		30
1,2,4,5-Tetramethylbenzene	94		95		70-130	1		30
Ethyl ether	96		94		67-130	2		30
trans-1,4-Dichloro-2-butene	81		81		70-130	0		30

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

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 05-06 Batch: WG1687032-3 WG1687032-4								
Methylene chloride	87		69	Q	70-130	23		30
1,1-Dichloroethane	100		102		70-130	2		30
Chloroform	96		96		70-130	0		30
Carbon tetrachloride	97		98		70-130	1		30
1,2-Dichloropropane	96		97		70-130	1		30
Dibromochloromethane	93		92		70-130	1		30
1,1,2-Trichloroethane	91		92		70-130	1		30
Tetrachloroethene	99		99		70-130	0		30
Chlorobenzene	93		93		70-130	0		30
Trichlorofluoromethane	77		79		70-139	3		30
1,2-Dichloroethane	93		94		70-130	1		30
1,1,1-Trichloroethane	99		99		70-130	0		30
Bromodichloromethane	95		96		70-130	1		30
trans-1,3-Dichloropropene	94		96		70-130	2		30
cis-1,3-Dichloropropene	100		100		70-130	0		30
1,1-Dichloropropene	97		99		70-130	2		30
Bromoform	82		85		70-130	4		30
1,1,2,2-Tetrachloroethane	83		86		70-130	4		30
Benzene	97		98		70-130	1		30
Toluene	89		90		70-130	1		30
Ethylbenzene	90		89		70-130	1		30
Chloromethane	80		78		52-130	3		30
Bromomethane	96		100		57-147	4		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 05-06 Batch: WG1687032-3 WG1687032-4								
Vinyl chloride	78		78		67-130	0		30
Chloroethane	81		82		50-151	1		30
1,1-Dichloroethene	78		80		65-135	3		30
trans-1,2-Dichloroethene	122		105		70-130	15		30
Trichloroethene	98		99		70-130	1		30
1,2-Dichlorobenzene	92		93		70-130	1		30
1,3-Dichlorobenzene	92		91		70-130	1		30
1,4-Dichlorobenzene	90		90		70-130	0		30
Methyl tert butyl ether	96		97		66-130	1		30
p/m-Xylene	92		91		70-130	1		30
o-Xylene	92		92		70-130	0		30
cis-1,2-Dichloroethene	98		98		70-130	0		30
Dibromomethane	95		95		70-130	0		30
Styrene	94		93		70-130	1		30
Dichlorodifluoromethane	49		48		30-146	2		30
Acetone	141	Q	91		54-140	43	Q	30
Carbon disulfide	71		74		59-130	4		30
2-Butanone	84		88		70-130	5		30
Vinyl acetate	98		98		70-130	0		30
4-Methyl-2-pentanone	86		88		70-130	2		30
1,2,3-Trichloropropane	84		85		68-130	1		30
2-Hexanone	81		82		70-130	1		30
Bromochloromethane	100		100		70-130	0		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 05-06 Batch: WG1687032-3 WG1687032-4								
2,2-Dichloropropane	102		103		70-130	1		30
1,2-Dibromoethane	90		92		70-130	2		30
1,3-Dichloropropane	91		91		69-130	0		30
1,1,1,2-Tetrachloroethane	95		94		70-130	1		30
Bromobenzene	88		89		70-130	1		30
n-Butylbenzene	94		92		70-130	2		30
sec-Butylbenzene	90		90		70-130	0		30
tert-Butylbenzene	88		89		70-130	1		30
o-Chlorotoluene	87		87		70-130	0		30
p-Chlorotoluene	88		89		70-130	1		30
1,2-Dibromo-3-chloropropane	89		88		68-130	1		30
Hexachlorobutadiene	103		101		67-130	2		30
Isopropylbenzene	85		87		70-130	2		30
p-Isopropyltoluene	90		91		70-130	1		30
Naphthalene	91		91		70-130	0		30
Acrylonitrile	103		106		70-130	3		30
n-Propylbenzene	88		89		70-130	1		30
1,2,3-Trichlorobenzene	102		99		70-130	3		30
1,2,4-Trichlorobenzene	102		101		70-130	1		30
1,3,5-Trimethylbenzene	88		88		70-130	0		30
1,2,4-Trimethylbenzene	88		88		70-130	0		30
1,4-Dioxane	108		109		65-136	1		30
p-Diethylbenzene	92		91		70-130	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 05-06 Batch: WG1687032-3 WG1687032-4								
p-Ethyltoluene	88		89		70-130	1		30
1,2,4,5-Tetramethylbenzene	94		92		70-130	2		30
Ethyl ether	80		83		67-130	4		30
trans-1,4-Dichloro-2-butene	90		93		70-130	3		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	99		98		70-130
Toluene-d8	96		97		70-130
4-Bromofluorobenzene	92		94		70-130
Dibromofluoromethane	102		104		70-130

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 03 Batch: WG1687815-3 WG1687815-4								
Methylene chloride	90		88		70-130	2		30
1,1-Dichloroethane	97		95		70-130	2		30
Chloroform	85		83		70-130	2		30
Carbon tetrachloride	83		78		70-130	6		30
1,2-Dichloropropane	98		97		70-130	1		30
Dibromochloromethane	81		78		70-130	4		30
1,1,2-Trichloroethane	93		93		70-130	0		30
Tetrachloroethene	91		88		70-130	3		30
Chlorobenzene	93		91		70-130	2		30
Trichlorofluoromethane	85		80		70-139	6		30
1,2-Dichloroethane	92		88		70-130	4		30
1,1,1-Trichloroethane	91		87		70-130	4		30
Bromodichloromethane	82		79		70-130	4		30
trans-1,3-Dichloropropene	92		91		70-130	1		30
cis-1,3-Dichloropropene	92		90		70-130	2		30
1,1-Dichloropropene	101		97		70-130	4		30
Bromoform	74		73		70-130	1		30
1,1,2,2-Tetrachloroethane	93		93		70-130	0		30
Benzene	94		91		70-130	3		30
Toluene	87		85		70-130	2		30
Ethylbenzene	94		93		70-130	1		30
Chloromethane	93		93		52-130	0		30
Bromomethane	87		89		57-147	2		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 03 Batch: WG1687815-3 WG1687815-4								
Vinyl chloride	93		90		67-130	3		30
Chloroethane	100		97		50-151	3		30
1,1-Dichloroethene	93		88		65-135	6		30
trans-1,2-Dichloroethene	88		83		70-130	6		30
Trichloroethene	93		89		70-130	4		30
1,2-Dichlorobenzene	88		89		70-130	1		30
1,3-Dichlorobenzene	91		90		70-130	1		30
1,4-Dichlorobenzene	83		82		70-130	1		30
Methyl tert butyl ether	85		81		66-130	5		30
p/m-Xylene	93		90		70-130	3		30
o-Xylene	93		91		70-130	2		30
cis-1,2-Dichloroethene	84		84		70-130	0		30
Dibromomethane	85		82		70-130	4		30
Styrene	92		90		70-130	2		30
Dichlorodifluoromethane	89		85		30-146	5		30
Acetone	113		111		54-140	2		30
Carbon disulfide	89		85		59-130	5		30
2-Butanone	93		95		70-130	2		30
Vinyl acetate	81		81		70-130	0		30
4-Methyl-2-pentanone	83		84		70-130	1		30
1,2,3-Trichloropropane	91		92		68-130	1		30
2-Hexanone	83		84		70-130	1		30
Bromochloromethane	85		82		70-130	4		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 03 Batch: WG1687815-3 WG1687815-4								
2,2-Dichloropropane	91		87		70-130	4		30
1,2-Dibromoethane	88		86		70-130	2		30
1,3-Dichloropropane	97		96		69-130	1		30
1,1,1,2-Tetrachloroethane	86		83		70-130	4		30
Bromobenzene	87		86		70-130	1		30
n-Butylbenzene	104		104		70-130	0		30
sec-Butylbenzene	100		99		70-130	1		30
tert-Butylbenzene	93		93		70-130	0		30
o-Chlorotoluene	109		109		70-130	0		30
p-Chlorotoluene	96		96		70-130	0		30
1,2-Dibromo-3-chloropropane	73		72		68-130	1		30
Hexachlorobutadiene	86		84		67-130	2		30
Isopropylbenzene	96		94		70-130	2		30
p-Isopropyltoluene	96		95		70-130	1		30
Naphthalene	84		81		70-130	4		30
Acrylonitrile	91		92		70-130	1		30
n-Propylbenzene	102		101		70-130	1		30
1,2,3-Trichlorobenzene	86		85		70-130	1		30
1,2,4-Trichlorobenzene	86		87		70-130	1		30
1,3,5-Trimethylbenzene	95		95		70-130	0		30
1,2,4-Trimethylbenzene	94		93		70-130	1		30
1,4-Dioxane	70		69		65-136	1		30
p-Diethylbenzene	95		94		70-130	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 03 Batch: WG1687815-3 WG1687815-4								
p-Ethyltoluene	98		97		70-130	1		30
1,2,4,5-Tetramethylbenzene	90		89		70-130	1		30
Ethyl ether	86		77		67-130	11		30
trans-1,4-Dichloro-2-butene	85		88		70-130	3		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	97		102		70-130
Toluene-d8	100		102		70-130
4-Bromofluorobenzene	99		100		70-130
Dibromofluoromethane	94		95		70-130

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 02 Batch: WG1687921-3 WG1687921-4								
Methylene chloride	84		80		70-130	5		30
1,1-Dichloroethane	88		82		70-130	7		30
Chloroform	85		77		70-130	10		30
Carbon tetrachloride	88		77		70-130	13		30
1,2-Dichloropropane	90		85		70-130	6		30
Dibromochloromethane	92		86		70-130	7		30
1,1,2-Trichloroethane	90		84		70-130	7		30
Tetrachloroethene	96		82		70-130	16		30
Chlorobenzene	88		77		70-130	13		30
Trichlorofluoromethane	82		74		70-139	10		30
1,2-Dichloroethane	88		83		70-130	6		30
1,1,1-Trichloroethane	90		81		70-130	11		30
Bromodichloromethane	87		81		70-130	7		30
trans-1,3-Dichloropropene	89		83		70-130	7		30
cis-1,3-Dichloropropene	86		80		70-130	7		30
1,1-Dichloropropene	89		79		70-130	12		30
Bromoform	95		90		70-130	5		30
1,1,2,2-Tetrachloroethane	97		93		70-130	4		30
Benzene	86		78		70-130	10		30
Toluene	88		77		70-130	13		30
Ethylbenzene	86		72		70-130	18		30
Chloromethane	64		59		52-130	8		30
Bromomethane	119		112		57-147	6		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 02 Batch: WG1687921-3 WG1687921-4								
Vinyl chloride	102		93		67-130	9		30
Chloroethane	84		76		50-151	10		30
1,1-Dichloroethene	85		76		65-135	11		30
trans-1,2-Dichloroethene	86		77		70-130	11		30
Trichloroethene	88		78		70-130	12		30
1,2-Dichlorobenzene	93		79		70-130	16		30
1,3-Dichlorobenzene	93		77		70-130	19		30
1,4-Dichlorobenzene	94		78		70-130	19		30
Methyl tert butyl ether	89		87		66-130	2		30
p/m-Xylene	89		74		70-130	18		30
o-Xylene	87		74		70-130	16		30
cis-1,2-Dichloroethene	87		80		70-130	8		30
Dibromomethane	90		86		70-130	5		30
Styrene	88		75		70-130	16		30
Dichlorodifluoromethane	61		56		30-146	9		30
Acetone	96		94		54-140	2		30
Carbon disulfide	71		64		59-130	10		30
2-Butanone	98		97		70-130	1		30
Vinyl acetate	87		83		70-130	5		30
4-Methyl-2-pentanone	92		91		70-130	1		30
1,2,3-Trichloropropane	93		88		68-130	6		30
2-Hexanone	88		85		70-130	3		30
Bromochloromethane	99		93		70-130	6		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 02 Batch: WG1687921-3 WG1687921-4								
2,2-Dichloropropane	86		78		70-130	10		30
1,2-Dibromoethane	88		83		70-130	6		30
1,3-Dichloropropane	94		88		69-130	7		30
1,1,1,2-Tetrachloroethane	91		82		70-130	10		30
Bromobenzene	89		78		70-130	13		30
n-Butylbenzene	90		68	Q	70-130	28		30
sec-Butylbenzene	89		71		70-130	23		30
tert-Butylbenzene	88		71		70-130	21		30
o-Chlorotoluene	82		68	Q	70-130	19		30
p-Chlorotoluene	82		68	Q	70-130	19		30
1,2-Dibromo-3-chloropropane	97		96		68-130	1		30
Hexachlorobutadiene	90		69		67-130	26		30
Isopropylbenzene	86		72		70-130	18		30
p-Isopropyltoluene	90		70		70-130	25		30
Naphthalene	98		89		70-130	10		30
Acrylonitrile	97		93		70-130	4		30
n-Propylbenzene	88		71		70-130	21		30
1,2,3-Trichlorobenzene	102		87		70-130	16		30
1,2,4-Trichlorobenzene	95		79		70-130	18		30
1,3,5-Trimethylbenzene	86		70		70-130	21		30
1,2,4-Trimethylbenzene	85		68	Q	70-130	22		30
1,4-Dioxane	98		98		65-136	0		30
p-Diethylbenzene	91		69	Q	70-130	28		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 02 Batch: WG1687921-3 WG1687921-4								
p-Ethyltoluene	88		71		70-130	21		30
1,2,4,5-Tetramethylbenzene	86		69	Q	70-130	22		30
Ethyl ether	93		89		67-130	4		30
trans-1,4-Dichloro-2-butene	88		84		70-130	5		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	100		99		70-130
Toluene-d8	100		99		70-130
4-Bromofluorobenzene	85		86		70-130
Dibromofluoromethane	102		102		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 07,10 Batch: WG1687936-3 WG1687936-4								
Methylene chloride	84		80		70-130	5		30
1,1-Dichloroethane	88		82		70-130	7		30
Chloroform	85		77		70-130	10		30
Carbon tetrachloride	88		77		70-130	13		30
1,2-Dichloropropane	90		85		70-130	6		30
Dibromochloromethane	92		86		70-130	7		30
1,1,2-Trichloroethane	90		84		70-130	7		30
Tetrachloroethene	96		82		70-130	16		30
Chlorobenzene	88		77		70-130	13		30
Trichlorofluoromethane	82		74		70-139	10		30
1,2-Dichloroethane	88		83		70-130	6		30
1,1,1-Trichloroethane	90		81		70-130	11		30
Bromodichloromethane	87		81		70-130	7		30
trans-1,3-Dichloropropene	89		83		70-130	7		30
cis-1,3-Dichloropropene	86		80		70-130	7		30
1,1-Dichloropropene	89		79		70-130	12		30
Bromoform	95		90		70-130	5		30
1,1,2,2-Tetrachloroethane	97		93		70-130	4		30
Benzene	86		78		70-130	10		30
Toluene	88		77		70-130	13		30
Ethylbenzene	86		72		70-130	18		30
Chloromethane	64		59		52-130	8		30
Bromomethane	119		112		57-147	6		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 07,10 Batch: WG1687936-3 WG1687936-4								
Vinyl chloride	102		93		67-130	9		30
Chloroethane	84		76		50-151	10		30
1,1-Dichloroethene	85		76		65-135	11		30
trans-1,2-Dichloroethene	86		77		70-130	11		30
Trichloroethene	88		78		70-130	12		30
1,2-Dichlorobenzene	93		79		70-130	16		30
1,3-Dichlorobenzene	93		77		70-130	19		30
1,4-Dichlorobenzene	94		78		70-130	19		30
Methyl tert butyl ether	89		87		66-130	2		30
p/m-Xylene	89		74		70-130	18		30
o-Xylene	87		74		70-130	16		30
cis-1,2-Dichloroethene	87		80		70-130	8		30
Dibromomethane	90		86		70-130	5		30
Styrene	88		75		70-130	16		30
Dichlorodifluoromethane	61		56		30-146	9		30
Acetone	96		94		54-140	2		30
Carbon disulfide	71		64		59-130	10		30
2-Butanone	98		97		70-130	1		30
Vinyl acetate	87		83		70-130	5		30
4-Methyl-2-pentanone	92		91		70-130	1		30
1,2,3-Trichloropropane	93		88		68-130	6		30
2-Hexanone	88		85		70-130	3		30
Bromochloromethane	99		93		70-130	6		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 07,10 Batch: WG1687936-3 WG1687936-4								
2,2-Dichloropropane	86		78		70-130	10		30
1,2-Dibromoethane	88		83		70-130	6		30
1,3-Dichloropropane	94		88		69-130	7		30
1,1,1,2-Tetrachloroethane	91		82		70-130	10		30
Bromobenzene	89		78		70-130	13		30
n-Butylbenzene	90		68	Q	70-130	28		30
sec-Butylbenzene	89		71		70-130	23		30
tert-Butylbenzene	88		71		70-130	21		30
o-Chlorotoluene	82		68	Q	70-130	19		30
p-Chlorotoluene	82		68	Q	70-130	19		30
1,2-Dibromo-3-chloropropane	97		96		68-130	1		30
Hexachlorobutadiene	90		69		67-130	26		30
Isopropylbenzene	86		72		70-130	18		30
p-Isopropyltoluene	90		70		70-130	25		30
Naphthalene	98		89		70-130	10		30
Acrylonitrile	97		93		70-130	4		30
n-Propylbenzene	88		71		70-130	21		30
1,2,3-Trichlorobenzene	102		87		70-130	16		30
1,2,4-Trichlorobenzene	95		79		70-130	18		30
1,3,5-Trimethylbenzene	86		70		70-130	21		30
1,2,4-Trimethylbenzene	85		68	Q	70-130	22		30
1,4-Dioxane	98		98		65-136	0		30
p-Diethylbenzene	91		69	Q	70-130	28		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 07,10 Batch: WG1687936-3 WG1687936-4								
p-Ethyltoluene	88		71		70-130	21		30
1,2,4,5-Tetramethylbenzene	86		69	Q	70-130	22		30
Ethyl ether	93		89		67-130	4		30
trans-1,4-Dichloro-2-butene	88		84		70-130	5		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	101		99		70-130
Toluene-d8	100		99		70-130
4-Bromofluorobenzene	85		86		70-130
Dibromofluoromethane	102		102		70-130

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 01,04 Batch: WG1689164-3 WG1689164-4								
Methylene chloride	77		77		70-130	0		30
1,1-Dichloroethane	87		87		70-130	0		30
Chloroform	82		83		70-130	1		30
Carbon tetrachloride	79		79		70-130	0		30
1,2-Dichloropropane	84		85		70-130	1		30
Dibromochloromethane	90		92		70-130	2		30
1,1,2-Trichloroethane	94		95		70-130	1		30
Tetrachloroethene	90		91		70-130	1		30
Chlorobenzene	90		91		70-130	1		30
Trichlorofluoromethane	87		82		70-139	6		30
1,2-Dichloroethane	86		86		70-130	0		30
1,1,1-Trichloroethane	84		84		70-130	0		30
Bromodichloromethane	84		84		70-130	0		30
trans-1,3-Dichloropropene	98		98		70-130	0		30
cis-1,3-Dichloropropene	86		86		70-130	0		30
1,1-Dichloropropene	85		86		70-130	1		30
Bromoform	90		94		70-130	4		30
1,1,2,2-Tetrachloroethane	96		98		70-130	2		30
Benzene	83		84		70-130	1		30
Toluene	90		91		70-130	1		30
Ethylbenzene	91		92		70-130	1		30
Chloromethane	99		97		52-130	2		30
Bromomethane	91		90		57-147	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 01,04 Batch: WG1689164-3 WG1689164-4								
Vinyl chloride	90		89		67-130	1		30
Chloroethane	91		90		50-151	1		30
1,1-Dichloroethene	82		85		65-135	4		30
trans-1,2-Dichloroethene	80		82		70-130	2		30
Trichloroethene	83		86		70-130	4		30
1,2-Dichlorobenzene	95		97		70-130	2		30
1,3-Dichlorobenzene	94		96		70-130	2		30
1,4-Dichlorobenzene	94		96		70-130	2		30
Methyl tert butyl ether	81		81		66-130	0		30
p/m-Xylene	93		94		70-130	1		30
o-Xylene	94		94		70-130	0		30
cis-1,2-Dichloroethene	80		79		70-130	1		30
Dibromomethane	82		84		70-130	2		30
Styrene	96		96		70-130	0		30
Dichlorodifluoromethane	88		86		30-146	2		30
Acetone	78		78		54-140	0		30
Carbon disulfide	79		79		59-130	0		30
2-Butanone	77		77		70-130	0		30
Vinyl acetate	84		82		70-130	2		30
4-Methyl-2-pentanone	94		96		70-130	2		30
1,2,3-Trichloropropane	94		96		68-130	2		30
2-Hexanone	88		88		70-130	0		30
Bromochloromethane	84		85		70-130	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 01,04 Batch: WG1689164-3 WG1689164-4								
2,2-Dichloropropane	88		87		70-130	1		30
1,2-Dibromoethane	93		95		70-130	2		30
1,3-Dichloropropane	95		96		69-130	1		30
1,1,1,2-Tetrachloroethane	92		93		70-130	1		30
Bromobenzene	92		95		70-130	3		30
n-Butylbenzene	96		97		70-130	1		30
sec-Butylbenzene	92		95		70-130	3		30
tert-Butylbenzene	91		94		70-130	3		30
o-Chlorotoluene	95		96		70-130	1		30
p-Chlorotoluene	96		98		70-130	2		30
1,2-Dibromo-3-chloropropane	88		92		68-130	4		30
Hexachlorobutadiene	91		91		67-130	0		30
Isopropylbenzene	90		92		70-130	2		30
p-Isopropyltoluene	94		95		70-130	1		30
Naphthalene	94		96		70-130	2		30
Acrylonitrile	92		92		70-130	0		30
n-Propylbenzene	93		96		70-130	3		30
1,2,3-Trichlorobenzene	94		96		70-130	2		30
1,2,4-Trichlorobenzene	95		97		70-130	2		30
1,3,5-Trimethylbenzene	94		96		70-130	2		30
1,2,4-Trimethylbenzene	95		97		70-130	2		30
1,4-Dioxane	102		103		65-136	1		30
p-Diethylbenzene	94		95		70-130	1		30

Lab Control Sample Analysis Batch Quality Control

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCS %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 01,04 Batch: WG1689164-3 WG1689164-4								
p-Ethyltoluene	92		95		70-130	3		30
1,2,4,5-Tetramethylbenzene	94		95		70-130	1		30
Ethyl ether	81		83		67-130	2		30
trans-1,4-Dichloro-2-butene	101		104		70-130	3		30

Surrogate	LCS %Recovery	Qual	LCS %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	102		101		70-130
Toluene-d8	105		106		70-130
4-Bromofluorobenzene	99		100		70-130
Dibromofluoromethane	97		97		70-130

INORGANICS & MISCELLANEOUS

Project Name: 2ND AVE**Project Number:** 81363**Lab Number:** L2248925**Report Date:** 09/22/22**SAMPLE RESULTS****Lab ID:** L2248925-01**Client ID:** B-1 (7.5-8.0)**Sample Location:** NY, NY**Date Collected:** 09/07/22 10:55**Date Received:** 09/08/22**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	38.3		%	0.100	NA	1	-	09/09/22 13:39	121,2540G	RI



Project Name: 2ND AVE**Project Number:** 81363**Lab Number:** L2248925**Report Date:** 09/22/22**SAMPLE RESULTS****Lab ID:** L2248925-02**Client ID:** B-2 (7.0-7.5)**Sample Location:** NY, NY**Date Collected:** 09/07/22 10:10**Date Received:** 09/08/22**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	81.3		%	0.100	NA	1	-	09/09/22 13:39	121,2540G	RI



Project Name: 2ND AVE**Project Number:** 81363**Lab Number:** L2248925**Report Date:** 09/22/22**SAMPLE RESULTS****Lab ID:** L2248925-03**Client ID:** B-3 (5.5-6.0)**Sample Location:** NY, NY**Date Collected:** 09/07/22 09:50**Date Received:** 09/08/22**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	86.7		%	0.100	NA	1	-	09/09/22 13:39	121,2540G	RI



Project Name: 2ND AVE**Project Number:** 81363**Lab Number:** L2248925**Report Date:** 09/22/22**SAMPLE RESULTS****Lab ID:** L2248925-04**Client ID:** B-4 (7.0-7.5)**Sample Location:** NY, NY**Date Collected:** 09/07/22 09:30**Date Received:** 09/08/22**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	83.4		%	0.100	NA	1	-	09/09/22 13:39	121,2540G	RI



Project Name: 2ND AVE**Project Number:** 81363**Lab Number:** L2248925**Report Date:** 09/22/22**SAMPLE RESULTS****Lab ID:** L2248925-05**Client ID:** B-5 (8.5-9.0)**Sample Location:** NY, NY**Date Collected:** 09/08/22 08:30**Date Received:** 09/08/22**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	84.6		%	0.100	NA	1	-	09/09/22 13:39	121,2540G	RI



Project Name: 2ND AVE**Project Number:** 81363**Lab Number:** L2248925**Report Date:** 09/22/22**SAMPLE RESULTS****Lab ID:** L2248925-06**Client ID:** B-6 (9.0-9.5)**Sample Location:** NY, NY**Date Collected:** 09/07/22 09:10**Date Received:** 09/08/22**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	79.9		%	0.100	NA	1	-	09/09/22 13:39	121,2540G	RI



Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248925

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248925-07

Client ID: B-7 (7.0-7.5)

Sample Location: NY, NY

Date Collected: 09/07/22 13:35

Date Received: 09/08/22

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	79.7		%	0.100	NA	1	-	09/09/22 13:39	121,2540G	RI



Project Name: 2ND AVE**Project Number:** 81363**Lab Number:** L2248925**Report Date:** 09/22/22**SAMPLE RESULTS****Lab ID:** L2248925-08**Client ID:** B-8 (1.0-1.5)**Sample Location:** NY, NY**Date Collected:** 09/07/22 13:15**Date Received:** 09/08/22**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	87.8		%	0.100	NA	1	-	09/09/22 13:39	121,2540G	RI



Project Name: 2ND AVE**Project Number:** 81363**Lab Number:** L2248925**Report Date:** 09/22/22**SAMPLE RESULTS****Lab ID:** L2248925-09**Client ID:** B-9 (6.0-6.5)**Sample Location:** NY, NY**Date Collected:** 09/08/22 09:30**Date Received:** 09/08/22**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	68.0		%	0.100	NA	1	-	09/09/22 13:39	121,2540G	RI



Project Name: 2ND AVE**Project Number:** 81363**Lab Number:** L2248925**Report Date:** 09/22/22**SAMPLE RESULTS****Lab ID:** L2248925-10**Client ID:** B-10 (5.5-6.0)**Sample Location:** NY, NY**Date Collected:** 09/08/22 09:50**Date Received:** 09/08/22**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	81.1		%	0.100	NA	1	-	09/09/22 13:39	121,2540G	RI



Project Name: 2ND AVE**Project Number:** 81363**Lab Duplicate Analysis***Batch Quality Control***Lab Number:** L2248925**Report Date:** 09/22/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-10 QC Batch ID: WG1685423-1 QC Sample: L2248912-01 Client ID: DUP Sample						
Solids, Total	88.2	88.2	%	0		20

Project Name: 2ND AVE
Project Number: 81363

Serial_No:09222211:57
Lab Number: L2248925
Report Date: 09/22/22

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler **Custody Seal**
A Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2248925-01A	5 gram Encore Sampler	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14),NYTCL-8260H(14)
L2248925-01B	5 gram Encore Sampler	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14),NYTCL-8260H(14)
L2248925-01C	5 gram Encore Sampler	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14),NYTCL-8260H(14)
L2248925-01D	Plastic 2oz unpreserved for TS	A	NA		4.2	Y	Absent		TS(7)
L2248925-01X	Vial MeOH preserved split	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14),NYTCL-8260H(14)
L2248925-01Y	Vial Water preserved split	A	NA		4.2	Y	Absent	09-SEP-22 05:55	NYTCL-8260HLW(14),NYTCL-8260H(14)
L2248925-01Z	Vial Water preserved split	A	NA		4.2	Y	Absent	09-SEP-22 05:55	NYTCL-8260HLW(14),NYTCL-8260H(14)
L2248925-02A	5 gram Encore Sampler	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)
L2248925-02B	5 gram Encore Sampler	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)
L2248925-02C	5 gram Encore Sampler	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)
L2248925-02D	Plastic 2oz unpreserved for TS	A	NA		4.2	Y	Absent		TS(7)
L2248925-02X	Vial MeOH preserved split	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)
L2248925-02Y	Vial Water preserved split	A	NA		4.2	Y	Absent	09-SEP-22 05:55	NYTCL-8260HLW(14)
L2248925-02Z	Vial Water preserved split	A	NA		4.2	Y	Absent	09-SEP-22 05:55	NYTCL-8260HLW(14)
L2248925-03A	5 gram Encore Sampler	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)
L2248925-03B	5 gram Encore Sampler	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)
L2248925-03C	5 gram Encore Sampler	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)
L2248925-03D	Plastic 2oz unpreserved for TS	A	NA		4.2	Y	Absent		TS(7)
L2248925-03X	Vial MeOH preserved split	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)
L2248925-03Y	Vial Water preserved split	A	NA		4.2	Y	Absent	09-SEP-22 05:55	NYTCL-8260HLW(14)
L2248925-03Z	Vial Water preserved split	A	NA		4.2	Y	Absent	09-SEP-22 05:55	NYTCL-8260HLW(14)
L2248925-04A	5 gram Encore Sampler	A	NA		4.2	Y	Absent		NYTCL-8260H(14),NYTCL-8260HLW(14)
L2248925-04B	5 gram Encore Sampler	A	NA		4.2	Y	Absent		NYTCL-8260H(14),NYTCL-8260HLW(14)

Project Name: 2ND AVE
Project Number: 81363

Serial_No:09222211:57
Lab Number: L2248925
Report Date: 09/22/22

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2248925-04C	5 gram Encore Sampler	A	NA		4.2	Y	Absent		NYTCL-8260H(14),NYTCL-8260HLW(14)
L2248925-04D	Plastic 2oz unpreserved for TS	A	NA		4.2	Y	Absent		TS(7)
L2248925-04X	Vial MeOH preserved split	A	NA		4.2	Y	Absent		NYTCL-8260H(14),NYTCL-8260HLW(14)
L2248925-04Y	Vial Water preserved split	A	NA		4.2	Y	Absent	09-SEP-22 05:55	NYTCL-8260H(14),NYTCL-8260HLW(14)
L2248925-04Z	Vial Water preserved split	A	NA		4.2	Y	Absent	09-SEP-22 05:55	NYTCL-8260H(14),NYTCL-8260HLW(14)
L2248925-05A	5 gram Encore Sampler	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)
L2248925-05B	5 gram Encore Sampler	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)
L2248925-05C	5 gram Encore Sampler	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)
L2248925-05D	Plastic 2oz unpreserved for TS	A	NA		4.2	Y	Absent		TS(7)
L2248925-05X	Vial MeOH preserved split	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)
L2248925-05Y	Vial Water preserved split	A	NA		4.2	Y	Absent	09-SEP-22 05:55	NYTCL-8260HLW(14)
L2248925-05Z	Vial Water preserved split	A	NA		4.2	Y	Absent	09-SEP-22 05:55	NYTCL-8260HLW(14)
L2248925-06A	5 gram Encore Sampler	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)
L2248925-06B	5 gram Encore Sampler	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)
L2248925-06C	5 gram Encore Sampler	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)
L2248925-06D	Plastic 2oz unpreserved for TS	A	NA		4.2	Y	Absent		TS(7)
L2248925-06X	Vial MeOH preserved split	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)
L2248925-06Y	Vial Water preserved split	A	NA		4.2	Y	Absent	09-SEP-22 05:55	NYTCL-8260HLW(14)
L2248925-06Z	Vial Water preserved split	A	NA		4.2	Y	Absent	09-SEP-22 05:55	NYTCL-8260HLW(14)
L2248925-07A	5 gram Encore Sampler	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)
L2248925-07B	5 gram Encore Sampler	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)
L2248925-07C	5 gram Encore Sampler	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)
L2248925-07D	Plastic 2oz unpreserved for TS	A	NA		4.2	Y	Absent		TS(7)
L2248925-07X	Vial MeOH preserved split	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)
L2248925-07Y	Vial Water preserved split	A	NA		4.2	Y	Absent	09-SEP-22 05:55	NYTCL-8260HLW(14)
L2248925-07Z	Vial Water preserved split	A	NA		4.2	Y	Absent	09-SEP-22 05:55	NYTCL-8260HLW(14)
L2248925-08A	5 gram Encore Sampler	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)
L2248925-08B	5 gram Encore Sampler	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)

Project Name: 2ND AVE
Project Number: 81363

Serial_No:09222211:57
Lab Number: L2248925
Report Date: 09/22/22

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2248925-08C	5 gram Encore Sampler	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)
L2248925-08D	Plastic 2oz unpreserved for TS	A	NA		4.2	Y	Absent		TS(7)
L2248925-08X	Vial MeOH preserved split	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)
L2248925-08Y	Vial Water preserved split	A	NA		4.2	Y	Absent	09-SEP-22 05:55	NYTCL-8260HLW(14)
L2248925-09A	5 gram Encore Sampler	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)
L2248925-09B	5 gram Encore Sampler	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)
L2248925-09C	5 gram Encore Sampler	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)
L2248925-09D	Plastic 2oz unpreserved for TS	A	NA		4.2	Y	Absent		TS(7)
L2248925-09X	Vial MeOH preserved split	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)
L2248925-09Y	Vial Water preserved split	A	NA		4.2	Y	Absent	09-SEP-22 05:55	NYTCL-8260HLW(14)
L2248925-09Z	Vial Water preserved split	A	NA		4.2	Y	Absent	09-SEP-22 05:55	NYTCL-8260HLW(14)
L2248925-10A	5 gram Encore Sampler	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)
L2248925-10B	5 gram Encore Sampler	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)
L2248925-10C	5 gram Encore Sampler	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)
L2248925-10D	Plastic 2oz unpreserved for TS	A	NA		4.2	Y	Absent		TS(7)
L2248925-10X	Vial MeOH preserved split	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)
L2248925-10Y	Vial Water preserved split	A	NA		4.2	Y	Absent	09-SEP-22 05:55	NYTCL-8260HLW(14)
L2248925-10Z	Vial Water preserved split	A	NA		4.2	Y	Absent	09-SEP-22 05:55	NYTCL-8260HLW(14)

Project Name: 2ND AVE**Lab Number:** L2248925**Project Number:** 81363**Report Date:** 09/22/22

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name: 2ND AVE
Project Number: 81363

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Report Date: 09/22/22

Footnotes

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

Terms

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

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

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

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

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

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

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

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

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

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

Report Format: DU Report with 'J' Qualifiers



Project Name: 2ND AVE
Project Number: 81363

Lab Number: L2248925
Report Date: 09/22/22

Data Qualifiers

Identified Compounds (TICs).

- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: 2ND AVE
Project Number: 81363

Lab Number: L2248925
Report Date: 09/22/22

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

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

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



Certification Information

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

Westborough Facility

EPA 624/624.1: m/p-xylene, o-xylene, 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, SM4500CI-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 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 1		Date Rec'd in Lab 9/8/22		ALPHA Job # L2248925	
		Project Information Project Name: 2nd AVE Project Location: NY, NY Project # 81363 (Use Project name as Project #) ☐ Project Manager: Tim Biercz ALPHAQuote #: Turn-Around Time: Standard ☒ Due Date: Rush (only if pre approved) ☐ # of Days:		Deliverables ☐ ASP-A ☐ ASP-B ☒ EQulS (1 File) ☐ EQulS (4 File) ☐ Other		Billing Information ☒ Same as Client Info PO #			
Client Information Client: Vortex Address: 3322 US 22, Ste 907 Branchburg, NJ Phone: Fax: Email: T.Biercz@Vortexny.com		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:		ANALYSIS		Sample Filtration ☐ Done ☐ Lab to do Preservation ☐ Lab to do (Please Specify below)					
Please specify Metals or TAL:		ANALYSIS Table Header: ALPHA Lab ID (Lab Use Only), Sample ID, Collection (Date, Time), Sample Matrix, Sampler's Initials		ANALYSIS Table Body: 10 rows of sample data					
Preservative Code: A = None B = HCl C = HNO ₃ D = H ₂ SO ₄ E = NaOH F = MeOH G = NaHSO ₄ H = Na ₂ S ₂ O 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					
Form No: 01-25 HC (rev. 30-Sept-2013)		Relinquished By: [Signature] Date/Time: 9/8/22 1750 9/8/22 1910 9/8/22 2145 9/8/22 2355		Received By: [Signature] Date/Time: 9-8-22 1750 9/8/22 19:30 9/8/22 2145 9/8/22 2355					

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.)

Appendix F:
Laboratory Report – Groundwater (September 2022)



ANALYTICAL REPORT

Lab Number:	L2248924
Client:	The Vertex Companies, Inc. 3322 US Highway 22 West Suite 907 Branchburg, NJ 08876
ATTN:	Tim Biercz
Phone:	(732) 414-2224
Project Name:	2ND AVE
Project Number:	81363
Report Date:	09/22/22

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

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

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



Project Name: 2ND AVE
Project Number: 81363

Lab Number: L2248924
Report Date: 09/22/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2248924-01	TW6	WATER	NY, NY	09/07/22 10:30	09/08/22
L2248924-02	TW3	WATER	NY, NY	09/07/22 11:45	09/08/22
L2248924-03	TW1	WATER	NY, NY	09/07/22 12:10	09/08/22
L2248924-04	TW2	WATER	NY, NY	09/07/22 11:20	09/08/22
L2248924-05	TW10	WATER	NY, NY	09/08/22 10:10	09/08/22

Project Name: 2ND AVE
Project Number: 81363

Lab Number: L2248924
Report Date: 09/22/22

Case Narrative

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

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

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

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

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

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

Project Name: 2ND AVE
Project Number: 81363

Lab Number: L2248924
Report Date: 09/22/22

Case Narrative (continued)

Report Submission

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

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

Authorized Signature:



Caitlin Walukevich

Title: Technical Director/Representative

Date: 09/22/22

ORGANICS

VOLATILES

Project Name: 2ND AVE**Lab Number:** L2248924**Project Number:** 81363**Report Date:** 09/22/22**SAMPLE RESULTS**

Lab ID: L2248924-01 D

Date Collected: 09/07/22 10:30

Client ID: TW6

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260C

Analytical Date: 09/17/22 13:06

Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	250	70.	100
1,1-Dichloroethane	ND		ug/l	250	70.	100
Chloroform	ND		ug/l	250	70.	100
Carbon tetrachloride	ND		ug/l	50	13.	100
1,2-Dichloropropane	ND		ug/l	100	14.	100
Dibromochloromethane	ND		ug/l	50	15.	100
1,1,2-Trichloroethane	ND		ug/l	150	50.	100
Tetrachloroethene	9500		ug/l	50	18.	100
Chlorobenzene	ND		ug/l	250	70.	100
Trichlorofluoromethane	ND		ug/l	250	70.	100
1,2-Dichloroethane	ND		ug/l	50	13.	100
1,1,1-Trichloroethane	ND		ug/l	250	70.	100
Bromodichloromethane	ND		ug/l	50	19.	100
trans-1,3-Dichloropropene	ND		ug/l	50	16.	100
cis-1,3-Dichloropropene	ND		ug/l	50	14.	100
1,3-Dichloropropene, Total	ND		ug/l	50	14.	100
1,1-Dichloropropene	ND		ug/l	250	70.	100
Bromoform	ND		ug/l	200	65.	100
1,1,2,2-Tetrachloroethane	ND		ug/l	50	17.	100
Benzene	ND		ug/l	50	16.	100
Toluene	ND		ug/l	250	70.	100
Ethylbenzene	ND		ug/l	250	70.	100
Chloromethane	ND		ug/l	250	70.	100
Bromomethane	ND		ug/l	250	70.	100
Vinyl chloride	1200		ug/l	100	7.1	100
Chloroethane	ND		ug/l	250	70.	100
1,1-Dichloroethene	ND		ug/l	50	17.	100
trans-1,2-Dichloroethene	ND		ug/l	250	70.	100

Project Name: 2ND AVE

Lab Number: L2248924

Project Number: 81363

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248924-01 D

Date Collected: 09/07/22 10:30

Client ID: TW6

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	880		ug/l	50	18.	100
1,2-Dichlorobenzene	ND		ug/l	250	70.	100
1,3-Dichlorobenzene	ND		ug/l	250	70.	100
1,4-Dichlorobenzene	ND		ug/l	250	70.	100
Methyl tert butyl ether	ND		ug/l	250	70.	100
p/m-Xylene	ND		ug/l	250	70.	100
o-Xylene	ND		ug/l	250	70.	100
Xylenes, Total	ND		ug/l	250	70.	100
cis-1,2-Dichloroethene	7100		ug/l	250	70.	100
1,2-Dichloroethene, Total	7100		ug/l	250	70.	100
Dibromomethane	ND		ug/l	500	100	100
1,2,3-Trichloropropane	ND		ug/l	250	70.	100
Acrylonitrile	ND		ug/l	500	150	100
Styrene	ND		ug/l	250	70.	100
Dichlorodifluoromethane	ND		ug/l	500	100	100
Acetone	ND		ug/l	500	150	100
Carbon disulfide	ND		ug/l	500	100	100
2-Butanone	ND		ug/l	500	190	100
Vinyl acetate	ND		ug/l	500	100	100
4-Methyl-2-pentanone	ND		ug/l	500	100	100
2-Hexanone	ND		ug/l	500	100	100
Bromochloromethane	ND		ug/l	250	70.	100
2,2-Dichloropropane	ND		ug/l	250	70.	100
1,2-Dibromoethane	ND		ug/l	200	65.	100
1,3-Dichloropropane	ND		ug/l	250	70.	100
1,1,1,2-Tetrachloroethane	ND		ug/l	250	70.	100
Bromobenzene	ND		ug/l	250	70.	100
n-Butylbenzene	ND		ug/l	250	70.	100
sec-Butylbenzene	ND		ug/l	250	70.	100
tert-Butylbenzene	ND		ug/l	250	70.	100
o-Chlorotoluene	ND		ug/l	250	70.	100
p-Chlorotoluene	ND		ug/l	250	70.	100
1,2-Dibromo-3-chloropropane	ND		ug/l	250	70.	100
Hexachlorobutadiene	ND		ug/l	250	70.	100
Isopropylbenzene	ND		ug/l	250	70.	100
p-Isopropyltoluene	ND		ug/l	250	70.	100
Naphthalene	ND		ug/l	250	70.	100

Project Name: 2ND AVE

Lab Number: L2248924

Project Number: 81363

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248924-01 D

Date Collected: 09/07/22 10:30

Client ID: TW6

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	ND		ug/l	250	70.	100
1,2,3-Trichlorobenzene	ND		ug/l	250	70.	100
1,2,4-Trichlorobenzene	ND		ug/l	250	70.	100
1,3,5-Trimethylbenzene	ND		ug/l	250	70.	100
1,2,4-Trimethylbenzene	ND		ug/l	250	70.	100
1,4-Dioxane	ND		ug/l	25000	6100	100
p-Diethylbenzene	ND		ug/l	200	70.	100
p-Ethyltoluene	ND		ug/l	200	70.	100
1,2,4,5-Tetramethylbenzene	ND		ug/l	200	54.	100
Ethyl ether	ND		ug/l	250	70.	100
trans-1,4-Dichloro-2-butene	ND		ug/l	250	70.	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	94		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	103		70-130

Project Name: 2ND AVE**Lab Number:** L2248924**Project Number:** 81363**Report Date:** 09/22/22**SAMPLE RESULTS**

Lab ID: L2248924-02 D

Date Collected: 09/07/22 11:45

Client ID: TW3

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260C

Analytical Date: 09/17/22 13:45

Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	5000	1400	2000
1,1-Dichloroethane	ND		ug/l	5000	1400	2000
Chloroform	ND		ug/l	5000	1400	2000
Carbon tetrachloride	ND		ug/l	1000	270	2000
1,2-Dichloropropane	ND		ug/l	2000	270	2000
Dibromochloromethane	ND		ug/l	1000	300	2000
1,1,2-Trichloroethane	ND		ug/l	3000	1000	2000
Tetrachloroethene	200000		ug/l	1000	360	2000
Chlorobenzene	ND		ug/l	5000	1400	2000
Trichlorofluoromethane	ND		ug/l	5000	1400	2000
1,2-Dichloroethane	ND		ug/l	1000	260	2000
1,1,1-Trichloroethane	ND		ug/l	5000	1400	2000
Bromodichloromethane	ND		ug/l	1000	380	2000
trans-1,3-Dichloropropene	ND		ug/l	1000	330	2000
cis-1,3-Dichloropropene	ND		ug/l	1000	290	2000
1,3-Dichloropropene, Total	ND		ug/l	1000	290	2000
1,1-Dichloropropene	ND		ug/l	5000	1400	2000
Bromoform	ND		ug/l	4000	1300	2000
1,1,2,2-Tetrachloroethane	ND		ug/l	1000	330	2000
Benzene	ND		ug/l	1000	320	2000
Toluene	ND		ug/l	5000	1400	2000
Ethylbenzene	ND		ug/l	5000	1400	2000
Chloromethane	ND		ug/l	5000	1400	2000
Bromomethane	ND		ug/l	5000	1400	2000
Vinyl chloride	20000		ug/l	2000	140	2000
Chloroethane	ND		ug/l	5000	1400	2000
1,1-Dichloroethene	ND		ug/l	1000	340	2000
trans-1,2-Dichloroethene	ND		ug/l	5000	1400	2000

