EMULSIFIED ZERO-VALENT IRON REMEDIAL DESIGN

for

1487 1st Avenue Redevelopment Site
New York, New York
NYSDEC BCP Site No. C231152

Prepared For:

CP VII 78th Street Owner, LLC
805 Third Avenue, 20th Floor
New York, New York 10022

Prepared By:

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6 March 2023

Langan Project No. 100963701

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1.0 BACKGROUND

Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. (Langan) has prepared this Emulsified Zero-Valent Iron (EZVI) Remedial Design on behalf of CP VII 78th Street Owner, LLC (the Requestor) for the property at 1487 First Avenue (Tax Block 1452, Lot 27 [formerly consisting of Lots 27, 28, 29, and 30]) in the Upper East Side neighborhood of New York, New York (the Site). A Site Location Map is included as **Figure 1**.

The Site is enrolled in the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) and is identified in the BCP as Site No. C231152. The Site is an approximately 10,050-square foot parcel, bordered by the four-story 354 East 78th Street building to the west, East 78th Street to the north, 1st Avenue to the east, and the nine-story 1485 1st Avenue building to the south.

The Site was most recently occupied by two four-story vacant buildings in the southern and northwestern portions of the site that have been demolished. The remaining portions of the site consist of vacant land, where former building basements were partially backfilled with remnant demolition debris from sidewalk level to the assumed depth of the former basement slabs at approximately 8 to 10 feet below sidewalk level (bsl) by the previous owner. The vacant portion of the site was heavily vegetated with uneven topography; however, vegetation was cleared and the remnant demolition debris was graded to a more even surface ranging from 4 to 8 feet bsl. Stone was imported in January 2022 from Clinton Quarry, located in Union Township, New Jersey, in order to grade the Site. Additional clean fill was imported in October and November 2022 from Allocco Recycling Corp. in accordance with the 25 October 2022 NYSDEC approval to level the Site in preparation for the demolition of the former buildings.

The following environmental assessment and investigation reports have been prepared for the Site by Langan.

- Phase II Environmental Site Assessment (ESA) prepared by Cider Environmental (Cider), dated 23 February 2016;
- Phase I ESA prepared by Langan, dated 5 January 2021; and,
- Phase II Environmental Site Investigation (ESI) Report prepared by Langan, dated 3 March 2022.
- 60-Day Advance Notice of Site Change of Use prepared by Langan, dated 25 March 2022.

- Remedial Investigation Work Plan prepared by Langan, dated 16 March 2022 and last revised 26 July 2022.
- Interim Remedial Measures Work Plan prepared by Langan, dated 16 March 2022 and last revised 4 January 2023.
- 60-Day Advance Notice of Site Change of Use prepared by Langan, dated 21 October 2022.
- Draft Remedial Investigation Report (RIR) prepared by Langan, dated January 2023.
- Draft Remedial Action Work Plan (RAWP) prepared by Langan, dated November 2022.

Based upon Langan's review and preparation of previous environmental assessments and investigation reports prepared for the Site, and the results of the Remedial Investigation (RI), features and environmental concerns on the subject property include chlorinated solvent impacts from the former solvent tank, former fuel oil aboveground storage tanks (ASTs), historical site uses including dyeing and cleaning operations within the Site extents, and the presence of historic fill material. The site plan and areas of concern (AOCs) discussed in detail in the draft 2023 RIR, are shown on **Figure 2**.

The site stratigraphy consists of an approximately 0.5- to 5-foot-thick layer of remnant demolition debris followed by a 1- to 4-foot-thick layer of fill. The fill is underlain by 3 to 14 feet of native sand and clayey sand, which was encountered in all soil borings completed.

Overburden monitoring wells installed and surveyed as part of the RI revealed perched groundwater between 11.8 and 14.2 feet bsl, corresponding to elevations between 22.79 and 25.21 NAVD88 in LMW-6 through LMW-10. Groundwater in bedrock monitoring wells was encountered at depths ranging from approximately 11.7 and 13.2 feet bsl corresponding to elevations between 23.80 and 25.33 NAVD88 in the shallow bedrock monitoring wells and at depths ranging from approximately 12.3 and 13.2 feet bsl corresponding to elevations between 23.76 and 24.69 NAVD88 in the deep bedrock monitoring wells. Based on the groundwater elevations recorded during the RI, perched groundwater flows to the northwest and bedrock groundwater flows to the southeast. Subsurface profiles are presented on **Figures 5 and 6B**.

As discussed in Section 2.0, groundwater samples revealed the presence of chlorinated volatile organic compounds (CVOCs), including the contaminants of concern tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), vinyl chloride (VC), and chloroform in groundwater samples collected in all bedrock monitoring wells advanced the Site at

concentrations exceeding the NYSDEC Ambient Water Quality Standards and Guidance Values (SGVs). Based on the results of the groundwater samples collected in bedrock, groundwater concentrations of cis-1,2-DCE, PCE, TCE, VC, and chloroform were detected above the SGVs throughout an approximately 6,125 square foot (sf) area between approximately el 19 NAVD88 and el and -49 NAVD88 (corresponding to between approximately 18 and 86 feet bsl). The highest concentration of CVOCs in groundwater in bedrock were detected at shallow bedrock well LMW-8R-S, which is located in the immediate vicinity of the former solvent tank in the north-central portion of the Site. Concentrations above the NYSDEC SGVs at this bedrock well location ranged from 63 micrograms per liter (µg/L) to 900 µg/L of PCE, 52 µg/L to 390 µg/L of TCE, and 180 µg/L to 390 µg/L of cis-1,2-DCE. The concentrations of PCE and associated breakdown compounds detected in groundwater are indicative of a release from the former solvent tank that has migrated into bedrock at the site. Extents of the on-site impacts are discussed in Section 2.0.

The proposed future use of the Site will consist of construction of a 35-story mixed-use residential and commercial building that will occupy the entirety of the Site footprint. General excavation will be completed across the majority of the Site footprint to between approximately 23 and 31 feet bsl. The proposed building cellar will be constructed within the groundwater elevation range measured during the RI.