Project Name: 2ND AVE

Lab Number: L2248924

Project Number: 81363

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248924-02 D

Date Collected: 09/07/22 11:45

Client ID: TW3

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	11000		ug/l	1000	350	2000
1,2-Dichlorobenzene	ND		ug/l	5000	1400	2000
1,3-Dichlorobenzene	ND		ug/l	5000	1400	2000
1,4-Dichlorobenzene	ND		ug/l	5000	1400	2000
Methyl tert butyl ether	ND		ug/l	5000	1400	2000
p/m-Xylene	ND		ug/l	5000	1400	2000
o-Xylene	ND		ug/l	5000	1400	2000
Xylenes, Total	ND		ug/l	5000	1400	2000
cis-1,2-Dichloroethene	94000		ug/l	5000	1400	2000
1,2-Dichloroethene, Total	94000		ug/l	5000	1400	2000
Dibromomethane	ND		ug/l	10000	2000	2000
1,2,3-Trichloropropane	ND		ug/l	5000	1400	2000
Acrylonitrile	ND		ug/l	10000	3000	2000
Styrene	ND		ug/l	5000	1400	2000
Dichlorodifluoromethane	ND		ug/l	10000	2000	2000
Acetone	ND		ug/l	10000	2900	2000
Carbon disulfide	ND		ug/l	10000	2000	2000
2-Butanone	ND		ug/l	10000	3900	2000
Vinyl acetate	ND		ug/l	10000	2000	2000
4-Methyl-2-pentanone	ND		ug/l	10000	2000	2000
2-Hexanone	ND		ug/l	10000	2000	2000
Bromochloromethane	ND		ug/l	5000	1400	2000
2,2-Dichloropropane	ND		ug/l	5000	1400	2000
1,2-Dibromoethane	ND		ug/l	4000	1300	2000
1,3-Dichloropropane	ND		ug/l	5000	1400	2000
1,1,1,2-Tetrachloroethane	ND		ug/l	5000	1400	2000
Bromobenzene	ND		ug/l	5000	1400	2000
n-Butylbenzene	ND		ug/l	5000	1400	2000
sec-Butylbenzene	ND		ug/l	5000	1400	2000
tert-Butylbenzene	ND		ug/l	5000	1400	2000
o-Chlorotoluene	ND		ug/l	5000	1400	2000
p-Chlorotoluene	ND		ug/l	5000	1400	2000
1,2-Dibromo-3-chloropropane	ND		ug/l	5000	1400	2000
Hexachlorobutadiene	ND		ug/l	5000	1400	2000
Isopropylbenzene	ND		ug/l	5000	1400	2000
p-Isopropyltoluene	ND		ug/l	5000	1400	2000
Naphthalene	ND		ug/l	5000	1400	2000



Project Name: 2ND AVE

Lab Number: L2248924

Project Number: 81363

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248924-02 D

Date Collected: 09/07/22 11:45

Client ID: TW3

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	ND		ug/l	5000	1400	2000
1,2,3-Trichlorobenzene	ND		ug/l	5000	1400	2000
1,2,4-Trichlorobenzene	ND		ug/l	5000	1400	2000
1,3,5-Trimethylbenzene	ND		ug/l	5000	1400	2000
1,2,4-Trimethylbenzene	ND		ug/l	5000	1400	2000
1,4-Dioxane	ND		ug/l	500000	120000	2000
p-Diethylbenzene	ND		ug/l	4000	1400	2000
p-Ethyltoluene	ND		ug/l	4000	1400	2000
1,2,4,5-Tetramethylbenzene	ND		ug/l	4000	1100	2000
Ethyl ether	ND		ug/l	5000	1400	2000
trans-1,4-Dichloro-2-butene	ND		ug/l	5000	1400	2000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	93		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	102		70-130

Project Name: 2ND AVE

Lab Number: L2248924

Project Number: 81363

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248924-03

Date Collected: 09/07/22 12:10

Client ID: TW1

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260C

Analytical Date: 09/17/22 12:46

Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	40		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	0.22	J	ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	27		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	3.2		ug/l	2.5	0.70	1

Project Name: 2ND AVE

Lab Number: L2248924

Project Number: 81363

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248924-03

Date Collected: 09/07/22 12:10

Client ID: TW1

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	1.3		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	26		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	29		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	16		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	3.4	J	ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1

Project Name: 2ND AVE

Lab Number: L2248924

Project Number: 81363

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248924-03

Date Collected: 09/07/22 12:10

Client ID: TW1

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	107		70-130

Project Name: 2ND AVE**Lab Number:** L2248924**Project Number:** 81363**Report Date:** 09/22/22**SAMPLE RESULTS**

Lab ID: L2248924-04 D

Date Collected: 09/07/22 11:20

Client ID: TW2

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260C

Analytical Date: 09/17/22 13:25

Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2500	700	1000
1,1-Dichloroethane	ND		ug/l	2500	700	1000
Chloroform	ND		ug/l	2500	700	1000
Carbon tetrachloride	ND		ug/l	500	130	1000
1,2-Dichloropropane	ND		ug/l	1000	140	1000
Dibromochloromethane	ND		ug/l	500	150	1000
1,1,2-Trichloroethane	ND		ug/l	1500	500	1000
Tetrachloroethene	24000		ug/l	500	180	1000
Chlorobenzene	ND		ug/l	2500	700	1000
Trichlorofluoromethane	ND		ug/l	2500	700	1000
1,2-Dichloroethane	ND		ug/l	500	130	1000
1,1,1-Trichloroethane	ND		ug/l	2500	700	1000
Bromodichloromethane	ND		ug/l	500	190	1000
trans-1,3-Dichloropropene	ND		ug/l	500	160	1000
cis-1,3-Dichloropropene	ND		ug/l	500	140	1000
1,3-Dichloropropene, Total	ND		ug/l	500	140	1000
1,1-Dichloropropene	ND		ug/l	2500	700	1000
Bromoform	ND		ug/l	2000	650	1000
1,1,2,2-Tetrachloroethane	ND		ug/l	500	170	1000
Benzene	ND		ug/l	500	160	1000
Toluene	ND		ug/l	2500	700	1000
Ethylbenzene	ND		ug/l	2500	700	1000
Chloromethane	ND		ug/l	2500	700	1000
Bromomethane	ND		ug/l	2500	700	1000
Vinyl chloride	19000		ug/l	1000	71.	1000
Chloroethane	ND		ug/l	2500	700	1000
1,1-Dichloroethene	ND		ug/l	500	170	1000
trans-1,2-Dichloroethene	ND		ug/l	2500	700	1000

Project Name: 2ND AVE

Lab Number: L2248924

Project Number: 81363

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248924-04 D

Date Collected: 09/07/22 11:20

Client ID: TW2

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	2300		ug/l	500	180	1000
1,2-Dichlorobenzene	ND		ug/l	2500	700	1000
1,3-Dichlorobenzene	ND		ug/l	2500	700	1000
1,4-Dichlorobenzene	ND		ug/l	2500	700	1000
Methyl tert butyl ether	ND		ug/l	2500	700	1000
p/m-Xylene	ND		ug/l	2500	700	1000
o-Xylene	ND		ug/l	2500	700	1000
Xylenes, Total	ND		ug/l	2500	700	1000
cis-1,2-Dichloroethene	80000		ug/l	2500	700	1000
1,2-Dichloroethene, Total	80000		ug/l	2500	700	1000
Dibromomethane	ND		ug/l	5000	1000	1000
1,2,3-Trichloropropane	ND		ug/l	2500	700	1000
Acrylonitrile	ND		ug/l	5000	1500	1000
Styrene	ND		ug/l	2500	700	1000
Dichlorodifluoromethane	ND		ug/l	5000	1000	1000
Acetone	ND		ug/l	5000	1500	1000
Carbon disulfide	ND		ug/l	5000	1000	1000
2-Butanone	ND		ug/l	5000	1900	1000
Vinyl acetate	ND		ug/l	5000	1000	1000
4-Methyl-2-pentanone	ND		ug/l	5000	1000	1000
2-Hexanone	ND		ug/l	5000	1000	1000
Bromochloromethane	ND		ug/l	2500	700	1000
2,2-Dichloropropane	ND		ug/l	2500	700	1000
1,2-Dibromoethane	ND		ug/l	2000	650	1000
1,3-Dichloropropane	ND		ug/l	2500	700	1000
1,1,1,2-Tetrachloroethane	ND		ug/l	2500	700	1000
Bromobenzene	ND		ug/l	2500	700	1000
n-Butylbenzene	ND		ug/l	2500	700	1000
sec-Butylbenzene	ND		ug/l	2500	700	1000
tert-Butylbenzene	ND		ug/l	2500	700	1000
o-Chlorotoluene	ND		ug/l	2500	700	1000
p-Chlorotoluene	ND		ug/l	2500	700	1000
1,2-Dibromo-3-chloropropane	ND		ug/l	2500	700	1000
Hexachlorobutadiene	ND		ug/l	2500	700	1000
Isopropylbenzene	ND		ug/l	2500	700	1000
p-Isopropyltoluene	ND		ug/l	2500	700	1000
Naphthalene	ND		ug/l	2500	700	1000

Project Name: 2ND AVE

Lab Number: L2248924

Project Number: 81363

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248924-04 D

Date Collected: 09/07/22 11:20

Client ID: TW2

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	ND		ug/l	2500	700	1000
1,2,3-Trichlorobenzene	ND		ug/l	2500	700	1000
1,2,4-Trichlorobenzene	ND		ug/l	2500	700	1000
1,3,5-Trimethylbenzene	ND		ug/l	2500	700	1000
1,2,4-Trimethylbenzene	ND		ug/l	2500	700	1000
1,4-Dioxane	ND		ug/l	250000	61000	1000
p-Diethylbenzene	ND		ug/l	2000	700	1000
p-Ethyltoluene	ND		ug/l	2000	700	1000
1,2,4,5-Tetramethylbenzene	ND		ug/l	2000	540	1000
Ethyl ether	ND		ug/l	2500	700	1000
trans-1,4-Dichloro-2-butene	ND		ug/l	2500	700	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	108		70-130

Project Name: 2ND AVE

Lab Number: L2248924

Project Number: 81363

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248924-05

Date Collected: 09/08/22 10:10

Client ID: TW10

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260C

Analytical Date: 09/17/22 12:26

Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	4.4		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	1.4		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1

Project Name: 2ND AVE

Lab Number: L2248924

Project Number: 81363

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248924-05

Date Collected: 09/08/22 10:10

Client ID: TW10

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	0.34	J	ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	3.7		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	3.7		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	3.5	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1

Project Name: 2ND AVE

Lab Number: L2248924

Project Number: 81363

Report Date: 09/22/22

SAMPLE RESULTS

Lab ID: L2248924-05

Date Collected: 09/08/22 10:10

Client ID: TW10

Date Received: 09/08/22

Sample Location: NY, NY

Field Prep: Not Specified

Sample Depth:

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	113		70-130

Project Name: 2ND AVE

Lab Number: L2248924

Project Number: 81363

Report Date: 09/22/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 09/17/22 06:35
 Analyst: TMS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-05 Batch: WG1689018-5					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18

Project Name: 2ND AVE

Lab Number: L2248924

Project Number: 81363

Report Date: 09/22/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 09/17/22 06:35
 Analyst: TMS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-05 Batch: WG1689018-5					
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylenes, Total	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Acrylonitrile	ND		ug/l	5.0	1.5
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248924

Report Date: 09/22/22

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 09/17/22 06:35
 Analyst: TMS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-05 Batch: WG1689018-5					
o-Chlorotoluene	ND		ug/l	2.5	0.70
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
1,4-Dioxane	ND		ug/l	250	61.
p-Diethylbenzene	ND		ug/l	2.0	0.70
p-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	112		70-130



Lab Control Sample Analysis **Batch Quality Control**

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248924

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG1689018-3 WG1689018-4								
Methylene chloride	110		110		70-130	0		20
1,1-Dichloroethane	110		110		70-130	0		20
Chloroform	110		100		70-130	10		20
Carbon tetrachloride	110		110		63-132	0		20
1,2-Dichloropropane	100		100		70-130	0		20
Dibromochloromethane	98		100		63-130	2		20
1,1,2-Trichloroethane	94		100		70-130	6		20
Tetrachloroethene	110		100		70-130	10		20
Chlorobenzene	100		100		75-130	0		20
Trichlorofluoromethane	120		110		62-150	9		20
1,2-Dichloroethane	94		94		70-130	0		20
1,1,1-Trichloroethane	100		99		67-130	1		20
Bromodichloromethane	97		100		67-130	3		20
trans-1,3-Dichloropropene	98		100		70-130	2		20
cis-1,3-Dichloropropene	98		100		70-130	2		20
1,1-Dichloropropene	100		100		70-130	0		20
Bromoform	98		110		54-136	12		20
1,1,2,2-Tetrachloroethane	92		97		67-130	5		20
Benzene	110		100		70-130	10		20
Toluene	100		100		70-130	0		20
Ethylbenzene	100		100		70-130	0		20
Chloromethane	120		120		64-130	0		20
Bromomethane	58		56		39-139	4		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248924

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG1689018-3 WG1689018-4								
Vinyl chloride	120		120		55-140	0		20
Chloroethane	140	Q	130		55-138	7		20
1,1-Dichloroethene	110		110		61-145	0		20
trans-1,2-Dichloroethene	110		110		70-130	0		20
Trichloroethene	110		110		70-130	0		20
1,2-Dichlorobenzene	100		98		70-130	2		20
1,3-Dichlorobenzene	100		100		70-130	0		20
1,4-Dichlorobenzene	100		100		70-130	0		20
Methyl tert butyl ether	78		86		63-130	10		20
p/m-Xylene	110		105		70-130	5		20
o-Xylene	105		105		70-130	0		20
cis-1,2-Dichloroethene	100		100		70-130	0		20
Dibromomethane	98		100		70-130	2		20
1,2,3-Trichloropropane	91		96		64-130	5		20
Acrylonitrile	99		110		70-130	11		20
Styrene	110		110		70-130	0		20
Dichlorodifluoromethane	130		120		36-147	8		20
Acetone	110		130		58-148	17		20
Carbon disulfide	130		120		51-130	8		20
2-Butanone	95		100		63-138	5		20
Vinyl acetate	84		89		70-130	6		20
4-Methyl-2-pentanone	83		91		59-130	9		20
2-Hexanone	82		91		57-130	10		20

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248924

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG1689018-3 WG1689018-4								
Bromochloromethane	100		96		70-130	4		20
2,2-Dichloropropane	100		98		63-133	2		20
1,2-Dibromoethane	93		99		70-130	6		20
1,3-Dichloropropane	96		100		70-130	4		20
1,1,1,2-Tetrachloroethane	100		100		64-130	0		20
Bromobenzene	98		98		70-130	0		20
n-Butylbenzene	110		100		53-136	10		20
sec-Butylbenzene	110		100		70-130	10		20
tert-Butylbenzene	100		100		70-130	0		20
o-Chlorotoluene	100		100		70-130	0		20
p-Chlorotoluene	100		100		70-130	0		20
1,2-Dibromo-3-chloropropane	93		110		41-144	17		20
Hexachlorobutadiene	91		91		63-130	0		20
Isopropylbenzene	100		100		70-130	0		20
p-Isopropyltoluene	100		100		70-130	0		20
Naphthalene	84		88		70-130	5		20
n-Propylbenzene	110		100		69-130	10		20
1,2,3-Trichlorobenzene	94		95		70-130	1		20
1,2,4-Trichlorobenzene	92		93		70-130	1		20
1,3,5-Trimethylbenzene	97		96		64-130	1		20
1,2,4-Trimethylbenzene	95		95		70-130	0		20
1,4-Dioxane	128		110		56-162	15		20
p-Diethylbenzene	97		93		70-130	4		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 2ND AVE

Project Number: 81363

Lab Number: L2248924

Report Date: 09/22/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG1689018-3 WG1689018-4								
p-Ethyltoluene	100		100		70-130	0		20
1,2,4,5-Tetramethylbenzene	76		79		70-130	4		20
Ethyl ether	81		99		59-134	20		20
trans-1,4-Dichloro-2-butene	94		100		70-130	6		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	94		95		70-130
Toluene-d8	101		100		70-130
4-Bromofluorobenzene	99		96		70-130
Dibromofluoromethane	103		103		70-130

Project Name: 2ND AVE**Lab Number:** L2248924**Project Number:** 81363**Report Date:** 09/22/22**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information**Cooler** **Custody Seal**

A Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2248924-01A	Vial HCl preserved	A	NA		4.2	Y	Absent		NYTCL-8260(14)
L2248924-01B	Vial HCl preserved	A	NA		4.2	Y	Absent		NYTCL-8260(14)
L2248924-01C	Vial HCl preserved	A	NA		4.2	Y	Absent		NYTCL-8260(14)
L2248924-02A	Vial HCl preserved	A	NA		4.2	Y	Absent		NYTCL-8260(14)
L2248924-02B	Vial HCl preserved	A	NA		4.2	Y	Absent		NYTCL-8260(14)
L2248924-02C	Vial HCl preserved	A	NA		4.2	Y	Absent		NYTCL-8260(14)
L2248924-03A	Vial HCl preserved	A	NA		4.2	Y	Absent		NYTCL-8260(14)
L2248924-03B	Vial HCl preserved	A	NA		4.2	Y	Absent		NYTCL-8260(14)
L2248924-03C	Vial HCl preserved	A	NA		4.2	Y	Absent		NYTCL-8260(14)
L2248924-04A	Vial HCl preserved	A	NA		4.2	Y	Absent		NYTCL-8260(14)
L2248924-04B	Vial HCl preserved	A	NA		4.2	Y	Absent		NYTCL-8260(14)
L2248924-04C	Vial HCl preserved	A	NA		4.2	Y	Absent		NYTCL-8260(14)
L2248924-05A	Vial HCl preserved	A	NA		4.2	Y	Absent		NYTCL-8260(14)
L2248924-05B	Vial HCl preserved	A	NA		4.2	Y	Absent		NYTCL-8260(14)
L2248924-05C	Vial HCl preserved	A	NA		4.2	Y	Absent		NYTCL-8260(14)

Project Name: 2ND AVE**Lab Number:** L2248924**Project Number:** 81363**Report Date:** 09/22/22

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name: 2ND AVE
Project Number: 81363

Lab Number: L2248924
Report Date: 09/22/22

Footnotes

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

Terms

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

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

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

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

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

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

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

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

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

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

Report Format: DU Report with 'J' Qualifiers



Project Name: 2ND AVE
Project Number: 81363

Lab Number: L2248924
Report Date: 09/22/22

Data Qualifiers

Identified Compounds (TICs).

- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: 2ND AVE**Lab Number:** L2248924**Project Number:** 81363**Report Date:** 09/22/22

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

LIMITATION OF LIABILITIES

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

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



Alpha Analytical, Inc.Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

Revision 19

Published Date: 4/2/2021 1:14:23 PM

Page 1 of 1

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, SM4500CI-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.

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

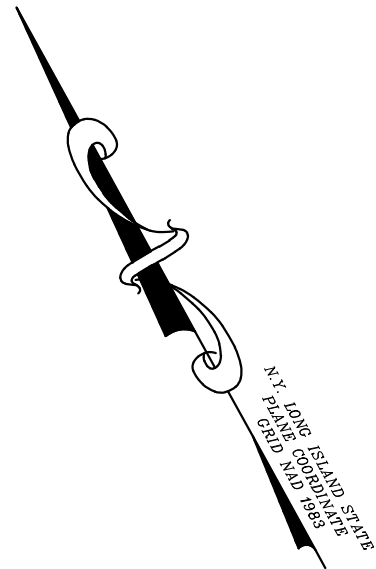
of

9/8/22

L2248924

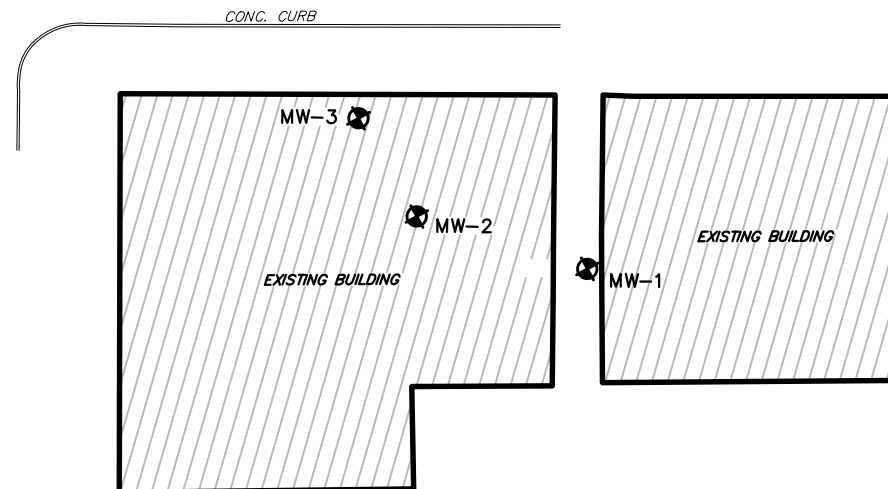
Page 35 of 35

Appendix G: Monitoring Well Survey Map



2ND AVENUE

E 12TH STREET

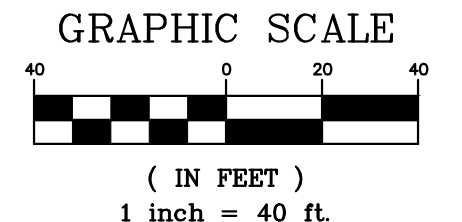


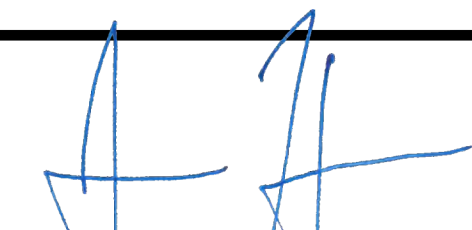
UNAUTHORIZED ALTERATION OR
ADDITION TO A SURVEY MAP
BEARING A LICENSED LAND
SURVEYOR'S SEAL IS A VIOLATION
OF SECTION 7209, SUB-DIVISION 2,
OF THE NEW YORK STATE
EDUCATION LAW.

NOTES:

1. FIELD WORK PERFORMED ON FEBRUARY 22, 2023.
2. ELEVATION DATUM NAVD 1988 DERIVED USING RTK/KEYNET. NYBP BATTERY PARK CORS ARP ELEV.=57.21' (NAVD 88)

MONITORING WELLS	GROUND	RIM	PVC
MW-1	20.09 CONC.	20.06	19.93
MW-2	20.35 CONC.	20.33	19.98
MW-3	20.23 CONC.	20.25	20.00




James J. Heiser
Professional Land Surveyor
JHEISER@DPKCONSULTING.NET

N.J. Lic: 24GS04331100
PA. Lic: SU075616
N.Y. Lic: 050932-1
CT. Lic: 70476

DATE 02/27/2023

Date: 02/27/2023 Dr.: R.M. Chk.: C.S. SCALE: 1" = 40' JOB No. 23-9859 Dwg: 23-9859 MW00

**DPK**
LAND SURVEYING
DPK LAND SURVEYING, LLC
200 METROPLEX DRIVE - STE. 285, EDISON, NJ 08817
P: 732-764-0100 F: 732-764-0990
NEW YORK CERTIFICATE OF AUTHORIZATION NO. 0012585

MONITORING WELL LOCATION MAP
FOR:
VERTEX
SITE:
300 EAST 12TH STREET
MANHATTAN
NEW YORK, NEW YORK

Appendix H: Groundwater Sampling Field Forms

Volume Groundwater Sampling Form

Well ID 15114-1

Page 1 of 1
Date 2/22/27

Weather

Weather

Gallon/Foot	0.75" = 0.02	2" = 0.16	6" = 1.47
Conversions	1" = 0.04	4" = 0.65	

Depth to Product (top)
Dept to Product (bottom)

Field Technician

Static Water Level (ft)

855

Water Column in Well (ft)	
3.23	

Oil

$$\frac{x}{\omega}$$

11

Calc 3 Volume (gals)

155

٢٥

Intake (n-
below TOC)

1

Well Casing Material

Class Time:

End Time

Time (24-hr)	Depth to Water (ft)	Gallons Purged	Temp (°C)	pH	Redox (mv)	Cond mS/cm	Turb (NTU)	DO (mg/L)	Appearance	
									Color	Odor
1243	8.45	0.1	14.95	7.36	-2	0.651	45.1	1.26	clear	
1252	10.68	0.5								
1256	11.63	0.75								
1323	11.28	0.8								

stopped purging due to drawdown. will allow well to recharge
purging complete due to prior recharge. will collect samples.

Sample Time: 1330

Sampled
by: 

Sampling Method	Sample	Analysis	Results
1. Random Sampling	100 units	100 units	100 units
2. Systematic Sampling	100 units	100 units	100 units
3. Stratified Sampling	100 units	100 units	100 units
4. Cluster Sampling	100 units	100 units	100 units
5. Convenience Sampling	100 units	100 units	100 units
6. Judgment Sampling	100 units	100 units	100 units
7. Quota Sampling	100 units	100 units	100 units
8. Snowball Sampling	100 units	100 units	100 units
9. Purposive Sampling	100 units	100 units	100 units
10. Voluntary Response Sampling	100 units	100 units	100 units

Container

Number of Bottles
3

Preservative	HCL

Well Information

Well Location

Condition of Well

Well Completion

Flush Mount / Stick Up

Condition of Well Pad and Lid	
Plug	Yes
Bolts	Yes

Yes	/	No
Yes	/	No

NOTES:

—

Volume Groundwater Sampling Form

Well ID MW-2

Page 1 of 1
2/22/23

Weather

Gallon/Foot	0.75 = 0.02	2' = 0.16	6' = 1.47
Conversions	1" = 0.04	4" = 0.65	

Depth to Product (top)
Dept to Product (bottom)

Field Technician

Static Water
Level (ft)

545

Water Column in Well
(ft)
=

0.000000

$$\begin{array}{r} x \\ 3 \end{array}$$

Calc 3 Volume (gals)

2.97

Gallons/Foot

Pump

Intake (11-
below TOC)

Well Casing Materia

Start Time

End Time

cloudy
cloudy
cloudy/green
cloudy/yellow

cloudy/green
cloudy/yellow

Samp
by

五

Sampling Method

10/10

1

Amber Vials

2.3

Pres
HCl

Well Information

Well Location

Condition of Well Pad and Lid

Condition of Well

Blind	Yes
1	1
2	1
3	1
4	1
5	1
6	1
7	1
8	1
9	1
10	1
11	1
12	1
13	1
14	1
15	1
16	1
17	1
18	1
19	1
20	1
21	1
22	1
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81	1
82	1
83	1
84	1
85	1
86	1
87	1
88	1
89	1
90	1
91	1
92	1
93	1
94	1
95	1
96	1
97	1
98	1
99	1
100	1

Well Completion	Flush Mount	/	Stick Up

2	Yes
Bolts	

CAI	AIQ

CAI	AIQ

NOTES:

Product

VERTeX

Volume Groundwater Sampling Form

Project No 10153 LK

Well ID MW-3

Date

Page 1 of 1
2/22/25

Project Name/Location

300 E 12th St, NW, OK

Weather

35°F Clear

Casing

2

Gallon/foot 0.75 ± 0.02 2' = 0.16 6' = 1.47

Depth to Product (top)

Field Technician

EG

Diameter (in)

2

Conversions 1" = 0.04 4" = 0.05

Depth to Product (bottom)

Gallons/foot

EG

Total Depth (ft below TOC)

16.06

Static Water Level (ft)

5.05

Water Column in Well (ft)

6.01

x

0.16

Calc 1

0.9616

x

3

=

Calc 3 Volume (gals)

2.88

Purge Method:

per pump

Well Casing Material

PVC

Centrifugal

Intake (ft below TOC)

Pump

Start Time

End Time

Submersible

Disp. Bailor

Other

Start Time

End Time

Time (24 hr)	Depth to Water (ft)	Gallons Purged	Temp. (°C)	pH	Redox (mV)	Cond ms/cm	Turb (NTU)	DO (mg/L)	Appearance Color	Appearance Odor
0907	6.03	0.1	14.39	6.43	41	0.674	>1000	1.14	green	solvent
0916	8.21	0.75	14.60	6.64	-4	0.658	>1000	2.17	green	solvent
0933	10.71	1.5	16.61	6.95	-25	0.636	>1000	1.77	clear	solvent
0935	stopped purging due to drawdown will wait to see if fuel enters,									
1005	8.30	purging resumed								
1023	9.50	2.0	16.86	6.84	-5	0.725	210	2.13	clear	solvent
1030	10.33	2.3	purging stopped due to drawdown - will collect sample							

Actual Gallons Purged

Sample Time: 1035

Sampled by: EG

Container

Amber Vials

Sampling Method: bailor

Number of Bottles

3

Preservative

HCL

Constituents Sampled

VOCs + TICs

Well Information

Well Location

Condition of Well

Well Completion

Flush Mount

/

Stick Up

Condition of Well Pad and Lid

Plug

Yes

/

No

Boils

Yes

/

No

NOTES:



INSTRUMENT CALIBRATION REPORT

Pine Environmental Services LLC

92 North Main St, Building 20

Windsor, NJ 08561

Toll-free: (800) 301-9663

Pine Environmental Services, Inc.

Instrument ID 45232
Description MiniRAe 3000
Calibrated 2/15/2023 4:06:27PM

Manufacturer	Rae Systems	State Certified	
Model Number	MiniRAE 3000	Status	Pass
Serial Number/ Lot Number	592-927244	Temp °C	23
Location	New Jersey	Humidity %	22
Department			

Calibration Specifications

Group # 1
Group Name Isobutylene
Stated Accy Pct of Reading

Range Acc % 0.0000
Reading Acc % 3.0000
Plus/Minus 0.00

<u>Nom In Val / In Val</u>	<u>In Type</u>	<u>Out Val</u>	<u>Out Type</u>	<u>Fnd As</u>	<u>Lft As</u>	<u>Dev%</u>	<u>Pass/Fail</u>
100.00 / 100.00	PPM	100.00	PPM	82.20	100.30	0.30%	Pass

Test Instruments Used During the Calibration

(As Of Cal Entry Date)

<u>Test Standard ID</u>	<u>Description</u>	<u>Manufacturer</u>	<u>Model Number</u>	<u>Serial Number / Lot Number</u>	<u>Last Cal Date/ Opened Date</u>	<u>Next Cal Date/ Expiration Date</u>
NJ ISO 100 PPM	NJ ISO 100 PPM LOT# 304-402556116-1	Pine Environmental Services, Inc.	31721	304-402556116-1	10/1/2022	10/18/2026

Notes about this calibration

Calibration Result Calibration Successful

Who Calibrated Steven Bailey

All instruments are calibrated by Pine Environmental Services LLC according to the manufacturer's specifications, but it is the customer's responsibility to calibrate and maintain this unit in accordance with the manufacturer's specifications and/or the customer's own specific needs.

Notify Pine Environmental Services LLC of any defect within 24 hours of receipt of equipment
Please call 800-301-9663 for Technical Assistance

VERTEX
Volume Groundwater Sampling Form

 Project No 10153.LK

 Well ID MW-1

 Page 1 of 1

 Date 4/27/23

 Project Name/Location 300 E. 12th St, NY, NY

 Weather cloudy SS

 Casing Diameter (in.) 2

 Gallons/Foot 0.75" = 0.02 2" = 0.16 6" = 1.47
 Conversions 1" = 0.04 4" = 0.85

 Depth to Product (top)
 Dept to Product (bottom)

 Total Depth (ft below TOC) 11.70

Static Water Level

8.35

Water Column in Well (ft)

2913.41

 x 0.16

 = Calc 1 Volume (gals) 1.45

 X 3

=

Calc 3 Volume (gals)

1.3963

Gallons/Foot

Purge Method:

Centrifugal

Submersible

Disp. Bailer

Other

peri

Pump Intake (ft. below TOC)

11.45
PVC

Well Casing Material

Time (24-hr)	Depth to Water (ft)	Gallons Purged	Temp (°C)	pH	Redox (mV)	Cond mS/cm	Turb (NTU)	DO (mg/L)	Appearance	
									Color	Odor
1006	9.00	0.25	17.70	8.14	-449	0.515	101	2.55	clear	Y
1014	10.85	0.5								
1019	11.45	0.75	Stopped purge to allow to recharge							
1234	9.80		Start purge							
1239	10.47	1	18.09	7.35	-25	0.649	30.4	1.68	clear	V
1241	11.00	1.25	drawn down taking sample							

Actual Gallons Purged

 Sample Time: 1245

 Sampled by: BG
 Container
 Amber Vials

 Sampling Method: bailer
 Number of Bottles
 3

 Preservative
 HCL

Constituents Sampled

VOCs + TICs

Well Information

Well Location

Condition of Well

Well Completion

Flush Mount / Stick Up

Condition of Well Pad and Lid

 Plug: Yes / No
 Bolts: Yes / No

NOTES:

VERTEX

Volume Groundwater Sampling Form

Project No. 10153.LK

Well ID MW-2

Page 1 of 1

Date 4/29/23

Project Name/Location 300 E. 12th St. NY, NY

Weather cloudy S4

Casing Diameter (in) 2

Gallon/Foot 0.787 = 0.62
Conversions 1" = 0.04 4" = 0.65

Depth to Product (top) _____
Depth to Product (bottom) _____

Field Technician BG

Total Depth (ft below TOC) 11.63

Static Water Level 5.22

Water Column in Well (ft) 6.41

x 0.16

= Calc 1 Volume (gals) 1.02

x 3

=

Calc 3 Volume (gals) 3.07

Purge Method: per

Pump Intake (ft below TOC) 9.38

Well Casing Material PVC

Time (24-hr)	Depth to Water (ft)	Gallons Purged	Temp (°C)	pH	Redox (mV)	Cond mS/cm	Turb (NTU)	DO (mg/L)	Appearance	
									Color	Odor
1107	6.07	0.25	19.01	6.72	21	.616	312	1.97	yellow	Y
1117	7.90	1	19.07	6.73	19	.577	407	8.21	yellow	Y
1129	9.15	2	19.26	6.73	20	.846	907	1.75	yellow	Y
1145	9.38	3	19.47	6.81	20	1.27	887	3.09	yellow	Y
1150	9.38	3.1	19.68	6.78	22	1.32	626	3.15	yellow	Y

cloudy
cloudy
cloudy
cloudy

Actual Gallons Purged

Sample Time: 1155

Sampled by: BG

Sampling Method: bailer

Constituents Sampled

Container
Amber Vials

Number of Bottles
3

Preservative
HCL

VOCs + TICs

Well Information

Well Location:

Condition of Well Pad and Lid

Condition of Well

Plug Yes / No

Well Completion

Flush Mouth / Stick Up

Bolts Yes / No

NOTES:

1130 DATA PL Sample

VERTEX
Volume Groundwater Sampling Form

 Project No. 10153-LK

 Well ID MW-3

 Page 1 of 1

 Date 4/27/23

Project Name/Location _____

 Weather Cloudy SS

 Casing Diameter (in.) 2

 Gallon/Foot 0.75' = 0.02 2' = 0.16 6' = 1.47
 Conversions 1' = 0.04 4' = 0.65

 Depth to Product (top) _____
 Depth to Product (bottom) _____

 Total Depth (ft below TOC) 11.06

 Static Water Level 499

 Water Column in Well (ft) 6.07

 x 0.16

 Calc 1 Volume (gals) 97

 x 3

=

 Calc 3 Volume (gals) 2.91

 Purge Method peri

Pump Intake (ft below TOC) _____

9.91

PVC Well Casing Material

 Centrifugal _____
 Submersible _____
 Disp. Bailer _____
 Other _____

Start Time _____

End Time _____

Time (24-hr)	Depth to Water (ft)	Gallons Purged	Temp (°C)	pH	Redox (mV)	Cond mS/cm	Turb (NTU)	DO (mg/L)	Appearance	
									Color	Odor
1034	6.55	0.25	18.14	7.38	63	.403	126	3.17	clear	Y
1050	9.01	1	18.35	7.14	44	.542	194	2.66	yellow	Y
1057	10.48	1.5	Stopped due to draw down, allow to recharge							
1203	6.23		Start purge again							
1208	7.21	2	19.34	7.12	28	.714	103	2.55	yellow	Y
1220	9.91	2.75	19.02	7.21	2	.810	64.4	5.00	yellow	Y

Actual Gallons Purged _____

 Sample Time: 1230

 Sampled by: BG

 Sampling Method: bailer

Constituents Sampled _____

Container _____

Number of Bottles _____

Preservative _____

VOCs + TICs _____

Amber Vials _____

3 _____

HCL _____

Well Information

Well Location _____

Condition of Well Pad and Lid: _____

Condition of Well _____

Plug _____

Yes / No

 Well Completion Flush Mount / Stick Up

Bolts _____

Yes / No

NOTES:



INSTRUMENT CALIBRATION REPORT

Pine Environmental Services LLC

92 North Main St, Building 20

Windsor, NJ 08561

Toll-free: (800) 301-9663

Pine Environmental Services, Inc.

Instrument ID 31790
Description MiniRae 3000
Calibrated 4/25/2023 8:15:15AM

Manufacturer Rae Systems
Model Number MiniRAE 3000
Serial Number/ Lot Number 592-914468
Location New Jersey
Department

State Certified
Status Pass
Temp °C 21
Humidity % 26

Calibration Specifications

Group # 1
Group Name Isobutylene
Stated Accy Pct of Reading

Range Acc % 0.0000
Reading Acc % 3.0000
Plus/Minus 0.0

<u>Nom In Val / In Val</u>	<u>In Type</u>	<u>Out Val</u>	<u>Out Type</u>	<u>End As</u>	<u>Lft As</u>	<u>Dev%</u>	<u>Pass/Fail</u>
100.0 / 100.0	PPM	100.0	PPM	104.0	100.2	0.20%	Pass

Test Instruments Used During the Calibration

(As Of Cal Entry Date)

<u>Test Standard ID</u>	<u>Description</u>	<u>Manufacturer</u>	<u>Model Number</u>	<u>Serial Number / Lot Number</u>	<u>Next Cal Date / Last Cal Date/ Expiration Date</u>
NJ ISO 100	NJ ISO 100 PPM LOT#	Pine	31721	304-402556116	10/1/2022 10/18/2026
PPM	304-402556116-1	Environmental Services, Inc.		-1	

Notes about this calibration

Calibration Result Calibration Successful
Who Calibrated Steven Bailey

All instruments are calibrated by Pine Environmental Services LLC according to the manufacturer's specifications, but it is the customer's responsibility to calibrate and maintain this unit in accordance with the manufacturer's specifications and/or the customer's own specific needs.

Notify Pine Environmental Services LLC of any defect within 24 hours of receipt of equipment
Please call 800-301-9663 for Technical Assistance

Appendix I:
Laboratory Report – Groundwater (February 2023)



ANALYTICAL REPORT

Lab Number:	L2309710
Client:	Lockwood, Kessler & Bartlett, Inc. THE VERTEX COMPANIES, LLC 3322 ROUTE 22 WEST, SUITE 907 BRANCBURG, NJ 08876
ATTN:	Timothy Biercz
Phone:	(781) 952-6000
Project Name:	300 E. 12TH STREET
Project Number:	10153.LK
Report Date:	03/02/23

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

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

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



Project Name: 300 E. 12TH STREET
Project Number: 10153.LK

Lab Number: L2309710
Report Date: 03/02/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2309710-01	MW-1	WATER	NY,NY	02/22/23 13:30	02/23/23
L2309710-02	MW-2	WATER	NY,NY	02/22/23 12:25	02/23/23
L2309710-03	MW-3	WATER	NY,NY	02/22/23 10:35	02/23/23
L2309710-04	FIELD BLANK	WATER	NY,NY	02/22/23 10:50	02/23/23
L2309710-05	TRIP BLANK	WATER	NY,NY	02/22/23 00:00	02/23/23

Project Name: 300 E. 12TH STREET
Project Number: 10153.LK

Lab Number: L2309710
Report Date: 03/02/23

Case Narrative

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

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

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

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

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

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

Project Name: 300 E. 12TH STREET
Project Number: 10153.LK

Lab Number: L2309710
Report Date: 03/02/23

Case Narrative (continued)

Report Submission

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

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

Authorized Signature:  Kelly O'Neill

Title: Technical Director/Representative

Date: 03/02/23

ORGANICS

VOLATILES

Project Name: 300 E. 12TH STREET**Lab Number:** L2309710**Project Number:** 10153.LK**Report Date:** 03/02/23**SAMPLE RESULTS**

Lab ID: L2309710-01 D

Date Collected: 02/22/23 13:30

Client ID: MW-1

Date Received: 02/23/23

Sample Location: NY,NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260D

Analytical Date: 02/27/23 14:59

Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	250	70.	100
1,1-Dichloroethane	ND		ug/l	250	70.	100
Chloroform	ND		ug/l	250	70.	100
Carbon tetrachloride	ND		ug/l	50	13.	100
1,2-Dichloropropane	ND		ug/l	100	14.	100
Dibromochloromethane	ND		ug/l	50	15.	100
1,1,2-Trichloroethane	ND		ug/l	150	50.	100
Tetrachloroethene	9700		ug/l	50	18.	100
Chlorobenzene	ND		ug/l	250	70.	100
Trichlorofluoromethane	ND		ug/l	250	70.	100
1,2-Dichloroethane	ND		ug/l	50	13.	100
1,1,1-Trichloroethane	ND		ug/l	250	70.	100
Bromodichloromethane	ND		ug/l	50	19.	100
trans-1,3-Dichloropropene	ND		ug/l	50	16.	100
cis-1,3-Dichloropropene	ND		ug/l	50	14.	100
1,3-Dichloropropene, Total	ND		ug/l	50	14.	100
1,1-Dichloropropene	ND		ug/l	250	70.	100
Bromoform	ND		ug/l	200	65.	100
1,1,2,2-Tetrachloroethane	ND		ug/l	50	17.	100
Benzene	ND		ug/l	50	16.	100
Toluene	ND		ug/l	250	70.	100
Ethylbenzene	ND		ug/l	250	70.	100
Chloromethane	ND		ug/l	250	70.	100
Bromomethane	ND		ug/l	250	70.	100
Vinyl chloride	50	J	ug/l	100	7.1	100
Chloroethane	ND		ug/l	250	70.	100
1,1-Dichloroethene	ND		ug/l	50	17.	100
trans-1,2-Dichloroethene	ND		ug/l	250	70.	100

Project Name: 300 E. 12TH STREET**Lab Number:** L2309710**Project Number:** 10153.LK**Report Date:** 03/02/23**SAMPLE RESULTS**

Lab ID: L2309710-01 D

Date Collected: 02/22/23 13:30

Client ID: MW-1

Date Received: 02/23/23

Sample Location: NY,NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	390		ug/l	50	18.	100
1,2-Dichlorobenzene	ND		ug/l	250	70.	100
1,3-Dichlorobenzene	ND		ug/l	250	70.	100
1,4-Dichlorobenzene	ND		ug/l	250	70.	100
Methyl tert butyl ether	ND		ug/l	250	70.	100
p/m-Xylene	ND		ug/l	250	70.	100
o-Xylene	ND		ug/l	250	70.	100
Xylenes, Total	ND		ug/l	250	70.	100
cis-1,2-Dichloroethene	1100		ug/l	250	70.	100
1,2-Dichloroethene, Total	1100		ug/l	250	70.	100
Dibromomethane	ND		ug/l	500	100	100
1,2,3-Trichloropropane	ND		ug/l	250	70.	100
Acrylonitrile	ND		ug/l	500	150	100
Styrene	ND		ug/l	250	70.	100
Dichlorodifluoromethane	ND		ug/l	500	100	100
Acetone	ND		ug/l	500	150	100
Carbon disulfide	ND		ug/l	500	100	100
2-Butanone	ND		ug/l	500	190	100
Vinyl acetate	ND		ug/l	500	100	100
4-Methyl-2-pentanone	ND		ug/l	500	100	100
2-Hexanone	ND		ug/l	500	100	100
Bromochloromethane	ND		ug/l	250	70.	100
2,2-Dichloropropane	ND		ug/l	250	70.	100
1,2-Dibromoethane	ND		ug/l	200	65.	100
1,3-Dichloropropane	ND		ug/l	250	70.	100
1,1,1,2-Tetrachloroethane	ND		ug/l	250	70.	100
Bromobenzene	ND		ug/l	250	70.	100
n-Butylbenzene	ND		ug/l	250	70.	100
sec-Butylbenzene	ND		ug/l	250	70.	100
tert-Butylbenzene	ND		ug/l	250	70.	100
o-Chlorotoluene	ND		ug/l	250	70.	100
p-Chlorotoluene	ND		ug/l	250	70.	100
1,2-Dibromo-3-chloropropane	ND		ug/l	250	70.	100
Hexachlorobutadiene	ND		ug/l	250	70.	100
Isopropylbenzene	ND		ug/l	250	70.	100
p-Isopropyltoluene	ND		ug/l	250	70.	100
Naphthalene	ND		ug/l	250	70.	100

Project Name: 300 E. 12TH STREET

Lab Number: L2309710

Project Number: 10153.LK

Report Date: 03/02/23

SAMPLE RESULTS

Lab ID: L2309710-01 D

Date Collected: 02/22/23 13:30

Client ID: MW-1

Date Received: 02/23/23

Sample Location: NY,NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	ND		ug/l	250	70.	100
1,2,3-Trichlorobenzene	ND		ug/l	250	70.	100
1,2,4-Trichlorobenzene	ND		ug/l	250	70.	100
1,3,5-Trimethylbenzene	ND		ug/l	250	70.	100
1,2,4-Trimethylbenzene	ND		ug/l	250	70.	100
1,4-Dioxane	ND		ug/l	25000	6100	100
p-Diethylbenzene	ND		ug/l	200	70.	100
p-Ethyltoluene	ND		ug/l	200	70.	100
1,2,4,5-Tetramethylbenzene	ND		ug/l	200	54.	100
Ethyl ether	ND		ug/l	250	70.	100
trans-1,4-Dichloro-2-butene	ND		ug/l	250	70.	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	99		70-130

Project Name: 300 E. 12TH STREET**Lab Number:** L2309710**Project Number:** 10153.LK**Report Date:** 03/02/23**SAMPLE RESULTS**

Lab ID: L2309710-02 D

Date Collected: 02/22/23 12:25

Client ID: MW-2

Date Received: 02/23/23

Sample Location: NY,NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260D

Analytical Date: 02/27/23 15:22

Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2500	700	1000
1,1-Dichloroethane	ND		ug/l	2500	700	1000
Chloroform	ND		ug/l	2500	700	1000
Carbon tetrachloride	ND		ug/l	500	130	1000
1,2-Dichloropropane	ND		ug/l	1000	140	1000
Dibromochloromethane	ND		ug/l	500	150	1000
1,1,2-Trichloroethane	ND		ug/l	1500	500	1000
Tetrachloroethene	180000		ug/l	500	180	1000
Chlorobenzene	ND		ug/l	2500	700	1000
Trichlorofluoromethane	ND		ug/l	2500	700	1000
1,2-Dichloroethane	ND		ug/l	500	130	1000
1,1,1-Trichloroethane	ND		ug/l	2500	700	1000
Bromodichloromethane	ND		ug/l	500	190	1000
trans-1,3-Dichloropropene	ND		ug/l	500	160	1000
cis-1,3-Dichloropropene	ND		ug/l	500	140	1000
1,3-Dichloropropene, Total	ND		ug/l	500	140	1000
1,1-Dichloropropene	ND		ug/l	2500	700	1000
Bromoform	ND		ug/l	2000	650	1000
1,1,2,2-Tetrachloroethane	ND		ug/l	500	170	1000
Benzene	ND		ug/l	500	160	1000
Toluene	ND		ug/l	2500	700	1000
Ethylbenzene	ND		ug/l	2500	700	1000
Chloromethane	ND		ug/l	2500	700	1000
Bromomethane	ND		ug/l	2500	700	1000
Vinyl chloride	16000		ug/l	1000	71.	1000
Chloroethane	ND		ug/l	2500	700	1000
1,1-Dichloroethene	ND		ug/l	500	170	1000
trans-1,2-Dichloroethene	ND		ug/l	2500	700	1000

Project Name: 300 E. 12TH STREET**Lab Number:** L2309710**Project Number:** 10153.LK**Report Date:** 03/02/23**SAMPLE RESULTS**

Lab ID: L2309710-02 D

Date Collected: 02/22/23 12:25

Client ID: MW-2

Date Received: 02/23/23

Sample Location: NY,NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	11000		ug/l	500	180	1000
1,2-Dichlorobenzene	ND		ug/l	2500	700	1000
1,3-Dichlorobenzene	ND		ug/l	2500	700	1000
1,4-Dichlorobenzene	ND		ug/l	2500	700	1000
Methyl tert butyl ether	ND		ug/l	2500	700	1000
p/m-Xylene	ND		ug/l	2500	700	1000
o-Xylene	ND		ug/l	2500	700	1000
Xylenes, Total	ND		ug/l	2500	700	1000
cis-1,2-Dichloroethene	86000		ug/l	2500	700	1000
1,2-Dichloroethene, Total	86000		ug/l	2500	700	1000
Dibromomethane	ND		ug/l	5000	1000	1000
1,2,3-Trichloropropane	ND		ug/l	2500	700	1000
Acrylonitrile	ND		ug/l	5000	1500	1000
Styrene	ND		ug/l	2500	700	1000
Dichlorodifluoromethane	ND		ug/l	5000	1000	1000
Acetone	ND		ug/l	5000	1500	1000
Carbon disulfide	ND		ug/l	5000	1000	1000
2-Butanone	ND		ug/l	5000	1900	1000
Vinyl acetate	ND		ug/l	5000	1000	1000
4-Methyl-2-pentanone	ND		ug/l	5000	1000	1000
2-Hexanone	ND		ug/l	5000	1000	1000
Bromochloromethane	ND		ug/l	2500	700	1000
2,2-Dichloropropane	ND		ug/l	2500	700	1000
1,2-Dibromoethane	ND		ug/l	2000	650	1000
1,3-Dichloropropane	ND		ug/l	2500	700	1000
1,1,1,2-Tetrachloroethane	ND		ug/l	2500	700	1000
Bromobenzene	ND		ug/l	2500	700	1000
n-Butylbenzene	ND		ug/l	2500	700	1000
sec-Butylbenzene	ND		ug/l	2500	700	1000
tert-Butylbenzene	ND		ug/l	2500	700	1000
o-Chlorotoluene	ND		ug/l	2500	700	1000
p-Chlorotoluene	ND		ug/l	2500	700	1000
1,2-Dibromo-3-chloropropane	ND		ug/l	2500	700	1000
Hexachlorobutadiene	ND		ug/l	2500	700	1000
Isopropylbenzene	ND		ug/l	2500	700	1000
p-Isopropyltoluene	ND		ug/l	2500	700	1000
Naphthalene	ND		ug/l	2500	700	1000

Project Name: 300 E. 12TH STREET**Lab Number:** L2309710**Project Number:** 10153.LK**Report Date:** 03/02/23**SAMPLE RESULTS**

Lab ID: L2309710-02 D

Date Collected: 02/22/23 12:25

Client ID: MW-2

Date Received: 02/23/23

Sample Location: NY,NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	ND		ug/l	2500	700	1000
1,2,3-Trichlorobenzene	ND		ug/l	2500	700	1000
1,2,4-Trichlorobenzene	ND		ug/l	2500	700	1000
1,3,5-Trimethylbenzene	ND		ug/l	2500	700	1000
1,2,4-Trimethylbenzene	ND		ug/l	2500	700	1000
1,4-Dioxane	ND		ug/l	250000	61000	1000
p-Diethylbenzene	ND		ug/l	2000	700	1000
p-Ethyltoluene	ND		ug/l	2000	700	1000
1,2,4,5-Tetramethylbenzene	ND		ug/l	2000	540	1000
Ethyl ether	ND		ug/l	2500	700	1000
trans-1,4-Dichloro-2-butene	ND		ug/l	2500	700	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	98		70-130

Project Name: 300 E. 12TH STREET**Lab Number:** L2309710**Project Number:** 10153.LK**Report Date:** 03/02/23**SAMPLE RESULTS**

Lab ID: L2309710-03 D

Date Collected: 02/22/23 10:35

Client ID: MW-3

Date Received: 02/23/23

Sample Location: NY,NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260D

Analytical Date: 02/27/23 15:45

Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	1200	350	500
1,1-Dichloroethane	ND		ug/l	1200	350	500
Chloroform	ND		ug/l	1200	350	500
Carbon tetrachloride	ND		ug/l	250	67.	500
1,2-Dichloropropane	ND		ug/l	500	68.	500
Dibromochloromethane	ND		ug/l	250	74.	500
1,1,2-Trichloroethane	ND		ug/l	750	250	500
Tetrachloroethene	56000		ug/l	250	90.	500
Chlorobenzene	ND		ug/l	1200	350	500
Trichlorofluoromethane	ND		ug/l	1200	350	500
1,2-Dichloroethane	ND		ug/l	250	66.	500
1,1,1-Trichloroethane	ND		ug/l	1200	350	500
Bromodichloromethane	ND		ug/l	250	96.	500
trans-1,3-Dichloropropene	ND		ug/l	250	82.	500
cis-1,3-Dichloropropene	ND		ug/l	250	72.	500
1,3-Dichloropropene, Total	ND		ug/l	250	72.	500
1,1-Dichloropropene	ND		ug/l	1200	350	500
Bromoform	ND		ug/l	1000	320	500
1,1,2,2-Tetrachloroethane	ND		ug/l	250	84.	500
Benzene	ND		ug/l	250	80.	500
Toluene	ND		ug/l	1200	350	500
Ethylbenzene	ND		ug/l	1200	350	500
Chloromethane	ND		ug/l	1200	350	500
Bromomethane	ND		ug/l	1200	350	500
Vinyl chloride	1400		ug/l	500	36.	500
Chloroethane	ND		ug/l	1200	350	500
1,1-Dichloroethene	ND		ug/l	250	84.	500
trans-1,2-Dichloroethene	ND		ug/l	1200	350	500

Project Name: 300 E. 12TH STREET**Lab Number:** L2309710**Project Number:** 10153.LK**Report Date:** 03/02/23**SAMPLE RESULTS**

Lab ID: L2309710-03 D

Date Collected: 02/22/23 10:35

Client ID: MW-3

Date Received: 02/23/23

Sample Location: NY,NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	2700		ug/l	250	88.	500
1,2-Dichlorobenzene	ND		ug/l	1200	350	500
1,3-Dichlorobenzene	ND		ug/l	1200	350	500
1,4-Dichlorobenzene	ND		ug/l	1200	350	500
Methyl tert butyl ether	ND		ug/l	1200	350	500
p/m-Xylene	ND		ug/l	1200	350	500
o-Xylene	ND		ug/l	1200	350	500
Xylenes, Total	ND		ug/l	1200	350	500
cis-1,2-Dichloroethene	7000		ug/l	1200	350	500
1,2-Dichloroethene, Total	7000		ug/l	1200	350	500
Dibromomethane	ND		ug/l	2500	500	500
1,2,3-Trichloropropane	ND		ug/l	1200	350	500
Acrylonitrile	ND		ug/l	2500	750	500
Styrene	ND		ug/l	1200	350	500
Dichlorodifluoromethane	ND		ug/l	2500	500	500
Acetone	ND		ug/l	2500	730	500
Carbon disulfide	ND		ug/l	2500	500	500
2-Butanone	ND		ug/l	2500	970	500
Vinyl acetate	ND		ug/l	2500	500	500
4-Methyl-2-pentanone	ND		ug/l	2500	500	500
2-Hexanone	ND		ug/l	2500	500	500
Bromochloromethane	ND		ug/l	1200	350	500
2,2-Dichloropropane	ND		ug/l	1200	350	500
1,2-Dibromoethane	ND		ug/l	1000	320	500
1,3-Dichloropropane	ND		ug/l	1200	350	500
1,1,1,2-Tetrachloroethane	ND		ug/l	1200	350	500
Bromobenzene	ND		ug/l	1200	350	500
n-Butylbenzene	ND		ug/l	1200	350	500
sec-Butylbenzene	ND		ug/l	1200	350	500
tert-Butylbenzene	ND		ug/l	1200	350	500
o-Chlorotoluene	ND		ug/l	1200	350	500
p-Chlorotoluene	ND		ug/l	1200	350	500
1,2-Dibromo-3-chloropropane	ND		ug/l	1200	350	500
Hexachlorobutadiene	ND		ug/l	1200	350	500
Isopropylbenzene	ND		ug/l	1200	350	500
p-Isopropyltoluene	ND		ug/l	1200	350	500
Naphthalene	ND		ug/l	1200	350	500

Project Name: 300 E. 12TH STREET**Lab Number:** L2309710**Project Number:** 10153.LK**Report Date:** 03/02/23**SAMPLE RESULTS**

Lab ID: L2309710-03 D

Date Collected: 02/22/23 10:35

Client ID: MW-3

Date Received: 02/23/23

Sample Location: NY,NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	ND		ug/l	1200	350	500
1,2,3-Trichlorobenzene	ND		ug/l	1200	350	500
1,2,4-Trichlorobenzene	ND		ug/l	1200	350	500
1,3,5-Trimethylbenzene	ND		ug/l	1200	350	500
1,2,4-Trimethylbenzene	ND		ug/l	1200	350	500
1,4-Dioxane	ND		ug/l	120000	30000	500
p-Diethylbenzene	ND		ug/l	1000	350	500
p-Ethyltoluene	ND		ug/l	1000	350	500
1,2,4,5-Tetramethylbenzene	ND		ug/l	1000	270	500
Ethyl ether	ND		ug/l	1200	350	500
trans-1,4-Dichloro-2-butene	ND		ug/l	1200	350	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	98		70-130

Project Name: 300 E. 12TH STREET
Project Number: 10153.LK

Lab Number: L2309710
Report Date: 03/02/23

SAMPLE RESULTS

Lab ID: L2309710-04
Client ID: FIELD BLANK
Sample Location: NY,NY

Date Collected: 02/22/23 10:50
Date Received: 02/23/23
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 02/27/23 14:12
Analyst: KJD

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

Project Name: 300 E. 12TH STREET**Lab Number:** L2309710**Project Number:** 10153.LK**Report Date:** 03/02/23**SAMPLE RESULTS****Lab ID:** L2309710-04**Date Collected:** 02/22/23 10:50**Client ID:** FIELD BLANK**Date Received:** 02/23/23**Sample Location:** NY,NY**Field Prep:** Not Specified**Sample Depth:**

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

Project Name: 300 E. 12TH STREET
Project Number: 10153.LK

Lab Number: L2309710
Report Date: 03/02/23

SAMPLE RESULTS

Lab ID: L2309710-04
Client ID: FIELD BLANK
Sample Location: NY,NY

Date Collected: 02/22/23 10:50
Date Received: 02/23/23
Field Prep: Not Specified

Sample Depth:

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	100		70-130

Project Name: 300 E. 12TH STREET
Project Number: 10153.LK

Lab Number: L2309710
Report Date: 03/02/23

SAMPLE RESULTS

Lab ID: L2309710-05
Client ID: TRIP BLANK
Sample Location: NY,NY

Date Collected: 02/22/23 00:00
Date Received: 02/23/23
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 02/27/23 14:35
Analyst: KJD

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

Project Name: 300 E. 12TH STREET

Lab Number: L2309710

Project Number: 10153.LK

Report Date: 03/02/23

SAMPLE RESULTS

Lab ID: L2309710-05

Date Collected: 02/22/23 00:00

Client ID: TRIP BLANK

Date Received: 02/23/23

Sample Location: NY,NY

Field Prep: Not Specified

Sample Depth:

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

Project Name: 300 E. 12TH STREET
Project Number: 10153.LK

Lab Number: L2309710
Report Date: 03/02/23

SAMPLE RESULTS

Lab ID: L2309710-05
Client ID: TRIP BLANK
Sample Location: NY,NY

Date Collected: 02/22/23 00:00
Date Received: 02/23/23
Field Prep: Not Specified

Sample Depth:

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	99		70-130

Project Name: 300 E. 12TH STREET
Project Number: 10153.LK

Lab Number: L2309710
Report Date: 03/02/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
 Analytical Date: 02/27/23 08:26
 Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-05 Batch: WG1749589-5					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18

Project Name: 300 E. 12TH STREET
Project Number: 10153.LK

Lab Number: L2309710
Report Date: 03/02/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 02/27/23 08:26
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-05 Batch: WG1749589-5					
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylenes, Total	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Acrylonitrile	ND		ug/l	5.0	1.5
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70

Project Name: 300 E. 12TH STREET
Project Number: 10153.LK

Lab Number: L2309710
Report Date: 03/02/23

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 02/27/23 08:26
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-05 Batch: WG1749589-5					
o-Chlorotoluene	ND		ug/l	2.5	0.70
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
1,4-Dioxane	ND		ug/l	250	61.
p-Diethylbenzene	ND		ug/l	2.0	0.70
p-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	100		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 300 E. 12TH STREET

Project Number: 10153.LK

Lab Number: L2309710

Report Date: 03/02/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG1749589-3 WG1749589-4								
Methylene chloride	97		99		70-130	2		20
1,1-Dichloroethane	100		100		70-130	0		20
Chloroform	100		100		70-130	0		20
Carbon tetrachloride	98		98		63-132	0		20
1,2-Dichloropropane	97		99		70-130	2		20
Dibromochloromethane	85		89		63-130	5		20
1,1,2-Trichloroethane	93		99		70-130	6		20
Tetrachloroethene	100		100		70-130	0		20
Chlorobenzene	99		100		75-130	1		20
Trichlorofluoromethane	110		110		62-150	0		20
1,2-Dichloroethane	96		100		70-130	4		20
1,1,1-Trichloroethane	100		100		67-130	0		20
Bromodichloromethane	89		91		67-130	2		20
trans-1,3-Dichloropropene	90		94		70-130	4		20
cis-1,3-Dichloropropene	88		91		70-130	3		20
1,1-Dichloropropene	100		100		70-130	0		20
Bromoform	74		79		54-136	7		20
1,1,2,2-Tetrachloroethane	85		92		67-130	8		20
Benzene	100		100		70-130	0		20
Toluene	100		100		70-130	0		20
Ethylbenzene	100		100		70-130	0		20
Chloromethane	90		92		64-130	2		20
Bromomethane	89		87		39-139	2		20

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 300 E. 12TH STREET

Project Number: 10153.LK

Lab Number: L2309710

Report Date: 03/02/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG1749589-3 WG1749589-4								
Vinyl chloride	100		100		55-140	0		20
Chloroethane	110		110		55-138	0		20
1,1-Dichloroethene	110		110		61-145	0		20
trans-1,2-Dichloroethene	100		100		70-130	0		20
Trichloroethene	100		100		70-130	0		20
1,2-Dichlorobenzene	95		99		70-130	4		20
1,3-Dichlorobenzene	98		100		70-130	2		20
1,4-Dichlorobenzene	96		100		70-130	4		20
Methyl tert butyl ether	88		95		63-130	8		20
p/m-Xylene	105		105		70-130	0		20
o-Xylene	100		105		70-130	5		20
cis-1,2-Dichloroethene	99		100		70-130	1		20
Dibromomethane	87		90		70-130	3		20
1,2,3-Trichloropropane	90		97		64-130	7		20
Acrylonitrile	87		93		70-130	7		20
Styrene	100		105		70-130	5		20
Dichlorodifluoromethane	88		88		36-147	0		20
Acetone	71		86		58-148	19		20
Carbon disulfide	100		100		51-130	0		20
2-Butanone	75		83		63-138	10		20
Vinyl acetate	97		100		70-130	3		20
4-Methyl-2-pentanone	80		89		59-130	11		20
2-Hexanone	83		92		57-130	10		20

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 300 E. 12TH STREET

Project Number: 10153.LK

Lab Number: L2309710

Report Date: 03/02/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG1749589-3 WG1749589-4								
Bromochloromethane	95		99		70-130	4		20
2,2-Dichloropropane	110		110		63-133	0		20
1,2-Dibromoethane	88		92		70-130	4		20
1,3-Dichloropropane	95		99		70-130	4		20
1,1,1,2-Tetrachloroethane	92		95		64-130	3		20
Bromobenzene	94		97		70-130	3		20
n-Butylbenzene	100		100		53-136	0		20
sec-Butylbenzene	110		110		70-130	0		20
tert-Butylbenzene	100		100		70-130	0		20
o-Chlorotoluene	100		100		70-130	0		20
p-Chlorotoluene	100		100		70-130	0		20
1,2-Dibromo-3-chloropropane	70		76		41-144	8		20
Hexachlorobutadiene	100		100		63-130	0		20
Isopropylbenzene	100		100		70-130	0		20
p-Isopropyltoluene	100		110		70-130	10		20
Naphthalene	82		92		70-130	11		20
n-Propylbenzene	100		110		69-130	10		20
1,2,3-Trichlorobenzene	86		94		70-130	9		20
1,2,4-Trichlorobenzene	90		95		70-130	5		20
1,3,5-Trimethylbenzene	100		100		64-130	0		20
1,2,4-Trimethylbenzene	100		100		70-130	0		20
1,4-Dioxane	74		82		56-162	10		20
p-Diethylbenzene	99		100		70-130	1		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 300 E. 12TH STREET

Project Number: 10153.LK

Lab Number: L2309710

Report Date: 03/02/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG1749589-3 WG1749589-4								
p-Ethyltoluene	100		100		70-130	0		20
1,2,4,5-Tetramethylbenzene	95		98		70-130	3		20
Ethyl ether	93		96		59-134	3		20
trans-1,4-Dichloro-2-butene	83		88		70-130	6		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	104		105		70-130
Toluene-d8	102		101		70-130
4-Bromofluorobenzene	99		98		70-130
Dibromofluoromethane	99		99		70-130

Project Name: 300 E. 12TH STREET**Lab Number:** L2309710**Project Number:** 10153.LK**Report Date:** 03/02/23**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information**Cooler** **Custody Seal**

A Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2309710-01A	Vial HCl preserved	A	NA		2.3	Y	Absent		NYTCL-8260(14)
L2309710-01B	Vial HCl preserved	A	NA		2.3	Y	Absent		NYTCL-8260(14)
L2309710-01C	Vial HCl preserved	A	NA		2.3	Y	Absent		NYTCL-8260(14)
L2309710-02A	Vial HCl preserved	A	NA		2.3	Y	Absent		NYTCL-8260(14)
L2309710-02B	Vial HCl preserved	A	NA		2.3	Y	Absent		NYTCL-8260(14)
L2309710-02C	Vial HCl preserved	A	NA		2.3	Y	Absent		NYTCL-8260(14)
L2309710-03A	Vial HCl preserved	A	NA		2.3	Y	Absent		NYTCL-8260(14)
L2309710-03B	Vial HCl preserved	A	NA		2.3	Y	Absent		NYTCL-8260(14)
L2309710-03C	Vial HCl preserved	A	NA		2.3	Y	Absent		NYTCL-8260(14)
L2309710-04A	Vial HCl preserved	A	NA		2.3	Y	Absent		NYTCL-8260(14)
L2309710-04B	Vial HCl preserved	A	NA		2.3	Y	Absent		NYTCL-8260(14)
L2309710-04C	Vial HCl preserved	A	NA		2.3	Y	Absent		NYTCL-8260(14)
L2309710-05A	Vial HCl preserved	A	NA		2.3	Y	Absent		NYTCL-8260(14)
L2309710-05B	Vial HCl preserved	A	NA		2.3	Y	Absent		NYTCL-8260(14)

Project Name: 300 E. 12TH STREET
Project Number: 10153.LK

Lab Number: L2309710
Report Date: 03/02/23

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers



Project Name: 300 E. 12TH STREET
Project Number: 10153.LK

Lab Number: L2309710
Report Date: 03/02/23

Footnotes

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

Terms

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

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

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

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

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

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

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

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

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

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

Report Format: DU Report with 'J' Qualifiers



Project Name: 300 E. 12TH STREET
Project Number: 10153.LK

Lab Number: L2309710
Report Date: 03/02/23

Data Qualifiers

Identified Compounds (TICs).

- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: DU Report with 'J' Qualifiers



Project Name: 300 E. 12TH STREET
Project Number: 10153.LK

Lab Number: L2309710
Report Date: 03/02/23

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

LIMITATION OF LIABILITIES

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

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



Certification Information

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

Westborough Facility

EPA 624/624.1: m/p-xylene, o-xylene, 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, SM4500CI-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.

[illegible]

Appendix J:

Water and Sewer Documentation

2003

2nd 1st

12th

2003

30

100 103
 79 82
 58 61
 37 40
 16 19
 13 10
 28 31
 43 46
 58 61
 79 82
 100 103
 104 101
 86 83
 67 64
 48 40
 22 19
 112 109
 89 85
 67 64
 43 40
 19 16
 106 103
 82 79
 58 55
 37 34
 16 13
 109 106
 91 88
 70 67
 49 46
 28 25
 14

116

113

111

119

113

119

Gen Daily Inspection

2nd 1st

11/11/20

Fourth

100	100
149	144
27	27
5	5
149	149
132	132
109	109
87	81
68	63
42	42
18	18
163	163
167	157
113	113
90	90
63	63

100
149
27
5
149
132
109
87
68
42
18
163
167
113
90
63

Third

120	120
97	97
48	48
33	33
29	29
7	7
136	136
116	116
93	93
71	71
51	51
29	29
8	8
171	171
158	158
131	131
112	112
88	88
61	61

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116
93
71
51
29
8
171
158
131
112
88
61

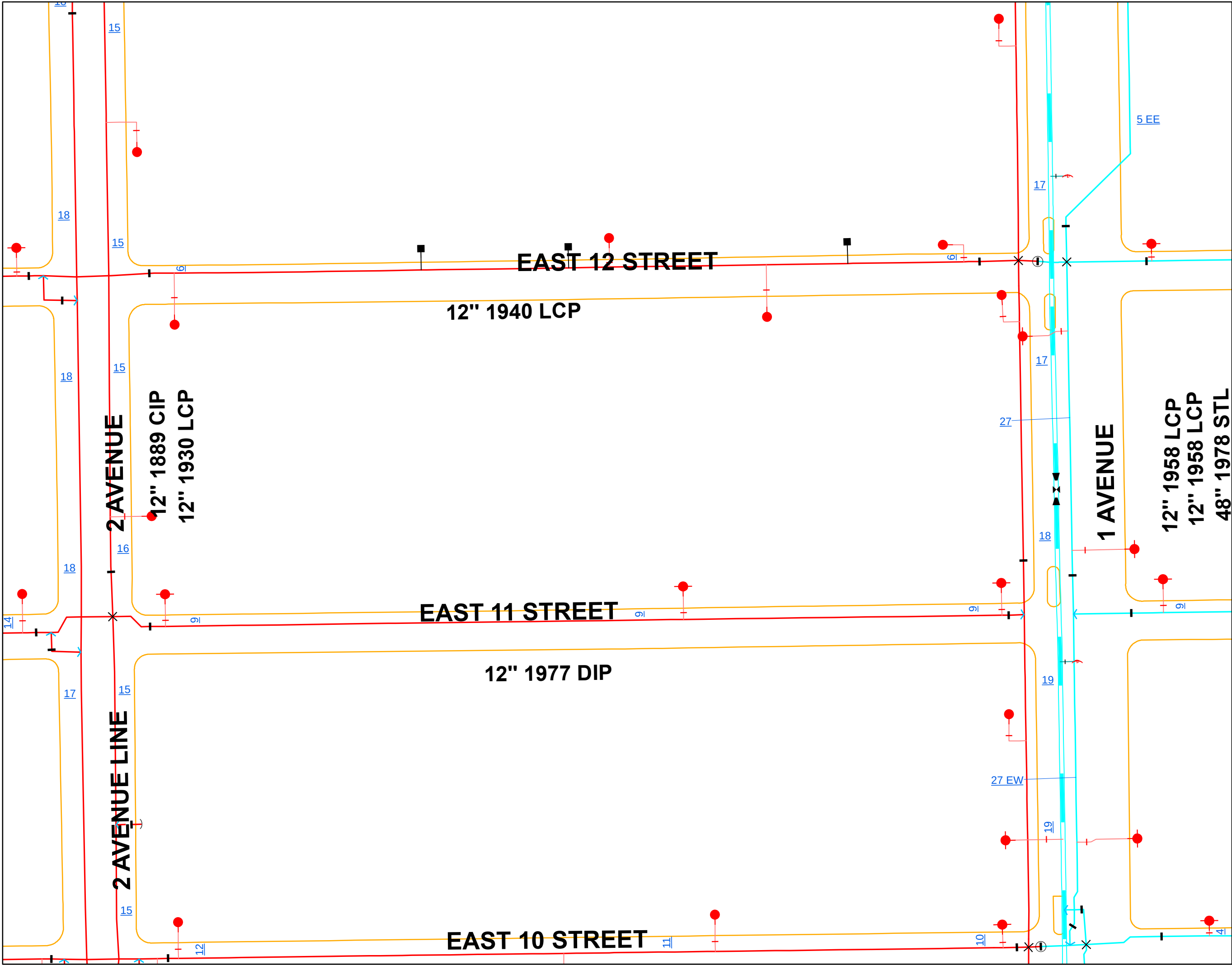
Twelfth

D. Piley

St

St

SECONDS



Water Map Legend

Valve Type and Status

- Butterfly, Open
- Butterfly, Boundary
- Butterfly, Closed
- Check, Open
- LH Gate, Open
- LH Gate, Closed or Boundary
- Gate Open
- Gate, Closed or Boundary

Structures and Miscellaneous

- Tank
- Well
- Sampling Station
- Regulator
- Shaft, Chamber, Vault, Etc

General WaterMain Sizes (in inches)

Aqueduct	96
	84
	72
	66
	60
	54
	48
	42
	36
	30
	24
	20
	18
	16
	14
	12
	10
	8
	6
	4
	3
	<3

Water Connections

- 3 Way
- 4 Way
- Bulkhead
- CAP
- Eccentric Reducer
- Reducer
- Plug
- Riser
- Manifolds / Reducer Bank
- Wet Connection
- Expansion Joint
- Terminus

BO Discharge and Valve

- BLIND
- Direct to Sewer
- Direct to Unknown
- Direct to Waterway
- POT to Sewer
- POT to Waterway
- BO Valve

Appurtenance

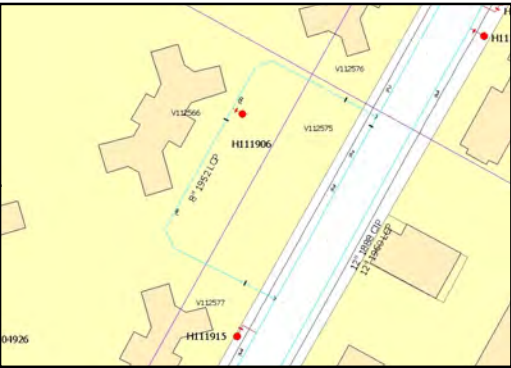
- Access Manhole
- Aqualog
- Electrolysis Connection
- Gauge/Meter
- Pitot Chamber
- Vent
- Venturi Tube
- Water Fed Transformer
- Street Washer

Hydrants

- Breakaway
- Standard
- Unknown
- Hydrant Gate

Base Map Layers

- Railroad (NYCMAP)
- Road Edge (NYCMAP)
- Borough Boundary
- City Tile Boundary (NYCMAP)
- Buildings (NYCMAP)
- Open Space (NYCMAP)
- Tax Lot (COGIS)
- Elevated Transportation Structures (NYCMAP)



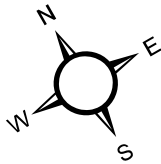
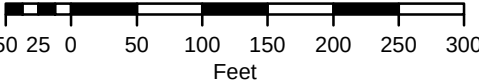
"Curb dimensions may exist in the water data in areas where there are not curb lines in the current NYCMAP landbase transportation edge layer. This may be because the curbs no longer exist or they are not in NYCMAP because the roadways are private or newly constructed"

Water Mapping

NYC Department of Environmental Protection
Bureau of Water and Sewer Operations
59-17 Junction Boulevard, 3rd Floor
Corona, NY 11373-5108

Datum:
NAD_1983
StatePlane_New_York_Long_Island
FIPS_3104_Feet

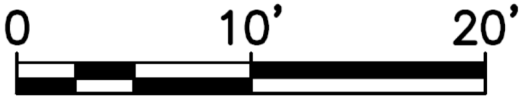
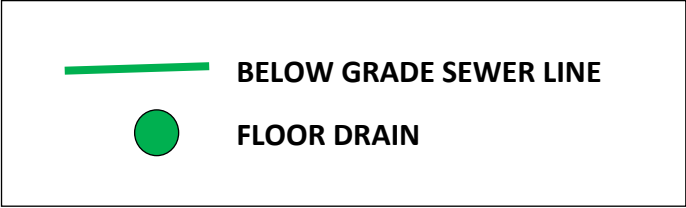
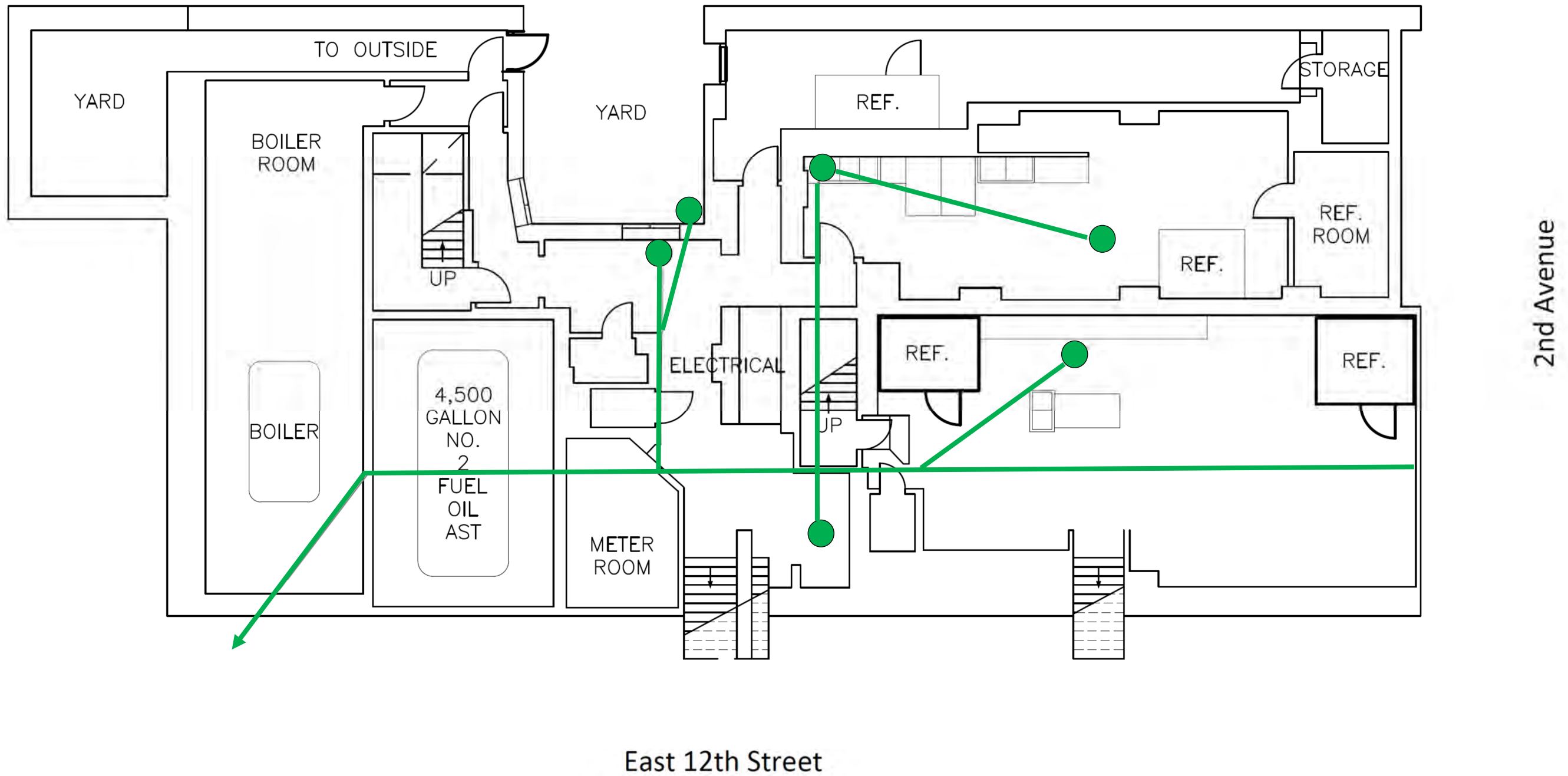
Map Printed: 8/19/2022



Pipe Material			
DIP	Ductile Iron Pipe	ACP	Asbestos Concrete Pipe
CIP	Cast Iron Pipe	RCP	Reinforced Concrete Pipe
PVC	Polyvinyl Chloride Pipe	COP	Copper Pipe
LCP	Lined Cast Iron Pipe	STL	Steel Pipe
TRN	Transite Pipe		
PWM	Private Water Main		
IWM	Internal Water Main		

This map is intended to be a schematic representation of the water system ONLY, and is not warranted to be accurate for construction and/or surveying purposes and is based on the best information available

All warranties, UCC and otherwise, express or implied, including, warranties as to accuracy of data shown hereon and merchantability and fitness for a particular purpose are expressly disclaimed. All incidental, consequential or special damages arising out of or in connection with the use or performance of the data shown on the map are expressly disclaimed. Map is not for public dissemination and is agreed by recipient not to be copied. Map and data contained herein, are expressly owned by the NYC Department of Environmental Protection. Recipient also agrees to destroy both paper and electronic copies of this map upon completion of project



Map Source: Basement Map - Plan, VERTEX,
9/12/2022

SEWER LAYOUT
300 EAST 12th STREET
NEW YORK, NEW YORK



ENGINEERING EXCELLENCE SINCE 1889
Lockwood, Kessler & Bartlett, Inc.
One Aerial Way - Syosset, NY 11791
516.938.0600 www.lkbinc.com

ATTACHMENT A

LKB Project No. 10153.LK

Appendix K:
Laboratory Report – Groundwater (April 2023)



ANALYTICAL REPORT

Lab Number:	L2323040
Client:	Lockwood, Kessler & Bartlett, Inc. THE VERTEX COMPANIES, LLC 3322 ROUTE 22 WEST, SUITE 907 BRANCBURG, NJ 08876
ATTN:	Timothy Biercz
Phone:	(781) 952-6000
Project Name:	300 E 12TH STREET
Project Number:	10153.LK
Report Date:	05/04/23

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

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

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



Project Name: 300 E 12TH STREET
Project Number: 10153.LK

Lab Number: L2323040
Report Date: 05/04/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2323040-01	MW-1	WATER	MANHATTAN, NY	04/27/23 12:45	04/27/23
L2323040-02	MW-2	WATER	MANHATTAN, NY	04/27/23 11:55	04/27/23
L2323040-03	MW-3	WATER	MANHATTAN, NY	04/27/23 12:30	04/27/23
L2323040-04	FIELD BLANK	WATER	MANHATTAN, NY	04/27/23 12:40	04/27/23
L2323040-05	TRIP BLANK	WATER	MANHATTAN, NY	04/26/23 00:00	04/27/23

Project Name: 300 E 12TH STREET
Project Number: 10153.LK

Lab Number: L2323040
Report Date: 05/04/23

Case Narrative

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

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

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

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

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

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

Project Name: 300 E 12TH STREET
Project Number: 10153.LK

Lab Number: L2323040
Report Date: 05/04/23

Case Narrative (continued)

Report Submission

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

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

Authorized Signature:



Kelly O'Neill

Title: Technical Director/Representative

Date: 05/04/23

ORGANICS

VOLATILES

Project Name: 300 E 12TH STREET**Lab Number:** L2323040**Project Number:** 10153.LK**Report Date:** 05/04/23**SAMPLE RESULTS**

Lab ID: L2323040-01 D

Date Collected: 04/27/23 12:45

Client ID: MW-1

Date Received: 04/27/23

Sample Location: MANHATTAN, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260D

Analytical Date: 04/29/23 12:32

Analyst: MJV

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	25	7.0	10
1,1-Dichloroethane	ND		ug/l	25	7.0	10
Chloroform	ND		ug/l	25	7.0	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
1,2-Dichloropropane	ND		ug/l	10	1.4	10
Dibromochloromethane	ND		ug/l	5.0	1.5	10
1,1,2-Trichloroethane	ND		ug/l	15	5.0	10
Tetrachloroethene	2.9	J	ug/l	5.0	1.8	10
Chlorobenzene	ND		ug/l	25	7.0	10
Trichlorofluoromethane	ND		ug/l	25	7.0	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
1,1,1-Trichloroethane	ND		ug/l	25	7.0	10
Bromodichloromethane	ND		ug/l	5.0	1.9	10
trans-1,3-Dichloropropene	ND		ug/l	5.0	1.6	10
cis-1,3-Dichloropropene	ND		ug/l	5.0	1.4	10
1,3-Dichloropropene, Total	ND		ug/l	5.0	1.4	10
1,1-Dichloropropene	ND		ug/l	25	7.0	10
Bromoform	ND		ug/l	20	6.5	10
1,1,2,2-Tetrachloroethane	ND		ug/l	5.0	1.7	10
Benzene	ND		ug/l	5.0	1.6	10
Toluene	ND		ug/l	25	7.0	10
Ethylbenzene	ND		ug/l	25	7.0	10
Chloromethane	ND		ug/l	25	7.0	10
Bromomethane	ND		ug/l	25	7.0	10
Vinyl chloride	440		ug/l	10	0.71	10
Chloroethane	ND		ug/l	25	7.0	10
1,1-Dichloroethene	9.6		ug/l	5.0	1.7	10
trans-1,2-Dichloroethene	9.4	J	ug/l	25	7.0	10

Project Name: 300 E 12TH STREET**Lab Number:** L2323040**Project Number:** 10153.LK**Report Date:** 05/04/23**SAMPLE RESULTS**

Lab ID: L2323040-01 D

Date Collected: 04/27/23 12:45

Client ID: MW-1

Date Received: 04/27/23

Sample Location: MANHATTAN, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	1000		ug/l	5.0	1.8	10
1,2-Dichlorobenzene	ND		ug/l	25	7.0	10
1,3-Dichlorobenzene	ND		ug/l	25	7.0	10
1,4-Dichlorobenzene	ND		ug/l	25	7.0	10
Methyl tert butyl ether	ND		ug/l	25	7.0	10
p/m-Xylene	ND		ug/l	25	7.0	10
o-Xylene	ND		ug/l	25	7.0	10
Xylenes, Total	ND		ug/l	25	7.0	10
cis-1,2-Dichloroethene	1500		ug/l	25	7.0	10
1,2-Dichloroethene, Total	1500	J	ug/l	25	7.0	10
Dibromomethane	ND		ug/l	50	10.	10
1,2,3-Trichloropropane	ND		ug/l	25	7.0	10
Acrylonitrile	ND		ug/l	50	15.	10
Styrene	ND		ug/l	25	7.0	10
Dichlorodifluoromethane	ND		ug/l	50	10.	10
Acetone	ND		ug/l	50	15.	10
Carbon disulfide	10	J	ug/l	50	10.	10
2-Butanone	ND		ug/l	50	19.	10
Vinyl acetate	ND		ug/l	50	10.	10
4-Methyl-2-pentanone	ND		ug/l	50	10.	10
2-Hexanone	ND		ug/l	50	10.	10
Bromochloromethane	ND		ug/l	25	7.0	10
2,2-Dichloropropane	ND		ug/l	25	7.0	10
1,2-Dibromoethane	ND		ug/l	20	6.5	10
1,3-Dichloropropane	ND		ug/l	25	7.0	10
1,1,1,2-Tetrachloroethane	ND		ug/l	25	7.0	10
Bromobenzene	ND		ug/l	25	7.0	10
n-Butylbenzene	ND		ug/l	25	7.0	10
sec-Butylbenzene	ND		ug/l	25	7.0	10
tert-Butylbenzene	ND		ug/l	25	7.0	10
o-Chlorotoluene	ND		ug/l	25	7.0	10
p-Chlorotoluene	ND		ug/l	25	7.0	10
1,2-Dibromo-3-chloropropane	ND		ug/l	25	7.0	10
Hexachlorobutadiene	ND		ug/l	25	7.0	10
Isopropylbenzene	ND		ug/l	25	7.0	10
p-Isopropyltoluene	ND		ug/l	25	7.0	10
Naphthalene	8.8	J	ug/l	25	7.0	10

Project Name: 300 E 12TH STREET**Lab Number:** L2323040**Project Number:** 10153.LK**Report Date:** 05/04/23**SAMPLE RESULTS**

Lab ID: L2323040-01 D

Date Collected: 04/27/23 12:45

Client ID: MW-1

Date Received: 04/27/23

Sample Location: MANHATTAN, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	ND		ug/l	25	7.0	10
1,2,3-Trichlorobenzene	ND		ug/l	25	7.0	10
1,2,4-Trichlorobenzene	ND		ug/l	25	7.0	10
1,3,5-Trimethylbenzene	ND		ug/l	25	7.0	10
1,2,4-Trimethylbenzene	ND		ug/l	25	7.0	10
1,4-Dioxane	ND		ug/l	2500	610	10
p-Diethylbenzene	ND		ug/l	20	7.0	10
p-Ethyltoluene	ND		ug/l	20	7.0	10
1,2,4,5-Tetramethylbenzene	ND		ug/l	20	5.4	10
Ethyl ether	ND		ug/l	25	7.0	10
trans-1,4-Dichloro-2-butene	ND		ug/l	25	7.0	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	125		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	129		70-130

Project Name: 300 E 12TH STREET
Project Number: 10153.LK

Lab Number: L2323040
Report Date: 05/04/23

SAMPLE RESULTS

Lab ID: L2323040-02 D2
Client ID: MW-2
Sample Location: MANHATTAN, NY

Date Collected: 04/27/23 11:55
Date Received: 04/27/23
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 05/02/23 01:07
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Volatile Organics by GC/MS - Westborough Lab

Tetrachloroethene	210000		ug/l	2500	900	5000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	124		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	130		70-130

Project Name: 300 E 12TH STREET**Lab Number:** L2323040**Project Number:** 10153.LK**Report Date:** 05/04/23**SAMPLE RESULTS**

Lab ID: L2323040-02 D

Date Collected: 04/27/23 11:55

Client ID: MW-2

Date Received: 04/27/23

Sample Location: MANHATTAN, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260D

Analytical Date: 04/29/23 12:53

Analyst: MJV

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2500	700	1000
1,1-Dichloroethane	ND		ug/l	2500	700	1000
Chloroform	ND		ug/l	2500	700	1000
Carbon tetrachloride	ND		ug/l	500	130	1000
1,2-Dichloropropane	ND		ug/l	1000	140	1000
Dibromochloromethane	ND		ug/l	500	150	1000
1,1,2-Trichloroethane	ND		ug/l	1500	500	1000
Tetrachloroethene	260000	E	ug/l	500	180	1000
Chlorobenzene	ND		ug/l	2500	700	1000
Trichlorofluoromethane	ND		ug/l	2500	700	1000
1,2-Dichloroethane	ND		ug/l	500	130	1000
1,1,1-Trichloroethane	ND		ug/l	2500	700	1000
Bromodichloromethane	ND		ug/l	500	190	1000
trans-1,3-Dichloropropene	ND		ug/l	500	160	1000
cis-1,3-Dichloropropene	ND		ug/l	500	140	1000
1,3-Dichloropropene, Total	ND		ug/l	500	140	1000
1,1-Dichloropropene	ND		ug/l	2500	700	1000
Bromoform	ND		ug/l	2000	650	1000
1,1,2,2-Tetrachloroethane	ND		ug/l	500	170	1000
Benzene	ND		ug/l	500	160	1000
Toluene	ND		ug/l	2500	700	1000
Ethylbenzene	ND		ug/l	2500	700	1000
Chloromethane	ND		ug/l	2500	700	1000
Bromomethane	ND		ug/l	2500	700	1000
Vinyl chloride	14000		ug/l	1000	71.	1000
Chloroethane	ND		ug/l	2500	700	1000
1,1-Dichloroethene	ND		ug/l	500	170	1000
trans-1,2-Dichloroethene	ND		ug/l	2500	700	1000

Project Name: 300 E 12TH STREET**Lab Number:** L2323040**Project Number:** 10153.LK**Report Date:** 05/04/23**SAMPLE RESULTS**