The January 2023 IRMWP approved by NYSDEC on 19 January 2023 detailed the interim remedy of EZVI injections to address the CVOC plume. The goal of the injections is to achieve a reduction in groundwater concentrations of CVOCs to promote monitored natural attenuation (MNA) and prevent off-site migration of on-Site impacted groundwater. The January 2023 IRMWP also outlined the procedures of bench-scale treatability study that was performed to demonstrate that the selected technology is sufficient to treat the groundwater contamination effectively. A treatability study was conducted between August and November 2022. Included herein is a discussion of the treatability study completed and the results of said study, as well as a final proposed groundwater remedy based on the treatability study results.

2.0 BASELINE GROUNDWATER SAMPLING

As part of the Remedial Investigation (RI), a Langan field engineer documented the installation of permanent groundwater monitoring wells by AARCO Environmental Services Corp. of Lindenhurst, New York (AARCO), including eight shallow bedrock wells (LMW-6R-S through LMW-13R-S) and eight deep bedrock wells (LMW-6R-D through LMW-13R-D). Monitoring well locations are shown on **Figure 2**.

2.1 PDB Groundwater Sampling Methodology

Initial bedrock groundwater sampling was completed via passive diffusion bag samplers (PDBs) as a screening tool to evaluate vertical and horizontal contaminant distribution and refine the packer testing intervals. PDBs were deployed at 53 fracture intervals in the 16 bedrock wells on 14 September 2022 and were allowed to equilibrate for 14 days prior to sample collection on 29 September 2022. Samples were analyzed for VOCs only.

2.2 Bedrock Groundwater Sampling Methodology

Packer testing and groundwater sampling was completed at the Site between 19 and 28 December 2022. AARCO conducted hydraulic conductivity tests (pump tests) at 13 fracture intervals between 13 and 81 feet bsl within six bedrock monitoring wells (LMW-7R-S, LMW-7R-D, LMW-8R-S, LMW-8R-D, LMW-10R-S, and LMW-10R-D). Prior to the in situ aquifer conductivity test (pump test) one groundwater sample was collected from each fracture interval via USEPA low-flow sampling methods. Groundwater samples were also collected from four fracture intervals between 20.5 and 52.75 feet bsl within four bedrock monitoring wells (LMW-6R-S, LMW-6R-D, LMW-13R-S, and LMW-13R-D). Monitoring wells LMW-11R-S, LMW-11R-D, LMW-12R-S, and LMW-12R-D were not accessible for hydraulic conductivity testing or groundwater sampling due to the building demolition being completed at the time.

The hydraulic conductivity testing and groundwater sampling was completed using a straddle packer assembly. The straddle packer assembly consisted of two Tigre Tierra® Model 36 packers manufactured by Aardvark Packers. A pump cage housing either a Grundfos Redi-Flo2 Environmental Pump or a Geotech Environmental Equipment, Inc.© Geosub 2 and an In-Situ® Vented Level-TROLL 700 Data Logger was installed within the straddle packer assembly.

Samples were analyzed for VOCs, iron, calcium, manganese, magnesium, chloride, sulfate, nitrate, total organic carbon, dissolved organic carbon, alkalinity, hardness, *Dehalococcoides* (DHC), and total bacteria (EBAC).

2.3 Quality Assurance Samples and Data Validation

All packer testing and groundwater sampling devices were properly decontaminated according to NYSDEC and ASTM (ASTM D-5088-90) guidelines prior to each hydraulic conductivity and sampling interval. The straddle packer assembly was removed and decontaminated prior to

advancing to the next designated fracture interval within each monitoring well as well prior to advancing to the next monitoring well location. The straddle packer assembly and pump cage (including the pump and data logger) was wiped down with Alconox© Liquinox detergent and rinsed with deionized water. The pump was then removed from the pump cage and Alconox© Liquinox detergent and deionized water were run through the pump. For groundwater sample collection, dedicated high density polyethylene tubing was used for each sampling interval. Groundwater samples were collected directly into glassware supplied by the laboratory.

Each sample was numbered and recorded in a field log book. Groundwater samples were transferred to the laboratory immediately after field sampling was completed, and were stored at a maximum of 4° Celsius. Chain-of-custody forms were utilized to document custody for the acquisition, possession and analysis. Quality assurance (trip blanks) and quality control samples (field blank samples) were incorporated into the sampling events and consisted of one field blank and seven trip blanks.

Analytical data was submitted to a Langan validator for review in accordance with USEPA and NYSDEC validation protocols. A DUSR was prepared for each delivery group following data validation. The DUSR presents the results of data validation, including a summary assessment of laboratory data packages, sample preservation and chain-of-custody procedures, and a summary assessment of precision, accuracy, representativeness, comparability, and completeness for each analytical method. For each of the organic analytical methods, the following was assessed:

- Holding times
- Instrument tuning
- Instrument calibrations
- Blank results
- System monitoring compounds or surrogate recovery compounds (as applicable)
- Internal standard recovery results
- MS/MSD results
- Target compound identification
- Chromatogram quality
- Compound quantization and reported detection limits
- System performance
- Results verification

DUSRs are provided in Appendix A. Based on the results of data validation, the following qualifiers may be assigned to the data in accordance with the USEPA guidelines and best professional judgment:

- **R** – The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
- **J** – The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
- **UJ** – The analyte was not detected at a level greater than or equal to the reporting limit (RL); however, the reported RL is approximate and may be inaccurate or imprecise.
- **U** – The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.
- **NJ** – The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

After data validation was complete, validated data was used to prepare the tables and figures included in this report.

2.4 Laboratory Analytical Results

All groundwater analytical results for the for the PDB groundwater sampling and the baseline groundwater sampling were compared to the NYSDEC Ambient Water Quality Standards and Guidance Value (SGVs) and are summarized in **Tables 1 and 2** and on **Figures 3, 4, and 5**.