Lab ID: L2323040-02 D

Date Collected: 04/27/23 11:55

Client ID: MW-2

Date Received: 04/27/23

Sample Location: MANHATTAN, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	12000		ug/l	500	180	1000
1,2-Dichlorobenzene	ND		ug/l	2500	700	1000
1,3-Dichlorobenzene	ND		ug/l	2500	700	1000
1,4-Dichlorobenzene	ND		ug/l	2500	700	1000
Methyl tert butyl ether	ND		ug/l	2500	700	1000
p/m-Xylene	ND		ug/l	2500	700	1000
o-Xylene	ND		ug/l	2500	700	1000
Xylenes, Total	ND		ug/l	2500	700	1000
cis-1,2-Dichloroethene	73000		ug/l	2500	700	1000
1,2-Dichloroethene, Total	73000		ug/l	2500	700	1000
Dibromomethane	ND		ug/l	5000	1000	1000
1,2,3-Trichloropropane	ND		ug/l	2500	700	1000
Acrylonitrile	ND		ug/l	5000	1500	1000
Styrene	ND		ug/l	2500	700	1000
Dichlorodifluoromethane	ND		ug/l	5000	1000	1000
Acetone	ND		ug/l	5000	1500	1000
Carbon disulfide	ND		ug/l	5000	1000	1000
2-Butanone	ND		ug/l	5000	1900	1000
Vinyl acetate	ND		ug/l	5000	1000	1000
4-Methyl-2-pentanone	ND		ug/l	5000	1000	1000
2-Hexanone	ND		ug/l	5000	1000	1000
Bromochloromethane	ND		ug/l	2500	700	1000
2,2-Dichloropropane	ND		ug/l	2500	700	1000
1,2-Dibromoethane	ND		ug/l	2000	650	1000
1,3-Dichloropropane	ND		ug/l	2500	700	1000
1,1,1,2-Tetrachloroethane	ND		ug/l	2500	700	1000
Bromobenzene	ND		ug/l	2500	700	1000
n-Butylbenzene	ND		ug/l	2500	700	1000
sec-Butylbenzene	ND		ug/l	2500	700	1000
tert-Butylbenzene	ND		ug/l	2500	700	1000
o-Chlorotoluene	ND		ug/l	2500	700	1000
p-Chlorotoluene	ND		ug/l	2500	700	1000
1,2-Dibromo-3-chloropropane	ND		ug/l	2500	700	1000
Hexachlorobutadiene	ND		ug/l	2500	700	1000
Isopropylbenzene	ND		ug/l	2500	700	1000
p-Isopropyltoluene	ND		ug/l	2500	700	1000
Naphthalene	ND		ug/l	2500	700	1000

Project Name: 300 E 12TH STREET
Project Number: 10153.LK

Lab Number: L2323040
Report Date: 05/04/23

SAMPLE RESULTS

Lab ID: L2323040-02 D
Client ID: MW-2
Sample Location: MANHATTAN, NY

Date Collected: 04/27/23 11:55
Date Received: 04/27/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	ND		ug/l	2500	700	1000
1,2,3-Trichlorobenzene	ND		ug/l	2500	700	1000
1,2,4-Trichlorobenzene	ND		ug/l	2500	700	1000
1,3,5-Trimethylbenzene	ND		ug/l	2500	700	1000
1,2,4-Trimethylbenzene	ND		ug/l	2500	700	1000
1,4-Dioxane	ND		ug/l	250000	61000	1000
p-Diethylbenzene	ND		ug/l	2000	700	1000
p-Ethyltoluene	ND		ug/l	2000	700	1000
1,2,4,5-Tetramethylbenzene	ND		ug/l	2000	540	1000
Ethyl ether	ND		ug/l	2500	700	1000
trans-1,4-Dichloro-2-butene	ND		ug/l	2500	700	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	110		70-130
Dibromofluoromethane	112		70-130

Project Name: 300 E 12TH STREET**Lab Number:** L2323040**Project Number:** 10153.LK**Report Date:** 05/04/23**SAMPLE RESULTS**

Lab ID: L2323040-03 D

Date Collected: 04/27/23 12:30

Client ID: MW-3

Date Received: 04/27/23

Sample Location: MANHATTAN, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260D

Analytical Date: 04/29/23 13:14

Analyst: MJV

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	1000	280	400
1,1-Dichloroethane	ND		ug/l	1000	280	400
Chloroform	ND		ug/l	1000	280	400
Carbon tetrachloride	ND		ug/l	200	54.	400
1,2-Dichloropropane	ND		ug/l	400	55.	400
Dibromochloromethane	ND		ug/l	200	60.	400
1,1,2-Trichloroethane	ND		ug/l	600	200	400
Tetrachloroethene	46000		ug/l	200	72.	400
Chlorobenzene	ND		ug/l	1000	280	400
Trichlorofluoromethane	ND		ug/l	1000	280	400
1,2-Dichloroethane	ND		ug/l	200	53.	400
1,1,1-Trichloroethane	ND		ug/l	1000	280	400
Bromodichloromethane	ND		ug/l	200	77.	400
trans-1,3-Dichloropropene	ND		ug/l	200	66.	400
cis-1,3-Dichloropropene	ND		ug/l	200	58.	400
1,3-Dichloropropene, Total	ND		ug/l	200	58.	400
1,1-Dichloropropene	ND		ug/l	1000	280	400
Bromoform	ND		ug/l	800	260	400
1,1,2,2-Tetrachloroethane	ND		ug/l	200	67.	400
Benzene	ND		ug/l	200	64.	400
Toluene	ND		ug/l	1000	280	400
Ethylbenzene	ND		ug/l	1000	280	400
Chloromethane	ND		ug/l	1000	280	400
Bromomethane	ND		ug/l	1000	280	400
Vinyl chloride	2900		ug/l	400	28.	400
Chloroethane	ND		ug/l	1000	280	400
1,1-Dichloroethene	ND		ug/l	200	68.	400
trans-1,2-Dichloroethene	ND		ug/l	1000	280	400

Project Name: 300 E 12TH STREET**Lab Number:** L2323040**Project Number:** 10153.LK**Report Date:** 05/04/23**SAMPLE RESULTS**

Lab ID: L2323040-03 D

Date Collected: 04/27/23 12:30

Client ID: MW-3

Date Received: 04/27/23

Sample Location: MANHATTAN, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	3200		ug/l	200	70.	400
1,2-Dichlorobenzene	ND		ug/l	1000	280	400
1,3-Dichlorobenzene	ND		ug/l	1000	280	400
1,4-Dichlorobenzene	ND		ug/l	1000	280	400
Methyl tert butyl ether	ND		ug/l	1000	280	400
p/m-Xylene	ND		ug/l	1000	280	400
o-Xylene	ND		ug/l	1000	280	400
Xylenes, Total	ND		ug/l	1000	280	400
cis-1,2-Dichloroethene	8100		ug/l	1000	280	400
1,2-Dichloroethene, Total	8100		ug/l	1000	280	400
Dibromomethane	ND		ug/l	2000	400	400
1,2,3-Trichloropropane	ND		ug/l	1000	280	400
Acrylonitrile	ND		ug/l	2000	600	400
Styrene	ND		ug/l	1000	280	400
Dichlorodifluoromethane	ND		ug/l	2000	400	400
Acetone	ND		ug/l	2000	580	400
Carbon disulfide	ND		ug/l	2000	400	400
2-Butanone	ND		ug/l	2000	780	400
Vinyl acetate	ND		ug/l	2000	400	400
4-Methyl-2-pentanone	ND		ug/l	2000	400	400
2-Hexanone	ND		ug/l	2000	400	400
Bromochloromethane	ND		ug/l	1000	280	400
2,2-Dichloropropane	ND		ug/l	1000	280	400
1,2-Dibromoethane	ND		ug/l	800	260	400
1,3-Dichloropropane	ND		ug/l	1000	280	400
1,1,1,2-Tetrachloroethane	ND		ug/l	1000	280	400
Bromobenzene	ND		ug/l	1000	280	400
n-Butylbenzene	ND		ug/l	1000	280	400
sec-Butylbenzene	ND		ug/l	1000	280	400
tert-Butylbenzene	ND		ug/l	1000	280	400
o-Chlorotoluene	ND		ug/l	1000	280	400
p-Chlorotoluene	ND		ug/l	1000	280	400
1,2-Dibromo-3-chloropropane	ND		ug/l	1000	280	400
Hexachlorobutadiene	ND		ug/l	1000	280	400
Isopropylbenzene	ND		ug/l	1000	280	400
p-Isopropyltoluene	ND		ug/l	1000	280	400
Naphthalene	ND		ug/l	1000	280	400

Project Name: 300 E 12TH STREET
Project Number: 10153.LK

Lab Number: L2323040
Report Date: 05/04/23

SAMPLE RESULTS

Lab ID: L2323040-03 D
Client ID: MW-3
Sample Location: MANHATTAN, NY

Date Collected: 04/27/23 12:30
Date Received: 04/27/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	ND		ug/l	1000	280	400
1,2,3-Trichlorobenzene	ND		ug/l	1000	280	400
1,2,4-Trichlorobenzene	ND		ug/l	1000	280	400
1,3,5-Trimethylbenzene	ND		ug/l	1000	280	400
1,2,4-Trimethylbenzene	ND		ug/l	1000	280	400
1,4-Dioxane	ND		ug/l	100000	24000	400
p-Diethylbenzene	ND		ug/l	800	280	400
p-Ethyltoluene	ND		ug/l	800	280	400
1,2,4,5-Tetramethylbenzene	ND		ug/l	800	220	400
Ethyl ether	ND		ug/l	1000	280	400
trans-1,4-Dichloro-2-butene	ND		ug/l	1000	280	400

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	116		70-130
Toluene-d8	93		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	117		70-130

Project Name: 300 E 12TH STREET
Project Number: 10153.LK

Lab Number: L2323040
Report Date: 05/04/23

SAMPLE RESULTS

Lab ID: L2323040-04
Client ID: FIELD BLANK
Sample Location: MANHATTAN, NY

Date Collected: 04/27/23 12:40
Date Received: 04/27/23
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 04/29/23 09:25
Analyst: MJV

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

Project Name: 300 E 12TH STREET**Lab Number:** L2323040**Project Number:** 10153.LK**Report Date:** 05/04/23**SAMPLE RESULTS**

Lab ID: L2323040-04
 Client ID: FIELD BLANK
 Sample Location: MANHATTAN, NY

Date Collected: 04/27/23 12:40
 Date Received: 04/27/23
 Field Prep: Not Specified

Sample Depth:

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

Project Name: 300 E 12TH STREET
Project Number: 10153.LK

Lab Number: L2323040
Report Date: 05/04/23

SAMPLE RESULTS

Lab ID: L2323040-04
Client ID: FIELD BLANK
Sample Location: MANHATTAN, NY

Date Collected: 04/27/23 12:40
Date Received: 04/27/23
Field Prep: Not Specified

Sample Depth:

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	121		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	127		70-130

Project Name: 300 E 12TH STREET
Project Number: 10153.LK

Lab Number: L2323040
Report Date: 05/04/23

SAMPLE RESULTS

Lab ID: L2323040-05
Client ID: TRIP BLANK
Sample Location: MANHATTAN, NY

Date Collected: 04/26/23 00:00
Date Received: 04/27/23
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 04/29/23 09:46
Analyst: MJV

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

Project Name: 300 E 12TH STREET**Lab Number:** L2323040**Project Number:** 10153.LK**Report Date:** 05/04/23**SAMPLE RESULTS****Lab ID:** L2323040-05**Date Collected:** 04/26/23 00:00**Client ID:** TRIP BLANK**Date Received:** 04/27/23**Sample Location:** MANHATTAN, NY**Field Prep:** Not Specified**Sample Depth:**

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

Project Name: 300 E 12TH STREET
Project Number: 10153.LK

Lab Number: L2323040
Report Date: 05/04/23

SAMPLE RESULTS

Lab ID: L2323040-05
Client ID: TRIP BLANK
Sample Location: MANHATTAN, NY

Date Collected: 04/26/23 00:00
Date Received: 04/27/23
Field Prep: Not Specified

Sample Depth:

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	124		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	127		70-130

Project Name: 300 E 12TH STREET
Project Number: 10153.LK

Lab Number: L2323040
Report Date: 05/04/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
 Analytical Date: 04/29/23 08:22
 Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-05 Batch: WG1773641-5					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18

Project Name: 300 E 12TH STREET
Project Number: 10153.LK

Lab Number: L2323040
Report Date: 05/04/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 04/29/23 08:22
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-05 Batch: WG1773641-5					
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylenes, Total	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Acrylonitrile	ND		ug/l	5.0	1.5
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70

Project Name: 300 E 12TH STREET
Project Number: 10153.LK

Lab Number: L2323040
Report Date: 05/04/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 04/29/23 08:22
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-05 Batch: WG1773641-5					
o-Chlorotoluene	ND		ug/l	2.5	0.70
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
1,4-Dioxane	ND		ug/l	250	61.
p-Diethylbenzene	ND		ug/l	2.0	0.70
p-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	117		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	123		70-130

Project Name: 300 E 12TH STREET
Project Number: 10153.LK

Lab Number: L2323040
Report Date: 05/04/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 05/01/23 19:41
Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02 Batch: WG1774302-5					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18

Project Name: 300 E 12TH STREET
Project Number: 10153.LK

Lab Number: L2323040
Report Date: 05/04/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 05/01/23 19:41
Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02 Batch: WG1774302-5					
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylenes, Total	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Acrylonitrile	ND		ug/l	5.0	1.5
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70

Project Name: 300 E 12TH STREET
Project Number: 10153.LK

Lab Number: L2323040
Report Date: 05/04/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 05/01/23 19:41
Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02 Batch: WG1774302-5					
o-Chlorotoluene	ND		ug/l	2.5	0.70
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
1,4-Dioxane	ND		ug/l	250	61.
p-Diethylbenzene	ND		ug/l	2.0	0.70
p-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	117		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	124		70-130

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 300 E 12TH STREET

Project Number: 10153.LK

Lab Number: L2323040

Report Date: 05/04/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG1773641-3 WG1773641-4								
Methylene chloride	110		110		70-130	0		20
1,1-Dichloroethane	110		110		70-130	0		20
Chloroform	110		110		70-130	0		20
Carbon tetrachloride	120		120		63-132	0		20
1,2-Dichloropropane	110		110		70-130	0		20
Dibromochloromethane	99		100		63-130	1		20
1,1,2-Trichloroethane	100		110		70-130	10		20
Tetrachloroethene	110		110		70-130	0		20
Chlorobenzene	100		110		75-130	10		20
Trichlorofluoromethane	120		120		62-150	0		20
1,2-Dichloroethane	100		110		70-130	10		20
1,1,1-Trichloroethane	120		120		67-130	0		20
Bromodichloromethane	110		110		67-130	0		20
trans-1,3-Dichloropropene	96		99		70-130	3		20
cis-1,3-Dichloropropene	97		100		70-130	3		20
1,1-Dichloropropene	110		110		70-130	0		20
Bromoform	90		100		54-136	11		20
1,1,2,2-Tetrachloroethane	94		100		67-130	6		20
Benzene	110		110		70-130	0		20
Toluene	110		110		70-130	0		20
Ethylbenzene	100		110		70-130	10		20
Chloromethane	120		120		64-130	0		20
Bromomethane	84		92		39-139	9		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 300 E 12TH STREET

Project Number: 10153.LK

Lab Number: L2323040

Report Date: 05/04/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG1773641-3 WG1773641-4								
Vinyl chloride	120		120		55-140	0		20
Chloroethane	100		110		55-138	10		20
1,1-Dichloroethene	110		110		61-145	0		20
trans-1,2-Dichloroethene	110		110		70-130	0		20
Trichloroethene	120		120		70-130	0		20
1,2-Dichlorobenzene	100		110		70-130	10		20
1,3-Dichlorobenzene	110		120		70-130	9		20
1,4-Dichlorobenzene	110		110		70-130	0		20
Methyl tert butyl ether	95		100		63-130	5		20
p/m-Xylene	115		115		70-130	0		20
o-Xylene	110		110		70-130	0		20
cis-1,2-Dichloroethene	110		110		70-130	0		20
Dibromomethane	100		110		70-130	10		20
1,2,3-Trichloropropane	93		100		64-130	7		20
Acrylonitrile	100		110		70-130	10		20
Styrene	115		115		70-130	0		20
Dichlorodifluoromethane	120		120		36-147	0		20
Acetone	110		100		58-148	10		20
Carbon disulfide	120		120		51-130	0		20
2-Butanone	110		100		63-138	10		20
Vinyl acetate	99		110		70-130	11		20
4-Methyl-2-pentanone	90		93		59-130	3		20
2-Hexanone	89		97		57-130	9		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 300 E 12TH STREET

Project Number: 10153.LK

Lab Number: L2323040

Report Date: 05/04/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG1773641-3 WG1773641-4								
Bromochloromethane	110		110		70-130	0		20
2,2-Dichloropropane	130		130		63-133	0		20
1,2-Dibromoethane	100		100		70-130	0		20
1,3-Dichloropropane	100		110		70-130	10		20
1,1,1,2-Tetrachloroethane	100		100		64-130	0		20
Bromobenzene	98		110		70-130	12		20
n-Butylbenzene	100		120		53-136	18		20
sec-Butylbenzene	110		120		70-130	9		20
tert-Butylbenzene	100		110		70-130	10		20
o-Chlorotoluene	110		120		70-130	9		20
p-Chlorotoluene	110		120		70-130	9		20
1,2-Dibromo-3-chloropropane	90		100		41-144	11		20
Hexachlorobutadiene	100		110		63-130	10		20
Isopropylbenzene	100		110		70-130	10		20
p-Isopropyltoluene	100		110		70-130	10		20
Naphthalene	80		90		70-130	12		20
n-Propylbenzene	110		120		69-130	9		20
1,2,3-Trichlorobenzene	93		100		70-130	7		20
1,2,4-Trichlorobenzene	88		98		70-130	11		20
1,3,5-Trimethylbenzene	100		110		64-130	10		20
1,2,4-Trimethylbenzene	96		100		70-130	4		20
1,4-Dioxane	92		92		56-162	0		20
p-Diethylbenzene	91		100		70-130	9		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 300 E 12TH STREET

Project Number: 10153.LK

Lab Number: L2323040

Report Date: 05/04/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG1773641-3 WG1773641-4								
p-Ethyltoluene	110		110		70-130	0		20
1,2,4,5-Tetramethylbenzene	74		82		70-130	10		20
Ethyl ether	99		110		59-134	11		20
trans-1,4-Dichloro-2-butene	97		110		70-130	13		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	99		101		70-130
Toluene-d8	102		100		70-130
4-Bromofluorobenzene	96		101		70-130
Dibromofluoromethane	102		101		70-130

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 300 E 12TH STREET

Project Number: 10153.LK

Lab Number: L2323040

Report Date: 05/04/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02 Batch: WG1774302-3 WG1774302-4								
Methylene chloride	84		77		70-130	9		20
1,1-Dichloroethane	100		100		70-130	0		20
Chloroform	110		100		70-130	10		20
Carbon tetrachloride	110		110		63-132	0		20
1,2-Dichloropropane	100		97		70-130	3		20
Dibromochloromethane	100		100		63-130	0		20
1,1,2-Trichloroethane	110		100		70-130	10		20
Tetrachloroethene	110		100		70-130	10		20
Chlorobenzene	100		94		75-130	6		20
Trichlorofluoromethane	110		100		62-150	10		20
1,2-Dichloroethane	110		110		70-130	0		20
1,1,1-Trichloroethane	110		100		67-130	10		20
Bromodichloromethane	100		99		67-130	1		20
trans-1,3-Dichloropropene	96		93		70-130	3		20
cis-1,3-Dichloropropene	91		90		70-130	1		20
1,1-Dichloropropene	93		92		70-130	1		20
Bromoform	96		98		54-136	2		20
1,1,2,2-Tetrachloroethane	97		100		67-130	3		20
Benzene	100		95		70-130	5		20
Toluene	100		94		70-130	6		20
Ethylbenzene	96		90		70-130	6		20
Chloromethane	100		94		64-130	6		20
Bromomethane	90		98		39-139	9		20

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 300 E 12TH STREET

Project Number: 10153.LK

Lab Number: L2323040

Report Date: 05/04/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02 Batch: WG1774302-3 WG1774302-4								
Vinyl chloride	96		94		55-140	2		20
Chloroethane	86		77		55-138	11		20
1,1-Dichloroethene	84		86		61-145	2		20
trans-1,2-Dichloroethene	86		79		70-130	8		20
Trichloroethene	110		99		70-130	11		20
1,2-Dichlorobenzene	95		93		70-130	2		20
1,3-Dichlorobenzene	100		96		70-130	4		20
1,4-Dichlorobenzene	98		94		70-130	4		20
Methyl tert butyl ether	81		97		63-130	18		20
p/m-Xylene	105		95		70-130	10		20
o-Xylene	100		95		70-130	5		20
cis-1,2-Dichloroethene	95		94		70-130	1		20
Dibromomethane	100		110		70-130	10		20
1,2,3-Trichloropropane	95		100		64-130	5		20
Acrylonitrile	100		110		70-130	10		20
Styrene	105		100		70-130	5		20
Dichlorodifluoromethane	95		90		36-147	5		20
Acetone	94		94		58-148	0		20
Carbon disulfide	82		70		51-130	16		20
2-Butanone	110		110		63-138	0		20
Vinyl acetate	94		96		70-130	2		20
4-Methyl-2-pentanone	82		89		59-130	8		20
2-Hexanone	85		94		57-130	10		20

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 300 E 12TH STREET

Project Number: 10153.LK

Lab Number: L2323040

Report Date: 05/04/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02 Batch: WG1774302-3 WG1774302-4								
Bromochloromethane	110		110		70-130	0		20
2,2-Dichloropropane	110		110		63-133	0		20
1,2-Dibromoethane	100		100		70-130	0		20
1,3-Dichloropropane	100		98		70-130	2		20
1,1,1,2-Tetrachloroethane	110		100		64-130	10		20
Bromobenzene	93		90		70-130	3		20
n-Butylbenzene	93		85		53-136	9		20
sec-Butylbenzene	89		85		70-130	5		20
tert-Butylbenzene	88		84		70-130	5		20
o-Chlorotoluene	96		92		70-130	4		20
p-Chlorotoluene	94		90		70-130	4		20
1,2-Dibromo-3-chloropropane	90		100		41-144	11		20
Hexachlorobutadiene	100		92		63-130	8		20
Isopropylbenzene	84		82		70-130	2		20
p-Isopropyltoluene	82		79		70-130	4		20
Naphthalene	72		77		70-130	7		20
n-Propylbenzene	91		87		69-130	4		20
1,2,3-Trichlorobenzene	92		91		70-130	1		20
1,2,4-Trichlorobenzene	85		84		70-130	1		20
1,3,5-Trimethylbenzene	95		91		64-130	4		20
1,2,4-Trimethylbenzene	86		83		70-130	4		20
1,4-Dioxane	100		108		56-162	8		20
p-Diethylbenzene	79		75		70-130	5		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 300 E 12TH STREET

Project Number: 10153.LK

Lab Number: L2323040

Report Date: 05/04/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02 Batch: WG1774302-3 WG1774302-4								
p-Ethyltoluene	91		87		70-130	4		20
1,2,4,5-Tetramethylbenzene	68	Q	65	Q	70-130	5		20
Ethyl ether	77		75		59-134	3		20
trans-1,4-Dichloro-2-butene	100		110		70-130	10		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	113		113		70-130
Toluene-d8	104		102		70-130
4-Bromofluorobenzene	86		90		70-130
Dibromofluoromethane	111		111		70-130

Project Name: 300 E 12TH STREET**Lab Number:** L2323040**Project Number:** 10153.LK**Report Date:** 05/04/23**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information**Cooler** **Custody Seal**

A Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2323040-01A	Vial HCl preserved	A	NA		3.0	Y	Absent		NYTCL-8260(14)
L2323040-01B	Vial HCl preserved	A	NA		3.0	Y	Absent		NYTCL-8260(14)
L2323040-01C	Vial HCl preserved	A	NA		3.0	Y	Absent		NYTCL-8260(14)
L2323040-02A	Vial HCl preserved	A	NA		3.0	Y	Absent		NYTCL-8260(14)
L2323040-02B	Vial HCl preserved	A	NA		3.0	Y	Absent		NYTCL-8260(14)
L2323040-02C	Vial HCl preserved	A	NA		3.0	Y	Absent		NYTCL-8260(14)
L2323040-03A	Vial HCl preserved	A	NA		3.0	Y	Absent		NYTCL-8260(14)
L2323040-03B	Vial HCl preserved	A	NA		3.0	Y	Absent		NYTCL-8260(14)
L2323040-03C	Vial HCl preserved	A	NA		3.0	Y	Absent		NYTCL-8260(14)
L2323040-04A	Vial HCl preserved	A	NA		3.0	Y	Absent		NYTCL-8260(14)
L2323040-04B	Vial HCl preserved	A	NA		3.0	Y	Absent		NYTCL-8260(14)
L2323040-04C	Vial HCl preserved	A	NA		3.0	Y	Absent		NYTCL-8260(14)
L2323040-05A	Vial HCl preserved	A	NA		3.0	Y	Absent		NYTCL-8260(14)
L2323040-05B	Vial HCl preserved	A	NA		3.0	Y	Absent		NYTCL-8260(14)

Project Name: 300 E 12TH STREET
Project Number: 10153.LK

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GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers



Project Name: 300 E 12TH STREET
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Footnotes

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

Terms

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

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

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

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

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

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

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

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

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

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

Report Format: DU Report with 'J' Qualifiers



Project Name: 300 E 12TH STREET
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Lab Number: L2323040
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Data Qualifiers

Identified Compounds (TICs).

- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: DU Report with 'J' Qualifiers



Project Name: 300 E 12TH STREET
Project Number: 10153.LK

Lab Number: L2323040
Report Date: 05/04/23

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

LIMITATION OF LIABILITIES

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

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



Alpha Analytical, Inc.Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

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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, SM4500CI-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 JERSEY CHAIN OF CUSTODY		Service Centers Mahwah, NJ 07430: 35 Whitney Rd, Suite 5 Albany, NY 12205: 14 Walker Way Tonawanda, NY 14150: 275 Cooper Ave, Suite 105		Page 1 of 1		Date Rec'd in Lab 04/07/03		ALPHA Job # L2323040	
		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		Project Information Project Name: 300 E 12th Street Project Location: Mannhattan, NY Project # 10153-LK (Use Project name as Project #) ☐		Deliverables ☐ NJ Full / Reduced ☐ EQulS (1 File) ☐ EQulS (4 File) ☐ Other	
Client Information Client: LOI KWOOD KESSLER & BARTLETT, INC one aerial way, syosseth NY 11791 Address: NY 11791 Phone: 516-221-1179 Fax: 516-221-1179 Email: tbiercz@vertexteng.com		Project Manager: TIM BIERCZ ALPHAQuote #: Turn-Around Time: Standard ☐ Due Date: 5 day Rush (only if pre approved) ☒ # of Days:		Regulatory Requirement ☐ SRS Residential/Non Residential ☐ SRS Impact to Groundwater ☐ NJ Ground Water Quality Standards ☐ NJ IGW SPLP Leachate Criteria ☐ Other		Site Information Is this site impacted by Petroleum? Yes ☐ Petroleum Product:			
These samples have been previously analyzed by Alpha ☐		ANALYSIS		Sample Filtration ☐ Done ☐ Lab to do Preservation ☐ Lab to do (Please Specify below)		Sample Specific Comments			
For EPH, selection is REQUIRED: ☐ Category 1 ☐ Category 2		For VOC, selection is REQUIRED: ☐ 1,4-Dioxane ☐ 8011		Other project specific requirements/comments: Please specify Metals or TAL.		VOCs		Sample Specific Comments	
ALPHA Lab ID (Lab Use Only)		Sample ID		Collection Date Time		Sample Matrix		Sampler's Initials	
03040 -01		MW-1		4/27/23 12:45		GW		BA	
-02		MW-2		11:55		↓		↓	
-03		MW-3		12:30		↓		↓	
-04		Field Blank		12:40		Blank		↓	
-05		Trip Blank		4/26/23		Blank		AH	
Preservative Code: A = None B = HCl C = HNO ₃ D = H ₂ SO ₄ E = NaOH F = MeOH G = NaHSO ₄ H = Na ₂ S ₂ O 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		Preservative B	
Relinquished By: Blair Jones		Date/Time: 4/27/23 17:20		Received By: [Signature]		Date/Time: 4/27/23 17:20		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.)	
Relinquished By: [Signature]		Date/Time: 4/27/23 18:45		Received By: [Signature]		Date/Time: 4/27/23 18:50			
Relinquished By: [Signature]		Date/Time: 4/27/23 23:30		Received By: [Signature]		Date/Time: 4/27/23 23:30			

Appendix L:

SSDS Drawings and Documentation



RE: TENANT PROTECTION PLAN FOR OCCUPANTS

NOTICE

The New York City Department of Buildings (DOB) has issued a permit for work in this building that requires a **Tenant Protection Plan (TPP)**. Building occupants may obtain a paper copy of the TPP from the owner and may access the plan at www.nyc.gov/dobnow

Permit Number(s): M00832597-I1-GC

Address: MANHATTAN 188 2 AVENUE

Below is the contact information for the (check one)

☐ Site Safety Manager ☐ Site Safety Coordinator ☐ Superintendent of Construction ☒ Owner/Owner's Designee

Name: GEORGE LAVIAN

Phone Number: 2122132500

Building occupants may call 311 to make complaints.

NYC Administrative code § 28-120.1.3 requires the Owner to:

Distribute this notice to each occupied dwelling unit; **and**

Post this notice in a conspicuous manner in the lobby and

- on each floor within ten feet of the elevator
- if the building does not have an elevator, within ten feet of or in the main stairwell of each floor.



Buildings



Work Permit Department Of Buildings

Permit Number: M00832597-I1-GC

Permit Classification: ALTERATION

Address: MANHATTAN 188 2 AVENUE

Work on Floor(s): CELLAR, ROOF

Total number of dwelling units at location: 20

Number of dwelling units occupied during construction: 20

Description: PROPOSE INSTALLATION OF A SUB-SLAB DEPRESSURIZATION SYSTEM. PIPE TO BE INSTALLED FROM BELOW SLAB THROUGH THE CELLAR OF THE BUILDINGS AND UP THE EXTERIOR TO ABOVE THE ROOF LEVEL. NO CHANGE IN USE, EGRESS OR OCCUPANCY.

Issued: 03/27/2023

Expires: 09/29/2023

Issued To: MELISSA NEMETH

Business: AWT ENVIRONMENTAL
SVCS IN

License No: GC-603304

For detailed information regarding this permit, please log on to DOB NOW at www.nyc.gov/buildings.
Call 311 with any questions or complaints.

Borough Commissioner:

Commissioner of Buildings:

Acting Commissioner of Buildings

Tampering with or knowingly making a false entry in or falsely altering this permit is a crime that is punishable by a fine, imprisonment or both.



NYC Department of Buildings
280 Broadway, New York, NY 10007
Kazimir Vilenchik, Acting Commissioner

Letter of Completion

RICHARD TOBIA
3322 RT 22 W, STE907
BRANCHBURG, NJ 08876

Re: 188 2 AVENUE, MANHATTAN
Job #: M00832597-I1
Block: 453 Lot: 8

Dear RICHARD TOBIA:

The work related to the above application is completed and was signed off in DOB NOW: Build on 4/24/2023.

Based on the nature of the work filed on this job, filing a new certificate of occupancy is not required.

Sincerely,

A handwritten signature in black ink, appearing to be "K. Vilenchik", written over a light gray rectangular background.

Borough Commissioner
MANHATTAN

Letter Generated on: 4/24/2023

BLOCK: 453 LOT: 8
ZONING MAP: 12C
ZONING DISTRICT: PRIMARY R7A, COMMERCIAL OVERLAY C1-5
HEIGHT: 70'
STORIES: 6
CONSTRUCTION CLASSIFICATION: CLASS 3
OCCUPANCY GROUP: 2
NEW LAW TENEMENT CLASS A

TENANT PROTECTION PLAN - 2014 CODE: PER BC 28-104.8.4.

THIS BUILDING CONTAINS 20 DWELLING UNITS. ALL UNITS WILL BE OCCUPIED.

1. EGRESS: REQUIRED EGRESS SHALL NOT BE OBSTRUCTED AT ANY TIME. EGRESS AT EXISTING CORRIDORS, FIRE STAIRS, ETC. MUST BE MAINTAINED AT ALL TIMES.

2. EXISTING FIRE SAFETY FOR ALL OCCUPIED DWELLING UNITS SHALL BE MAINTAINED AND NOT DIMINISHED. ALL BUILDING MATERIALS STORED AT CONSTRUCTION AREA AND/OR IN ANY AREA OF THE BUILDING ARE TO BE SECURED IN A LOCKED AREA. ACCESS TO SUCH AREAS IS TO BE CONTROLLED BY THE BUILDING OWNER AND/OR GENERAL CONTRACTOR.

3. THE GENERAL CONTRACTOR SHALL ENSURE THAT DUST IS CONTROLLED, AND THAT DISPOSAL OF CONSTRUCTION DEBRIS IS PERFORMED IN SUCH A MANNER AS TO NOT INTERFERE WITH OCCUPIED DWELLING UNITS. DEBRIS, DIRT AND DUST ARE TO BE KEPT TO A MINIMUM AND BE CONFINED TO THE IMMEDIATE CONSTRUCTION AREA, AND BE CLEANED UP AND CLEARED FROM THE BUILDING PERIODICALLY TO AVOID ANY EXCESSIVE ACCUMULATION. NO ASBESTOS TO BE DISTURBED DURING CONSTRUCTION PER THE ACPS ASBESTOS REPORT.

4. THERE WILL BE NOBODY OCCUPYING THE PROPOSED CONSTRUCTION AREA TO BE RENOVATED DURING THE COURSE OF CONSTRUCTION WORK. ALL EXISTING MEANS OF EGRESS MAY NOT BE USED TO STORE MATERIAL, EQUIPMENT AND DEBRIS. TRANSPORTATION OF ALL MATERIALS, EQUIPMENT AND DEBRIS MUST BE COORDINATED WITH THE BUILDING SUPERINTENDENT.

5. NO STRUCTURAL WORK PROPOSED UNDER THIS APPLICATION.

6. THE GENERAL CONTRACTOR SHALL ENSURE THAT NOISE IS LIMITED TO ACCEPTABLE LEVELS IN ACCORDANCE WITH THE NEW YORK CITY NOISE CONTROL CODE.

7. CONSTRUCTION OPERATIONS WILL BE CONFINED TO NORMAL WORKING HOURS 8AM TO 5PM, MONDAYS THRU FRIDAYS, EXCEPT LEGAL HOLIDAYS, UNLESS AN AFTER-HOURS WORK PERMIT IS ISSUED. WATER SUPPLY WILL NOT BE INTERRUPTED WITHOUT AT LEAST 24 HOURS NOTICE TO BUILDING RESIDENTS AND WILL BE SCHEDULED AS TO MINIMIZE DISRUPTION.

8. ADDITIONAL TENANT SAFETY REQUIREMENTS - N/A

9. UPON ISSUANCE OF A PERMIT FOR WORK CONTAINING A TENANT PROTECTION PLAN, THE NYC DEPARTMENT OF BUILDINGS SHALL MAKE THE TENANT PROTECTION PLAN PUBLICLY AVAILABLE ON ITS WEBSITE.

10. THE OWNER OF A BUILDING UNDERGOING WORK FOR WHICH A TENANT PROTECTION PLAN IS REQUIRED BY SECTION 28-104.8.4 SHALL, UPON REQUEST FROM AN OCCUPANT OF A DWELLING UNIT WITHIN SUCH BUILDING, PROVIDE SUCH OCCUPANT WITH A PAPER COPY OF THE TENANT PROTECTION PLAN APPROVED BY THE NYC DEPARTMENT OF BUILDINGS.

11. NOTICE TO OCCUPANTS. UPON ISSUANCE OF A PERMIT FOR WORK CONTAINING A TENANT PROTECTION PLAN, THE OWNER SHALL (I) DISTRIBUTE A NOTICE REGARDING SUCH PLAN TO EACH OCCUPIED DWELLING UNIT OR (II) POST A NOTICE REGARDING SUCH PLAN IN A CONSPICUOUS MANNER IN THE BUILDING LOBBY, AS WELL AS ON EACH FLOOR WITHIN TEN FEET OF THE ELEVATOR, OR IN A BUILDING WHERE THERE IS NO ELEVATOR, WITHIN TEN FEET OF OR IN THE MAIN STAIRWELL ON SUCH FLOOR. THE NOTICE SHALL BE IN A FORM CREATED OR APPROVED BY THE DEPARTMENT AND SHALL INCLUDE:

1. A STATEMENT THAT OCCUPANTS OF THE BUILDING MAY OBTAIN A PAPER COPY OF SUCH PLAN FROM THE OWNER AND MAY ACCESS SUCH PLAN ON THE DEPARTMENT WEBSITE;
2. THE NAME AND CONTACT INFORMATION FOR THE SITE SAFETY MANAGER, SITE SAFETY COORDINATOR OR SUPERINTENDENT OF CONSTRUCTION REQUIRED BY SECTION 3301.3 OF THE NEW YORK CITY BUILDING CODE, AS APPLICABLE, OR, IF THERE IS NO SITE SAFETY MANAGER, SITE SAFETY COORDINATOR OR SUPERINTENDENT OF CONSTRUCTION, THE NAME AND CONTACT INFORMATION OF THE OWNER OF THE BUILDING OR SUCH OWNER'S DESIGNEE;
3. A STATEMENT THAT OCCUPANTS OF THE BUILDING MAY CALL 311 TO MAKE COMPLAINTS ABOUT THE WORK. ENERGY CODE COMPLIANCE STATEMENT TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS

GENERAL NOTES

1.THERE IS NO CHANGE OF USE, EGRESS OR OCUPANCY BEING FILED UNDER THIS APPLICATION.

2.THERE IS NO INCREASE TO THE SIZE OR BULK AREA OF THE BUILDING.

3.THE PROPERTY DOES NOT FALL IN A SPECIAL FLOOD HAZARD ZONE "SFHZ" AS PER FEMA FLOOD MAP # 3604970201F.

4.THIS APPLICATION IS BEING FILED FOR MODERATE TENANT-IN-PLACE REHABILITATION (ALTERATION TYPE 2). ALL APTS ARE FULLY OCCUPIED DURING ALL PHASES OF CONSTRUCTION. TENANT PROTECTION OR TENANT RELOCATION AS REQ'D SHALL BE PROVIDED FOR IN ACCORDANCE WITH TENANT PROTECTION PLAN TPP-1.

5.ANY PROPOSED WORK WHICH CONTAINS ASBESTOS CONTAMINATED MATERIAL (ACM), THAT IS IDENTIFIED IN THE ASBESTOS INVESTIGATOR'S SURVEY, WILL BE LABELED AND NOTED. THE ACMs WILL BE LEFT IN PLACE AND SEALED (OR ENCAPSULATED) TO CONTAIN AND REDUCE THE RISK OF AIRBORNE ASBESTOS FIBERS BEING GENERATED.

6.ASSOCIATED ELECTRICAL MOTOR CONNECTIONS WILL BE PERMITTED SEPARATELY - NO ELECTRICAL WORK OR CONNECTION TO BE PERFORMED.

PROFESSIONAL STATEMENTS

2020 NYCECC COMPLIANCE:

TO THE BEST OF MY KNOWLEDGE, BELIEF, AND PROFESSIONAL JUDGEMENT, THIS APPLICATION IS IN COMPLIANCE WITH THE 2020 NYCECC. DUE TO ENERGY CONSUMPTION BEING UNDER GUIDELINES, PROJECT IS EXEMPT.

SPECIAL AND PROGRESS INSPECTIONS:

FIRE RESISTANT PENETRATIONS AND JOINTS

FINAL

SCOPE OF WORK DESCRIPTION

INSTALLATION OF A SUB-SLAB DEPRESSURIZATION SYSTEM. PIPE TO BE INSTALLED FROM BELOW SLAB THROUGH THE CELLAR OF THE BUILDING AND UP THE EXTERIOR TO ABOVE THE ROOF LEVEL. NO CHANGE IN USE, EGRESS OR OCCUPANCY.

NEW YORK ENGINEER SEAL & SIGNATURE STATEMENT

IT IS A VIOLATION FOR ANY PERSON TO ALTER ANY DOCUMENT THAT BEARS THE SEAL OF A PROFESSIONAL ENGINEER

THIS APPROVAL APPLIES TO 3 OF 3 DRAWING PAGES: T-001.00, M-100.00, and M-101.00

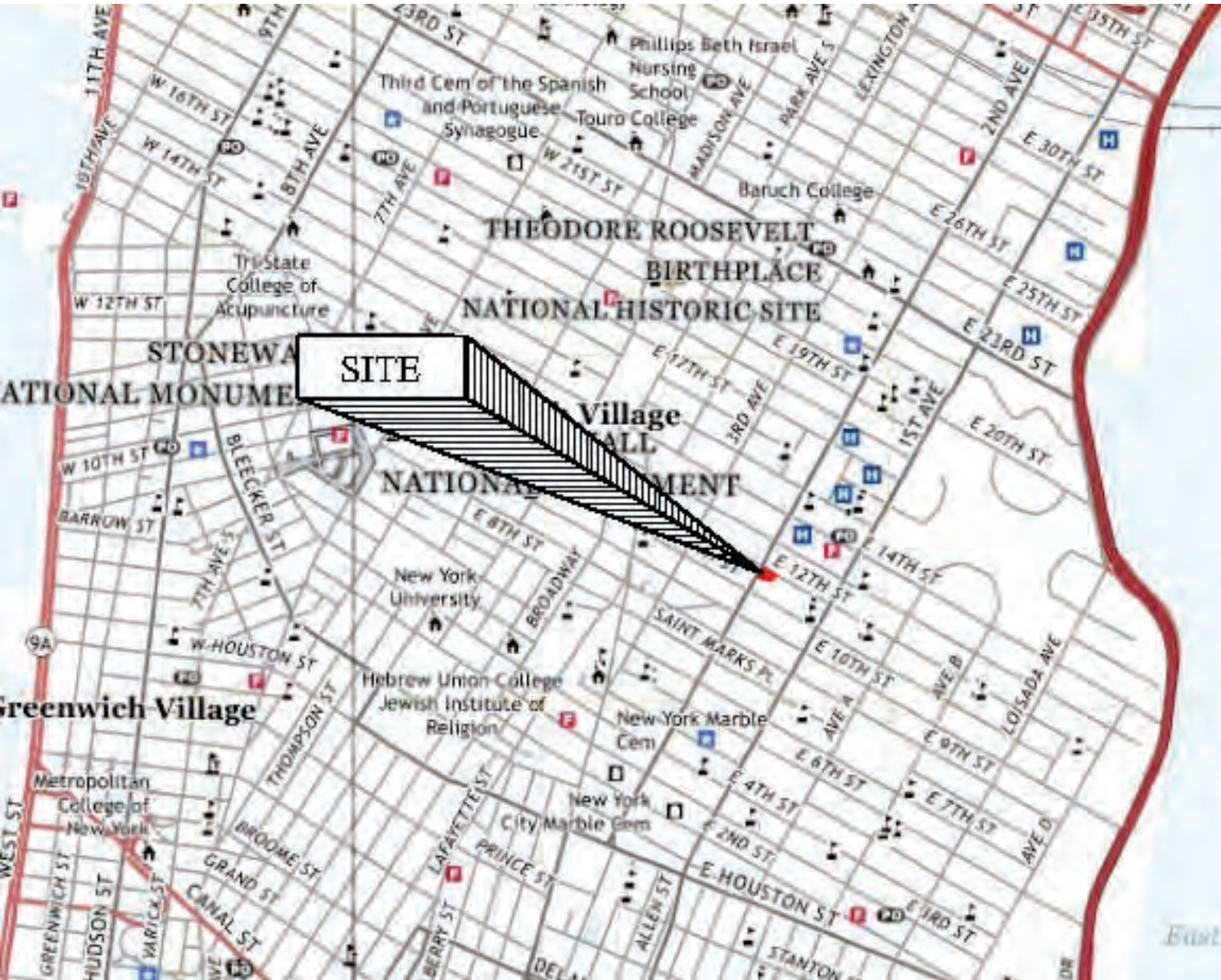


NUMBER	DATE	DESCRIPTION
01	2023-01-27	INITIAL SUBMITTAL
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NOTE

- IT IS A VIOLATION OF NY STATE LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT IN ANY WAY.
- NO NEW MECHANICAL UNITS TO BE INSTALLED.
- THE WORK IS IN COMPLIANCE WITH 2020 ENERGY CODE

SUB-SLAB DEPRESSURIZATION SYSTEM (SSDS)



TABULAR ENERGY ANALYSIS - NYCEEC		
TO THE BEST OF MY KNOWLEDGE, BELIEF, AND PROFESSIONAL JUDGEMENT, THIS APPLICATION IS IN COMPLIANCE WITH THE NYCECC.		
WORK ITEM	PROPOSED DESIGN VALUE	CODE PRESCRIBED VALUE & CITATION
BUILDING ENVELOPE	NO CHANGE	N/A
MECHANICAL SYSTEMS	NO CHANGE	N/A
SERVICE WATER HEAT	NO CHANGE	N/A
ELECTRICAL POWER & LIGHTING SYSTEMS	NO CHANGE	N/A

DOB No.: M00832597-11

DOB APPROVAL STAMP:



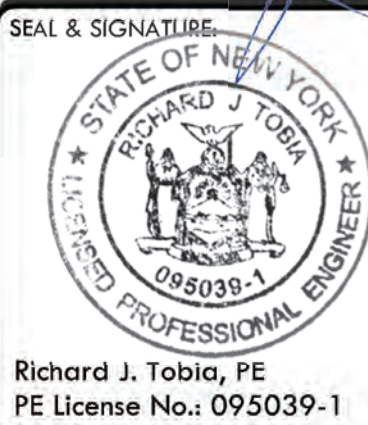
PROJECT:

SITE: 188 SECOND AVENUE
NEW YORK, NEW YORK 10003
FOR: 188 SECOND EQUITIES CORP.

377 PARK AVENUE SOUTH,
3RD FLOOR
NEW YORK, NEW YORK 10016

DRAWING TITLE:

TITLE PAGE



FILE NAME: 10153.LK_NY_NY
PLOT DATE: 01/19/23
DATE: 2023.01.19
DRAWN BY: MK
CHECKED BY: RT
JOB #: 10153.LK
T-001.00
SHEET SIZE: 24 X 36
1 of 3

NUMBER	DATE	DESCRIPTION
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- NOTE
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PROJECT:

SITE: 188 SECOND AVENUE
NEW YORK, NEW YORK 10003
FOR: 188 SECOND EQUITIES CORP.

377 PARK AVENUE SOUTH,
3RD FLOOR
NEW YORK, NEW YORK 10016

DRAWING TITLE:

SSDS LAYOUT

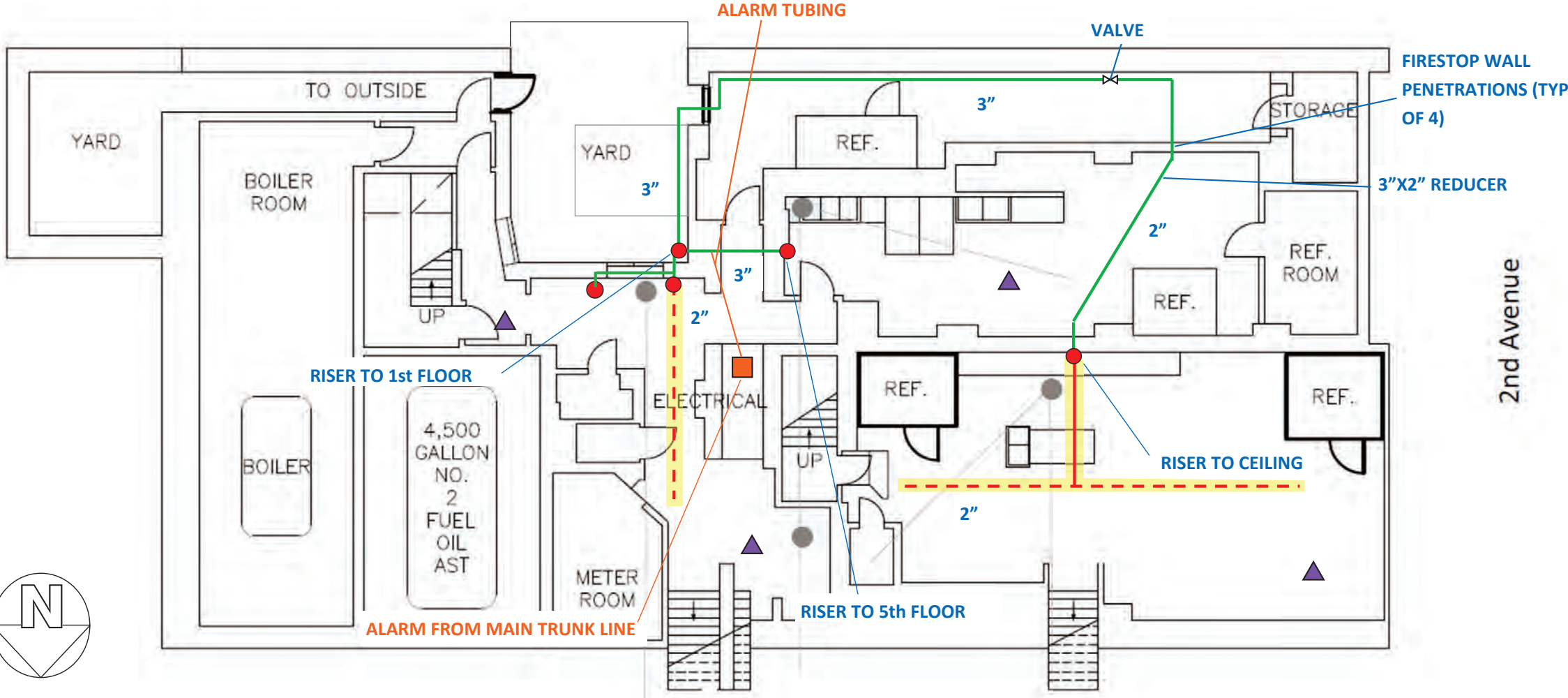
SEAL & SIGNATURE
STATE OF NEW YORK
RICHARD J. TOBIA
095039-1
REGISTERED PROFESSIONAL ENGINEER
Richard J. Tobia, PE
PE License No.: 095039-1

FILE NAME: 10153.LK_NY_NY
PLOT DATE: 01/19/23
DATE: 2023.01.19
DRAWN BY: MK
CHECKED BY: RT
JOB #: 10153.LK

M-100.00

SHEET SIZE: 24 X 362 of 3

SSDS LAYOUT—CELLAR

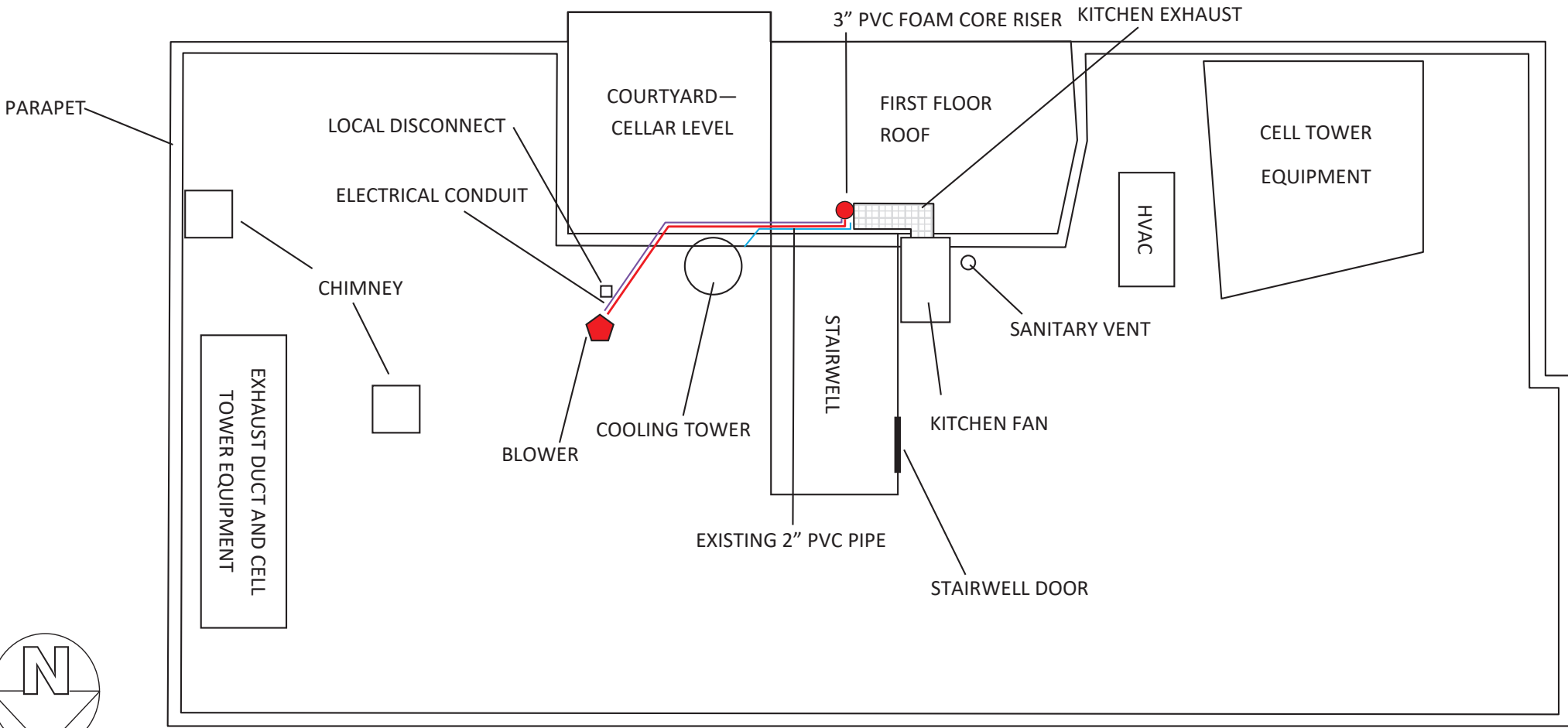


- SCALE: 1 INCH = APPROX. 10 FEET
- Riser Locations
 - Slotted Pipe Locations (below grade)
 - Solid Pipe Locations (below grade)
 - Above Grade Pipe Locations
 - Sub-Slab Monitoring Point Location

East 12th Street

2nd Avenue

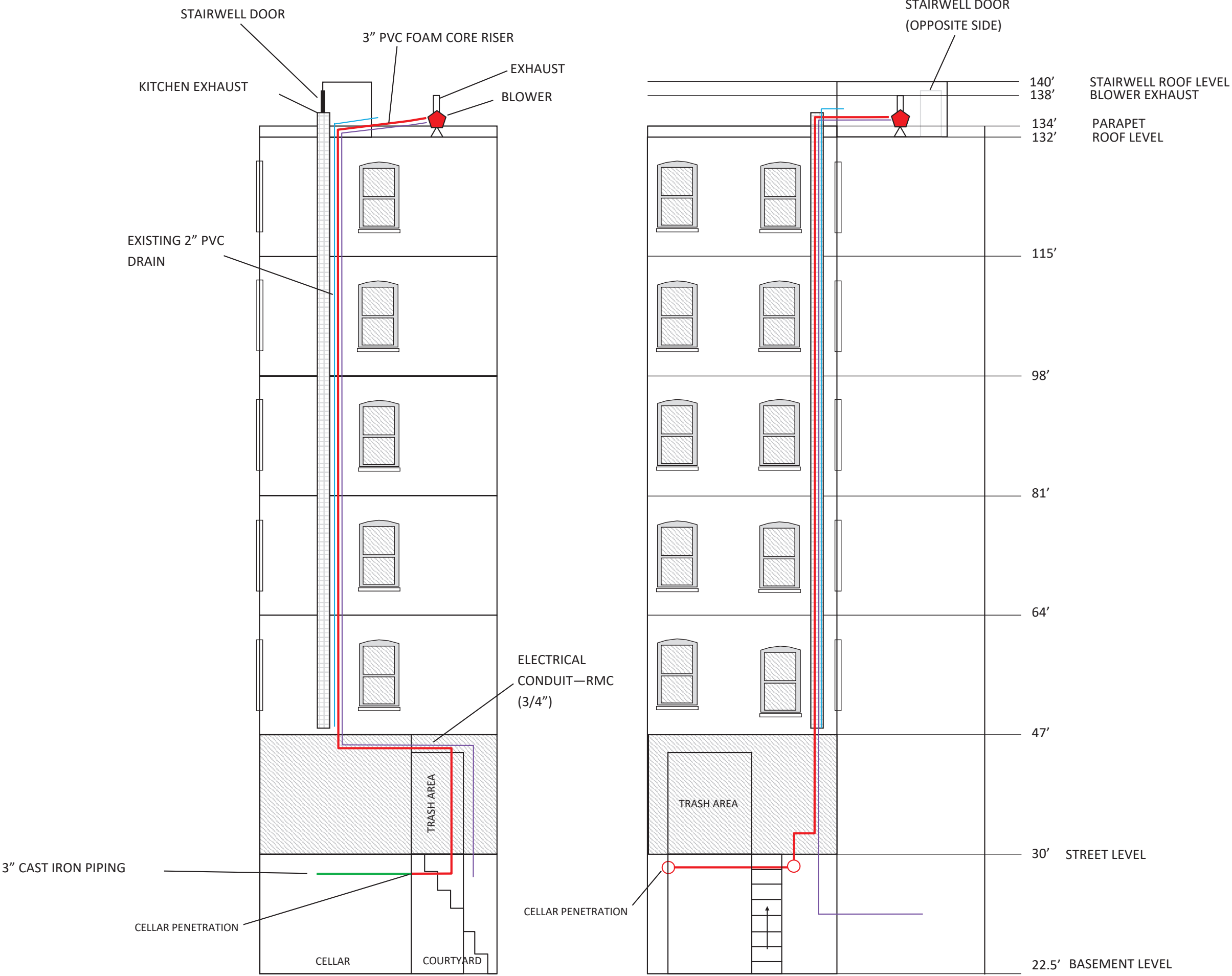
ROOF PLAN



SCALE: 1 INCH = APPROX. 10 FEET

- NOTES:
- Exhaust must be more than 10 feet from stairwell door opening and any air intakes

ELEVATIONS



SOUTH ELEVATION

SCALE: 1 INCH = APPROX. 15 FEET

EAST ELEVATION

- NOTES:
- Utilize existing support brackets, confirm existing connections.
 - Remove existing unused 2" PVC piping and replace with 3" foam core PVC SSDS riser from cellar to roof.

NUMBER	DATE	DESCRIPTION
01	2023-01-27	INITIAL SUBMITTAL
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NOTE

IT IS A VIOLATION OF NY STATE LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT IN ANY WAY.

NO NEW MECHANICAL UNITS TO BE INSTALLED.

THE WORK IS IN COMPLIANCE WITH 2020 ENERGY CODE

PROJECT:

SITE: 188 SECOND AVENUE
NEW YORK, NEW YORK 10003
FOR: 188 SECOND EQUITIES CORP.

377 PARK AVENUE SOUTH,
3RD FLOOR
NEW YORK, NEW YORK 10016

DRAWING TITLE:

SSDS DETAILS AND NOTES

SEAL & SIGNATURE:
RICHARD J. TOBIA, P.E.
PE License No.: 095039-1

FILE NAME: 10153.LK_NY_NY
PLOT DATE: 01/19/23
DATE: 2023.01.19
DRAWN BY: MK
CHECKED BY: RT
JOB #: 10153.LK
M-101.00
SHEET SIZE: 24 X 36
3 of 3

Notes

Contractor shall:

- Comply with all OSHA requirements and training in accordance with 1910.120.
- Follow their own H&S plan or the Site-Specific H&S plan, whichever is more protective. VERTEX is not responsible for contractor H&S.
- Obtain local permits for all work, as required.
- Verify site conditions prior to the start of work.
- Be responsible for identifying and verifying the location of all utilities within the limits of disturbance.
- Be responsible for the means and methods for implementation of the scope of work.
- Coordinate work and schedule with Engineer and Owner and provide a safe demarcated work area.
- Perform all work in accordance with all drawings and other information provided by Engineer and Owner.
- Install all materials and appurtenances in accordance with manufacturer's instructions.
- Coordinate delivery of all materials and support equipment.
- Restore area to pre-construction conditions.

Installation:

- Install vertical vent risers flush with interior walls.
- Install above-grade piping with slope to allow for condensate drainage. Install condensate drops as needed.
- Install monitoring ports and valves on each riser.
- Install sub-slab monitoring points within building slab.
- Install breaker for blower in existing Owner's electrical panel located in cellar meter room.
- Provide 115V outlet for alarm operation.

- Construct all above grade metal vent piping and fittings to be gas tight.
- Firestop all wall and floor penetrations.
- Pull electric from cellar meter room.

· The inspection of all vapor control measures shall be performed by the SSDS ENGINEER or their designated representative. At a minimum, inspection shall take place at the following stages of the installation:

- a. During the installation of the vent piping;
- b. During and at the completion of the risers for the sub-slab vent piping.

General:

- The SSDS presented in these plans and specifications shall be utilized to prevent vapor intrusion into the building. The basis of design is an active sub-slab depressurization system described in these plans.
- The SSDS construction shall consist of, but not be limited to, the following:

- a. Supply and install vapor vent risers with ancillary monitoring equipment.
- b. Supply and install below grade collection piping.
- c. Supply and install exhaust fan and appurtenances.
- d. Supply and install electric.

Submittals:

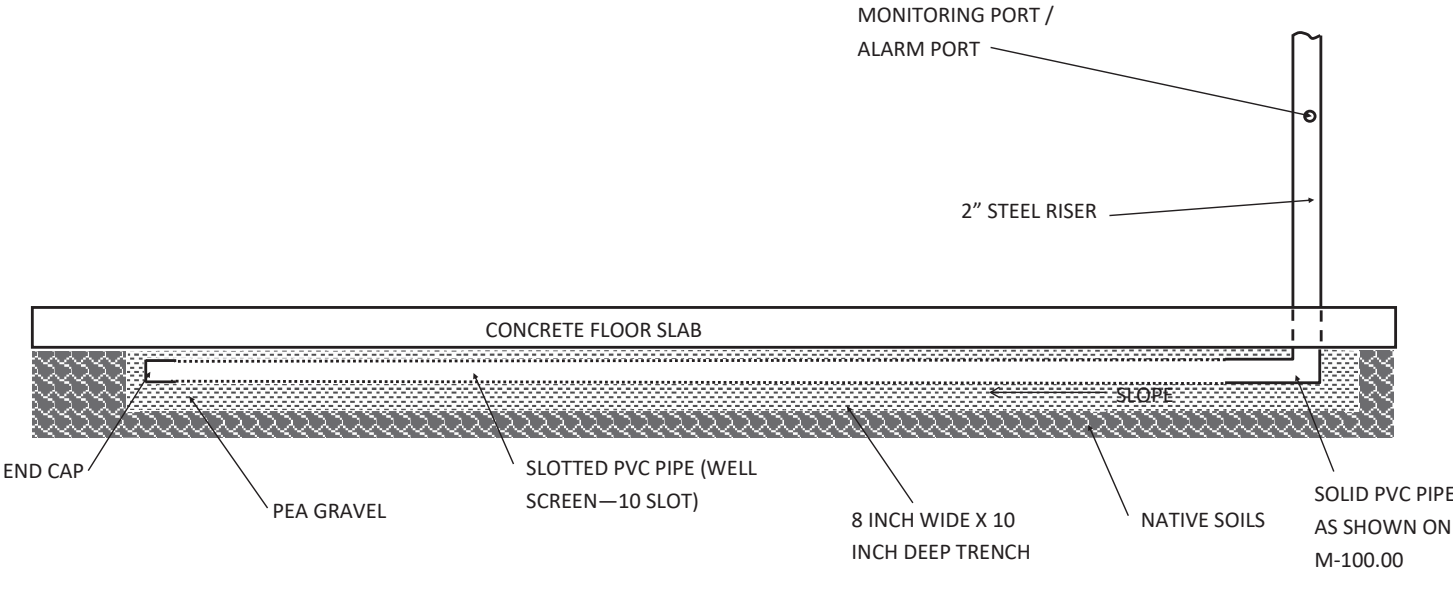
- Provide material cut sheets for Engineer approval if different than that specified.
- Proposed changes to plans shall be submitted in writing for Engineer/Owner approval.
- Provide a sketch of staging areas for Engineer/Owner approval

Vapor Vent System:

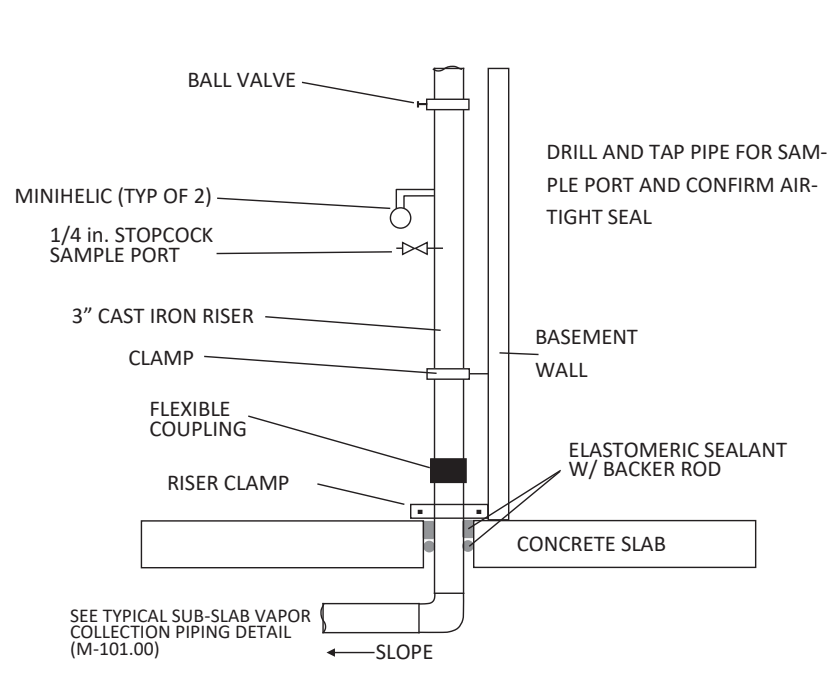
- A vapor vent system shall be installed beneath the slab as detailed in this drawing set.
- The exhaust shall be located at least 10 feet from the parapet walls, air intakes, door openings, and windows and 6 feet above the roof.
- All vent piping shall be sloped to a sub-grade drainage point.
- Materials of construction shall comply with the applicable Plumbing and Mechanical Codes.
- Riser pipe sample ports and gauges shall be installed within accessible areas.
- The riser pipes shall be fully supported through the entire height of the building such that no downward force is exerted on the sub-slab venting piping.

Materials:

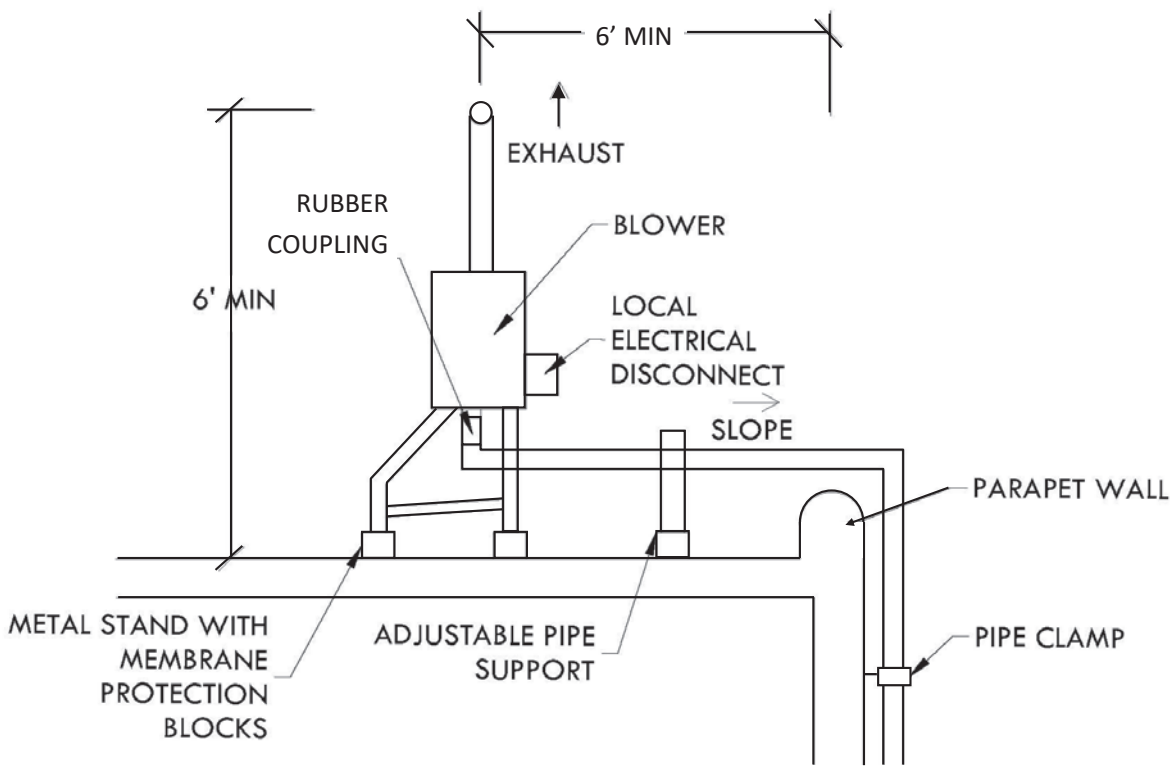
- All materials are to be delivered to the project site in their original unbroken packages bearing the manufacturer's label showing brand, weight, volume, and batch number.
 - Materials are to be stored at the project site in strict compliance with the manufacturer's instructions.
- Blower: OBAR GBR 76 SOE- 120V
- Alarm: Radon Away Checkpoint IIa
- Vacuum Gauge: Dwyer Minihelic 2-5020 0-20" WC
- Above Grade Pipe: Cast Iron or Steel (interior), Foam Core PVC (exterior)
- Below Grade Pipe: PVC, solid and perforated



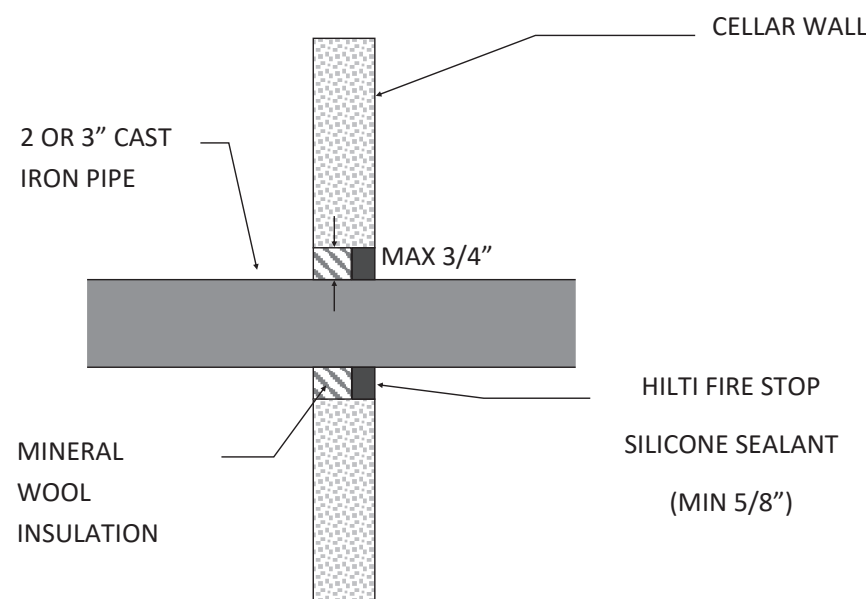
TYPICAL SUB-SLAB VAPOR COLLECTION PIPING DETAIL
SCALE: NOT TO SCALE



RISER DETAIL
SCALE: NOT TO SCALE



FAN MOUNT DETAIL
SCALE: NOT TO SCALE

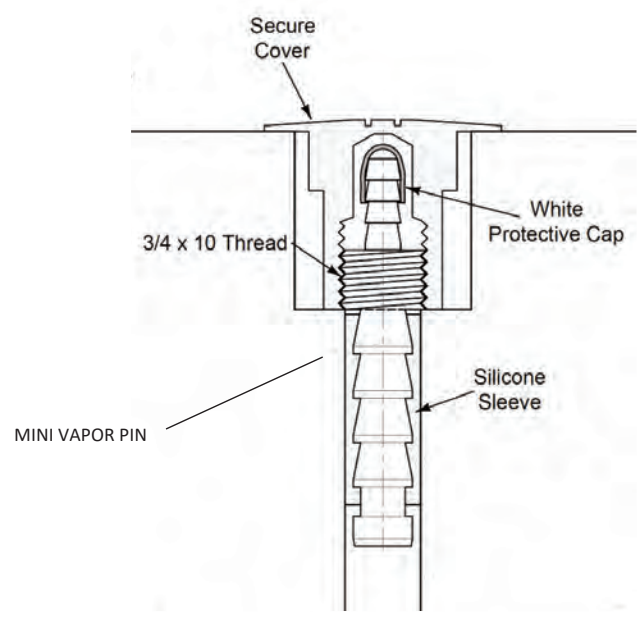


FIRE STOP DETAIL
SCALE: NOT TO SCALE

VAPOR VENT PIPE, IF DAMAGED IMMEDIATELY NOTIFY BUILDING OWNER

ALL SIGNS VINYL WITH ADHESIVE BACKING
LARGE LETTERS MIN 1/2" HIGH
RED LETTER ON WHITE OR YELLOW BACKGROUND
THIS PLACARD SHALL BE POSTED ON EACH VENT RISER APPROXIMATELY EVERY FIVE FEET

SSDS PIPE LABEL
SCALE: NOT TO SCALE



SUB-SLAB MONITORING POINT DETAIL
SCALE: NOT TO SCALE

DOB No.: M00832597-11

DOB APPROVAL STAMP:

NYC Buildings
ACCEPTED
Date: 03/21/2023

Appendix M: Drum Disposal Documentation

NON-HAZARDOUS WASTE MANIFEST

5/15

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. CESQG		Manifest Document No. SE - 01		2. Page 1 of 2	
3. Generator Name and Mailing Address 377 Park Avenue 3rd Floor New York, NY 11101				188 Second Avenue New York, NY 10003			
4. Generator's Phone (908) 488-2627							
5. Transporter 1 Company Name PAL Environmental Services, Inc		6. US EPA ID Number NYR000134791		A. State Transporter's ID			
7. Transporter 2 Company Name Innovative Recycling Technology		8. US EPA ID Number NYR000134940		B. Transporter 1 Phone 718-349-0900			
9. Designated Facility Name and Site Address Republic Environmental Systems (PA), LLC 2869 Sandstone Drive Hatfield, PA 19440		10. US EPA ID Number PAD085690592		C. State Transporter's ID		D. Transporter 2 Phone 631-225-3044	
				E. State Facility's ID			
				F. Facility's Phone 215-822-8995			
11. WASTE DESCRIPTION				Containers		13. Total Quantity	
				No.	Type		
a. Non Hazardous, Non DOT Regulated Material (Concrete and Soil)				007	DM	2,800.00	14. Unit Wt./Vol. P
b.							
c.							
d.							
G. Additional Descriptions for Materials Listed Above				H. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information 1) 11a) Approval Number _____ Job Number 23-6050							
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.							
agent for 188 Second Equities Corp				Date			
Printed/Typed Name Amanda Turner				Signature <i>Amanda Turner</i>		Month Day Year 4/27/23	
17. Transporter 1 Acknowledgement of Receipt of Materials				Date			
Printed/Typed Name Jose D Munizor				Signature <i>[Signature]</i>		Month Day Year 4/27/23	
18. Transporter 2 Acknowledgement of Receipt of Materials				Date			
Printed/Typed Name Francis McShane				Signature <i>[Signature]</i>		Month Day Year 5/5/23	
19. Discrepancy Indication Space							
20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.							
Printed/Typed Name <i>[Signature]</i>				Signature <i>[Signature]</i>		Date Month Day Year 5/15/23	

NON-HAZARDOUS WASTE

NON-HAZARDOUS WASTE MANIFEST
(Continuation Sheet)

19. Generator ID Number

CESGG

20. Page 2

2

21. Waste Tracking Number

SE-01

22. Generator's Name

188 SECOND EQUITIES CORP

23. Transporter 3 Company Name

U.S. EPA ID Number

REPUBLIC ENV SYS (TRANS GRP) LLC

PAD 982661381

U.S. EPA ID Number

24. Transporter Company Name

25. Waste Shipping Name and Description

26. Containers

No.

Type

27. Total
Quantity

28. Unit
Wt./Vol.

29. Special Handling Instructions and Additional Information

30. Transporter 3 Acknowledgment of Receipt of Materials

Printed/Typed Name

JESSICA PHUNG

Signature

Jessica Phung

Month Day Year

5/12/23

31. Transporter Acknowledgment of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

32. Discrepancy

GENERATOR

TRANSPORTER

DESIGNATED FACILITY

CERTIFICATE OF TREATMENT, RECYCLING, AND/OR DISPOSAL

Generator: 700202 - 188 SECOND EQUITES CORP
188 SECOND AVENUE
NEW YORK NY, 10003
EPA ID: CESQG

Facility: REPUBLIC ENV SYS (PA) LLC
2869 SANDSTONE DRIVE
HATFIELD PA, 19440
EPA ID: PAD085690592

Manifest #: SE-01
Waste Receipt #: HAT-18660
Date Received: 05/15/2023

Line Profile	Material Description	Treatment/ Disposal Description
1 2300004497-00	NON RCRA HAZARDOUS WASTE, SOLID	H141 THIS SITE RECEIVING THIS WASTE STORED/BULKED AND TRANSFERRED THE WASTE WITH

Name: MARCIA THOMAS

Signature : *Marcia Thomas*

Title : Logistic Coordinator

5/15 5199339

Form Approved. OMB No. 2050-0039

Please print or type.

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number CESQG	2. Page 1 of 2	3. Emergency Response Phone 718-349-0900	4. Manifest Tracking Number 016070119 FLE					
5. Generator's Name and Mailing Address 188 Second Equities Corp 377 Park Avenue 3rd Floor New York, NY 10016 Generator's Phone: 212 213-2500			Generator's Site Address (if different than mailing address) 300 East 12th Street New York, NY 10003							
6. Transporter 1 Company Name PAL Environmental Services, Inc.			U.S. EPA ID Number NYR000134791							
7. Transporter 2 Company Name Innovative Recycling Technologies, Inc.			U.S. EPA ID Number NYR000134940							
8. Designated Facility Name and Site Address Republic Environmental Systems (PA), LLC 2869 Sandstone Drive Hatfield, PA 19440 Facility's Phone: 215-822-8995			U.S. EPA ID Number PAD085690592							
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No. Type		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes			
	X	1. NA3082, Hazardous waste, liquid, n.o.s., 9, PGIII (Tetrachloroethene, Trichloroethene)	1	DM	200	P	F001	T		
	X	2. NA3077, Hazardous waste, solid, n.o.s., 9, PGIII (Tetrachloroethene, Trichloroethene)	4	DM	1200	P	F001	T		
		3.								
		4.								
14. Special Handling Instructions and Additional Information 1) 9b.1) Approval Number _____ Job Number 23-6050 2) 9b.2) Approval Number _____ agent for 188 Second Equities Corp DOC# 314246-23										
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.										
Generator's/Offeror's Printed/Typed Name Amanda Turner		Signature <i>Amanda Turner</i>		Month 4		Day 27		Year 23		
INT'L	16. International Shipments ☐ Import to U.S. ☐ Export from U.S.		Port of entry/exit: _____ Date leaving U.S.: _____							
	Transporter signature (for exports only): _____									
TRANSPORTER	17. Transporter Acknowledgment of Receipt of Materials		Signature		Month		Day		Year	
	Transporter 1 Printed/Typed Name JOSE L MANZON		<i>Jose L Manzon</i>		4		27		23	
DESIGNATED FACILITY	Transporter 2 Printed/Typed Name Francis McShane		<i>Francis McShane</i>		5/5/23		4		27	
	18. Discrepancy									
DESIGNATED FACILITY	18a. Discrepancy Indication Space		☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection		Manifest Reference Number: _____					
	18b. Alternate Facility (or Generator)				U.S. EPA ID Number _____					
	Facility's Phone: _____									
	18c. Signature of Alternate Facility (or Generator)				Month		Day		Year	
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)										
1. H141		2. H141		3. _____		4. _____				
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a										
Printed/Typed Name MALEVE/ANTW		Signature <i>MALEVE/ANTW</i>		Month 10		Day 05		Year 23		

GENERATOR

CERTIFICATE OF TREATMENT, RECYCLING, AND/OR DISPOSAL

Generator: 700202 - 188 SECOND EQUITES CORP
300 E 12TH ST
NEW YORK NY, 10003-7201

EPA ID: CESQG

Facility: REPUBLIC ENV SYS (PA) LLC
2869 SANDSTONE DRIVE
HATFIELD PA, 19440
EPA ID: PAD085690592

Manifest #: 016070119FLE
Waste Receipt #: HAT-18214
Date Received: 05/15/2023

Line Profile	Material Description	Treatment/ Disposal Description
1 1848087-00	HAZARDOUS WASTE, LIQUID, N.O.S. (TETRACHLOROETHYLENE, TRICHLOROETHYLENE)	H141 THIS SITE RECEIVING THIS WASTE STORED/BULKED AND TRANSFERRED THE WASTE WITH
2 1848086-00	HAZARDOUS WASTE, SOLID, N.O.S. (TETRACHLOROETHYLENE, TRUCHLOROETHYLENE)	H141 THIS SITE RECEIVING THIS WASTE STORED/BULKED AND TRANSFERRED THE WASTE WITH

Name: MARCIA THOMAS

Signature : Marcia Thomas

Title : Logistic Coordinator

Appendix N: Laboratory Certification

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER



Expires 12:01 AM April 01, 2019
Issued April 01, 2018
Revised June 05, 2018

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. JOHN TRIMBLE
ALPHA ANALYTICAL
320 FORBES BOULEVARD
MANSFIELD, MA 02048

NY Lab Id No: 11627

*is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES POTABLE WATER
All approved analytes are listed below:*

Metals I

Arsenic, Total	EPA 200.8 Rev. 5.4
Barium, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
Cadmium, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
Chromium, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
Copper, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
Iron, Total	EPA 200.7 Rev. 4.4
Lead, Total	EPA 200.8 Rev. 5.4
Manganese, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
Mercury, Total	EPA 245.1 Rev. 3.0
Selenium, Total	EPA 200.8 Rev. 5.4
Silver, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
Zinc, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4

Metals II

Aluminum, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
Antimony, Total	EPA 200.8 Rev. 5.4
Beryllium, Total	EPA 200.8 Rev. 5.4
Nickel, Total	EPA 200.7 Rev. 4.4

Metals II

Nickel, Total	EPA 200.8 Rev. 5.4
Thallium, Total	EPA 200.8 Rev. 5.4
Vanadium, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4

Metals III

Boron, Total	EPA 200.7 Rev. 4.4
Calcium, Total	EPA 200.7 Rev. 4.4
Magnesium, Total	EPA 200.7 Rev. 4.4
Potassium, Total	EPA 200.7 Rev. 4.4
Sodium, Total	EPA 200.7 Rev. 4.4

Miscellaneous

1,4-Dioxane	EPA 522

Non-Metals

Calcium Hardness	EPA 200.7 Rev. 4.4

Perfluorinated Alkyl Acids

Perfluorooctanesulfonic acid (PFOS)	EPA 537
Perfluorooctanoic acid (PFOA)	EPA 537

Serial No.: 58392

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.



NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER



Expires 12:01 AM April 01, 2019
Issued April 01, 2018
Revised January 04, 2019

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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ALPHA ANALYTICAL
320 FORBES BOULEVARD
MANSFIELD, MA 02048

NY Lab Id No: 11627

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National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved analytes are listed below:*

Amines		Chlorinated Hydrocarbon Pesticides	
1,2-Diphenylhydrazine	EPA 8270D	Endrin	EPA 8081B
2-Nitroaniline	EPA 8270D	Endrin aldehyde	EPA 8081B
3-Nitroaniline	EPA 8270D	Endrin Ketone	EPA 8081B
4-Chloroaniline	EPA 8270D	gamma-Chlordane	EPA 8081B
4-Nitroaniline	EPA 8270D	Heptachlor	EPA 8081B
Aniline	EPA 8270D	Heptachlor epoxide	EPA 8081B
Carbazole	EPA 8270D	Lindane	EPA 8081B
Pyridine	EPA 8270D	Methoxychlor	EPA 8081B
		Mirex	EPA 8081B
		Toxaphene	EPA 8081B
Benzidines		Chlorinated Hydrocarbons	
3,3'-Dichlorobenzidine	EPA 8270D	1,2,4,5-Tetrachlorobenzene	EPA 8270D
Benzidine	EPA 8270D	1,2,4-Trichlorobenzene	EPA 8270D
Chlorinated Hydrocarbon Pesticides		2-Chloronaphthalene	EPA 8270D
4,4'-DDD	EPA 8081B	Hexachlorobenzene	EPA 8081B
4,4'-DDE	EPA 8081B		EPA 8270D
4,4'-DDT	EPA 8081B	Hexachlorobutadiene	EPA 8270D
Aldrin	EPA 8081B	Hexachlorocyclopentadiene	EPA 8270D
alpha-BHC	EPA 8081B	Hexachloroethane	EPA 8270D
alpha-Chlordane	EPA 8081B		
beta-BHC	EPA 8081B	Dioxins and Furans	
Chlordane Total	EPA 8081B	1,2,3,4,6,7,8,9-Octachlorodibenzofuran	EPA 8290A
delta-BHC	EPA 8081B		EPA 1613B
Dieldrin	EPA 8081B	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-diox	EPA 8290A
Endosulfan I	EPA 8081B		EPA 1613B
Endosulfan II	EPA 8081B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	EPA 8290A
Endosulfan sulfate	EPA 8081B		

Serial No.: 58991

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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER



Expires 12:01 AM April 01, 2019
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Revised January 04, 2019

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ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved analytes are listed below:*

Dioxins and Furans

1,2,3,4,6,7,8-Heptachlorodibenzofuran	EPA 1613B
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	EPA 8290A
	EPA 1613B
1,2,3,4,7,8,9-Heptachlorodibenzofuran	EPA 8290A
	EPA 1613B
1,2,3,4,7,8-Hexachlorodibenzofuran	EPA 8290A
	EPA 1613B
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	EPA 8290A
	EPA 1613B
1,2,3,6,7,8-Hexachlorodibenzofuran	EPA 8290A
	EPA 1613B
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	EPA 8290A
	EPA 1613B
1,2,3,7,8,9-Hexachlorodibenzofuran	EPA 8290A
	EPA 1613B
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	EPA 8290A
	EPA 1613B
1,2,3,7,8-Pentachlorodibenzofuran	EPA 8290A
	EPA 1613B
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	EPA 8290A
	EPA 1613B
2,3,4,6,7,8-Hexachlorodibenzofuran	EPA 8290A
	EPA 1613B
2,3,4,7,8-Pentachlorodibenzofuran	EPA 8290A
	EPA 1613B
2,3,7,8-Tetrachlorodibenzofuran	EPA 8290A

Dioxins and Furans

2,3,7,8-Tetrachlorodibenzofuran	EPA 1613B
2,3,7,8-Tetrachlorodibenzo-p-dioxin	EPA 8290A
	EPA 1613B

Dissolved Gases

Ethane	RSK-175
Ethene (Ethylene)	RSK-175
Methane	RSK-175
Propane	RSK-175

Fuel Oxygenates

Ethanol	EPA 8015D
tert-amyl alcohol	EPA 8015D
tert-butyl alcohol	EPA 8015D

Haloethers

2,2'-Oxybis(1-chloropropane)	EPA 8270D
4-Bromophenylphenyl ether	EPA 8270D
4-Chlorophenylphenyl ether	EPA 8270D
Bis(2-chloroethoxy)methane	EPA 8270D
Bis(2-chloroethyl)ether	EPA 8270D

Low Level Polynuclear Aromatics

Acenaphthene Low Level	EPA 8270D SIM
Acenaphthylene Low Level	EPA 8270D SIM
Anthracene Low Level	EPA 8270D SIM
Benzo(a)anthracene Low Level	EPA 8270D SIM
Benzo(a)pyrene Low Level	EPA 8270D SIM

Serial No.: 58991

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WADSWORTH CENTER



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National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved analytes are listed below:*

Low Level Polynuclear Aromatics

Benzo(b)fluoranthene Low Level	EPA 8270D SIM
Benzo(g,h,i)perylene Low Level	EPA 8270D SIM
Benzo(k)fluoranthene Low Level	EPA 8270D SIM
Chrysene Low Level	EPA 8270D SIM
Dibenzo(a,h)anthracene Low Level	EPA 8270D SIM
Fluoranthene Low Level	EPA 8270D SIM
Fluorene Low Level	EPA 8270D SIM
Indeno(1,2,3-cd)pyrene Low Level	EPA 8270D SIM
Naphthalene Low Level	EPA 8270D SIM
Phenanthrene Low Level	EPA 8270D SIM
Pyrene Low Level	EPA 8270D SIM

Metals I

Barium, Total	EPA 200.7, Rev. 4.4 (1994)
	EPA 6010D
	EPA 6020B
	EPA 200.8, Rev. 5.4 (1994)
Cadmium, Total	EPA 200.7, Rev. 4.4 (1994)
	EPA 6010D
	EPA 6020B
	EPA 200.8, Rev. 5.4 (1994)
Calcium, Total	EPA 200.7, Rev. 4.4 (1994)
	EPA 6010D
	EPA 6020B
Chromium, Total	EPA 200.7, Rev. 4.4 (1994)
	EPA 6010D

Metals I

Chromium, Total	EPA 6020B
	EPA 200.8, Rev. 5.4 (1994)
Copper, Total	EPA 200.7, Rev. 4.4 (1994)
	EPA 6010D
	EPA 6020B
	EPA 200.8, Rev. 5.4 (1994)
Iron, Total	EPA 200.7, Rev. 4.4 (1994)
	EPA 6010D
	EPA 6020B
	EPA 200.8, Rev. 5.4 (1994)
Lead, Total	EPA 200.7, Rev. 4.4 (1994)
	EPA 6010D
	EPA 6020B
	EPA 200.8, Rev. 5.4 (1994)
Magnesium, Total	EPA 200.7, Rev. 4.4 (1994)
	EPA 6010D
	EPA 6020B
Manganese, Total	EPA 200.7, Rev. 4.4 (1994)
	EPA 6010D
	EPA 6020B
	EPA 200.8, Rev. 5.4 (1994)
Nickel, Total	EPA 200.7, Rev. 4.4 (1994)
	EPA 6010D
	EPA 6020B
	EPA 200.8, Rev. 5.4 (1994)
Potassium, Total	EPA 200.7, Rev. 4.4 (1994)

Serial No.: 58991

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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER



Expires 12:01 AM April 01, 2019
Issued April 01, 2018
Revised January 04, 2019

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MR. JOHN TRIMBLE
ALPHA ANALYTICAL
320 FORBES BOULEVARD
MANSFIELD, MA 02048

NY Lab Id No: 11627

*is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved analytes are listed below:*