2.4.1 Passive Diffusion Bag Sampling

Analytical results revealed exceedances of the NYSDEC SGVs for VOCs in 49 of the 53 groundwater samples collected during the investigation. Exceedances include acetone (84 µg/L – 170 µg/L), benzene (1.1 µg/L – 31 µg/L), chloroform (7.2 µg/L – 56 µg/L), cis-1,2-DCE (8.8 µg/L – 710 µg/L), methylene chloride (8 µg/L – 9.4 µg/L), PCE (9.4 µg/L – 640 µg/L), TCE (5.4 µg/L – 390 µg/L), and VC (2.7 µg/L – 6.7 µg/L).

2.4.2 Baseline Bedrock Groundwater Sampling

Analytical results revealed exceedances of the NYSDEC SGVs for VOCs, metals, and general chemistry parameters in all of the groundwater samples collected during the investigation. Exceedances include the VOCs benzene (2 µg/L – 8.5 µg/L), chloroform (7.4 µg/L), cis-1,2-DCE (7.7 µg/L – 400 µg/L), PCE (7.2 µg/L – 900 µg/L), toluene (9 µg/L), TCE (6.3 µg/L – 360 µg/L), and VC (4.4 µg/L – 6.4 µg/L). Additionally, exceedances for metals were detected including iron (5,660 µg/L – 98,500 µg/L), magnesium (40,800 µg/L – 117,000 µg/L), and manganese (363.8 µg/L – 9,421 µg/L) and the general chemistry parameters chloride (340,000 µg/L – 600,000 µg/L) and sulfate (510,000 µg/L – 1,100,000 µg/L).

2.4.3 Data Usability

The DUSRs for the PDB and Baseline Bedrock Groundwater sampling were prepared in accordance with DER-10 and reviewed by Langan's in-house validator before issuance. The DUSRs presented the results of data validation, including a summary assessment of laboratory data packages, sample preservation and chain of custody procedures, and a summary assessment of deficiencies for each analytical method.

All data are considered usable, as qualified. Some data qualifiers were appended to the reported results, which have been included in the respective data summary tables (**Tables 1 and 2**). Copies of the DUSRs are included in Appendix B.

3.0 EMULSIFIED ZERO VALENT IRON REMEDIAL DESIGN

The emulsified zero valent iron (EZVI) remedial design is based on the treatability study results and recommendations described in the treatability study report (**Appendix D**). EZVI is a combination of zero valent iron particles and emulsified vegetable oil (EVO) and is an effective method combining two mechanisms (abiotic reductive dechlorination due to ZVI and biological reductive dechlorination) for degrading chlorinated solvents present as residual organic liquid.

3.1 Treatability Testing

A bench-scale treatability study was conducted by Langan between August 2022 and November 2022 at the Langan Treatability Facility at the New Jersey Institute of Technology (NJIT) (Newark, New Jersey), to analyze the performance of three iron based remedial options (two doses of SRS®-ZVI, a product of Terra Systems Inc. (Claymont, DE), and one dose of Provect-ERD-CH4™, product of Provectus Environmental Products, Inc. (Freeport, IL) for the reduction of

Site CVOCs using Site groundwater and rock. SRS®-ZVI is a typical EZVI product made with combination of EVO and zero valent iron (ZVI), while Provect-ERD-CH4™ is a proprietary variation of EZVI with fermentable carbon source, water soluble dual-valent iron (DVI), and antimethanogenic reagents (AMR). The treatability testing methods, results, and findings are provided in report provided in **Appendix D.**

The treatability results showed a decrease in groundwater PCE mass in the test jars treated with SRS®-ZVI and Provect-ERD-CH4™. In test jars, treated with low and high dose of SRS®-ZVI, the PCE mass decreased by 100% compared to the control (untreated) jars. Whereas, in test jars treated with Provect-ERD-CH4™, PCE mass decreased by 40% as compared to the control (untreated) jars. Overall, the data shows that SRS®-ZVI was more effective than Provect-ERD-CH4™ in degradation of CVOCs. Therefore, SRS®-ZVI treatment is recommended for field implementation of the remedy.

3.2 Remedial Approach

As described in the NYSDEC-approved IRMWP, the remedial objective for the EZVI remedy is to achieve reduction in groundwater concentrations of chlorinated solvents (PCE, TCE, cis-1,2-DCE, VC and chloroform), as well as changes in geochemistry, such that natural attenuation is better supported. An EZVI injection will be performed for both abiotic, as well as biological degradation of CVOCs. The use of EZVI injections is designed to promote MNA and mitigate potential for offsite migration of on-Site CVOC-impacted groundwater. The chemically and biologically reducing conditions induced by EZVI enhance conditions for long-term MNA. The EZVI reagents will be delivered into the subsurface through existing on-site bedrock wells.

3.3 Treatment Zones

Treatment zones for the application of EZVI were determined based on the shallow and deep bedrock groundwater concentrations of the CVOCs detected at the Site, as described in Section 2.0 and shown on **Figures 5**. The lateral extent of EZVI treatment zones are based on observed exceedances of CVOC NYSDEC SGVs in groundwater and are targeted to zones with total CVOC concentration of more than 20 µg/L. Application of the EZVI remedy in zones of high CVOC concentrations will provide a remedial benefit in affecting decrease in CVOC levels in zones with relatively low CVOC concentrations by the migration of soluble reagents, fatty acids generated through degradation of EVO, and changes in induced geochemistry. The proposed

EZVI treatment locations and intervals are shown on **Figure 6A and 6B**, respectively, and are defined as below:

- Shallow EZVI Treatment Zone is approximately 6,125 square feet wide and up to 30 feet thick (up to 50 feet bsl).
- Deep EZVI Treatment Zone is approximately 6,125 square feet wide and up to 35 feet thick (up to 80 feet bsl).