Metals I		Metals II	
Potassium, Total	EPA 6010D EPA 6020B EPA 200.8, Rev. 5.4 (1994)	Arsenic, Total	EPA 6020B EPA 200.8, Rev. 5.4 (1994)
Silver, Total	EPA 200.7, Rev. 4.4 (1994) EPA 6010D EPA 6020B EPA 200.8, Rev. 5.4 (1994)	Beryllium, Total	EPA 200.7, Rev. 4.4 (1994) EPA 6010D EPA 6020B EPA 200.8, Rev. 5.4 (1994)
Sodium, Total	EPA 200.7, Rev. 4.4 (1994) EPA 6010D EPA 6020B EPA 200.8, Rev. 5.4 (1994)	Mercury, Low Level	EPA 1631E
Strontium, Total	EPA 200.7, Rev. 4.4 (1994) EPA 6010D EPA 6020B EPA 200.8, Rev. 5.4 (1994)	Mercury, Total	EPA 245.1, Rev. 3.0 (1994) EPA 7470A
		Selenium, Total	EPA 200.7, Rev. 4.4 (1994) EPA 6010D EPA 6020B EPA 200.8, Rev. 5.4 (1994)
		Vanadium, Total	EPA 200.7, Rev. 4.4 (1994) EPA 6010D EPA 6020B EPA 200.8, Rev. 5.4 (1994)
Metals II		Metals III	
Aluminum, Total	EPA 200.7, Rev. 4.4 (1994) EPA 6010D EPA 6020B EPA 200.8, Rev. 5.4 (1994)	Zinc, Total	EPA 200.7, Rev. 4.4 (1994) EPA 6010D EPA 6020B EPA 200.8, Rev. 5.4 (1994)
Antimony, Total	EPA 200.7, Rev. 4.4 (1994) EPA 6010D EPA 6020B EPA 200.8, Rev. 5.4 (1994)		
Arsenic, Total	EPA 200.7, Rev. 4.4 (1994) EPA 6010D		

Serial No.: 58991

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ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved analytes are listed below:*

Metals III

Cobalt, Total	EPA 200.8, Rev. 5.4 (1994)
Molybdenum, Total	EPA 200.7, Rev. 4.4 (1994)
	EPA 6010D
	EPA 6020B
	EPA 200.8, Rev. 5.4 (1994)
Thallium, Total	EPA 200.7, Rev. 4.4 (1994)
	EPA 6010D
	EPA 6020B
	EPA 200.8, Rev. 5.4 (1994)
Tin, Total	EPA 200.7, Rev. 4.4 (1994)
	EPA 6010D
	EPA 6020B
Titanium, Total	EPA 200.7, Rev. 4.4 (1994)
	EPA 6010D
	EPA 6020B

Mineral

Hardness, Total	EPA 200.7, Rev. 4.4 (1994)
	SM 2340B-2011

Miscellaneous

Boron, Total	EPA 200.7, Rev. 4.4 (1994)
	EPA 6010D
	EPA 6020B
Silica, Dissolved	EPA 200.7, Rev. 4.4 (1994)

Nitroaromatics and Isophorone

2,4-Dinitrotoluene	EPA 8270D
2,6-Dinitrotoluene	EPA 8270D
Isophorone	EPA 8270D
Nitrobenzene	EPA 8270D

Nitrosoamines

N-Nitrosodimethylamine	EPA 8270D
N-Nitrosodi-n-propylamine	EPA 8270D
N-Nitrosodiphenylamine	EPA 8270D

Organophosphate Pesticides

Atrazine	EPA 8270D

Petroleum Hydrocarbons

Diesel Range Organics	EPA 8015D

Phthalate Esters

Benzyl butyl phthalate	EPA 8270D
Bis(2-ethylhexyl) phthalate	EPA 8270D
Diethyl phthalate	EPA 8270D
Dimethyl phthalate	EPA 8270D
Di-n-butyl phthalate	EPA 8270D
Di-n-octyl phthalate	EPA 8270D

Polychlorinated Biphenyls

Aroclor 1016 (PCB-1016)	EPA 8082A
Aroclor 1221 (PCB-1221)	EPA 8082A
Aroclor 1232 (PCB-1232)	EPA 8082A

Serial No.: 58991

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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER



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Revised January 04, 2019

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. JOHN TRIMBLE
ALPHA ANALYTICAL
320 FORBES BOULEVARD
MANSFIELD, MA 02048

NY Lab Id No: 11627

*is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved analytes are listed below:*

Polychlorinated Biphenyls

Aroclor 1242 (PCB-1242)	EPA 8082A
Aroclor 1248 (PCB-1248)	EPA 8082A
Aroclor 1254 (PCB-1254)	EPA 8082A
Aroclor 1260 (PCB-1260)	EPA 8082A
Aroclor 1262 (PCB-1262)	EPA 8082A
Aroclor 1268 (PCB-1268)	EPA 8082A
PCB 118	EPA 8082A
PCB 128	EPA 8082A
PCB 138	EPA 8082A
PCB 170	EPA 8082A
PCB 18	EPA 8082A
PCB 206	EPA 8082A
PCB 44	EPA 8082A
PCB 52	EPA 8082A
PCB 66	EPA 8082A

Polynuclear Aromatics

Acenaphthene	EPA 8270D
Acenaphthylene	EPA 8270D
Anthracene	EPA 8270D
Benzo(a)anthracene	EPA 8270D
Benzo(a)pyrene	EPA 8270D
Benzo(b)fluoranthene	EPA 8270D
Benzo(g,h,i)perylene	EPA 8270D
Benzo(k)fluoranthene	EPA 8270D
Chrysene	EPA 8270D

Polynuclear Aromatics

Dibenzo(a,h)anthracene	EPA 8270D
Fluoranthene	EPA 8270D
Fluorene	EPA 8270D
Indeno(1,2,3-cd)pyrene	EPA 8270D
Naphthalene	EPA 8270D
Phenanthrene	EPA 8270D
Pyrene	EPA 8270D

Priority Pollutant Phenols

2,3,4,6 Tetrachlorophenol	EPA 8270D
2,4,5-Trichlorophenol	EPA 8270D
2,4,6-Trichlorophenol	EPA 8270D
2,4-Dichlorophenol	EPA 8270D
2,4-Dimethylphenol	EPA 8270D
2,4-Dinitrophenol	EPA 8270D
2-Chlorophenol	EPA 8270D
2-Methyl-4,6-dinitrophenol	EPA 8270D
2-Methylphenol	EPA 8270D
2-Nitrophenol	EPA 8270D
3-Methylphenol	EPA 8270D
4-Chloro-3-methylphenol	EPA 8270D
4-Methylphenol	EPA 8270D
4-Nitrophenol	EPA 8270D
Pentachlorophenol	EPA 8270D
Phenol	EPA 8270D

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ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved analytes are listed below:*

Semi-Volatile Organics

1,1'-Biphenyl	EPA 8270D
1,2-Dichlorobenzene, Semi-volatile	EPA 8270D
1,3-Dichlorobenzene, Semi-volatile	EPA 8270D
1,4-Dichlorobenzene, Semi-volatile	EPA 8270D
2-Methylnaphthalene	EPA 8270D
Acetophenone	EPA 8270D
Benzaldehyde	EPA 8270D
Benzoic Acid	EPA 8270D
Benzyl alcohol	EPA 8270D
Caprolactam	EPA 8270D
Dibenzofuran	EPA 8270D

Volatiles Organics

1,4-Dioxane	EPA 8270D SIM
Ethylene Glycol	EPA 8015D
Isobutyl alcohol	EPA 8015D
Methanol	EPA 8015D

Sample Preparation Methods

EPA 3015A
EPA 3005A
EPA 3510C

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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved analytes are listed below:*

Amines		Chlorinated Hydrocarbon Pesticides	
1,2-Diphenylhydrazine	EPA 8270D	Endrin aldehyde	EPA 8081B
2-Nitroaniline	EPA 8270D	Endrin Ketone	EPA 8081B
3-Nitroaniline	EPA 8270D	gamma-Chlordane	EPA 8081B
4-Chloroaniline	EPA 8270D	Heptachlor	EPA 8081B
4-Nitroaniline	EPA 8270D	Heptachlor epoxide	EPA 8081B
Aniline	EPA 8270D	Lindane	EPA 8081B
Carbazole	EPA 8270D	Methoxychlor	EPA 8081B
Benzidines		Mirex	EPA 8081B
3,3'-Dichlorobenzidine	EPA 8270D	Pentachloronitrobenzene	EPA 8270D
Benzidine	EPA 8270D	Toxaphene	EPA 8081B
Chlorinated Hydrocarbon Pesticides		Chlorinated Hydrocarbons	
4,4'-DDD	EPA 8081B	1,2,4,5-Tetrachlorobenzene	EPA 8270D
4,4'-DDE	EPA 8081B	1,2,4-Trichlorobenzene	EPA 8270D
4,4'-DDT	EPA 8081B	2-Chloronaphthalene	EPA 8270D
Aldrin	EPA 8081B	Hexachlorobenzene	EPA 8270D
alpha-BHC	EPA 8081B	Hexachlorobutadiene	EPA 8270D
alpha-Chlordane	EPA 8081B	Hexachlorocyclopentadiene	EPA 8270D
beta-BHC	EPA 8081B	Hexachloroethane	EPA 8270D
Chlordane Total	EPA 8081B	Dioxins and Furans	
delta-BHC	EPA 8081B	1,2,3,4,6,7,8,9-Octachlorodibenzofuran	EPA 8290A
Dieldrin	EPA 8081B	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-diox	EPA 8290A
Endosulfan I	EPA 8081B	1,2,3,4,6,7,8-Heptachlorodibenzofuran	EPA 8290A
Endosulfan II	EPA 8081B	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxi	EPA 8290A
Endosulfan sulfate	EPA 8081B	1,2,3,4,7,8,9-Heptachlorodibenzofuran	EPA 8290A
Endrin	EPA 8081B	1,2,3,4,7,8-Hexachlorodibenzofuran	EPA 8290A

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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved analytes are listed below:*

Dioxins and Furans

1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	EPA 8290A
1,2,3,6,7,8-Hexachlorodibenzofuran	EPA 8290A
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	EPA 8290A
1,2,3,7,8,9-Hexachlorodibenzofuran	EPA 8290A
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	EPA 8290A
1,2,3,7,8-Pentachlorodibenzofuran	EPA 8290A
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	EPA 8290A
2,3,4,6,7,8-Hexachlorodibenzofuran	EPA 8290A
2,3,4,7,8-Pentachlorodibenzofuran	EPA 8290A
2,3,7,8-Tetrachlorodibenzofuran	EPA 8290A
2,3,7,8-Tetrachlorodibenzo-p-dioxin	EPA 8290A

Haloethers

2,2'-Oxybis(1-chloropropane)	EPA 8270D
4-Bromophenylphenyl ether	EPA 8270D
4-Chlorophenylphenyl ether	EPA 8270D
Bis(2-chloroethoxy)methane	EPA 8270D
Bis(2-chloroethyl)ether	EPA 8270D

Low Level Polynuclear Aromatic Hydrocarbons

Acenaphthene Low Level	EPA 8270D SIM
Acenaphthylene Low Level	EPA 8270D SIM
Anthracene Low Level	EPA 8270D SIM
Benzo(a)anthracene Low Level	EPA 8270D SIM
Benzo(a)pyrene Low Level	EPA 8270D SIM
Benzo(b)fluoranthene Low Level	EPA 8270D SIM
Benzo(g,h,i)perylene Low Level	EPA 8270D SIM

Low Level Polynuclear Aromatic Hydrocarbons

Benzo(k)fluoranthene Low Level	EPA 8270D SIM
Chrysene Low Level	EPA 8270D SIM
Dibenzo(a,h)anthracene Low Level	EPA 8270D SIM
Fluoranthene Low Level	EPA 8270D SIM
Fluorene Low Level	EPA 8270D SIM
Indeno(1,2,3-cd)pyrene Low Level	EPA 8270D SIM
Naphthalene Low Level	EPA 8270D SIM
Phenanthrene Low Level	EPA 8270D SIM
Pyrene Low Level	EPA 8270D SIM

Metals I

Barium, Total	EPA 6010D EPA 6020B
Cadmium, Total	EPA 6010D EPA 6020B
Calcium, Total	EPA 6010D EPA 6020B
Chromium, Total	EPA 6010D EPA 6020B
Copper, Total	EPA 6010D EPA 6020B
Iron, Total	EPA 6010D EPA 6020B
Lead, Total	EPA 6010D EPA 6020B
Magnesium, Total	EPA 6010D

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Metals I

Magnesium, Total	EPA 6020B
Manganese, Total	EPA 6010D
	EPA 6020B
Nickel, Total	EPA 6010D
	EPA 6020B
Potassium, Total	EPA 6010D
	EPA 6020B
Silver, Total	EPA 6010D
	EPA 6020B
Sodium, Total	EPA 6010D
	EPA 6020B
Strontium, Total	EPA 6010D
	EPA 6020B

Metals II

Aluminum, Total	EPA 6010D
	EPA 6020B
Antimony, Total	EPA 6010D
	EPA 6020B
Arsenic, Total	EPA 6010D
	EPA 6020B
Beryllium, Total	EPA 6010D
	EPA 6020B
Mercury, Total	EPA 7471B
	EPA 7474
Selenium, Total	EPA 6010D

Metals II

Selenium, Total	EPA 6020B
Vanadium, Total	EPA 6010D
	EPA 6020B
Zinc, Total	EPA 6010D
	EPA 6020B

Metals III

Cobalt, Total	EPA 6010D
	EPA 6020B
Molybdenum, Total	EPA 6010D
	EPA 6020B
Thallium, Total	EPA 6010D
	EPA 6020B
Tin, Total	EPA 6010D
	EPA 6020B
Titanium, Total	EPA 6010D
	EPA 6020B

Miscellaneous

Boron, Total	EPA 6010D
	EPA 6020B
Organic Carbon, Total	Lloyd Kahn Method
	EPA 9060A

Nitroaromatics and Isophorone

2,4-Dinitrotoluene	EPA 8270D
2,6-Dinitrotoluene	EPA 8270D

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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
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Nitroaromatics and Isophorone

Isophorone	EPA 8270D
Nitrobenzene	EPA 8270D
Pyridine	EPA 8270D

Nitrosoamines

N-Nitrosodimethylamine	EPA 8270D
N-Nitrosodi-n-propylamine	EPA 8270D
N-Nitrosodiphenylamine	EPA 8270D

Petroleum Hydrocarbons

Diesel Range Organics	EPA 8015D

Phthalate Esters

Benzyl butyl phthalate	EPA 8270D
Bis(2-ethylhexyl) phthalate	EPA 8270D
Diethyl phthalate	EPA 8270D
Dimethyl phthalate	EPA 8270D
Di-n-butyl phthalate	EPA 8270D
Di-n-octyl phthalate	EPA 8270D

Polychlorinated Biphenyls

Aroclor 1016 (PCB-1016)	EPA 8082A
Aroclor 1221 (PCB-1221)	EPA 8082A
Aroclor 1232 (PCB-1232)	EPA 8082A
Aroclor 1242 (PCB-1242)	EPA 8082A
Aroclor 1248 (PCB-1248)	EPA 8082A
Aroclor 1254 (PCB-1254)	EPA 8082A
Aroclor 1260 (PCB-1260)	EPA 8082A

Polychlorinated Biphenyls

Aroclor 1262 (PCB-1262)	EPA 8082A
Aroclor 1268 (PCB-1268)	EPA 8082A
PCB 1	EPA 8082A
PCB 101	EPA 8082A
PCB 110	EPA 8082A
PCB 118	EPA 8082A
PCB 128	EPA 8082A
PCB 138	EPA 8082A
PCB 141	EPA 8082A
PCB 151	EPA 8082A
PCB 153	EPA 8082A
PCB 170	EPA 8082A
PCB 18	EPA 8082A
PCB 180	EPA 8082A
PCB 183	EPA 8082A
PCB 187	EPA 8082A
PCB 206	EPA 8082A
PCB 31	EPA 8082A
PCB 44	EPA 8082A
PCB 5	EPA 8082A
PCB 52	EPA 8082A
PCB 66	EPA 8082A
PCB 87	EPA 8082A

Polynuclear Aromatic Hydrocarbons

Acenaphthene	EPA 8270D

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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved analytes are listed below:*

Polynuclear Aromatic Hydrocarbons

Acenaphthylene	EPA 8270D
Anthracene	EPA 8270D
Benzo(a)anthracene	EPA 8270D
Benzo(a)pyrene	EPA 8270D
Benzo(b)fluoranthene	EPA 8270D
Benzo(g,h,i)perylene	EPA 8270D
Benzo(k)fluoranthene	EPA 8270D
Chrysene	EPA 8270D
Dibenzo(a,h)anthracene	EPA 8270D
Fluoranthene	EPA 8270D
Fluorene	EPA 8270D
Indeno(1,2,3-cd)pyrene	EPA 8270D
Naphthalene	EPA 8270D
Phenanthrene	EPA 8270D
Pyrene	EPA 8270D

Priority Pollutant Phenols

2,3,4,6 Tetrachlorophenol	EPA 8270D
2,4,5-Trichlorophenol	EPA 8270D
2,4,6-Trichlorophenol	EPA 8270D
2,4-Dichlorophenol	EPA 8270D
2,4-Dimethylphenol	EPA 8270D
2,4-Dinitrophenol	EPA 8270D
2-Chlorophenol	EPA 8270D
2-Methyl-4,6-dinitrophenol	EPA 8270D
2-Methylphenol	EPA 8270D

Priority Pollutant Phenols

2-Nitrophenol	EPA 8270D
3-Methylphenol	EPA 8270D
4-Chloro-3-methylphenol	EPA 8270D
4-Methylphenol	EPA 8270D
4-Nitrophenol	EPA 8270D
Pentachlorophenol	EPA 8270D
Phenol	EPA 8270D

Semi-Volatile Organics

1,1'-Biphenyl	EPA 8270D
1,2-Dichlorobenzene, Semi-volatile	EPA 8270D
1,3-Dichlorobenzene, Semi-volatile	EPA 8270D
1,4-Dichlorobenzene, Semi-volatile	EPA 8270D
2-Methylnaphthalene	EPA 8270D
Acetophenone	EPA 8270D
Benzaldehyde	EPA 8270D
Benzoic Acid	EPA 8270D
Benzyl alcohol	EPA 8270D
Caprolactam	EPA 8270D
Dibenzofuran	EPA 8270D

Volatile Organics

Ethylene Glycol	EPA 8015D
Isobutyl alcohol	EPA 8015D
tert-butyl alcohol	EPA 8015D

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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved analytes are listed below:*

Sample Preparation Methods

EPA 3570
EPA 3580A
EPA 3050B
EPA 3540C
EPA 3051A

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Department
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ENVIRONMENTAL ANALYSES AIR AND EMISSIONS
All approved analytes are listed below:

Acrylates

Acetonitrile	EPA TO-15
Acrylonitrile	EPA TO-15
Methyl methacrylate	EPA TO-15

Chlorinated Hydrocarbons

1,2,4-Trichlorobenzene	EPA TO-15
Hexachlorobutadiene	EPA TO-15

Metals I

Lead, Total	40 CFR PART 50 2013 APP G

Miscellaneous

Formaldehyde	EPA TO-11A

Polychlorinated Biphenyls

PCBs and Aroclors	EPA TO-10A

Polynuclear Aromatics

Acenaphthene	EPA TO-13A
Acenaphthylene	EPA TO-13A
Anthracene	EPA TO-13A
Benzo(a)anthracene	EPA TO-13A
Benzo(a)pyrene	EPA TO-13A
Benzo(b)fluoranthene	EPA TO-13A
Benzo(ghi)perylene	EPA TO-13A
Benzo(k)fluoranthene	EPA TO-13A
Chrysene	EPA TO-13A
Dibenzo(a,h)anthracene	EPA TO-13A

Polynuclear Aromatics

Fluoranthene	EPA TO-13A
Fluorene	EPA TO-13A
Indeno(1,2,3-cd)pyrene	EPA TO-13A
Naphthalene	EPA TO-13A
Phenanthrene	EPA TO-13A
Pyrene	EPA TO-13A

Purgeable Aromatics

1,2,4-Trimethylbenzene	EPA TO-15
1,2-Dichlorobenzene	EPA TO-15
1,3,5-Trimethylbenzene	EPA TO-15
1,3-Dichlorobenzene	EPA TO-15
1,4-Dichlorobenzene	EPA TO-15
2-Chlorotoluene	EPA TO-15
Benzene	EPA TO-15
Chlorobenzene	EPA TO-15
Ethyl benzene	EPA TO-15
Isopropylbenzene	EPA TO-15
m/p-Xylenes	EPA TO-15
o-Xylene	EPA TO-15
Styrene	EPA TO-15
Toluene	EPA TO-15
Total Xylenes	EPA TO-15

Purgeable Halocarbons

1,1,1-Trichloroethane	EPA TO-15

Serial No.: 57872

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CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. JOHN TRIMBLE
ALPHA ANALYTICAL
320 FORBES BOULEVARD
MANSFIELD, MA 02048

NY Lab Id No: 11627

is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES AIR AND EMISSIONS
All approved analytes are listed below:

Purgeable Halocarbons

1,1,2,2-Tetrachloroethane	EPA TO-15
1,1,2-Trichloro-1,2,2-Trifluoroethane	EPA TO-15
1,1,2-Trichloroethane	EPA TO-15
1,1-Dichloroethane	EPA TO-15
1,1-Dichloroethene	EPA TO-15
1,2-Dibromo-3-chloropropane	EPA TO-15
1,2-Dibromoethane	EPA TO-15
1,2-Dichloroethane	EPA TO-15
1,2-Dichloropropane	EPA TO-15
3-Chloropropene (Allyl chloride)	EPA TO-15
Bromedichloromethane	EPA TO-15
Bromoform	EPA TO-15
Bromomethane	EPA TO-15
Carbon tetrachloride	EPA TO-15
Chloroethane	EPA TO-15
Chloroform	EPA TO-15
Chloromethane	EPA TO-15
cis-1,2-Dichloroethene	EPA TO-15
cis-1,3-Dichloropropene	EPA TO-15
Dibromochloromethane	EPA TO-15
Dichlorodifluoromethane	EPA TO-15
Methylene chloride	EPA TO-15
Tetrachloroethane	EPA TO-15
trans-1,2-Dichloroethene	EPA TO-15
trans-1,3-Dichloropropene	EPA TO-15
Trichloroethene	EPA TO-15

Purgeable Halocarbons

Trichlorofluoromethane	EPA TO-15
Vinyl bromide	EPA TO-15
Vinyl chloride	EPA TO-15

Volatile Chlorinated Organics

Benzyl chloride	EPA TO-15

Volatile Organics

1,2-Dichlorotetrafluoroethane	EPA TO-15
1,3-Butadiene	EPA TO-15
1,4-Dioxane	EPA TO-15
2,2,4-Trimethylpentane	EPA TO-15
2,5-Dimethylbenzaldehyde	EPA TO-11A
2-Butanone (Methylethyl ketone)	EPA TO-15
4-Methyl-2-Pentanone	EPA TO-15
Acetaldehyde	EPA TO-11A
	EPA TO-15
Acetone	EPA TO-11A
	EPA TO-15
Acrolein (Propenal)	EPA TO-15
Benzaldehyde	EPA TO-11A
Butyraldehyde	EPA TO-11A
Carbon Disulfide	EPA TO-15
Crotonaldehyde	EPA TO-11A
Cyclohexane	EPA TO-15
Hexanaldehyde	EPA TO-11A
Hexane	EPA TO-15

Serial No.: 57872

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.



NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER



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All approved analytes are listed below:

Volatile Organics

Isopropanol	EPA TO-15
Isovaleraldehyde	EPA TO-11A
Methanol	EPA TO-15
Methyl tert-butyl ether	EPA TO-15
m-Tolualdehyde	EPA TO-11A
n-Heptane	EPA TO-15
o-Tolualdehyde	EPA TO-11A
Propionaldehyde	EPA TO-11A
p-Tolualdehyde	EPA TO-11A
tert-butyl alcohol	EPA TO-15
Valeraldehyde	EPA TO-11A
Vinyl acetate	EPA TO-15

Serial No.: 57872

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Appendix O: Health and Safety Plan

300 East 12th Street Site
300 East 12th Street
New York, NY 10003
Block 453, Lot 8

SITE SPECIFIC HEALTH AND SAFETY PLAN (HASP)

PREPARED FOR:

188 Second Equities Corp.
377 Park Avenue South, 3rd Floor
New York, New York 10016

PREPARED BY:

The Vertex Companies, LLC
3322 Route 22W Suite 907
Branchburg, NJ 08876
PHONE 908-448-2627

VERTEX PROJECT NO: 10153.LK

FEBRUARY 2023



Prepared
by:

Eugene Giardino

Signature:

Date: 03/13/2023

Project

Manager: Timothy Biercz

Signature:

Date: 03/13/2023

Hands
Team

Member: Richard Tobia, P.E.

Signature:

Date: 03/13/2023

HASP Limitations and Acknowledgement

This HASP addresses those activities and site procedures to be followed by VERTEX personnel during work performed at this site(s). *This HASP is designed to comply with OSHA standards, such as HAZWOPER, 29 CFR 1910.120, and VERTEX Companies Safety Policies, so compliance with this HASP is required by VERTEX personnel.* The content of this HASP may change or undergo revision based upon additional information made available to VERTEX. Changes proposed must be approved by VERTEX's Hands Team and the Project Manager.

The information in this HASP supplements the health and safety training that each VERTEX employee receives. It is not possible to discover, evaluate, and provide protection for all possible hazards, which may be encountered. This plan is written for the specific-site conditions, purposes, dates, and personnel specified, and must be amended if these conditions change.

Compliance with this HASP is required by persons who enter the site.

This HASP will expire 1 Year after the Hands Team's Signature Date, or if site conditions change. A review and approval by the Hands Team is required to extend the HASP Duration.

VERTEX Colleagues

Name: _____	Signature: _____	Date: _____
Name: _____	Signature: _____	Date: _____
Name: _____	Signature: _____	Date: _____
Name: _____	Signature: _____	Date: _____
Name: _____	Signature: _____	Date: _____

Subcontractors, Owner, and Others

Subcontractors must review this HASP but must prepare their own site-specific HASP based upon their company health and safety program, and the risks and precautions of their work on the site. The subcontractor HASP will be at a minimum consistent with the provisions of this HASP.

This HASP is not intended to satisfy the requirement for the owner or designated subcontractor to prepare their own site-specific HASPs. This HASP does not relieve the owner, subcontractor, or their designated representatives of their responsibility to comply with all federal, state and local laws, regulations and ordinances governing worker health and safety.

VERTEX expressly disclaims any and all guarantees or warranties, expressed or implied that this plan will meet the specific needs or requirements of any subcontractor or its employees. VERTEX, therefore, cannot and does not assume any liability by the use or reuse of this plan by any client, subcontractor or their employees or agents. Any reliance on this plan or the information herein will be at the sole risk and liability of such party.

Employer: _____

Name: _____ Employer: _____ Signature: _____ Date: _____

Name: _____ Employer: _____ Signature: _____ Date: _____

Name: _____ Employer: _____ Signature: _____ Date: _____

Employer: _____

Name: _____ Employer: _____ Signature: _____ Date: _____

Name: _____ Employer: _____ Signature: _____ Date: _____

Name: _____ Employer: _____ Signature: _____ Date: _____

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Attachments

Job Safety Analyses

Daily Safety Log Forms

Near Miss/Incident Report Forms

Safety Data Sheets

Hospital Map and Directions



A *HANDS* on Approach to Safety

VERTEX SITE SPECIFIC HEALTH AND SAFETY PLAN (HASP)

300 East 12th Street
New York, NY
VERTEX Project No. 10153.LK

1.0 CONTACT INFORMATION

EMERGENCY PERPAREDNESS EQUIPMENT LOCATIONS

Fire extinguisher (10 lbs)	On site
First aid kit	VERTEX
Decontamination area	On-site
H&S Plan and other related documents	On-site folder

EMERGENCY PHONE NUMBERS

Ambulance, Police, and Fire	911, in case of emergency.
Poison Control Center	1-800-222-1222
Chemtrec	1-800-424-9300
National Response Center	1-800-424-8802
Utility Clearance (National)/Local Phone #	811
One Call Ticket Number	GPRS to call in
Local Fire Department	311
Local Police Department	311
Water/Sewer Department	718-595-7000
Electrical Company	888-752-6633
Gas Company	888-752-6633
WorkCare Injury Intervention	1-888-449-7787



A HANDS on Approach to Safety

HOSPITAL INFORMATION

Mount Sinai Beth Israel	212-420-2000 281 1 st Ave, NY, NY 10003

A HOSPITAL MAP AND DIRECTIONS ARE ATTACHED

PERTINENT SITE CONTACT INFORMATION

SITE CONTACT	Mr. George Lavian 300 East 12 th Street New York, NY 212-421-2150
PROJECT MANAGER - VERTEX OFFICE	Timothy Biercz 3322 Rt. 22 West Branchburg, NJ 732-690-3083
Health and Safety (HANDS) Phone Number	339-499-4995
HandS Team Member working on this HASP:	908-500-2369



A HANDS on Approach to Safety

2.0 SITE DESCRIPTION AND RELEVANT INFORMATION

The Site is in the East Village section of Manhattan, New York and is identified as Block 453, Lot 8 on the New York City Tax Map. According to the New York City Department of Buildings (NYCDOB), the Site is identified with the following addresses: 188 Second Avenue and 300 East 12th Street, Manhattan. The Site is in an urban area with a mix of commercial and residential buildings and is located at the southeast corner of the intersection of Second Avenue and East 12th Street.

The Site is improved with a six-story building with a cellar. The Site building pad encompasses approximately 19,299 square feet and was constructed in 1920. The Site building's ground floor contains two vacant restaurant tenant spaces, both with access to separate cellar support areas. The restaurant space at 188 2nd Avenue was most recently occupied by Strings Ramen. The restaurant space at 190 2nd Avenue/300 East 12th Street (Site) was most recently occupied by Dunhuang. Floors two through six of the Site building consist of 19 residential apartments. The Site building is serviced by municipal water (New York City Department of Environmental Protection [NYCDEP]), municipal sanitary and storm sewer (NYCDEP), electric (Consolidated Edison), and natural gas (Consolidated Edison). In addition, the Site is improved with an active 4,500-gallon No. 2 heating oil aboveground storage tank (AST), which is registered under Petroleum Bulk Storage (PBS) No. 2-406619 and located within a separate room in the cellar to which neither retail tenant has access. The building footprint covers the majority of the Site, with two small, cellar-level, concrete-paved courtyards located on the central and eastern portions of the property, and concrete-paved public sidewalks to the northwest (along Second Avenue) and northeast (along East 12th Street).

2.1 Relevant Information

Based on a review of reasonably ascertainable historical information, the Site was improved with two structures by at least 1903, which consisted of a residential building (188 2nd Avenue) and mixed-use residential and commercial structure (190 2nd Avenue and 300 East 12th Street). The eastern portion of the commercial space, identified as 300 ½ East 12th Street, was noted as a Chinese laundry in 1903. The former buildings were razed in the early 1900s and in 1920, the current mixed-use residential and commercial structure was constructed. Prior to the 1950s, commercial tenants included a café, a tailor, a hair products store, and a plumbing and heating supply store. According to historic city directories, from at least 1956 to 1988, commercial tenants operated 190 2nd Avenue and 300 East 12th Street as a dry-cleaning facility (K&S Cleaners & Dyers and Leather Master Cleaners & Tailor). It should be noted that the current property owner purchased the Site in 1987, and at the time, the commercial tenant spaces had been renovated and there was no evidence of former on-site dry-cleaning activities. Both ground floor commercial tenant spaces were occupied by restaurants from the late 1980s to approximately 2020 and are currently vacant.

2.2 Anticipated Chemicals:

- Chlorinated volatile organic compounds (CVOCs)

2.3 Scope of Work and Tasks

The VERTEX scope of work for this project includes the following tasks:

- Site reconnaissance.
- Geophysical survey.
- Sewer evaluation.
- Borehole advancement using a direct-push drill rig and hand equipment.
- Borehole advancement using a hollow-stem auger drill rig.
- Installation of permanent monitoring wells.

- Installation of temporary sub-slab soil vapor sampling points.
- Collection of soil, groundwater, sub-slab soil vapor, indoor air, and ambient air samples.
- Groundwater and soil vapor extraction.
- Disposal of investigation-derived waste (IDW).
- Sub-slab depressurization system (SSDS) installation oversight.
- In-situ chemical oxidation (ISCO) pilot study.

2.4 Subcontractors Scope of Work

Geophysical Evaluation

- Investigation utilizing Electromagnetic (EM), Utility Location (UL) and/or Ground Penetrating Radar (GPR) technology to clear proposed boring locations and verify locations of current below-grade utilities.

Sewer Evaluation

- Perform a sanitary sewer evaluation, to confirm the locations of the sewer connections to the site building and below the site building footprint, the sewer locations beneath the sidewalk around the perimeter of the site building, and the location of the sewers within nearby streets. The inspection will include a video inspection of the sanitary sewer piping within and existing the site building.

Borehole and Monitoring Well Installation

- Installation of soil borings and permanent monitoring wells via direct-push, hand equipment, and hollow-stem auger drilling methodologies.

Groundwater and Soil Vapor Extraction

- Conduct enhanced fluid recovery (EFR) events via a drum vacuum on permanent monitoring wells installed at the Site. Groundwater to be placed in 55-gallon drums. Air exhaust from the vacuum was treated on-site via activated carbon in a 55-gallon drum.

Drum Disposal

- Disposal of IDW (soil cuttings, concrete, and purge water) generated during the installation of permanent monitoring wells, development of wells, groundwater sampling events, and SSDS installation.

SSDS Installation

- Installation of an active SSDS consisting of saw cutting and excavation of the SSDS piping trenches in the cellar of the Site building; installation of piping runs pass through building walls, floors, and ceilings; installation of a blower on the roof; and installation of permanent sub-slab monitoring points.

ISCO Pilot Study

- Installation of temporary injection points via direct-push drilling; mixing of treatment chemicals into solutions; and injection of materials under pressure and at different depth intervals to aid in distribution of the chemicals in the formation and monitored to prevent surfacing.

3.0 JOB SAFETY ANALYSES

The following Job Safety Analyses (JSAs) will be followed during this project. The JSAs are included in the Attachments Section:

1. Site Reconnaissance and GPR Survey Oversight
2. Drilling Oversight
3. Monitoring Well Installation
4. Soil Sampling
5. Groundwater Sampling
6. Soil Vapor and Indoor Air Sampling
7. Site Reconnaissance and Excavation Oversight
8. Injection Oversight
9. Virus Avoidance

3.1 Site Reconnaissance/Site Entrance

The Site is a portion of the Associated Property. Access to the Site cellar is via bilco doors located on East 12th Street and a door along Second Avenue. The doors are locked outside of typical working hours.

3.2 Ladders

Ladders are not anticipated to be used during VERTEX's investigative activities. We can minimize risk when using a ladder by:

- Using a VERTEX-owned ladder.
- Thoroughly inspecting the ladder before each use.
- Ascending and descending the ladder with three contact points.

- Using ladders of the appropriate height, materials, and construction for the work being performed.
- Securing the ladder, and where applicable maintaining appropriate ladder angle prior to ascension.
- Never move a ladder while occupied.
- Using a hoist to bring tools and materials to the work area.

3.3 Special Risks

Due to the nature of the work, the known presence of CVOC contaminants beneath the slab, the location of the work in a basement and lack of natural ventilation, and the use of power tools gasoline-fired power tools (i.e. saws), VERTEX will monitor atmospheric conditions in the work area including volatile organic vapors, oxygen, carbon dioxide, carbon monoxide, and the lower explosive limit (LEL). Mechanical ventilation equipment will be utilized to provide adequate ventilation to the basement during the proposed scope of work. PPE, water, and ventilation will be utilized to minimize exposure to dust during concrete cutting/restoration. Take precautions and utilize hand tools when trenching in the vicinity of sub-grade utilities (sewer/steam pipes). Take precautions when handling contaminated soil/groundwater.

4.0 WORK ZONES

Work zones in an environmental remediation project typically include three specific areas:

1. The Support Zone
2. The Decontamination Zone
3. The Exclusion Zone

The zones are shown on the site plan on the cover of this HASP.

The following tables provide general guidelines for the establishment of work zones. The information provided should be adjusted if warranted by field observations, such as traffic, and measurements, laboratory analytical results, or at the request of the HandS Team.

ACTIVITY	GENERAL WORK ZONE RADIUS (FEET)	WORK ZONE EVALUATION
Soil/Sediment Sampling	5	The Site supervisor may modify the work zone radius based upon field conditions (examples below): Physical barriers or walls that may reduce the work zone to the barrier or wall. High traffic area may increase the work zone to allow for worker safety.
Drilling	15	The Site supervisor may modify this radius based upon the specific equipment being use. Generally, height of equipment plus 5 feet.
Overhead Power Lines	10	Assumes < 50 kV. Additional 4-inches per 50 kV.

5.0 CLEANLINESS AND HYGIENE

5.1 Housekeeping

Proper housekeeping is the foundation for a safe work environment. It prevents incidents and fires, as well as creating a businesslike work area. Materials will be stored in a stable manner so that it will not be subject to falling. Rubbish, scraps and debris will be removed from the work area on a daily basis to job-site dumpster or truck as required. Materials and supplies will not be left in stairways, walkways, near floor openings or at the edge of the building when exterior walls are not built.

5.2 Hygiene Facilities

Hygiene facilities include washing and toilet facilities. The hygiene facilities for this project will be located inside the tenant space and will consist of a permanent restroom.

6.0 AIR MONITORING AND ACTION LEVELS

Air monitoring is required whenever we anticipate exposure to airborne chemicals or dust. The purpose of air monitoring is to keep track of the concentration of the contaminants of concern (COC) and minimize the exposure to VERTEX colleagues, workers and the general public. The following table presents the air monitoring methods, exposure guidelines and action levels.

Contact the HandS Team to establish the values that are appropriate for the purpose and for the COCs. If you have questions or surpass an action level in the field, contact the HandS Team for guidance.

MONITORING PROTOCOLS AND ACTION LIMITS FOR PETROLEUM VOCs		
Range	PPE	Action
Background to 5 ppmv	LEVEL D	Continue air monitoring.
Above 5 ppmv	LEVEL D	Pause work and contact the Project Manager and the HandS Team for guidance.

6.1 Exposure Guidelines

Airborne Contaminant Monitoring VERTEX Responses Based on Level D PPE				
Parameter	Contaminant Measurements	VERTEX Response	Comments	Frequency of Measurement
VOCs – normal concentration: 0 - 5 ppm Depending on the concentration you may sense an oily odor	< 5 ppm	Continue working	VOCs are a group of compounds with various PELs. Benzene and vinyl chloride have low PEL, each is 1 ppm. A PID is usually used to measure VOCs. The lamp selected, usually either 10.6 or 11.7eV must be appropriate for the contaminants of concern. If the work is intended to be completed only in Level D PPE, then work should stop at 5 ppm. A decision would be made at that point about whether to use a Draeger Tube to test for benzene, or to wear a respirator.	VOCs will be continuously logged in the datalogger.
	5 – 10 ppm	Temporarily stop work and contact the CIH		
	1-5 mg/m ³	Temporarily stop work and contact the CIH		
	> 5 mg/m ³	Stop work, respiratory protection will be required		

7.0 DECONTAMINATION

Our goal is always to keep contaminated material where it belongs, either on a project site or in an appropriate waste disposal process. We should avoid taking contaminated materials with us on our clothes or the bottoms of our work boots, into our vehicles, or to our homes. This practice applies to staff who may encounter hazardous materials/waste, and it is also reasonable to manage nuisance dirt from sites in a responsible manner.

VERTEX supports proper project planning and execution to minimize risks. This requires:

- Planning before going to the Site:
- Responsible actions at the Site:
- After you leave the Site:

It is critical that decontamination takes place prior to break periods and at the end of the day to reduce the chances of ingesting contaminants or carrying them off the Site.

Decontamination to be performed:

- Remove PPE and dispose of disposable items.
- Wash hardhats and safety glasses.
- Rinse work boots in a boot wash.

8.0 SIMULTANEOUS OPERATIONS

Simultaneous operations are activities that may be taking place at the same time as VERTEX's or our subcontractor's work. The following activities will be taking place nearby to our work:

- No other simultaneous operations will be taking place.

9.0 TRAINING AND MEDICAL SURVEILLANCE

9.1 Training

Colleagues and workers assigned to a VERTEX project must have proper training and experience to enable our project to be performed successfully. At a minimum, completion of the OSHA 10-Hour Construction Safety training session and 40-Hour HAZWOPER in accordance with OSHA standard, 29 CFR 1910.120 is required for all VERTEX colleagues.

9.2 Medical Surveillance

Field staff who are exposed to chemicals will participate in VERTEX's Medical Surveillance Program. Our program is administered by our Human Resources Department. The examination is responsive to many chemicals, but not all chemicals, so prior to a project, the Project Manager should check with Human Resources or the HandS Team, especially if unusual chemicals or elements are involved in the scope of work. VERTEX colleagues can verify the content of their exams by contacting Human Resources. The colleague must successfully pass the physical examination prior to field work on the project.

10.0 SAFETY MEETINGS

Safety meetings are vital to set the tone for safe work performance at the beginning of a project and each day. These meetings should be attended by all project participants, that is, VERTEX colleagues, contractors, and client staff if they are on-site. Several types of meetings may take place during a project:

- Kick-off meeting. This meeting begins a project and may take place at the field site or in an office or trailer. The scope of work should be reiterated, along with the hazards and precautions. This meeting is important to setting the tone and expectations for performance.
- Daily tailgate safety meeting. Held at the beginning of each shift, this meeting reiterates the scope of work planned during the shift, the hazards, and precautions. Ideally, a different person, including contractor workers, would lead the meeting each day of a project to engage everyone and make each meeting fresh.
- Post project meeting. Although this meeting does not always take place, it is a good idea to wrap up a project and share what went well and what should be improved the next time the project team is together or share lessons to take to the next project regardless of the team.
- Root cause analysis meeting is held following an incident or near miss to understand the root cause of what went wrong or almost went wrong (near miss) to reduce the chance of recurrence and to share lessons learned. These discussions are an essential part of any people-based safety program.

11.0 EMERGENCY RESPONSE PLAN

Incidents and near misses, no matter how minor, must be reported immediately to the Project Safety Supervisor or VERTEX HandS Team! The Safety Hotline is 339.499.4995. Other information is included in the Contact Information chart at the beginning of this HASP. Directions to the nearest hospital are attached at the end of the HASP so that they can be posted in an accessible location.

11.1 Emergency Incident

The nature of our work makes emergencies on site a continual possibility. Although emergencies are unlikely and occur infrequently, a contingency plan is required to ensure timely and appropriate response actions. The contingency plan is reviewed at the tailgate safety meetings. Discuss client Emergency Response Plans with all project participants so that everyone knows their part and expectations.

Upon Incident, Near Miss, Physical Reaction or Excessive Exposure: Leave area immediately and seek appropriate medical assistance. This may include, but not be limited to, any of the following physiological reactions:

- Dizziness
- Nausea
- Rash
- Asthmatic Reaction
- Abdominal Pain
- Distorted Vision or Hearing
- Excessive Coughing
- Edema or Localized Swelling
- Headaches
- Exposure to High/Cold Temperatures

11.2 Upon Emergency Incident, Take the Following Actions:

1. Size-up the situation based on the available information.
2. Follow the VERTEX Wallet Card calling directions. You must speak directly to a person: Notify:
 - a. Your Supervisor/Site Supervisor, follow any client required procedures.
 - b. Call the VERTEX HandS Team at 339-499-4995.
 - c. Call Human Resources.
 - d. Call your Project Manager/Client.
 - e. Call Account Manager.
3. Only respond to an emergency if personnel are sufficiently trained and properly equipped.
4. As appropriate, evacuate site personnel and notify emergency response agencies, e.g., fire, police, etc.
5. As necessary, request assistance from outside sources and/or allocate personnel and equipment.
6. Consult the posted emergency phone list and contact key personnel.
7. Prepare an incident/near miss report. Forward incident report to Project Manager/VERTEX HandS Team within 24 hours via the HandS@vertexeng.com email.

11.3 Upon Medical Emergency, Take the Following Actions:

1. Assess the severity of the injury and perform first aid/CPR as necessary to stabilize the injured person. Follow universal precautions to protect against exposure to bloodborne pathogens.
2. Get medical attention for the injured person immediately. Call 911 or consult the Emergency Contacts list which must be posted at the site.

3. Follow the VERTEX Wallet Card calling directions. You must speak directly to a person: Notify:
 - a. Your Supervisor/Site Supervisor, follow any client required procedures.
 - b. For any injuries, call WorkCare at 888-449-7787. For international calls, use 714-456-2107. WorkCare has qualified medical practitioners tending the phone to offer a telephone triage of the situation. WorkCare will provide guidance on how to transport the injured individual.
 - c. Call the VERTEX HandS Team at 339-499-4995
 - d. Call Human Resources
 - e. Call your Project Manager/Client
 - f. Call Account Manager.
4. Prepare an incident report. The Site Safety officer is responsible for its preparation and submittal to the Health and Safety Manager within 24 hours by email at HandS@vertexeng.com.
5. You can reach Human Resources at HR@vertexeng.com.



A HANDS on Approach to Safety

12.0 NEAR MISS/UNSAFE CONDITION REPORTING

Reporting of near misses and unsafe conditions is a critical piece of our health & safety learning, and it comes with “no cost,” because nothing was damaged, and no one was hurt. A near miss is defined as an event that “almost happened but did not.” An unsafe condition is simply a potentially unsafe condition that is recognized before it even becomes a near miss. A good litmus test for reporting is, “Do you think someone who has less experience would benefit from learning about your event or unsafe condition?” If so, please go ahead and report it. The Near Miss Incident Report can be used for this purpose. The HandS Team also accepts emails or even a phone call to report to make sharing of information as easy as possible. Call the HandS Team number that is found in the Contacts information, or email at HandS@vertexeng.com.