3.4 Injection Reagents and Dosages

To implement the remedy, an injection solution consisting of EVO, ZVI (along with ferrous sulfide to generate sulfidated ZVI), nutrients (yeast extract, and diammonium phosphate (DAP)), buffering agent (calcium carbonate and alkaline buffer), sodium ascorbate (reducing agent for dilution water) and bioaugmentation culture SDC-9™ will be injected into both Treatment Zones. The reagent demand for the EZVI application are based on the results of the treatability study. The reagent doses and injection volume are summarized in **Table 3**.

4.0 EMULSIFIED ZERO VALENT IRON INJECTION IMPLEMENTATION

The following tasks will be completed as a part of EZVI injection implementation:

- Health and Safety Requirements;
- Permit and Notifications;
- Mobilization;
- Injection Event;
- Bedrock Monitoring Well Installation and Development (contingent task);
- Community Air Monitoring;
- Injection Monitoring; and
- Post-Injection Groundwater Monitoring Events.

4.1 Health and Safety Requirements

A site-specific construction health and safety plan (CHASP) was developed as Appendix A of the January 2023 IRMWP and will be enforced to protect on-Site workers during the implementation of the EZVI remedy. This CHASP includes reagent and chemical substance handling and storage guidelines, first aid and spill control measures, and exposure limits for all additives to be used in the field. Supplemental Safety Data Sheets (SDS) are provided in Appendix C. Personal protective equipment (PPE) to be used while handling of reagents will include full-face respirators, as applicable, chemical resistant coveralls and booties, nitrite gloves, steel toed shoes, and hard hat. A job safety analysis will be prepared before all field activities.

Appropriate storage, handling, and spill cleanup guidelines will be followed to minimize the potential for accidental release and exposure to injection reagents. The injection area and surroundings will be continuously monitored for surfacing and leaks during the injection process. In an event of surfacing or leak, the injections will be immediately stopped and the leaked or surfaced materials will be removed and contained in drums. At the end of each work day, once application of injection pressure is ceased, injection area and surroundings will be monitored for additional half hour to identify any potential surfacing or leaks. During this time the pressure at the injection points is expected to subside to ambient conditions, reducing potential for surfacing.

All injection reagents will be stored on-Site within a secured area with secondary containment and appropriate labeling and warning signs.

4.2 Permits and Notifications

An underground control notification letter along with Inventory of Injection Wells form (USEPA form 7520-16) and a copy of the approved Emulsified Zero Valent Iron Remedial Design will be submitted to the USEPA before field activities for injections are started.

A permit for access to the City fire hydrant will be requested from the Department of Environmental Protection. Hydrant water will be used to provide dilution water for injection activities.

4.3 Mobilization

Prior to starting the injection activities, Langan and its subcontractors will mobilize the necessary equipment and reagents to the Site. Mobilization will be completed over the course of a single week. Reagents and equipment mobilized to the Site will be staged adjacent to the treatment

area shown on **Figure 6A**. Equipment needed for the injection includes the following: air compressor, generator, injection mixing totes, electric mixer, injection hoses, injection pumps, injection manifold, injection trailer, well head fittings, groundwater sampling/monitoring equipment, work zone and perimeter air monitoring equipment, and 55-gallon steel drums. Reagents will be delivered to the Site. The remedial reagents (SRS-ZVI®, calcium bicarbonate, yeast extract, DAP, and sodium ascorbate) will be sourced from Terra Systems, Inc., and bioaugmentation culture (SDC-9™) will be supplied by APTIM Corporation (Lawrenceville, New Jersey). Alkaline buffer CoBupHMg™ will be sourced from EOS Remediation LLC (Research Triangle Park, NC). The SDS for all remedial reagents are provided in **Appendix C**. All mixing and injection equipment will be staged within secondary containment in the treatment areas. Water for dilution of injection reagents will be sourced directly from a nearby fire hydrant or will be sourced from off-Site, if hydrant permit is not approved. An inert chemical reducing agent may be added to the injection water to assure that it is anaerobic and reducing. The proposed injection locations are existing bedrock wells (listed in **Table 3** and shown on **Figure 6A** and are located in an open area without access restrictions.

4.4 Injections

The injection event will include preparation for the injection of undiluted SRS-ZVI® reagent, application of injection mix (calcium carbonate, alkaline buffer, yeast extract, DAP, and reducing reagent), and injection of undiluted bioaugmentation culture SDC-9™, at the existing bedrock wells.

Injection of EZVI: SRS-ZVI®, will be injected without dilution and directly pumped from the reagent tote into the targeted injection intervals summarized in **Table 3**.

Application of Injection Mixture: An injection mixture of calcium carbonate, alkaline buffer, yeast extract, and DAP, will be prepared in water that has been made anaerobic [<0.5 milligrams per liter dissolved oxygen and ~-75 millivolts oxidation reduction potential], using the reducing reagent (as necessary). Injection mixture will be prepared in small batches (about 100-200 gallons), and will be continuously mixed to avoid settling of solids. Remedial reagents are provided in **Table 3**.

Application of Bioaugmentation culture SDC-9™: The bioaugmentation culture will be injected without dilution, in-line, before the injection point, to minimize the exposure of the oxygen sensitive microbial culture to air. Volume of bioaugmentation culture to be applied at each interval is provided in **Table 3**.

Injections: The injection mix will be applied within the treatment zones using existing shallow and deep bedrock wells. Proposed injection locations are shown on **Figure 6A** and injection intervals are shown in **Figure 6B** and provided in **Table 3**. Injections at each location will be performed from top to bottom, with a 5-foot injection interval isolated with straddle packers or packer/well seal combination. The injection reagents will be pumped from the mixing tank or directly from the reagent tote into the well head through an injection manifold. The injection manifold will be equipped with ball valves, gate vales, and flow totalizers to regulate and monitor the injection flow. Each injection location will be fitted with a well head that will be equipped with a pressure gauge and a threaded adaptor to connect to the injection location and Camlock fittings to connect with similarly fitted hoses. One bedrock well will be injected at a time. An injection process diagram is provided as **Figure 7**.

All reagents will be injected at the target injection interval followed by injection of up to 50 to 100 gallons of anaerobic chase water, to rinse the injection hoses and push out reagents within the fractures away from the injection location. Then the packer assembly will be moved to the next treatment interval. Changes to the injections (reagent volume, treatment intervals, extent of dilution of reagents [calcium carbonate, alkaline buffer yeast extract, and DAP], and volume of chase water) will be made based on field observations. The injection event is estimated to be completed within two to three weeks.

4.5 Injection Monitoring

Injection monitoring will consists of batch, field, and process monitoring. The injection monitoring plan is summarized in **Table 4**.

Batch Monitoring: During preparation of each batch of injection solution, the mixing ratios and volumes will be recorded.

Field Monitoring: Depth to water and water quality parameters (pH, temperature, ORP, dissolved oxygen, turbidity, conductivity, and total dissolved solids) will be measured daily at the existing bedrock wells before the injections and daily after the injections. During injections at the bedrock monitoring wells, water quality will be monitored at other bedrock wells, if wells are not sealed

(to avoid surfacing of injection fluids through the wells). Field monitoring will be used to assess the radius of influence of injections. In addition, monitoring will be performed to identify leaks and surfacing of injection fluid at the injection wells heads, and within and around the treatment zone. Any injection fluid that surfaces will be contained in 55-gallon plastic drums and disposed of off-Site.

Process Monitoring: During EZVI injections, process parameters (injection pressure, flow rate, and volume) will be monitored. The process monitoring will be performed to assess the injection process.

Preparation of batches of injection solutions, the injection process parameters, and field monitoring will be recorded in field logs.

4.6 Community Air Monitoring

Pursuant to the NYSDEC-approved IRMWP dated January 2023, air monitoring will be conducted for particulates (i.e., dust) and VOCs during intrusive activities. Dust and/or vapor suppression techniques will be employed to limit potential for off-Site migration of soil and vapors. The air monitoring will include continuous perimeter monitoring of dust and organic vapor utilizing DustTrak aerosol monitors and PIDs capable of recording data and calculating 15-minute averages. A field engineer, scientist, or geologist will also monitor Site perimeters for visible dust and odors. During injections, work zone air monitoring will be implemented in accordance with the CHASP provided in the IRMWP. If activity will occur that disturbs the soil or subsurface, perimeter air monitoring will be implemented in accordance with the CAMP provided in the IRMWP.

4.7 Bedrock Monitoring Well Installation and Development (Contingent Task)

It is anticipated that existing bedrock monitoring wells will be used for post-injection performance monitoring. Effort will be made to preserve the monitoring wells to the extent practicable, particularly those located in the immediate vicinity of the source area. However, if the existing on-site bedrock monitoring wells are damaged during foundation construction activities, permanent replacement bedrock monitoring wells will be installed by a licensed well driller. If well re-installation is required, final well location design and construction details will be determined based on the constructed foundation elements and observed bedrock depth during construction, and will be provided to NYSDEC for review and approval prior to installation.

4.8 Post-Injection Performance Monitoring

Groundwater monitoring events will be performed six months after the completion of injections and the need for additional monitoring will be determined following review of the performance monitoring analytical results. Groundwater samples will be collected from selected fracture zones within the bedrock monitoring wells, which will be submitted to NYSDEC for review and approval prior to sample collection, via either passive bag diffusion sample collection or USEPA low-flow sampling methods and will be analyzed for VOCs, iron (total and dissolved), manganese (total and dissolved), sulfate, sulfide, chloride, dissolved gases (methane, ethene, ethane), alkalinity, *Dehalococcoides* (DHC) and total bacteria (EBAC). Depth to water measurements and groundwater quality parameters (pH, temperature, ORP, DO, turbidity, and conductivity) will be collected during each groundwater monitoring event. Purged groundwater collected during the sampling event will be contained in 55-gallon drums and properly disposed of off-Site.

5.0 REPORTING

Following the injection event, the injection volumes, reagent dosage, injection and field monitoring data, as well as performance monitoring data will be reported to NYSDEC in the Final Engineering Report.

6.0 SCHEDULE

Following approval from the NYSDEC, implementation of the remediation activities proposed herein is expected to progress under the following schedule:

	Task	Duration
1	Mobilization, injections, and injection monitoring	2 to 3 weeks
2	Installation of new monitoring wells (contingent task)	2 to 3 weeks
3	Post-injection performance monitoring	One event will be performed at six months after injections.
4	Reporting	Final injection report will be submitted in the Final Engineering Report.

7.0 CERTIFICATION

I, Stewart Abrams, P.E., certify that I am currently a NYS registered professional engineer and that the Emulsified Zero-Valent Iron Remedial Design 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).



NYS Professional Engineer 078833	6 March 2023 Date	Signature

TABLES

Table 1
EZVI Remedial Design
Passive Diffusion Bag (PDB) Groundwater Sample Analytical Results