ATTACHMENTS

JOB SAFETY ANALYSES

VERTEX The VERTEX Companies Health & Safety - A HANDS on Approach to Safety

Task to Be Performed:	Geoprobe Drilling Oversight	Analyzed By:	E. Giardino
		Date	23-Mar-23
Project Name & Location:	300 East 12th Street, New York, New York		
Possible Risks at a Glance		Engineering Controls at a Glance	
Possible risks include associated with groundwater sampling include: 1. Vehicular traffic; 2. Potential to encounter utilities; 3. Excessive noise; 4. Drill rig moving and heated mechanisms; 5. Muscle strains from lifting; 6. Eye injury from dust and debris; 7. Inhalation of dust and debris; 8. Lacerations; 9. Muscle strain from heavy lifting; 10. Slip/Trip/Fall hazards due to uneven terrain, equipment, debris, and/or slippery surfaces. 11. Mechanical failure leading to injury or property damage; and, 12. Pinch points. 13. Heat stress		None	
		Work Practice Controls at a Glance	
		* Wear appropriate PPE. * Practice safe drilling and oversight techniques. * Implement procedures to avoid heat stress. * Implement procedures for working safely around heavy equipment.	
		Personal Protective Equipment at a Glance	
		Level D PPE including safety glasses, steel-toe boots, chemical resistant gloves, hearing protection, work gloves, hard hat, and reflective safety vest.	
Step #	Specific Steps in the Task	Hazards and Risks by Step That Must Be Controlled	Precautions Actions to Avoid the Risks
1	Set up necessary traffic and public access controls	1. Personnel could be hit by vehicular traffic.	* Set up work area demarcation, including cones and caution tape, or greater if needed, to establish work area. * Position vehicle so that field crew is protected from site traffic. *Unload as close to work area as safely possible.
2	Utility Clearance	1. Potential to encounter underground or aboveground utilities while drilling.	Complete utility clearance using State One Call, GPR services, and hand augur or other strategy such as vacuum excavation to 5 feet bgs.
3	Geoprobe drill rig operation	1. Excessive noise is generated by rig operations.	When the engine is used at high RPMs or soil samples are being collected, use hearing protection.
			Responsible Person
			Field Staff
			Field Staff
			Drilling subcontractor and field staff

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Step #	Specific Steps in the Task	Hazards and Risks by Step That Must Be Controlled	Precautions Actions to Avoid the Risks	Responsible Person
3	Geoprobe drill rig operation	2. During drill rig operation, surfaces will become hot and cause burns if touched, and COCs in the soil will more readily vaporize generating airborne contaminants.	* Use caution handling equipment and wear proper work gloves - nitrile gloves are not sufficient when contacting hot surfaces; use a heavy duty glove. * Air monitoring should be performed in accordance with the HASP to monitor the potential volatilization of COCs.	Drilling subcontractor
		3. Moving parts of the drilling rig can pull you in, causing injury. Pinch points on the rig and auger connections can cause pinching or crushing of body parts.	* Stay at least 5 feet away from moving parts of the drill rig. * Know where the kill switch is, and have the drillers test it to verify that it is working. * Do not wear loose clothing and tie back long hair. * Avoid wearing jewelry when drilling. * Ensure that the work area demarcation is effective at keeping unauthorized people out of the work zone around the drill rig.	Drilling subcontractor and field staff
		4. Dust and debris can cause eye injury and soil cuttings and/or water could contain COCs.	Wear safety glasses and stay as far away from actual drilling operation as practicable. Wear appropriate gloves to protect from COCs.	Drilling subcontractor and field staff
		5. Drilling equipment laying on the ground (i.e. augurs, split spoons, decon equipment, coolers, etc.) create a tripping hazard. Water from decon buckets generate mud and cause a slipping hazard.	* Keep equipment and trash picked up and store away from the primary work area. * Wear footwear with ankle support.	Drilling subcontractor
		6. The raised derrick can strike overhead utilities, tree limbs, or other elevated items.	* Never move the rig with the derrick up. * Ensure there is proper clearance to raise the derrick. * Survey the surrounding area to ensure that you are far enough away from overhead power lines.	Drilling subcontractor

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Task to Be Performed:	Groundwater Sampling	Analyzed By:	E. Giardino	
		Date	13-Mar-23	
Project Name & Location:	300 East 12th Street, New York, New York			
Possible Risks at a Glance		Engineering Controls at a Glance		
Possible risks include associated with groundwater sampling include: 1. Vehicular traffic; 2. Tripping/slipping hazards; 3. Pinch points; 4. Lacerations; 5. Muscle strains from lifting; 6. Electrical shock; and 7. Exposure to contaminated vapors and/or water.		None		
		Work Practice Controls at a Glance		
		Wear appropriate PPE, practice safe sampling techniques.		
		Personal Protective Equipment at a Glance		
		Level D PPE including safety glasses, steel-toe boots, chemical resistant gloves, work gloves, hard hat, and reflective safety vest.		
Step #	Specific Steps in the Task	Hazards and Risks by Step That Must Be Controlled	Precautions Actions to Avoid the Risks	Responsible Person
1	Stage at pre-determined sampling location and set up work zone and sampling equipment	1. Personnel could be hit by vehicular traffic.	Set up cones and establish work area. Position vehicle so that field crew is protected from site traffic. Unload as close to work area as safely as possible.	Field Staff
		2. Sampling equipment, tools, and monitoring well covers can cause tripping hazard.	Keep equipment picked up and monitor any changes to site condition.	Field Staff
2	Open wells to equilibrate and gauge wells	1. When squatting down, personnel can be difficult to see by vehicular traffic.	Wear Class II traffic vest if wells are located in/near vehicular traffic. Use tall cones and the buddy system if practicable.	Field Staff

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Step #	Specific Steps in the Task	Hazards and Risks by Step That Must Be Controlled	Precautions Actions to Avoid the Risks	Responsible Person
2	Open wells to equilibrate and gauge wells	2. Pinch points on well vaults can pinch or lacerate fingers.	Use correct tools to open well vault/cap. Wear leather gloves when removing well vault lids, and chemical protective gloves when gauging. Wear proper PPE including safety boots, knee pads, and safety glasses.	Field Staff
		3. Lifting sampling equipment can cause muscle strain.	Unload as close to work area as safely possible; use proper lifting and reaching techniques and body positioning; don't carry more than you can handle and get help moving heavy or awkward objects.	Field Staff
		4. Pressure can build up inside well causing cap to release under pressure.	Keep head away from well cap when removing. If pressure relief valves are on well, use prior to opening.	Field Staff
		5. Vapors from open wells.	Conduct air monitoring as wells are opened. When opening wells, be positioned downwind when possible.	Field Staff
3	Begin purging well and collecting parameter measurements	1. Electrical shock can occur when connecting/disconnecting pump from battery.	Make sure equipment is turned off when connecting/disconnecting. Wear leather gloves. Use GFCIs when using power tools and pumps. Do not use in the rain or run electrical cords through wet areas.	Field Staff
		2. Purge water can spill or leak from equipment.	Stop purging activities immediately, stop leakage and block any drainage grate with absorbent pads. Call PM to notify them of any reportable spill.	Field Staff
		3. Water spilling on the ground can cause muddy/slippery conditions.	Be careful when walking around work area and wear proper safety boots.	Field Staff

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		4. Lacerations can occur when cutting materials such as plastic tubing.	When cutting tubing, use tubing cutter. No open fixed blades should ever be used. When possible, wear leather safety gloves.	Field Staff

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Step #	Specific Steps in the Task	Hazards and Risks by Step That Must Be Controlled	Precautions Actions to Avoid the Risks	Responsible Person
3	Begin purging well and collecting parameter measurements	5. Purge water can splash into eyes.	Pour water slowly into buckets/drums to minimize splashing. Wear safety glasses and recommended PPE.	Field Staff
4	Collect groundwater sample	1. Sample water can splash into eyes.	Minimize splashing potential by wearing safety glasses and appropriate gloves.	Field Staff
		2. Sample containers could break/leak preservative.	Discard any broken sample containers properly. Wear appropriate eye and hand protection.	Field Staff
5	Staging of purged well water	1. Muscle strains can occur when moving purge water or drums.	If using buckets, do not fill buckets up to the top. Always keep lid on buckets when travelling or moving them to another location. Only half fill buckets so bucket weight is manageable.	Field Staff
		2. Spilling or splashing of purge water.	Make sure that purge water is properly contained with a lid to avoid spilling/splashing the purge water. Wear long sleeve shirts while sampling.	Field Staff

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Task to Be Performed:	Injections via Geoprobe		Analyzed By:	E. Giardino
			Date	16-Apr-23
Project Name & Location:	300 East 12th Street, New York, New York			
Possible Risks at a Glance			Engineering Controls at a Glance	
Possible risks include associated with chemical injection include: 1. Vehicular traffic; 3. Pressurized hose rupture 3. Potential to encounter utilities; 4. Excessive noise; 5. Drill rig moving and heated mechanisms; 6. Muscle strains from lifting; 7. Eye injury from dust and debris; 8. Inhalation of dust and debris; 9. Lacerations; 10. Muscle strain from heavy lifting; 11. Slip/Trip/Fall hazards due to uneven terrain, equipment, debris, and/or slippery surfaces. 12. Mechanical failure leading to injury or property damage; and, 13. Pinch points. 14. Heat stress 2. Chemical Burns			None	
			Work Practice Controls at a Glance	
			* Wear appropriate PPE. * Practice safe drilling and oversight techniques. * Implement procedures to avoid heat stress. * Implement procedures for working safely around heavy equipment.	
			Personal Protective Equipment at a Glance	
			Level D PPE including safety glasses, steel-toe boots, chemical resistant gloves, hearing protection, work gloves, hard hat, and reflective safety vest. Higher level of PPE for workers immediately in injection trailer or near chemical.	
Step #	Specific Steps in the Task	Hazards and Risks by Step That Must Be Controlled	Precautions Actions to Avoid the Risks	Responsible Person
1	Set up necessary traffic and public access controls	1. Personnel could be hit by vehicular traffic.	* Set up work area demarcation, including cones and caution tape, or greater if needed, to establish work area. * Position vehicle so that field crew is protected from site traffic. *Unload as close to work area as safely possible.	Field Staff
2	Utility Clearance	1. Potential to encounter underground or aboveground utilities while drilling.	Complete utility clearance using State One Call, GPR services, and hand augur or other strategy such as vacuum excavation to 5 feet bgs.	Field Staff

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3	Geoprobe drill rig operation	1. Excessive noise is generated by rig operations.	When the engine is used at high RPMs or injection boring is being advanced, use hearing protection.	Drilling subcontractor and field staff
		2. During drill rig operation, surfaces will become hot and cause burns if touched, and COCs in the soil will more readily vaporize generating airborne contaminants.	* Use caution handling equipment and wear proper work gloves - nitrile gloves are not sufficient when contacting hot surfaces; use a heavy duty glove. * Air monitoring should be performed in accordance with the HASP to monitor the potential volatilization of COCs.	Drilling subcontractor
		3. Moving parts of the drilling rig can pull you in, causing injury. Pinch points on the rig and auger connections can cause pinching or crushing of body parts.	* Stay at least 5 feet away from moving parts of the drill rig. * Know where the kill switch is, and have the drillers test it to verify that it is working. * Do not wear loose clothing and tie back long hair. * Avoid wearing jewelry when drilling. * Ensure that the work area demarcation is effective at keeping unauthorized people out of the work zone around the drill rig.	Drilling subcontractor and field staff
		4. Dust and debris can cause eye injury and soil cuttings and/or water could contain COCs.	Wear safety glasses and stay as far away from actual drilling operation as practicable. Wear appropriate gloves to protect from COCs.	Drilling subcontractor and field staff
		5. Drilling equipment laying on the ground (i.e. augers, split spoons, decon equipment, coolers, etc.) create a tripping hazard. Water from decon buckets generate mud and cause a slipping hazard.	* Keep equipment and trash picked up and store away from the primary work area. * Wear footwear with ankle support.	Drilling subcontractor
		6. The raised derrick can strike overhead utilities, tree limbs, or other elevated items.	* Never move the rig with the derrick up. * Ensure there is proper clearance to raise the derrick. * Survey the surrounding area to ensure that you are far enough away from overhead power lines.	Drilling subcontractor

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Step #	Specific Steps in the Task	Hazards and Risks by Step That Must Be Controlled	Precautions Actions to Avoid the Risks	Responsible Person
4	Addition of chemical to subsurface/handling of chemical	1. Chemical Exposure (burns), spills, drips, leaks 2. Pressurized line rupture 3. Spills of chemical	1. Add PPE, Goggles, splash shield, chemical protective clothing, steel-toed shoes with PVC/Rubber covers and disposable nitrile inner/heavy PVC or neoprene outer glove. 2. Buddy System during all transfers of liquid with third site person designated as standby to assist (if needed) or to implement EMS notification. Ensure proper flow pathways, valve positions and appropriate chemical resistant contact components. 3. Insure operatibility of emergency kill switch to immediately cease additions. Ensure Location, availability and operability of drench shower, dilution water, neutrilizer solution and communications to respond to conditions. 4. Recognize that injection will pressure lines, bleed all lines prior to breaking connections. Keep distance from pressure lines if possible. 5. Use absorbant material to handle spills and drips, use sodium thiosulfate to handle larger spills and for neutralization of chemical.	Drilling subcontractor and field staff

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Step #	Specific Steps in the Task	Hazards and Risks by Step That Must Be Controlled	Precautions Actions to Avoid the Risks	Responsible Person
5	Soil cutting and purge water management.	1. Moving full drums can cause back injury and/or pinching/crushing injury.	* Employ proper lifting techniques and body positioning. * Do not carry more than you can handle. * Get assistance from an associate or a lift assist device for heavy objects. * Wear leather work gloves. * Clear all walking and work areas of debris prior to moving a drum.	Field Staff
6	Sample collection and processing	1. Injuries can result from pinch points on sampling equipment and from breakage of sample containers.	* Care should be taken when opening sampling equipment. * Look at empty containers before picking them up to be sure that they are not broken to avoid injuries from broken glass. * Use dividers or bubble wrap in cooler so that the containers do not break.	Field Staff
		2. Lifting heavy coolers can cause muscle strain and/or back injuries.	* Use proper lifting techniques and body positions; * Do not carry more than you can handle and get help moving heavy or awkward objects.	Field Staff

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Task to Be Performed:	Monitoring Well Installation	Analyzed By:	E. Giardino
		Date	13-Mar-23

Project Name & Location:	300 East 12th Street, New York, New York

Possible Risks at a Glance	Engineering Controls at a Glance
Possible risks include associated with groundwater sampling include: 1. Vehicular traffic; 2. Potential to encounter utilities; 3. Excessive noise; 4. Drill rig moving and heated mechanisms; 5. Muscle strains from lifting; 6. Eye injury from dust and debris; 7. Lacerations; 8. Muscle strain from heavy lifting; and 9. Slip/Trip/Fall hazards due to equipment, debris, and/or slippery surfaces.	None
	Work Practice Controls at a Glance
	Wear appropriate PPE, practice safe drilling and installation techniques.
	Personal Protective Equipment at a Glance
	Level D PPE including safety glasses, steel-toe boots, chemical resistant gloves, hearing protection, work gloves, hard hat, and reflective safety vest.

Step #	Specific Steps in the Task	Hazards and Risks by Step That Must Be Controlled	Precautions Actions to Avoid the Risks	Responsible Person
1	Set up necessary traffic and public access controls	1. Personnel could be hit by vehicular traffic.	Set up cones and establish work area. Position vehicle so that field crew is protected from site traffic. Unload as close to work area as safely as possible.	VERTEX
2	Utility Clearance	1. Potential to encounter underground or aboveground utilities while drilling.	Complete utility clearance using State One Call, GPR services, and/or hand augur to 5 feet bgs.	VERTEX/Sub Contractor
3	General drill rig operation	1. Excessive noise is generated by rig operations.	When the engine is used at high RPMs or soil samples are being collected, use hearing protection.	Sub Contractor

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Step #	Specific Steps in the Task	Hazards and Risks by Step That Must Be Controlled	Precautions Actions to Avoid the Risks	
3	General drill rig operation	2. During drill rig operation, surfaces will become hot and cause burns if touched, and COCs in the soil will more readily vaporize generating airborne contaminants.	Use caution handling equipment and wear proper work gloves. Air monitoring should be performed in accordance with the HASP to monitor the potential volatilization of COCs.	Sub Contractor
		3. Moving parts of the drilling rig can pull you in, causing injury. Pinch points on the rig and auger connections can cause pinching or crushing of body parts.	Stay at least 5 feet away from moving parts of the drill rig. Know where the kill switch is, and have the drillers test it to verify that it is working. Do not wear loose clothing and tie back long hair. Avoid wearing jewelry when drilling. Cone off work area to keep general public away from the drill rig.	Sub Contractor
		4. Dust and debris can cause eye injury and soil cuttings and/or water could contain COCs.	Wear safety glasses and stay as far away from actual drilling operation as practicable. Wear appropriate gloves to protect from COCs.	Sub Contractor
		5. Drilling equipment laying on the ground (i.e. augurs, split spoons, decon equipment, coolers, etc.) create a tripping hazard. Water from decon buckets generate mud and cause a slipping hazard.	Keep equipment and trash picked up and store away from the primary work area. Wear footwear with ankle support.	Sub Contractor
		6. The raised derrick can strike overhead utilities, tree limbs, or other elevated items.	Never move the rig with the derrick up. Ensure there is proper clearance to raise the derrick. Ensure that you are far enough away from overhead power lines.	Sub Contractor
4	Monitoring well installation	1. Monitoring well construction materials can clutter the work area causing tripping hazards.	Well construction materials should be picked up during the well installation process.	Sub Contractor

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Step #	Specific Steps in the Task	Hazards and Risks by Step That Must Be Controlled	Precautions Actions to Avoid the Risks	
4	Monitoring well installation	2. Heavy lifting can cause muscle strains.	Use proper lifting and reaching techniques and body positioning; don't carry more than you can handle and get help moving heavy or awkward objects.	Sub Contractor
		3. Lacerations can occur when cutting materials, such as bags or plastic tubing.	When cutting items, ensure that proper cutting tools are utilized. When possible, wear leather safety gloves.	Sub Contractor
		4. Well packed material (i.e. sand, grout, bentonite) can become airborne and get in your eyes.	Wear safety glasses for protection from airborne sand and dust.	Sub Contractor
		5. Cutting the top of the well to size can cause jagged/sharp edges on the top of the well casing.	Wear gloves when working with the top of the well casing, and file any sharp jagged edges that resulting from cutting to size.	Sub Contractor
5	Soil cutting and purge water management.	1. Moving full drums can cause back injury and/or pinching/crushing injury.	Employ proper lifting techniques and body positioning. Don't carry more than you can handle; get assistance from an associate or a lift assist device for heavy objects. Wear leather work gloves and clear all walking and work areas of debris prior to moving a drum.	VERTEX/Sub Contractor

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Task to Be Performed:	Site Reconnaissance & Excavation Oversight	Analyzed By:	E. Giardino
		Date	13-03-23
Project Name & Location:	300 East 12th Street, New York, New York		
Possible Risks at a Glance		Engineering Controls at a Glance	
Possible risks include associated with site reconnaissance & excavation oversight include: 1. Vehicular collision/damage; 2. Slip, trip, and fall hazards; 3. Truck and heavy equipment operations; 4. Scratch, scrape, lacerations and impalement hazards; 5. Muscle strains; 6. On-site traffic; 7. Eye hazards from wind-blown dust; 8. Lack of communications; 9. Personal injury from energized equipment; 10. Changing site conditions.		* Consider wetting of soils for dust protection during excavation, * Covers for soil in roll-off container(s), * Covers for unattended open excavations, * Restricted access to public	
		Work Practice Controls at a Glance	
		* Wear appropriate PPE * Warning signs * Practice excavation oversight techniques * Only trained and qualified workers shall operate equipment	
		Personal Protective Equipment at a Glance	
		* Modified Level D PPE - steel- or composite-toe boots, reflective safety vest, safety glasses, work gloves, hard hat, and tyvek suite/books (spalsh resistant). * Wear additional Level D PPE including hearing protection when needed. * Respiratory protection will be used if the action level of 5 parts per billion by volume (ppbv) is measured in the work area. *Only personnel properly trained and fit tested can done respiratory protection. A full-face respirator with organic vapor P100 cartridge is required. *Cartridges will be changed daily at the end of each work shift and/or based on field observations (i.e. difficulty breathing).	

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Step #	Specific Steps in the Task	Hazards and Risks by Step That Must Be Controlled	Precautions Actions to Avoid the Risks	Responsible Person
1	Commuting to and from the work site	1. Vehicular incident/collision or near miss	Wear seatbelts. Drive defensively by: (a) looking down road to determine limiting factors, (b) minimizing/eliminating distractions, and (c) managing speed and following distance (1 second of following distance for every 10mph of speed). Check vehicle for proper operating systems, such as lights, tires, and mirrors. Walk around the vehicle before moving it. Back into parking spaces whenever possible.	Field Staff
2	Daily Safety Meetings	None	Ensure that everyone knows each other's scope of work for the day, the associated hazards, and precautions. Encourage engagement by all parties. Remind that everyone has Stop Work Authority.	Site Safety Officer
3	Site Reconnaissance and Oversight of Excavation Work	1. Slips/trips/falls	Wear footwear with proper ankle support, be vigilant for trip hazards, and be aware of open excavation areas.	Field Staff

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Step #	Specific Steps in the Task	Hazards and Risks by Step That Must Be Controlled	Precautions Actions to Avoid the Risks	Responsible Person
3	Site Reconnaissance and Oversight of Excavation Work	2. Truck and heavy equipment operations	Be aware of surroundings at all times. Do not stand or walk behind vehicles or mobile equipment in operation. Do not enter swing radius of any rotating equipment. Use hearing protection as needed and maintain 15-foot minimum clearance of heavy equipment, i.e. excavators and trucks. Maintain eye contact with truck and equipment operators, but you must get meaningful acknowledgement from the operator, e.g., a hand signal, before walking near the heavy equipment.	Field Staff
		3. Scratches/scrapes/impalement from sharp edges/protruding objects	Be vigilant for hazard and avoid touching any rough edges of machinery and equipment. Common impalement hazards include protruding rebar and wooden stakes, or scrap wood with protruding nails.	Field Staff
		4. Eye Hazards	Wear safety glasses to provide as much eye protection as possible from wind-blown dust, fumes, etc. Stay upwind of the dust in windy weather conditions.	Field Staff
		5. Lack of Site Communications	Carry cell phone. Abandon site activity when conditions are unsafe.	Field Staff

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Step #	Specific Steps in the Task	Hazards and Risks by Step That Must Be Controlled	Precautions Actions to Avoid the Risks	Responsible Person
3	Site Reconnaissance and Oversight of Excavation Work	6. Tripping Hazards	Emphasize good housekeeping. Minimize unnecessary equipment or debris storage. Clean up any material dropped on the ground as soon as possible.	Field Staff
		7. Muscle Strains	Use proper lifting techniques and body positions; don't carry more than you can handle and get help moving heavy or awkward objects.	Field Staff
		8. Changing Site Conditions	The work area should be consistently assessed for changing conditions (animals, weather, etc.) to avoid potential safety-related issues. Abandon site activity during hazardous weather conditions (e.g., thunderstorms).	Field Staff

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Task to Be Performed:	Site Reconnaissance and GPR Survey Oversight		Analyzed By:	E. Giardino
			Date	13-Mar-23
Project Name & Location:	300 East 12th Street, New York, New York			
Possible Risks at a Glance			Engineering Controls at a Glance	
Possible risks include associated with site reconnaissance and GPR survey oversight include: 1. Vehicular collision/damage; 2. Slip, trip, and fall hazards; 3. Heavy equipment operations; 4. Scratch, scrape, and impalement hazards; 5. Muscle strains; 6. On site traffic; 7. Lack of communications; 8. Changing site conditions; 9. Personal injury from energized equipment; Exposure to automotive fuel and maintenance chemicals; and, 11. Use of ladder to reach elevated areas.			None	
			10. * Wear appropriate PPE, practice safe site reconnaissance techniques.	
			Personal Protective Equipment at a Glance	
			Long pants and steel toed work boots with defined heel, and limited Level D PPE including reflective safety vest. Additional Level D PPE including steel-toe boots, chemical resistant gloves, work gloves, hard hat, and safety glasses when applicable.	
Step #	Specific Steps in the Task	Hazards and Risks by Step That Must Be Controlled	Precautions Actions to Avoid the Risks	Responsible Person
1	Commuting to and from the work site.	1. Vehicular collision/damage	Wear seatbelts. Drive defensively by: (a) looking down road to determine limiting factors, (b)	Field Staff
2	Set up necessary traffic and public access controls	1. Personnel could be hit by vehicular traffic.	Set up cones and establish work area. Position vehicle so that field crew is protected from site traffic. Unload as close to work area as safely possible.	Field Staff
3	GPR oversight	1. Slips/trips/falls.	Wear footwear with proper ankle support and be vigilant for trip hazards. Be aware that floors may be slippery from lubricants, etc. Walk around these slick areas when possible, otherwise take small steps to maintain balance, especially if you are carrying anything.	Field Staff

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		2. On-site traffic.	Watch for vehicular traffic on site. Obtain visible acknowledgement (e.g., hand signal) from the operator of a vehicle before moving around the vehicle. Maintaining only eye contact with vehicle operators is NOT sufficient.	Field Staff

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Task to Be Performed:	Soil Sampling	Analyzed By:	E. Giardino	
		Date	13-Mar-23	
Project Name & Location:	300 East 12th Street, New York, New York			
Possible Risks at a Glance		Engineering Controls at a Glance		
Possible risks include associated with soil sampling include: 1. Vehicular traffic; 2. Potential to encounter utilities; 3. Excessive noise; 4. Drill rig moving and heated mechanisms; 5. Muscle strains from lifting; 6. Eye injury from dust and debris; 7. Lacerations; 8. Hand strains and blisters; and 9. Slip/Trip/Fall hazards due to equipment, debris, and/or slippery surfaces.		None		
		Work Practice Controls at a Glance		
		Wear appropriate PPE, practice safe boring and sampling techniques.		
		Personal Protective Equipment at a Glance		
		Level D PPE including safety glasses, steel-toe boots, chemical resistant gloves, hearing protection, work gloves, hard hat, and reflective safety vest.		
Step #	Specific Steps in the Task	Hazards and Risks by Step That Must Be Controlled	Precautions Actions to Avoid the Risks	Responsible Person
1	Set up necessary traffic and public access controls	1. Personnel could be hit by vehicular traffic	Set up cones and establish work area. Position vehicle so that field crew is protected from site traffic.	Field Staff
2	Utility Clearance	1. Potential to encounter underground or aboveground utilities while drilling.	Complete utility clearance using State One Call, GPR services, and/or hand augur to 5 feet bgs.	Field Staff
3	Installation of boring using drill rig.	1. Excessive noise is generated by rig operations.	When the engine is used at high RPMs or soil samples are being collected, use hearing protection.	Field Staff

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Step #	Specific Steps in the Task	Hazards and Risks by Step That Must Be Controlled	Precautions Actions to Avoid the Risks	Responsible Person
3	Installation of boring using drill rig.	2. During drill rig operation, surfaces will become hot and cause burns if touched, and COCs in the soil will more readily vaporize generating airborne contaminates.	Use caution handling equipment and wear proper work gloves. Air monitoring should be performed in accordance with the HASP to monitor the potential volatilization of COCs.	Field Staff
		3. Moving parts of the drilling rig can pull you in, causing injury. Pinch points on the rig and auger connections can cause pinching or crushing of body parts.	Stay at least 5 feet away from moving parts of the drill rig. Know where the kill switch is, and have the drillers test it to verify that it is working. Do not wear loose clothing and tie back long hair. Avoid wearing jewelry when drilling. Cone off work area to keep general public away from the drill rig.	Field Staff
		4. Dust and debris can cause eye injury and soil cuttings and/or water could contain COCs.	Wear safety glasses and stay as far away from actual drilling operation as practicable. Wear appropriate gloves to protect from COCs.	Field Staff
		5. Drilling equipment laying on the ground (i.e. augers, split spoons, decon equipment, coolers, etc.) create a tripping hazard. Water from decon buckets generates mud and causes a	Keep equipment and trash picked up and store away from the primary work area. Wear footwear with ankle support.	Field Staff
		6. The raised derrick can strike overhead utilities, tree limbs, or other elevated items.	Never move the rig with the derrick up. Ensure there is proper clearance to raise the derrick. Ensure that you are far enough away from overhead power lines.	Field Staff
4	Installation of boring using hand auger, sample probe, and/or trowel	1. Muscle strains from pulling/pushing could occur when installing the boring and when removing the auger from the hole.	Stretch out back/arms/shoulders prior to beginning activities. Using a firm grip on the handle, slowly turn the auger and progress downward in 6" increments. Slowly pull the auger from the hole using legs and proper lifting techniques. Ask for assistance if necessary.	Field Staff

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Step #	Specific Steps in the Task	Hazards and Risks by Step That Must Be Controlled	Precautions Actions to Avoid the Risks	Responsible Person
4	Installation of boring using hand auger, sample probe, and/or trowel	2. Hand strain and blisters could develop from prolonged hand augering.	Select proper gloves for the task (wear padded mechanics glove when turning auger). If hot spots develop on hands, re-adjust gloves or change to better padded gloves.	Field Staff
		3. Over-exertion could occur when trying to force an auger forward if there is refusal.	If refusal occurs, stop work. Remove auger from the hole and check hole with flashlight. Do not over-exert by using excessive force.	Field Staff
		4. Fatigue can occur due to strenuous nature of hand augering activities.	Take rest breaks as needed or switch out task with another employee.	Field Staff
5	Collection of soil sample	1. Contact with impacted soils	Wear chemical protective gloves as outlined in the HASP and wear safety glasses.	Field Staff
		2. Sharp edges and broken glassware can cause lacerations.	Discard any broken sample containers or glass properly. Do not overtighten containers. Wear cut-resistant gloves when handling sample containers.	Field Staff
		3. Containerizing and moving soil cuttings can cause muscle strains.	Dispose of leftover soil cuttings in a drum or bucket and dispose properly. Only fill buckets half full due to weight and strength of bucket. Wear leather work gloves and use good lifting techniques when handling buckets.	Field Staff
6	Decontamination of hand auger, sample probe, and/or trowel	1. Exposure to COCs during equipment decontamination.	Wear chemical protective gloves as outlined in the HASP and wear safety glasses.	Field Staff

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		2. The end of the auger/probe has sharp/pointed edges; lacerations can occur.	Use a brush to scrub off soils. Wear cut-resistant gloves when handling auger. Do not reach into the auger with hands.	Field Staff
Step #	Specific Steps in the Task	Hazards and Risks by Step That Must Be Controlled	Precautions Actions to Avoid the Risks	Responsible Person
7	Fill in sample location	1. Open boreholes are a trip hazard.	Fill in holes with sand or bentonite. Pack down chips as best as possible, adding water as necessary.	Field Staff
		2. Muscle strain can occur from lifting bags of sand and/or bentonite.	Use proper lifting techniques and body positioning.	Field Staff

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Task to Be Performed:	Indoor Soil Vapor and Indoor Air Sampling	Analyzed By:	E Giardino	
		Date	13-Mar-23	
Project Name & Location:	300 East 12th Street, New York, New York			
Possible Risks at a Glance		Engineering Controls at a Glance		
Possible risks include associated with indoor soil vapor and indoor air sampling include: 1. Vehicular traffic; 2. Potential to encounter utilities; 3. Excessive noise; 4. Moving/vibrating and hot parts of the hammer drill and drill bit; 5. Eye injury from dust and debris; 6. Electrical hazards; 7. Hand strain and blisters; 8. Over-exertion and fatigue; and 9. Slip/Trip/Fall hazards due to equipment, debris, and/or slippery surfaces.		None		
		Work Practice Controls at a Glance		
		Wear appropriate PPE, practice safe drilling and sampling techniques.		
		Personal Protective Equipment at a Glance		
		Level D PPE including safety glasses, steel-toe work boots, chemical resistant and cut-resistant work gloves, hearing protection, hard hat, and reflective safety vest.		
Step #	Specific Steps in the Task	Hazards and Risks by Step That Must Be Controlled	Precautions Actions to Avoid the Risks	Responsible Person
1	Set up necessary traffic and public access controls.	1. Personnel could be hit by vehicular traffic	Set up cones and establish work area. Position vehicle so that field crew is protected from site traffic.	Field Staff
2	Utility Clearance.	1. Potential to encounter underground utilities while drilling.	Complete utility clearance using Dig Safe notification.	Field Staff
3	Installation of soil vapor point using hammer drill with 5/8" (or appropriate drill bit) as well as hammer and mallet.	1. Excessive noise is generated by hammer drill.	When hammer drill is being utilized, use hearing protection.	Field Staff

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Step #	Specific Steps in the Task	Hazards and Risks by Step That Must Be Controlled	Precautions Actions to Avoid the Risks	Responsible Person
3	Installation of soil vapor point using hammer drill with 5/8" (or appropriate drill bit) as well as hammer and mallet.	2. Immediately after drilling, the drill bit or blade/cutter may be very hot and could burn you.	Do not touch drill bit or blade/cutter immediately after the drilling. Wear cut-resistant work gloves at all times.	Field Staff
		3. Moving and vibrating parts of the hammer drill can cause you to lose control and cause injury. Pinch points on the hammer drill equipment can cause pinching of body parts.	Always keep a firm footing when using power tools, making sure you have balance and control before you start the job. Firmly grasp the tool handle and auxiliary handle (if provided) to maintain control. Always hold or brace the tool securely. Brace against stationary objects for maximum control. Do not wear loose clothing and tie back long hair. Avoid wearing jewelry when drilling. Wear steel-toe work boots when drilling. Cone off work area to keep general public away from the drilling operation.	Field Staff
		4. Dust and debris from drilling can cause eye injury and sub-slab soil could contain COCs.	Wear safety glasses at all times. Wear appropriate chemical resistant gloves to protect from COCs.	Field Staff
		5. Drilling and sampling equipment laying on the ground (i.e., Summa canisters, electrical cords, extension cords) create a tripping hazard.	Keep equipment and trash picked up and store away from the primary work area. Wear footwear with ankle support.	Field Staff

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Step #	Specific Steps in the Task	Hazards and Risks by Step That Must Be Controlled	Precautions Actions to Avoid the Risks	Responsible Person
		6. Hammer drill power cord and any extension cords used could pose an electrical hazard.	Grounded tools (3-pronged cords) must be plugged into a properly grounded installed outlet. Extension cords with 3-prong grounding plugs must be plugged into 3-prong outlets when using grounded tools. Do not use power tools in wet conditions. Do not abuse the power cord, do not carry the tool by its cord, or pull the cord to unplug it. Replace damaged cords immediately.	Field Staff
		7. Hand strain and blisters could develop from prolonged use of hand drill.	Select proper cut-resistant work gloves for the task. If hot spots develop on hands, re-adjust gloves or change to better padded gloves. Take rest breaks as needed.	Field Staff
		8. Fatigue can occur due to strenuous nature of hammer drill & vapor point installation activities.	Take rest breaks as needed.	Field Staff
4	Assembly and use of Helium Shroud	1. Helium stored in cannisters under pressure, extreme heat may damage container.	Properly store helium and ensure equipment is undamaged before use.	Field Staff
		2. Helium is an asphxiant, may displace oxygen and cause suffocation.	Ensure proper ventilation of work area and be vigilant for signs of exposure to Helium. Repair any leaks within helium shroud detected with Helium Meter.	Field Staff
5	Collection of soil vapor samples and indoor air samples using Summa canisters.	1. Sample containers could be damaged during the job.	Discard any damaged sample containers properly. Wear appropriate eye and hand protection.	Field Staff

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Task to Be Performed:	Virus Avoidance JSA NOTE: This JSA is meant to cover VERTEX work with an on-site component and be used in conjunction with existing VERTEX's task-specific procedures. This JSA must be modified as needed for the scope of work. <i>* Guidance is appropriate for our construction sites, Phase I ESAs, Cause & Origin (C&O) investigations, insurance assessments, asbestos surveys, IAQ assessments, radon sampling, PCAs, and other site visit scopes that require being physically present on-site.</i> <i>* Special guidance is provided for multi-tenant facilities and facilities with large numbers of occupants, including apartment complexes, hospitals, schools/higher education, nursing homes, assisted living, office buildings, and hotels; airport; cruise ships.</i>	Analyzed By:	Philip Platcow and Genevieve Reynolds
		Date	17-Sep-20
Project Name & Location:	VERTEX field-activities requiring in-person presence of VERTEX team members at field sites		
Possible Risks at a Glance		Engineering Controls at a Glance	
* Possible exposure to the virus that causes COVID-19 Note: This guidance must be combined with JSAs for site-work tasks have their own risks and precautions that must be addressed, such as electrical risks, falling, tripping, chemicals, etc.		* Do not go to the site if you can achieve your objectives remotely. * Good preparation before you go to a project site can avoid incidents of all types. * For construction sites, order construction trailers that are large enough to allow at least a separation between employees of 6 feet/2m. * Determine if any restrictions in the location to which you are going might limit the effectiveness of the visit and impact achieving all the goals of the visit.	
		Work Practice Controls at a Glance	
		* Establishing a distance of 6 feet/2m between people, when possible. * Conducting work off-hours, when fewer people are around, when possible. * Avoid any contact with confirmed positive COVID-19 or presumptive positive cases. * Obey any restrictions imposed by the various states of emergency or other community restrictions. * Implement cleaning/disinfection procedures in job trailers. * Discuss wellness <i>daily</i> to ensure that all project participants are feeling well at the beginning of every shift.	
		Personal Protective Equipment at a Glance	
		* Bring gloves, hand sanitizer, to the visit to use. If hand sanitizer is in short supply, use cleaning/disinfectant wipes, or simply identify places where you can wash your hands with soap and water. * Depending on the VERTEX task(s), some level of respiratory protection may be needed. Please contact Philip Platcow to discuss the task, airborne hazards and the need for protection. * You should wear a surgical or N/KN-95 when more substantial respiratory protection is <u>not</u> required. Cloth masks are not preferred when better protection is available. When you are walking around a site or traveling to and from, you should wear a mask. If there is more than one VERTEX colleague on a project site or at a meeting, an effort should be made to wear the same mask for uniformity. * Utilize other PPE as required for the specific task, such as steel-toed work boots, safety glasses, hardhats, etc.	

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Step #	Specific Steps in the Task	Hazards and Risks by Step That Must Be Controlled	Precautions Actions to Avoid the Risks	Responsible Person
1	Preparing for a site visit or other work task requiring that the VERTEX team member be physically present at a site.		Determine if going to the location is absolutely necessary to achieve the project goal. * Can we use a technology tool to avoid the need to be on a site? * Can we attend a meeting by remote video?	Project managers/field colleagues
			When setting up a site visit: * Ask if the facility is open and operating, and which hours may have fewer people present at the site. * Ask your site contact if any cases or voluntary isolations/quarantines have been reported among employees/tenants/etc. at the location. * Tactfully ask if there is anyone else who might be aware of cases.	Project managers/field colleagues
			For sites between 3 and 6 hours from your office, consider driving rather than taking a train or plane to your destination.	Field colleagues
			If you must take a plane: * Wear a surgical or cloth mask while traveling these areas. * Make an effort to avoid crowds, create a 6 feet/2m (or greater if possible) distance between you and others while in the waiting areas and in lines to the extent possible. * Although you may feel uncomfortable, it is fine to wear nitrile gloves. * Bring disinfectant wipes for seats, arm rests, tray tables, etc. * Wash hands frequently and carry a small container of hand sanitizer.	Field colleagues

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			* Select a good level hotel, such as, Courtyard and above, where you can count on it being clean under normal circumstances. * Call the hotel and ask if they have had any COVID-19 cases. * When checking in/out, keep a 6 foot/2m distance from the hotel employees and any other guests. * Bring your own pen to sign documents. Many people may have used those hotel pens. * Bring disinfectant wipes to go back over surfaces and high touch areas like knobs, lights, thermostat, and stay away from people as possible. * Use a wipe to disinfect the room key and the TV remote control. If you use any glasses, wash them again prior to use. * Wear a surgical or cloth mask and gloves as you go through the hotel. * Do not use the fitness center during this time at all; go for a run or walk outdoors if it's in a safe area. * Select a hotel with a refrigerator so that you do a bit of shopping (breakfast and lunch anyway) and minimize the meals you take in the presence of others. Indeed, these common areas may be closed anyway. * Follow other, typical safety procedures, such as parking under lights, choose a hotel that requires you to enter through the lobby, etc. * During this time, it is even more important to consider wellness: eat properly, get some exercise, get a good amount of sleep.	
			Make sure you have nitrile gloves and hand sanitizer, or other available and appropriate sanitization supplies and PPE, in your field kit before you set out for the project location.	Field colleagues
			For scopes that require a municipal research component, consider calling or submitting a FOIA to local offices to confirm records are available before visiting in person. Give yourself enough time for the office visit so that you can wait, if needed, to get in a cabinet/folder that someone else may be standing near. Then approach when they move. Wear a surgical or cloth mask in these offices.	Project managers/field colleagues
			Obey all local/State/Federal restrictions in place on work in the site area, such as stop-work orders for construction sites, shelter-in-place orders, etc.	Project managers/field colleagues
			For multi-tenant residential visits: Ask the site management to notify more units than you need, to complete the scope. For example, if your scope requires access to 20% of the units, request that the property notify 25% or even 30%. This will allow you to skip units during the visit if it becomes necessary. This is always a good approach because all sorts of scenarios may come up that prohibit you from getting into one unit or space or another.	Project managers/field colleagues

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			For multi-tenant residential visits: request access to vacant units when the scope can be completed by visiting vacant units. Note that this may not be appropriate for all scopes.	Project managers/field colleagues
2	During your task		At the start of the on-site portion of the assessment, ask the site contacts again if any cases (confirmed or presumptive positive) or voluntary isolations have been reported at the property. This is an evolving situation, and cases may have been reported since you set up the visit.	Field colleagues
			Please bring a surgical or cloth mask, gloves, hand sanitizer, etc. to the visit to use.	Field colleagues
			As much as possible, avoid touching high-contact surfaces (railings, knobs, switches, etc.), particularly in high-occupancy areas like clubhouses. We want to avoid touching railings, but we also need to be careful walking up/down stairs as well. Use your surgical or cloth mask, and nitrile gloves for protection.	Field colleagues
Step #	Specific Steps in the Task	Hazards and Risks by Step That Must Be Controlled	Precautions Actions to Avoid the Risks	Responsible Person
			As always, wash hands frequently (esp. before eating) for about 20 second, up to the elbow, and avoid touching your face. This actually takes some practice to get used to.	Field colleagues
			* While at the property, maintain a distance of 6 feet/2m (or greater, if possible) between people, when possible. Remember that people who are not showing visible symptoms or even exhibiting an elevated temperature may still be capable of spreading COVID-19. * Wear your mask, unless the scope of work requires a higher level of respiratory protection.	Field colleagues
			For Construction Sites: * Discuss measuring temperatures of individuals coming on to the site. * Signage about proper hygiene practices should be installed on the outside of job trailers or at the gate wherever possible. * Ensure an adequate number of hand-washing stations on job sites to facilitate better hygiene. * Minimize sharing of tools and wipe down tools with disinfectant prior to another worker using a tool. * Have daily discussions about wellness with colleagues and workers at the beginning of each shift to ensure that all are feeling well. Anyone who is sick should be sent home. * Wear your mask.	Project Managers and Field colleagues

[illegible]

DAILY TAILGATE SAFETY MEETING FORMS

THE **VERTEX** COMPANIES, INC.
DAILY SAFETY LOG

DATE: _____

SITE LOCATION: _____

WEATHER: _____

PROJECT NUMBER: _____

TOPICS DISCUSSED

- ☐ Expected Activities
- ☐ Health and Safety Emergency Numbers
- ☐ Hospital Location
- ☐ Work Areas (Posted)
- ☐ Standing Orders
- ☐ Confined Space Entry
- ☐ Slip, Trip, Fall
- ☐ Manual Lifting
- ☐ Utility Locations
- ☐ Mechanical Hazards
- ☐ Emergency Communications
- ☐ Electrical Hazards
- ☐ Other _____

- ☐ Chemical Hazards
- ☐ Bonding and Grounding
- ☐ Heavy Equipment
- ☐ Traffic hazards
- ☐ Heat/Cold Stress
- ☐ Noise Hazards
- ☐ Lock-out/Tag-out
- ☐ Excavation Hazards
- ☐ Venting/Inerting
- ☐ Biological Hazards
- ☐ Meeting Place
- ☐ Other _____
- ☐ Other _____

PERSONAL PROTECTIVE EQUIPMENT

- ☐ Energized Systems
- ☐ Eye Protection
- ☐ Hearing Protection
- ☐ Gloves (Specify Type)
- ☐ Respiratory Protection (Specify Type)
- ☐ Engineering Controls (Specify Type)
- ☐ Other _____
- ☐ Other _____

- ☐ Hard Hat
- ☐ Protective Clothing
- ☐ Retrieval System
- ☐ Backup system
- ☐ Lighting
- ☐ Other _____
- ☐ Other _____
- ☐ Other _____

Additional Comments Observations, Deficiencies / Corrective Actions Taken:

MEETING CONDUCTED BY (SSM): _____

Meeting Attended By:

_____	_____
_____	_____
_____	_____

NEAR MISS/INCIDENT REPORT FORMS



LOCATION OF THE INCIDENT

EMPLOYEES INVOLVED

VERTEX employees involved: _____

Subcontractors involved: _____

Other parties involved: _____

INFORMATION ABOUT THE INCIDENT

What was the employee(s) doing just before the incident occurred? Describe the activity as well as the tools, equipment, or material the employee was using. Be specific. Examples: "Climbing a ladder while carrying roofing material"; "Daily computer key-entry"; "Verifying masonry installation from scaffolding"; "Operating an aerial lift

This form contains information relating to employee health and must be used in a manner that protects the confidentiality of the employee to the extent possible while the information is being used for occupational safety and health purposes.

Revision Date: 1/10/2017



INCIDENT INVESTIGATION REPORT (Continued)

INFORMATION ABOUT THE INCIDENT (continued)

What happened? *Clearly describe how the incident occurred. Examples: "When ladder slipped on wet floor, worker fell 20 feet"; "Worker developed soreness in wrist over time"; "Worker displaced loose brick which fell 25 feet and landed on a parked vehicle;" "Worker raised work platform while railing was beneath exterior light fixture, contacting the fixture and knocking it off the wall."*

Was the employee performing regular job duties? Yes ☐ No ☐

Was safety equipment provided? Yes ☐ No ☐ Was safety equipment used? Yes ☐ No ☐

REPORT OF INJURY

Did an injury or illness occur? Yes ☐ No ☐ (*skip to next section if "No"*)

Injured Employee Information

Name: _____ Office: _____

Home address: _____ Gender: M ☐ F ☐ No. of dependents: _____

_____ Marital status: _____

Home telephone number: _____ Date of birth: _____

Occupation (regular job title): _____

Department: _____

What was the injury or illness? *Describe the part(s) of the body affected and how it was affected. Be more specific than "hurt," "pain," or "sore." Examples: "Strained back"; "Carpal tunnel syndrome, left wrist"*

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Revision Date: 1/10/2017



INCIDENT INVESTIGATION REPORT (Continued)

REPORT OF INJURY (continued)

Describe the object or substance that directly harmed the employee. *Examples: "Concrete floor"; "Chlorine."*

Did the employee die? Yes ☐ No ☐ Date of death: _____

NOTE: Attach any police reports or related diagrams to this report.