1487 First Avenue
New York, New York
NYSDEC BCP Site No.: C231152
Langan Project No.: 100963701

Analyte	CAS Number	NYSDEC SGVs	Location	LMW-6R-D	LMW-6R-D	LMW-6R-D	LMW-6R-S	LMW-6R-S	LMW-7R-D	LMW-7R-D	LMW-7R-D	LMW-7R-S	LMW-7R-S	LMW-7R-S	LMW-7R-S
			Sample Name	LMW-6R-D_46	LMW-6R-D_70	LMW-6R-D_75	LMW-6R-S_21.5	LMW-6R-S_31	LMW-7R-D_48	LMW-7R-D_68.5	LMW-7R-D_75	LMW-7R-S_21.5	LMW-7R-S_27	LMW-7R-S_39	LMW-7R-S_42.5
			Sample Date	09/29/2022	09/29/2022	09/29/2022	09/29/2022	09/29/2022	09/29/2022	09/29/2022	09/29/2022	09/29/2022	09/29/2022	09/29/2022	09/29/2022
			Pump Intake Depth	46	70	75	21.5	31	48	68.5	75	21.5	27	39	42.5
			Unit	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Volatile Organic Compounds															
1,1,1,2-Tetrachloroethane	630-20-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
1,1,1-Trichloroethane	71-55-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
1,1,2,2-Tetrachloroethane	79-34-5	5	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U	<1 U	<0.5 U	<1 U	<1.2 U	<2.5 U	<2.5 U
1,1,2-Trichloroethane	79-00-5	1	ug/l	<1.5 U	<1.5 U	<1.5 U	<1.5 U	<1.5 U	<3 U	<3 U	<1.5 U	<3 U	<3.8 U	<7.5 U	<7.5 U
1,1-Dichloroethane	75-34-3	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
1,1-Dichloroethene	75-35-4	5	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U	<1 U	<0.5 U	0.53 J	0.69 J	0.88 J	1.2 J
1,1-Dichloropropene	563-58-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
1,2,3-Trichlorobenzene	87-61-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
1,2,3-Trichloropropane	96-18-4	0.04	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
1,2,4,5-Tetramethylbenzene	95-93-2	5	ug/l	<2 U	<2 U	<2 U	<2 U	<2 U	<4 U	<4 U	<2 U	<4 U	<5 U	<10 U	<10 U
1,2,4-Trichlorobenzene	120-82-1	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
1,2,4-Trimethylbenzene	95-63-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
1,2-Dibromo-3-Chloropropane	96-12-8	0.04	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	0.0006	ug/l	<2 U	<2 U	<2 U	<2 U	<2 U	<4 U	<4 U	<2 U	<4 U	<5 U	<10 U	<10 U
1,2-Dichlorobenzene	95-50-1	3	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
1,2-Dichloroethane	107-06-2	0.6	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U	<1 U	<0.5 U	<1 U	<1.2 U	<2.5 U	<2.5 U
1,2-Dichloropropane	78-87-5	1	ug/l	<1 U	<1 U	<1 U	<1 U	<1 U	<2 U	<2 U	<1 U	<2 U	<2.5 U	<5 U	<5 U
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
1,3-Dichlorobenzene	541-73-1	3	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
1,3-Dichloropropane	142-28-9	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
1,4-Dichlorobenzene	106-46-7	3	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
1,4-Diethyl Benzene	105-05-5	NS	ug/l	<2 U	<2 U	<2 U	<2 U	<2 U	<4 U	<4 U	<2 U	<4 U	<5 U	<10 U	<10 U
1,4-Dioxane (P-Dioxane)	123-91-1	NS	ug/l	<250 U	<250 UJ	<250 U	<250 U	<250 UJ	<500 U	<500 UJ	<250 U	<500 U	<620 UJ	<1,200 U	<1,200 U
2,2-Dichloropropane	594-20-7	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
2-Chlorotoluene	95-49-8	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
2-Hexanone (MBK)	591-78-6	50	ug/l	<5 U	<5 U	<5 U	<5 U	<5 U	<10 U	<10 U	<5 U	<10 U	<12 U	<25 U	<25 U
4-Chlorotoluene	106-43-4	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
4-Ethyltoluene	622-96-8	NS	ug/l	<2 U	<2 U	<2 U	<2 U	<2 U	<4 U	<4 U	<2 U	<4 U	<5 U	<10 U	<10 U
Acetone	67-64-1	**50**	ug/l	19	17	33	8.8	6.7	31	23	19	34	25	26	30
Acrylonitrile	107-13-1	5	ug/l	<5 U	<5 U	<5 U	<5 U	<5 U	<10 U	<10 U	<5 U	<10 U	<12 U	<25 U	<25 U
Benzene	71-43-2	**1**	ug/l	<0.5 U	<0.5 U	<0.5 U	0.16 J	<0.5 U	**1.1**	**1.1**	0.34 J	0.63 J	0.46 J	<2.5 U	<2.5 U
Bromobenzene	108-86-1	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
Bromochloromethane	74-97-5	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
Bromodichloromethane	75-27-4	50	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U	<1 U	<0.5 U	<1 U	<1.2 U	<2.5 U	<2.5 U
Bromoform	75-25-2	50	ug/l	<2 U	<2 U	<2 U	<2 U	<2 U	<4 U	<4 U	<2 U	<4 U	<5 U	<10 U	<10 U