Medical treatment required? Yes ☐ No ☐ First Aid Only ☐

Name of physician or health care professional: _____

If treatment was provided away from the work site, provide the information below:

Facility name: _____

Street address: _____

City: _____ State: _____ Zip code: _____

Telephone number: _____

Was the employee treated in an emergency room? Yes ☐ No ☐

Was the employee hospitalized overnight as an in-patient? Yes ☐ No ☐

PROPERTY DAMAGE

Did property damage occur? Yes ☐ No ☐ (skip to next section if "No")

VERTEX property damaged: _____

VERTEX client property damaged: _____

Other property damaged: _____

Trespassers, vandalism or illegal activity: _____

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Revision Date: 1/10/2017



INCIDENT INVESTIGATION REPORT (Continued)

PROPERTY DAMAGE (continued)

Wildlife or environmental damage: _____

Motor vehicle involved? Yes ☐ No ☐ - If "Yes", **attach police report** and insurance information.

WITNESS INFORMATION (attach additional sheets for other witnesses)

Were there witnesses to the incident? Yes ☐ No ☐

Name: _____ Company: _____

Street Address: _____

City: _____ State: _____ Zip code: _____

Telephone number: _____

CORRECTIVE ACTION(S)

Corrective action(s) taken by unit reporting the incident:

Corrective action still to be taken (by whom and when) with suggestions to prevent a similar incident:

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Revision Date: 1/10/2017



INCIDENT INVESTIGATION REPORT (Continued)

REPORTING AND ACKNOWLEDGEMENT

Name of employee the incident was first reported to: _____

Date of Report: _____ Time of Report: _____

I have reviewed this investigation report and agree, to the best of my recollection, with its contents.

Name of reporting employee (print): _____ Telephone Number: _____

Signature of reporting employee: _____ Date: _____

Name of injured employee (print): _____ Telephone Number: _____

Signature of injured employee: _____ Date: _____

The signatures below indicate that appropriate personnel have been notified of the incident.

<u>Title</u>	<u>Printed Name</u>	<u>Signature</u>	<u>Telephone Number</u>	<u>Date</u>
Corporate Health & Safety Manager				
Supervisor				
Site Safety Coordinator (if applicable)				

Subsequent pages to be completed by the Health and Safety Representative, Human Resources, and Workers Compensation Carrier, respectively.

This form contains information relating to employee health and must be used in a manner that protects the confidentiality of the employee to the extent possible while the information is being used for occupational safety and health purposes.

Revision Date: 1/10/2017



INCIDENT INVESTIGATION REPORT (Continued)

To Be Completed by the Health and Safety Representative

Classification of Incident:

☐ Injury ☐ Illness ☐ Property damage with no injury or illness

Result of Incident:

- ☐ Property damage
☐ First aid only
☐ Days away from work
☐ Remained at work but incident resulted in job transfer or work restriction
☐ Incident involved days away and job transfer or work restriction
☐ Medical treatment only
☐ Was incident investigated?

No. of days away from work _____

Date employee left work _____

Date employee returned to work _____

No. of days placed on restriction or job transfer: _____

OSHA Recordable Case Number _____

Reason for Incident: ☐ Lack of Knowledge/Experience ☐ Improper Attitude
☐ Human Limitation ☐ Condition

Corrective Action: ☐ Instruction/Training
☐ Motivation/Discipline
☐ Proper Placement
☐ Repair/Eliminate
☐ Recommended Management

Suggestions for Changes to Avoid a Similar Incident? _____

Signed: _____ Date: _____

Printed Name: _____

This form contains information relating to employee health and must be used in a manner that protects the confidentiality of the employee to the extent possible while the information is being used for occupational safety and health purposes.

Revision Date: 1/10/2017



INCIDENT INVESTIGATION REPORT (Continued)

To Be Completed by Human Resources

Date of hire: _____ Hire date for current job: _____

Wage information: \$ _____ per ☐ Hour ☐ Day ☐ Week ☐ Month ☐ Year

Position at time of hire: _____

Current position: _____ Shift hours: _____

State in which employee was hired: _____

Status: ☐ Full-time ☐ Part-time Hours per week: _____ Days per week: _____

Temporary job end date: _____

To Be Completed during Report to Workers Compensation Carrier

Date reported: _____ Reported by: _____

Confirmation number: _____

Name of contact: _____

Field office of claims adjuster: _____

For claims:

This form contains information relating to employee health and must be used in a manner that protects the confidentiality of the employee to the extent possible while the information is being used for occupational safety and health purposes.

Revision Date: 1/10/2017

THE VERTEX[®] COMPANIES, INC.

NEAR MISS FORM

This is an official document to be initiated by a VERTEX employee, please answer correctly and with much detail as possible. This report should be forwarded to the OHSM within 24 hours of the near miss.

EMPLOYEE(S) INVOLVED:

DATE & TIME OF INCIDENT:

PERSON COMPLETING FORM:

DATE: _____

PROJECT NAME / NUMBER:

TIME: AM/PM

NEAR MISS LOCATION (ADDRESS):

DESCRIBE NEAR MISS: (Defined as an event or situation that could have resulted in an accident, injury, or illness but DID NOT, either by chance of time/distance or through timely intervention). Describe fully, the protocol / procedures being followed including all substances, machinery, equipment (including personnel protective equipment) being used as related to the near miss.

SUBCONTRACTORS OR OTHER COMPANY INVOLVED? NO ☐ IF YES, DESCRIBE

ON A SCALE OF 1 TO 10 HOW SEVERE COULD THE EVENT HAVE BEEN?

Least Severe 1 2 3 4 5 6 7 8 9 10 Most Severe

WHAT IS THE PROBABILITY OF AN INCIDENT IF THIS WERE TO OCCUR AGAIN (HIGH, MEDIUM, LOW)?

(Example: HIGH = task occurs frequently and by numerous individuals; MEDIUM = task occurs on a regular basis by certain individuals; LOW = minor or no injury, no lost dollar)

☐ LOW

☐ MEDIUM

☐ High

WHAT ARE THE SUGGESTED CORRECTIVE ACTIONS?

EMPLOYEE _____
 Printed Name Signature Date

CHSM _____

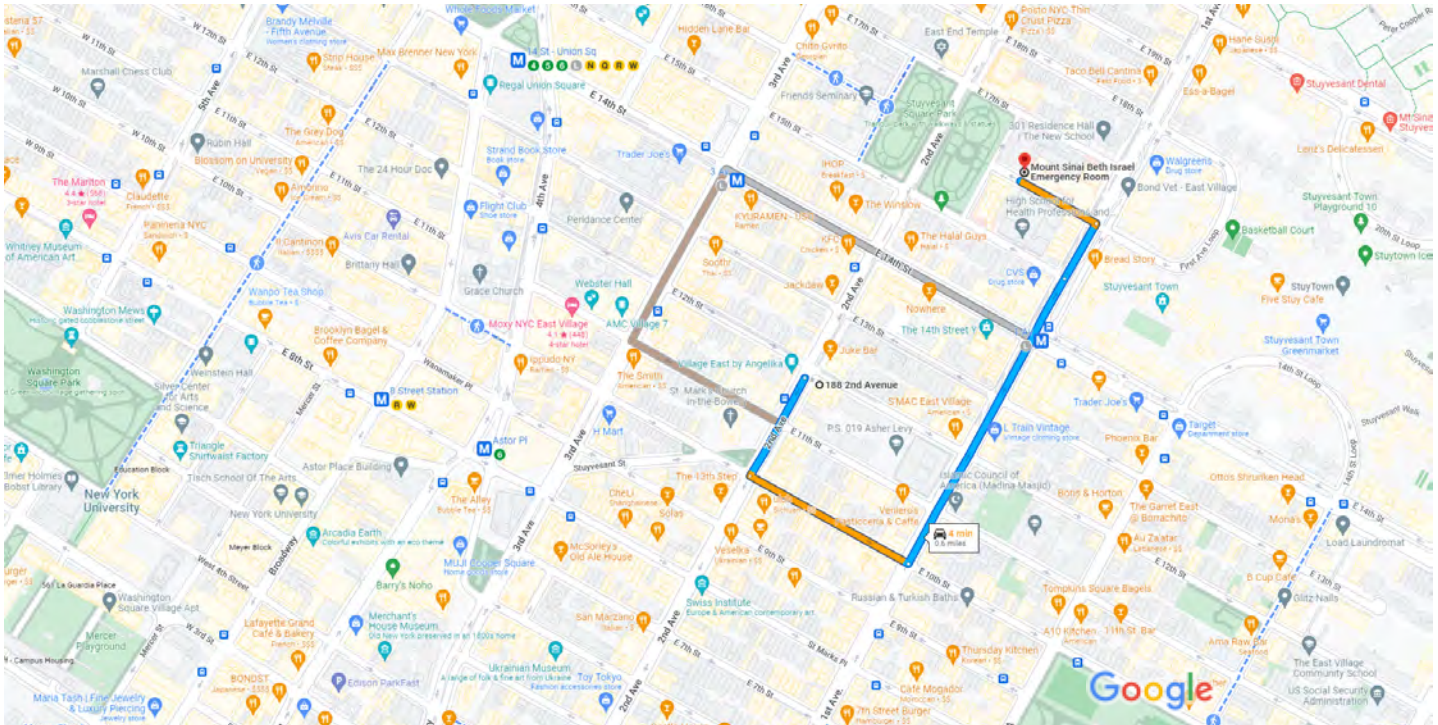
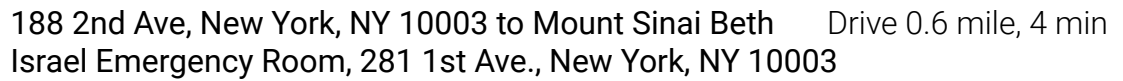
Printed Name	Signature	Date

ATTACHMENTS ☐ YES ☐ NO

Revision Date: April 1, 2014.



DIRECTIONS TO THE HOSPITAL



188 2nd Ave
New York, NY 10003

1. Head southwest on 2nd Ave toward E 11th St
469 ft
2. Turn left onto E 10th St
0.1 mi
3. Turn left at the 1st cross street onto 1st Ave.
i Pass by Hamptons Market Pl (on the left)
0.3 mi
4. Continue straight to stay on 1st Ave.
266 ft
5. Turn left onto E 16th St
i Destination will be on the right
364 ft

Mount Sinai Beth Israel Emergency Room
281 1st Ave., New York, NY 10003

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause

conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

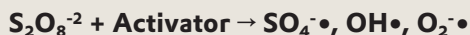
Appendix P: ISCO Chemical Information

THE FIELD PROVEN AND VERSATILE ISCO SOLUTION TO ADDRESS SOIL & GROUNDWATER CONTAMINATION

KLOZUR® SP is the oxidant of choice for in situ chemical oxidation (ISCO), because of its proven ability to treat a wide range of contaminants including chlorinated solvents, petroleum and PAHs. Based upon an environmental grade of sodium persulfate (SP), KLOZUR® SP is ideal for contaminated source zones and hot spots that require rapid treatment. When properly activated, KLOZUR® SP provides an unmatched combination of oxidative power, versatility, and control that can be delivered both safely and cost effectively. Successful field applications of KLOZUR® activated persulfate have been performed globally. These applications demonstrate the ability of KLOZUR® activated persulfate to treat diverse organic contaminants of concern including: chlorinated ethenes (TCE, PCE, DCE and vinyl chloride), chlorinated ethanes (TCA and DCA), chlorinated methanes (carbon tetrachloride and methylene chloride), BTEX, MTBE, polyaromatic hydrocarbons (PAHs), petroleum hydrocarbons (TPHs, GRO, DRO), 1,4-dioxane and pesticides.

KEY BENEFITS

When used with Evonik's patented activation methods, KLOZUR® SP produces the powerful oxidative ($\text{SO}_4^{\cdot-}$, $\text{OH}^{\cdot}$) and reductive ($\text{O}_2^{\cdot-}$) radicals creating a multi-radical attack for the rapid destruction of recalcitrant compounds.



Multiple activation options and methods of delivery provide for a flexible and custom solution based on site conditions. With a solubility limit of up to 40 wt%, KLOZUR® SP can be applied as a fully soluble solution. KLOZUR® SP is a stable oxidant given its high oxidation potential, with a typical

active lifetime in the subsurface of weeks to months, providing an extended radius of influence. KLOZUR® SP is safe to handle with Evonik's recommended use guidelines and does not generate heat or gas.

EXAMPLES OF CONTAMINANTS OF CONCERN

CHLORINATED SOLVENTS

PCE, TCE, DCE, VC, TCA, DCA, methylene chloride, carbon tetrachloride, chlorobenzene

PETROLEUM

TPH, BTEX, DRO, GRO

PAHs

creosote, MGP residuals 1,4-dioxane, MTBE, TBA, energetics, chlorinated pesticides

THE SOUND SCIENCE OF KLOZUR® ACTIVATED PERSULFATE

KLOZUR® activated persulfate has a long history of documented success having been used at thousands of sites to remediate contaminants of concern around the world. The field application of KLOZUR® activated persulfate has been scientifically validated in hundreds of independent peer-reviewed journal articles and conference presentations.

APPLICATION METHODS

- Direct push injection
- Fixed well injection
- Soil blending

For more information and detailed case studies, please visit our website.

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EVONIK INDUSTRIES AG

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SAFETY DATA SHEET

Klozur® SP

SDS # : 7775-27-1-12
Revision date: 2018-07-13
Format: NA
Version 1.04



1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name Klozur® SP

CAS-No 7775-27-1

Synonyms Sodium Persulfate; Sodium Peroxydisulfate; Disodium Peroxydisulfate; Peroxydisulfuric acid, disodium salt; Peroxydisulfuric acid, sodium salt.

Alternate Commercial Name Klozur® Persulfate

Recommended use of the chemical and restrictions on use

Recommended Use: In situ and ex situ chemical oxidation of contaminants and compounds of concern for environmental remediation applications

Restrictions on Use No uses to be advised against were identified.

Manufacturer/Supplier

PeroxyChem LLC
2005 Market Street
Suite 3200
Philadelphia, PA 19103
Phone: +1 267/ 422-2400 (General Information)
E-Mail: sdsinfo@peroxychem.com

Emergency telephone numbers

For leak, fire, spill or accident emergencies, call:
1 800 / 424 9300 (CHEMTREC - U.S.A.)
1 703 / 527 3887 (CHEMTREC - Collect - All Other Countries)
1 303/ 389-1409 (Medical - U.S. - Call Collect)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2B
Respiratory sensitization	Category 1
Skin sensitization	Category 1
Specific target organ toxicity (single exposure)	Category 3
Oxidizing Solids	Category 3

GHS Label elements, including precautionary statements**EMERGENCY OVERVIEW****Danger****Hazard Statements**

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335 - May cause respiratory irritation
H320 - Causes eye irritation
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H302 - Harmful if swallowed
H272 - May intensify fire; oxidizer

**Precautionary Statements - Prevention**

P261 - Avoid breathing dust.
P285 - In case of inadequate ventilation wear respiratory protection
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear protective gloves/ protective clothing
P264 - Wash face, hands and any exposed skin thoroughly after handling
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P220 - Keep/Store away from clothing/combustible materials
P221 - Take any precaution to avoid mixing with combustibles

Precautionary Statements - Response

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337 + P313 - If eye irritation persists: Get medical advice/ attention
P302 + P352 - IF ON SKIN: Wash with plenty of water.
P333 + P313 - If skin irritation or rash occurs: Get medical advice/ attention
P304 + P341 - IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing
P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell
P330 - Rinse mouth
P370 + P378 - In case of fire: Use water spray for extinction

Precautionary Statements - Storage

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

Hazards not otherwise classified (HNOC)

No hazards not otherwise classified were identified.

Other Information

Risk of decomposition by heat or by contact with incompatible materials

Unknown acute toxicity

0% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTSFormula Na₂O₈S₂

Chemical name	CAS-No	Weight %
Sodium Persulfate	7775-27-1	> 99
Sodium sulfate	7757-82-6	< 2

4. FIRST AID MEASURES

General Advice	May produce an allergic reaction.
Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids intermittently. Consult a physician. If symptoms persist, call a physician.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention if irritation develops and persists.
Inhalation	Remove from exposure, lie down. If breathing is irregular or stopped, administer artificial respiration. Call a physician immediately.
Ingestion	Do NOT induce vomiting. Call a physician or poison control center immediately. Rinse mouth. Drink 1 or 2 glasses of water.
Most important symptoms and effects, both acute and delayed	Itching; Redness; Coughing and/ or wheezing.
Indication of immediate medical attention and special treatment needed, if necessary	Treat symptomatically

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Water. Cool containers with flooding quantities of water until well after fire is out.
Unsuitable extinguishing media	Do not use carbon dioxide or other gas filled fire extinguishers; they will have little effect on decomposing persulfate.
Specific Hazards Arising from the Chemical	Decomposes under fire conditions to release oxygen that intensifies the fire.
Flammable properties	Contact with combustible material may cause fire
Explosion data	
Sensitivity to Mechanical Impact	Not sensitive.
Sensitivity to Static Discharge	Not sensitive.
Protective equipment and precautions for firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Keep off any unprotected persons. Avoid contact with the skin and the eyes. Avoid breathing dust. Wear personal protective equipment.
Other	Never add other substances or combustible waste to product residues.
Environmental Precautions	Prevent material from entering into soil, ditches, sewers, waterways, and/or groundwater.

See Section 12, Ecological Information for more detailed information.

Methods for Containment

Vacuum, shovel or pump waste into a drum and label contents for disposal. Avoid dust formation. Store in closed container.

Methods for cleaning up

Clean up spill area and treat as special waste. Dispose of waste as indicated in Section 13.

7. HANDLING AND STORAGE

Handling

Wear personal protective equipment. Use only in area provided with appropriate exhaust ventilation. Avoid dust formation. Handle product only in closed system or provide appropriate exhaust ventilation at machinery. Avoid contact with skin and eyes. Avoid breathing dust. Remove and wash contaminated clothing before re-use. Reference to other sections.

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat. Do not store near combustible materials. Avoid contamination of opened product. Keep away from food, drink and animal feedings. Avoid formation and deposition of dust.

Incompatible products

Acids, Alkalis, Halides, Combustible materials, Organic material, Reducing agents. Acids, alkalis, halides (fluorides, chlorides, bromides), combustible materials, reducing agents and organic compounds.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters**Exposure Guidelines**

Chemical name	ACGIH TLV	OSHA PEL	NIOSH	Mexico
Sodium Persulfate 7775-27-1	TWA: 0.1 mg/m ³	-	-	-
Chemical name	British Columbia	Quebec	Ontario TWAEV	Alberta
Sodium Persulfate 7775-27-1	TWA: 0.1 mg/m ³	-	TWA: 0.1 mg/m ³	TWA: 0.1 mg/m ³

Appropriate engineering controls**Engineering measures**

Provide local exhaust or general ventilation adequate to maintain exposures below permissible exposure limits.

Individual protection measures, such as personal protective equipment**Eye/Face Protection**

Eye protection recommended. Chemical goggles consistent with EN 166 or equivalent.

Skin and Body Protection

Wear long-sleeved shirt, long pants, socks, and shoes.

Hand Protection

Protective gloves: Neoprene gloves, Polyvinylchloride, Natural Rubber.

Respiratory Protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn: particulate filtering facepiece respirators.

Hygiene measures

Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Wash hands before breaks and after shifts. Keep work clothes separate, remove contaminated clothing - launder after open handling of product.

General information

Protective engineering solutions should be implemented and in use before personal protective equipment is considered.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Crystalline solid
Physical State	Solid
Color	White
Odor	odorless
Odor threshold	Not applicable
pH	6.0 (1% solution)
Melting point/freezing point	180 °C (Decomposes)
Boiling Point/Range	Decomposes upon heating
Flash point	Not flammable
Evaporation Rate	No information available
Flammability (solid, gas)	Not flammable
Flammability Limit in Air	Not applicable
Upper flammability limit:	No information available
Lower flammability limit:	No information available
Vapor pressure	6.07E-30 mm Hg at 25°C
Vapor density	No information available
Density	2.59 g/cm ³ (crystal density)
Specific gravity	No information available
Water solubility	42 % @ 25 °C
Solubility in other solvents	No information available
Partition coefficient	No information available (inorganic)
Autoignition temperature	No evidence of combustion up to 600°C No evidence of combustion up to 600 °C
Decomposition temperature	> 100 °C (assume)
Viscosity, kinematic	No information available (Solid)
Viscosity, dynamic	No information available
Explosive properties	Not explosive
Oxidizing properties	oxidizer
Molecular weight	238.1
VOC content (%)	Not applicable
Bulk density	1.12 g/cm ³ (loose)

10. STABILITY AND REACTIVITY

Reactivity	None under normal use condtions. Oxidizer. Contact with other material may cause fire
Chemical Stability	Stable.
Possibility of Hazardous Reactions	None under normal processing.
Hazardous polymerization	Hazardous polymerization does not occur.
Conditions to avoid	Heat. Moisture.
Incompatible materials	Acids, alkalis, halides (fluorides, chlorides, bromides), combustible materials, reducing agents and organic compounds. . Acids, Alkalis, Halides, Combustible materials, Organic material, Reducing agents.
Hazardous Decomposition Products	Oxygen which supports combustion

11. TOXICOLOGICAL INFORMATION

Product Information

Unknown acute toxicity	0% of the mixture consists of ingredient(s) of unknown toxicity
LD50 Oral	Sodium Persulfate: 895 mg/kg (rat)
LD50 Dermal	Sodium Persulfate: > 10 g/kg
LC50 Inhalation	Sodium Persulfate: >5.10 mg/L (4h) (rat)
Serious eye damage/eye irritation	Irritating to eyes.
Skin corrosion/irritation	Minimally irritating.

Sensitization Sodium Persulfate: May cause sensitization by inhalation and skin contact.

Component Information

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation	NOAEL Oral Value
Sodium Persulfate (7775-27-1)	895 mg/kg (Rat)	> 10000 mg/kg (Rabbit)	> 21.6 mg/L (Rat) 4 h	
Sodium sulfate (7757-82-6)	> 10000 mg/kg (Rat)			

Information on toxicological effects

Symptoms Symptoms of allergic reaction may include rash, itching, swelling and trouble breathing.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation Irritating to eyes, respiratory system and skin.
corrosivity None.

Carcinogenicity Contains no ingredient listed as a carcinogen.

Mutagenicity Did not show mutagenic effects in animal experiments

Neurological effects Not neurotoxic

Reproductive toxicity This product is not recognized as reprotox by Research Agencies.
Developmental toxicity None known.
Teratogenicity Not teratogenic in animal studies.

STOT - single exposure May cause respiratory irritation.
STOT - repeated exposure Not classified.

Target organ effects Eyes, Lungs.

Aspiration hazard No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity**Ecotoxicity effects**

Sodium Persulfate (7775-27-1)				
Active Ingredient(s)	Duration	Species	Value	Units
Sodium Persulfate	96 h LC50	Rainbow trout	163	mg/L
Sodium Persulfate	48 h LC50	Daphnia magna	133	mg/L
Sodium Persulfate	96 h LC50	Grass shrimp	519	mg/L
Sodium Persulfate	72 h EC50	Algae Selenastrum capricornutum	116	mg/L

Persistence and degradability Biodegradability does not pertain to inorganic substances.

Bioaccumulation Does not bioaccumulate.

Mobility Dissociates into ions.

Other Adverse Effects None known.

13. DISPOSAL CONSIDERATIONS

Waste disposal methods	This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261). It must undergo special treatment, e.g. at suitable disposal site, to comply with local regulations.
Contaminated Packaging	Empty remaining contents. Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION**DOT**

UN/ID no	UN 1505
Proper Shipping Name	SODIUM PERSULFATE
Hazard class	5.1
Packing Group	III

TDG

UN/ID no	UN 1505
Proper Shipping Name	SODIUM PERSULFATE
Hazard class	5.1
Packing Group	III

MEX

UN/ID no	UN 1505
Proper Shipping Name	SODIUM PERSULFATE
Hazard class	5.1
Packing Group	III

ICAO

UN/ID no	UN 1505
Proper Shipping Name	SODIUM PERSULFATE
Hazard class	5.1
Packing Group	III

ICAO/IATA

UN/ID no	UN 1505
Proper Shipping Name	SODIUM PERSULFATE
Hazard class	5.1
Packing Group	III

IMDG/IMO

UN/ID no	UN 1505
Proper Shipping Name	SODIUM PERSULFATE
Hazard class	5.1
Packing Group	III

ADR/RID

UN/ID no	UN 1505
Proper Shipping Name	SODIUM PERSULFATE
Hazard class	5.1
Packing Group	III

ADN

Proper Shipping Name	SODIUM PERSULFATE
Hazard class	5.1
Packing Group	III

15. REGULATORY INFORMATION**U.S. Federal Regulations**

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

This product is not subject to reporting under the Emergency Planning and Community Right-to-Know rule.

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA/EPCRA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations**U.S. State Right-to-Know Regulations**

This product contains the following substances regulated under state Right-to-Know laws:

Chemical name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Sodium Persulfate		X			
Sodium sulfate	X		X		

California Proposition 65

This product does not contain any Proposition 65 chemicals

CANADA**Environmental Emergencies**

This product contains no substances listed under Canada's Environmental Emergency regulations.

Canadian National Pollutant Release Inventory

This product contains no substances reportable under Canada's National Pollutant Release Inventory regulations.

International Inventories

Component	TSCA (United States)	DSL (Canada)	EINECS/EL INCS (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)	NZIoC (New Zealand)
Sodium Persulfate 7775-27-1 (> 99)	X	X	X	X	X	X	X	X	X
Sodium sulfate 7757-82-6 (< 2)	X	X	X	X	X	X	X	X	X

Mexico

Mexico - Grade

Slight risk, Grade 1

16. OTHER INFORMATION

NFPA	Health Hazards 1	Flammability 0	Stability 1	Special Hazards OX
HMIS	Health Hazards 1	Flammability 0	Physical hazard 1	Special precautions J

NFPA/HMIS Ratings Legend

Special Hazards: OX = Oxidizer

Protection=J (Safety goggles, gloves, apron, combination dust and vapor respirator)

Revision date: 2018-07-13
Revision note SDS sections updated: 3
Issuing Date: 2017-03-17

Disclaimer

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Prepared By:

PeroxyChem

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End of Safety Data Sheet

Selection Guide:

- ✓ Recommended, lab or field data available demonstrating success
- Recommended, no available lab or field data
- ∅ Not recommended

▼ Contaminant	Activator ►	Klozur® One and Fe-Chelate	Alkaline	Hydrogen Peroxide	Heat
CHLORINATED SOLVENTS					
Tetrachloroethene (PCE)		✓	✓	✓	✓
Trichloroethene (TCE)		✓	✓	✓	✓
Dichloroethene (<i>cis</i> and <i>trans</i> DCE)		✓	✓	✓	✓
Trichloroethane (TCA)		∅	✓	✓	✓
Dichloroethane (DCA)		∅	✓	■	✓
Carbon tetrachloride		∅	✓	✓	✓
Chloroethane		∅	■	■	✓
Chloroform		∅	✓	✓	✓
Chloromethane		∅	■	■	✓
Chlorotoluene		■	■	■	✓
Methylene chloride		∅	✓	✓	✓
Vinyl chloride		∅	✓	✓	✓
Dichloropropane		∅	■	■	✓
Dichloropropene		∅	■	■	✓
Hexachlorobutadiene		∅	■	■	✓
Tetrachloroethane		∅	■	✓	■
Trichloropropane		∅	■	■	✓
BTEX					
Benzene		✓	✓	✓	✓
Toluene		✓	✓	✓	✓
Ethylbenzene		✓	✓	✓	✓
Xylenes		✓	✓	✓	✓



Selection Guide:

- ✓ Recommended, lab or field data available demonstrating success
- Recommended, no available lab or field data
- Ø Not recommended

▼ Contaminant	Activator ►	Klozur® One and Fe-Chelate	Alkaline	Hydrogen Peroxide	Heat
PAHS					
Acenaphthene		✓	✓	■	✓
Acenaphthylene		✓	✓	■	✓
Anthracene		■	✓	■	■
Benzo(a)anthracene		■	✓	■	■
Benzo(a)pyrene		■	✓	■	■
Benzo(b)fluoranthene		■	✓	■	■
Benzo(ghi)perylene		■	✓	■	■
Bis(2-ethylhexyl)phthalate		■	✓	■	■
n-butylbenzene		✓	■	■	✓
Chrysene		■	✓	■	■
Dibenzo(ah)anthracene		■	✓	■	■
Fluorene		✓	✓	■	✓
Naphthalene		✓	✓	■	✓
Nitrobenzene		Ø	Ø	✓	✓
Phenathrene		✓	✓	✓	✓
Propylbenzene		✓	✓	✓	✓
4-iso-propyltoluene		✓	✓	✓	✓
Pyrene		■	✓	■	■
Styrene		✓	✓	✓	✓
Trimethylbenzene		✓	✓	✓	✓
OXYGENATES					
Methyl tert-butyl ether (MTBE)		✓	✓	✓	✓
Tert-butyl alcohol (TBA)		✓	✓	✓	✓
PETROLEUM HYDROCARBONS					
GRO (octane)		Ø	✓	✓	■
DRO (dodecane)		Ø	✓	✓	■
ORO (C20 alkane)		Ø	✓	✓	■
Creosote (coal tar)		✓	✓	■	■

Selection Guide:

- ✓ Recommended, lab or field data available demonstrating success
- Recommended, no available lab or field data
- Ø Not recommended

▼ Contaminant	Activator ►	Klozur® One and Fe-Chelate	Alkaline	Hydrogen Peroxide	Heat
CHLOROBENZENES					
Chlorobenzene		✓	✓	■	✓
Dichlorobenzene		✓	✓	■	✓
Trichlorobenzene		Ø	✓	■	✓
PHENOLS					
Phenol		■	■	■	✓
4-chloro-3-methyl phenol		■	■	■	✓
2-chlorophenol		■	■	■	✓
2,4-dichlorophenol		■	■	■	✓
2,4-dinitrophenol		■	■	■	✓
4-nitrophenol		■	■	■	✓
Pentachlorophenol		■	■	■	✓
FLUORINATED COMPOUNDS					
Dichlorodifluoromethane (Freon 12)		Ø	✓	■	✓
Trichlorofluoromethane (Freon 11)		Ø	✓	■	✓
Trichlorotrifluoroethane (Freon 113)		Ø	✓	■	✓
PFCA/PFOA		■	Ø	Ø	✓
PESTICIDES/HERBICIDES					
α-Chlordane		Ø	✓	■	✓
DDD		Ø	✓	■	✓
DDE		Ø	✓	■	✓
DDT		Ø	✓	■	✓
Heptachlor Epoxide		Ø	✓	■	✓
Lindane (hexachlorocyclohexane)		✓	✓	✓	✓
Bromoxynil		■	■	✓	■
MCPA		■	■	✓	■

Selection Guide:

- ✓ Recommended, lab or field data available demonstrating success
- Recommended, no available lab or field data
- Ø Not recommended

▼ Contaminant	Activator ►	Klozur® One and Fe-Chelate	Alkaline	Hydrogen Peroxide	Heat
MISCELLANEOUS					
Acetone		■	✓	✓	✓
4-methyl-2-pentanone		✓	■	■	✓
1,4-dioxane		✓	✓	✓	✓
BCEE		Ø	✓	✓	✓
BCEM		Ø	✓	✓	✓
Perchlorate		Ø	Ø	Ø	Ø
Polychlorinated biphenyls (PCBs)		Ø	✓	■	✓
Aniline		✓	■	■	■
Chloroaniline		✓	■	■	■
TNT		✓	✓	■	✓
DNT		✓	✓	■	✓

The Klozur Activator Selection Guide is for guidance only regarding which contaminants can be treated by PeroxyChem's patented activation methods. It is recommended that a suitable treatability study be performed to verify applicability to your specific contaminant and site conditions. For more information and to discuss which Klozur product and activation method would be best suited to your site, please contact your local PeroxyChem Technical Sales Manager.

1. A limited use license is included with the purchase of Klozur Persulfate for PeroxyChem's suite of national and international patents for the *in situ* activation of persulfate to remediate environmental contaminants of concern including, but not limited to US 6019548, US 6474908, US 7524141, US 7576254B2, and US 7785038.

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Klozur® SP Application Guidelines

Klozur® SP is a high purity environmental grade sodium persulfate that has been successfully used to remediate contaminants of concern (COC) at environmental sites around the world. Klozur persulfate can be activated using PeroxyChem's patented technologies¹ to form powerful oxidative and reductive radicals that aggressively treat the targeted contaminants. PeroxyChem's persulfate activation technology is well established having been successfully applied in thousands of field applications and scientifically validated in hundreds of independent peer-reviewed journal articles and conference presentations.

Klozur SP is part of PeroxyChem's Klozur Portfolio which also includes Klozur One, Klozur KP, and Klozur CR. Klozur products are typically applied using an injection, soil mixing, or backfill strategies to establish contact between the activated persulfate and the contaminants of concern. This document will provide general application guidelines for Klozur SP. For more information on Klozur SP or other products in PeroxyChem's Klozur Portfolio, please visit klozur.com.

FIELD APPLICATIONS

PeroxyChem recommends activation of Klozur SP with alkaline, iron-chelate, heat, and hydrogen peroxide activation chemistries. For more information on each activation chemistry, please visit www.klozur.com.

PeroxyChem recommends batching and storing the activation chemistry and Klozur SP separately. It is also recommended that all the wetted components of the injection system be chemically compatible with all chemistries. The reagents can then be combined via in-line mixing prior to being injected or pulsed into the subsurface separately. In-line mixing requires an injection skid capable of blending the two reagents just prior to injection at the wellhead. A pulsed strategy involves injecting one solution at a time and allowing them to mix *in situ*. This can require oscillating between the reagent solutions frequently. Typically, this would involve the injection of 400 gallons (gal), or approximately 1,500 liters (L), of Klozur SP followed by 100 to 200 gal (approximately 400 to 800 L) of activator solution.

Batching Klozur SP

When batching any Klozur product, it is important to ensure that the tank, water, mixing equipment and any other parts that will contact the reagent solution are clean and devoid of impurities that might react with the oxidant. Klozur SP should be batched in systems where all wetted parts or parts that could become wetted are chemically compatible with Klozur SP. Please refer to PeroxyChem's Technical Bulletin: *Corrosion and Material Compatibility with Klozur Persulfate*, which can be found at peroxychem.com/remediation, for a list of chemically compatible materials. A chemically compatible secondary containment is also recommended beneath the batching system.

Klozur SP is highly water soluble over normal temperatures providing a great deal of flexibility in the field in terms of batch concentration. PeroxyChem recommends that Klozur SP be injected in a range from 50 to 250 grams per liter (g/L). To achieve these concentrations, it is recommended that Klozur SP be batched at a concentration less than the theoretical solubility (Table 1).



It is recommended that batches of Klozur SP be injected or applied within eight hours of the dilution in water and that Klozur SP, batched, or otherwise stored, not be left unsecured or unsupervised. Solutions stored longer than eight hours are expected to be stable; however, the Klozur SP will slowly degrade and is expected to generate acid. If impurities are present or at elevated temperatures, the rate of reaction will increase.

Klozur SP can be mixed using a variety of methods. The most common methods are mechanical and hydraulic mixers. Most mechanical mixers are mounted to the top of the batch tank and involve a motor, shaft and propeller that mixes the solution. Hydraulic mixers usually include some form of recirculating the batch solution. The time required to dissolve Klozur SP will increase with increasing concentrations. Generally, with an adequate mixing system, Klozur SP should be completely dissolved within 5 to 20 minutes.

Temperature	Klozur SP	
(°C)	(wt%)	(g/L)
0	36.5	480
10	40.1	540
20	41.8	570
25	42.3	580

Table 1: Solubility of Klozur SP in Water at Various Temperatures

Injection Equipment

Klozur SP can be injected using a single chemically compatible pump. Common pumps used include centrifugal and double diaphragm pumps sized according to the anticipated injection rate and down gradient pressure. Most double diaphragm pumps have the secondary benefit of creating inlet negative pressure that can be used to pull Klozur SP from the batch tank. The inlet is usually placed at the base of the tank with a foot valve. This removes the need for a gravity feed coming from the bottom of the batch tank which is necessary for most centrifugal pumps.

Depending on the injection objectives, other common components that may be necessary in an injection system include flow meters, pressure gauges, pressure relief valves, temperature gauges, valves to open and close portions of the system (i.e. ball valves or equivalent), and valves to help moderate injection rates (i.e. gate valves or equivalent). If injecting into multiple locations simultaneously, multiple injection lines can be split off down gradient of the injection pump with each line typically having its own set of valves, gauges, and flow meters. All components of the injection system must be chemically compatible with Klozur SP and the activator chemistry.

Establishing Contact

Effective treatment of site contaminants is achieved by establishing sufficient contact between activated Klozur SP and the contaminants. To help estimate the quantity of Klozur SP and activator needed, please contact your PeroxyChem Technical Representative or email us at remediation@peroxychem.com.

The method used to establish sufficient contact between Klozur SP and the COCs is a critical aspect of the remedial application with injection and soil mixing being the most common strategies used for establishing contact.

Injection Strategies

Injection strategies introduce the previously dissolved (batched) Klozur SP solution into the subsurface through chemically compatible wells or rods. The wells or rods are typically solid (blank) until reaching the intended depth where the reagents can flow through screens and out into the targeted interval of the subsurface. The reagents are then distributed into the subsurface for a certain radius of influence (ROI) depending upon the site characteristics and injection volume. At most sites, Klozur SP can be expected to persist for weeks to months which may be sufficient time for it to migrate with groundwater flow after injection.

Common types of injection strategies include direct injection and recirculation.

Direct Injection

With a direct injection strategy, Klozur SP is injected into the subsurface and the volume of the injection is used to push Klozur SP out a distance from the injection point to contact contamination in soil, non-aqueous phase liquid, and groundwater. There is no extraction with a direct injection strategy. The injection is typically under a pressure lower than the fracture pressure of the soils at the top of the injection interval. The volume of reagents injected can be critical in terms of the distance from each injection point the reagents are distributed. This distance is commonly referred to as the radius of influence, or ROI.

There are typically three ROIs:

- **Design ROI.** The design ROI is the radius intended to be treated by each injection point. This can include the injection ROI, as well as additional distribution of the reagent due to diffusion and advection with groundwater flow after the injection event. Injection point spacing is often set so that the design ROIs overlap, typically by 15 to 20 percent, which minimizes untreated areas and results in additional treatment of soils furthest from the injection points.
- **Injection ROI.** The injection ROI is a design parameter estimating the distance the injection volume will distribute the reagents from the injection point. This is typically estimated by equating the injection volume to the effective pore volume or pore volume at different distances from an injection point. For example, assuming 1,500 gallon injection volume and an effective pore volume of 0.15, the injection ROI would be $R = \sqrt[3]{(1,500 \text{ gal} / (\pi * h \text{ (ft)} * 7.48 \text{ gal/ft}^3 * 0.15))}$.
- **Observed ROI.** This is the actual ROI from an injection point confirmed in field optimization studies or field pilot tests. The observed ROI may vary vertically with different soil types and preferential flow paths even from the same injection point.

The injection volume is typically set so that the injection ROI is less than or equal to the design ROI. If less than the design ROI, it is typically assumed that the Klozur SP solution will be distributed either by natural groundwater flow (advection) or diffusion.

Recirculation

In a recirculation strategy, groundwater is extracted from one set of wells, amended with Klozur SP, and then reinjected into another set of injection wells. A recirculation strategy is commonly used to help control or limit the distribution of the reagent solution. Extraction wells typically outnumber injection wells since reagents injected under pressure typically flow at a higher rate than groundwater can be extracted.

Constructed Injection Wells

Constructed wells should be made with materials compatible with Klozur SP including stainless steel, polyvinyl chloride (PVC), or chlorinated polyvinyl chloride (cPVC). The wells are typically constructed with a screen interval, sand pack interval, a bentonite seal directly above the sand pack, and lastly a bentonite or grout slurry to surface. The sand pack interval that is typically slightly larger than the screen interval to prevent the bentonite seal from impacting the screen. It is generally best to align the sand pack interval with the targeted contaminant interval in most applications where Klozur SP is injected under pressure and the sand pack is more permeable than the native soils. Constructed

wells can also be made using “pre-pack” screen, sand pack, and bentonite seals. For these wells, the screen and sand pack intervals are typically the same.

Direct Push Technology Injection Points

Injecting Kloxur SP through direction push technology (DPT) points is also possible. Since carbon steel is the common material for DPT rods, most practitioners prefer to use alkaline activated persulfate to help minimize possible corrosion. Other steps to mitigate corrosion that are commonly taken include taping or otherwise protecting the rod threads with materials compatible with Kloxur SP, and rinsing the rods after use and prior to storage. The rinse solution often includes a pH buffer, such as sodium bicarbonate and a reactant such as an alcohol or sodium ascorbate.

Other activation methods can be used with DTP systems utilizing stainless steel or other chemically compatible materials. PeroxyChem recommends coordinating with your DPT contractor to make sure they are using a chemically compatible system to inject Kloxur SP.

Soil Mixing

Soil mixing is the second common method of establishing contact between Kloxur SP and contamination in the subsurface. A soil mixing strategy typically involves the mechanical agitation of subsurface soils blending in both Kloxur SP and the necessary activator reagents. The mechanical agitation breaks apart the natural soil structure and helps to establish contact between activated Kloxur persulfate and the contamination found in the soils. Good contact is key for successful remediation and soil mixing can be particularly useful in treating source zones and lower permeable soils such as silts or clays.

Soil mixing has been used:

- As the primary method of treatment in source areas
- To treat residual contamination after excavation as a secondary method of treatment
- In combination with *in situ* stabilization (ISS) and other technologies

Soil mixing equipment often includes equipment containing carbon steel. Kloxur SP, by itself, is corrosive to carbon steel. Most practitioners prefer alkaline activated persulfate for soil mixing as it helps protect the carbon steel mixing equipment. If interested in a soil mixing application, please contact your PeroxyChem Technical Representative or email remediation@peroxychem.com to discuss how to decrease the potential corrosion of the mixing equipment.

For more information, please refer to the *Kloxur Persulfate Soil Mixing Recommendations and Applications Guidelines* document, which can be found at peroxychem.com/remediation.

OPTIMIZATION STUDIES: BENCH AND PILOT SCALE TESTS

Projects often include a series of tests to help develop and confirm a variety of design parameters and assumptions prior to the full-scale application of Kloxur SP. PeroxyChem recommends performing bench scale tests to estimate the non-target demand associated with the soil and, if desired, to confirm the treatment effectiveness of different concentrations of Kloxur SP with contaminated site soils and groundwater. The non-target demand test is a critical design element for Kloxur SP. PeroxyChem refers to our non-target demand, or soil oxidant demand (SOD), test as the Kloxur Demand Test (KDT). PeroxyChem has a full-service treatability laboratory to conduct bench scale studies using Kloxur SP. More information on these lab tests is available from your PeroxyChem Technical Representative or by emailing remediation@peroxychem.com.

Field optimization studies or field pilot tests can be used to further assess the application of Klozur SP prior to a full-scale application. In addition to confirming treatment effectiveness, common objectives of these field evaluations include assessing injection pressures, flow rates, reagent distribution, and using the observed ROI to confirm the assumptions made in determining both the design and injection ROI.

STORAGE AND HANDLING

Klozur SP is a UN Class 5.1 oxidizer. It should be stored in a secure, cool and dry location. The temperature of Klozur SP should not exceed 45°C (113°F). PeroxyChem does not recommend storing Klozur SP in field conditions for extended periods of time. Do not store liquid solutions of Klozur SP. For more information on storage and handling, please see guidelines for persulfate at peroxychem.com/chemistries/persulfates/safe-storage-handling.

MATERIALS OF COMPATIBILITY

As specified by the safety data sheet (SDS), Klozur SP is a DOT class 5.1 oxidizer and a corrosive material. All materials contacting Klozur SP should be chemically compatible including tanks, pumps, injection rods, seals, gaskets, tubing, hoses, and mixing equipment.

Compatible materials include: stainless steel (304L and 316L), polyethylene (PE), polyvinylchloride (PVC), polytetrafluoroethylene (PTFE), Viton[®], polyvinylidene fluoride (PVDF), and butyl rubber. Materials NOT compatible include, nitrile rubber, carbon steel, aluminum, brass, galvanized steel, or any other metal susceptible to corrosion. Please refer to PeroxyChem's Corrosion and Material Compatibility of Klozur Persulfate Technical Bulletin for more detailed information, available at peroxychem.com/remediation.

HEALTH AND SAFETY

Klozur persulfate has been applied safely and effectively at thousands of sites. However, as with any chemical, proper procedures should be followed and recommended equipment used. When working with Klozur persulfate, ensure adequate ventilation and use the appropriate personal protective equipment, including safety glasses, suitable protective clothing, boots (steel toed or equivalent), chemical resistant gloves, hard hat, and hearing protection. For dust, splash, mist, or spray exposures wear a filtering dust mask and chemical protective goggles. A face shield can also be used in addition to goggles.

Please consult the appropriate safety data sheets (SDS) for guidelines regarding proper handling procedures. Klozur persulfate SDS's can be found at www.peroxychem.com/remediation. Additional safety equipment may be required for mechanical and site operations.

Please contact PeroxyChem for additional guidance.

Notes

1. A limited use license is included with the purchase of Klozur Persulfate for PeroxyChem's suite of national and international patents for the *in situ* activation of persulfate to remediate environmental contaminants of concern including US 6019548, US 6474908, US 7524141, US 7576254B2, US 7785038, and US 9375768B2.

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