Bromomethane	74-83-9	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
Carbon Disulfide	75-15-0	60	ug/l	<5 U	<5 U	<5 U	<5 U	<5 U	<10 U	<10 U	<5 U	<10 U	<12 U	<25 U	<25 U
Carbon Tetrachloride	56-23-5	5	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U	<1 U	<0.5 U	<1 U	<1.2 U	<2.5 U	<2.5 U
Chlorobenzene	108-90-7	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
Chloroethane	75-00-3	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
Chloroform	67-66-3	**7**	ug/l	**55**	**56**	**55**	**24**	**25**	<5 U	<5 U	1.8 J	2.9 J	2.5 J	<12 U	<12 U
Chloromethane	74-87-3	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
Cis-1,2-Dichloroethene	156-59-2	**5**	ug/l	4.3	4	3.8	**17**	**16**	**170**	**180**	**100**	**330**	**390**	**480**	**710**
Cis-1,3-Dichloropropene	10061-01-5	0.4	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U	<1 U	<0.5 U	<1 U	<1.2 U	<2.5 U	<2.5 U
Cymene	99-87-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
Dibromochloromethane	124-48-1	50	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U	<1 U	<0.5 U	<1 U	<1.2 U	<2.5 U	<2.5 U
Dibromomethane	74-95-3	5	ug/l	<5 U	<5 U	<5 U	<5 U	<5 U	<10 U	<10 U	<5 U	<10 U	<12 U	<25 U	<25 U
Dichlorodifluoromethane	75-71-8	5	ug/l	<5 U	<5 U	<5 U	<5 U	1 J	<10 U	<10 U	<5 U	<10 U	<12 U	<25 U	<25 U
Diethyl Ether (Ethyl Ether)	60-29-7	NS	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
Ethylbenzene	100-41-4	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
Hexachlorobutadiene	87-68-3	0.5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
Isopropylbenzene (Cumene)	98-82-8	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
M,P-Xylene	179601-23-1	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
Methyl Ethyl Ketone (2-Butanone)	78-93-3	50	ug/l	2.7 J	<5 UJ	<5 U	<5 U	<5 UJ	<10 U	<10 UJ	<5 U	<10 U	<12 UJ	<25 U	<25 U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1	NS	ug/l	<5 U	<5 U	<5 U	<5 U	<5 U	<10 U	<10 U	<5 U	<10 U	<12 U	<25 U	<25 U
Methylene Chloride	75-09-2	**5**	ug/l	3.9	4	3.6	2.6	2.9	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
Naphthalene	91-20-3	10	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
n-Butylbenzene	104-51-8	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
n-Propylbenzene	103-65-1	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
o-Xylene (1,2-Dimethylbenzene)	95-47-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
Sec-Butylbenzene	135-98-8	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
Styrene	100-42-5	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
T-Butylbenzene	98-06-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
Tert-Butyl Methyl Ether	1634-04-4	10	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
Tetrachloroethene (PCE)	127-18-4	**5**	ug/l	0.19 J	0.18 J	<0.5 U	**25**	**24**	**12**	**9.4**	2.1	**11**	**23**	**31**	**26**
Toluene	108-88-3	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
Total 1,2-Dichloroethene (Cis and Trans)	540-59-0	NS	ug/l	4.3	4	3.8	17	16	170	180	100	330	390	480	710
Total Xylenes	1330-20-7	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
Total, 1,3-Dichloropropene (Cis And Trans)	542-75-6	0.4	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U	<1 U	<0.5 U	<1 U	<1.2 U	<2.5 U	<2.5 U
Trans-1,2-Dichloroethene	156-60-5	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
Trans-1,3-Dichloropropene	10061-02-6	0.4	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U	<1 U	<0.5 U	<1 U	<1.2 U	<2.5 U	<2.5 U
Trans-1,4-Dichloro-2-Butene	110-57-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
Trichloroethene (TCE)	79-01-6	**5**	ug/l	0.29 J	0.34 J	0.18 J	**10**	**9.7**	**20**	**20**	**8.2**	**50**	**90**	**110**	**86**
Trichlorofluoromethane	75-69-4	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<5 U	<2.5 U	<5 U	<6.2 U	<12 U	<12 U
Vinyl Acetate	108-05-4	NS	ug/l	<5 U	<5 U	<5 U	<5 U	<5 U	<10 U	<10 U	<5 U	<10 U	<12 U	<25 U	<25 U
Vinyl Chloride	75-01-4	**2**	ug/l	<1 U	0.09 J	0.12 J	0.31 J	0.34 J	1 J	1 J	1	1.1 J	1.1 J	1.2 J	1.6 J

Table 1
EZVI Remedial Design
Passive Diffusion Bag (PDB) Groundwater Sample Analytical Results

1487 First Avenue
New York, New York
NYSDEC BCP Site No.: C231152
Langan Project No.: 100963701

Analyte	CAS Number	NYSDEC SGVs	Location	LMW-8R-D	LMW-8R-D	LMW-8R-D	LMW-8R-D	LMW-8R-D	LMW-8R-S	LMW-8R-S	LMW-8R-S	LMW-8R-S	LMW-9R-D	LMW-9R-D	LMW-9R-D	LMW-9R-D	LMW-9R-D
			Sample Name	LMW-8R-D_46.5	LMW-8R-D_48.5	LMW-8R-D_58	LMW-8R-D_73	LMW-8R-D_77	LMW-8R-S_15	LMW-8R-S_17.5	LMW-8R-S_22.5	LMW-8R-S_27	LMW-9R-D_43.5	LMW-9R-D_46.5	LMW-9R-D_60.5	LMW-9R-D_63.5	LMW-9R-D_76
			Sample Date	09/29/2022	09/29/2022	09/29/2022	09/29/2022	09/29/2022	09/29/2022	09/29/2022	09/29/2022	09/29/2022	09/29/2022	09/29/2022	09/29/2022	09/29/2022	09/29/2022
			Pump Intake Depth	46.5	48.5	58	73	77	15	17.5	22.5	27	43.5	46.5	60.5	63.5	76
			Unit	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	630-20-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,1,1-Trichloroethane	71-55-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,1,2,2-Tetrachloroethane	79-34-5	5	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,1,2-Trichloroethane	79-00-5	1	ug/l	<1.5 U	<1.5 U	<1.5 U	<1.5 U	<3 U	<7.5 U	<7.5 U	<7.5 U	<7.5 U	<1.5 U	<1.5 U	<1.5 U	<1.5 U	<1.5 U
1,1-Dichloroethane	75-34-3	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,1-Dichloroethene	75-35-4	5	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,1-Dichloropropene	563-58-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,2,3-Trichlorobenzene	87-61-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,2,3-Trichloropropane	96-18-4	0.04	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,2,4,5-Tetramethylbenzene	95-93-2	5	ug/l	<2 U	<2 U	<2 U	<2 U	<4 U	<10 U	<10 U	<10 U	<10 U	<2 U	<2 U	<2 U	<2 U	<2 U
1,2,4-Trichlorobenzene	120-82-1	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,2,4-Trimethylbenzene	95-63-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,2-Dibromo-3-Chloropropane	96-12-8	0.04	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	0.0006	ug/l	<2 U	<2 U	<2 U	<2 U	<4 U	<10 U	<10 U	<10 U	<10 U	<2 U	<2 U	<2 U	<2 U	<2 U
1,2-Dichlorobenzene	95-50-1	3	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,2-Dichloroethane	107-06-2	0.6	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,2-Dichloropropane	78-87-5	1	ug/l	<1 U	<1 U	<1 U	<1 U	<2 U	<5 U	<5 U	<5 U	<5 U	<1 U	<1 U	<1 U	<1 U	<1 U
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,3-Dichlorobenzene	541-73-1	3	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,3-Dichloropropane	142-28-9	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,4-Dichlorobenzene	106-46-7	3	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,4-Diethyl Benzene	105-05-5	NS	ug/l	<2 U	<2 U	<2 U	<2 U	<4 U	<10 U	<10 U	<10 U	<10 U	<2 U	<2 U	<2 U	<2 U	<2 U
1,4-Dioxane (P-Dioxane)	123-91-1	NS	ug/l	<250 U	<250 U	<250 UJ	<250 U	<500 U	<1,200 U	<1,200 UJ	<1,200 U	<1,200 UJ	<250 U	<250 U	<250 U	<250 UJ	<250 U
2,2-Dichloropropane	594-20-7	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
2-Chlorotoluene	95-49-8	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
2-Hexanone (MBK)	591-78-6	50	ug/l	<5 U	<5 U	<5 U	<5 U	<10 U	<25 U	<25 U	<25 U	<25 U	<5 U	<5 U	<5 U	<5 U	<5 U
4-Chlorotoluene	106-43-4	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
4-Ethyltoluene	622-96-8	NS	ug/l	<2 U	<2 U	<2 U	<2 U	<4 U	<10 U	<10 U	<10 U	<10 U	<2 U	<2 U	<2 U	<2 U	<2 U
Acetone	67-64-1	**50**	ug/l	8.5	10	11	28	17	17 J	27	17 J	26	8.4	6.8	20	6.2	13
Acrylonitrile	107-13-1	5	ug/l	<5 U	<5 U	<5 U	<5 U	<10 U	<25 U	<25 U	<25 U	<25 U	<5 U	<5 U	<5 U	<5 U	<5 U
Benzene	71-43-2	**1**	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	**31**	<2.5 U	<2.5 U	<2.5 U	<2.5 U	0.6	0.56	0.65	**1.6**	0.19 J
Bromobenzene	108-86-1	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Bromochloromethane	74-97-5	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Bromodichloromethane	75-27-4	50	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
Bromoform	75-25-2	50	ug/l	<2 U	<2 U	<2 U	<2 U	<4 U	<10 U	<10 U	<10 U	<10 U	<2 U	<2 U	<2 U	<2 U	<2 U
Bromomethane	74-83-9	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Carbon Disulfide	75-15-0	60	ug/l	<5 U	<5 U	<5 U	<5 U	<10 U	<25 U	<25 U	<25 U	<25 U	<5 U	<5 U	<5 U	<5 U	1 J
Carbon Tetrachloride	56-23-5	5	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
Chlorobenzene	108-90-7	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Chloroethane	75-00-3	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Chloroform	67-66-3	**7**	ug/l	1.5 J	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	1.2 J	1.2 J	<2.5 U	3.8	**34**
Chloromethane	74-87-3	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Cis-1,2-Dichloroethene	156-59-2	**5**	ug/l	0.8 J	0.85 J	1 J	0.86 J	**200**	**200**	**190**	**190**	**180**	**9.6**	**8.8**	**9.6**	**11**	2.3 J
Cis-1,3-Dichloropropene	10061-01-5	0.4	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
Cymene	99-87-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Dibromochloromethane	124-48-1	50	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
Dibromomethane	74-95-3	5	ug/l	<5 U	<5 U	<5 U	<5 U	<10 U	<25 U	<25 U	<25 U	<25 U	<5 U	<5 U	<5 U	<5 U	<5 U
Dichlorodifluoromethane	75-71-8	5	ug/l	<5 U	<5 U	<5 U	<5 U	<10 U	<25 U	<25 U	<25 U	<25 U	<5 U	<5 U	<5 U	<5 U	<5 U
Diethyl Ether (Ethyl Ether)	60-29-7	NS	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Ethylbenzene	100-41-4	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Hexachlorobutadiene	87-68-3	0.5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Isopropylbenzene (Cumene)	98-82-8	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
M,P-Xylene	179601-23-1	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Methyl Ethyl Ketone (2-Butanone)	78-93-3	50	ug/l	<5 U	<5 U	<5 UJ	<5 U	<10 U	<25 U	<25 UJ	<25 U	<25 UJ	2 J	<5 U	1.9 J	<5 UJ	<5 U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1	NS	ug/l	<5 U	<5 U	<5 U	<5 U	<10 U	<25 U	<25 U	<25 U	<25 U	<5 U	<5 U	<5 U	<5 U	<5 U
Methylene Chloride	75-09-2	**5**	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	**8**
Naphthalene	91-20-3	10	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
n-Butylbenzene	104-51-8	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
n-Propylbenzene	103-65-1	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
o-Xylene (1,2-Dimethylbenzene)	95-47-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Sec-Butylbenzene	135-98-8	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Styrene	100-42-5	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
T-Butylbenzene	98-06-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Tert-Butyl Methyl Ether	1634-04-4	10	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Tetrachloroethene (PCE)	127-18-4	**5**	ug/l	<0.5 U	<0.5 U	0.25 J	<0.5 U	0.41 J	**540**	**600**	**640**	**570**	2.7	2.5	2.4	2.1	0.34 J
Toluene	108-88-3	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Total 1,2-Dichloroethene (Cis and Trans)	540-59-0	NS	ug/l	0.8 J	0.85 J	1 J	0.86 J	200	200	190	190	180	9.6	8.8	9.6	11	2.3 J
Total Xylenes	1330-20-7	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Total, 1,3-Dichloropropene (Cis And Trans)	542-75-6	0.4	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
Trans-1,2-Dichloroethene	156-60-5	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Trans-1,3-Dichloropropene	10061-02-6	0.4	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<1 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
Trans-1,4-Dichloro-2-Butene	110-57-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Trichloroethene (TCE)	79-01-6	**5**	ug/l	<0.5 U	<0.5 U	0.18 J	<0.5 U	0.39 J	**380**	**390**	**390**	**350**	0.75	0.68	0.65	0.65	<0.5 U
Trichlorofluoromethane	75-69-4	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U	<12 U	<12 U	<12 U	<12 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Vinyl Acetate	108-05-4	NS	ug/l	<5 U	<5 U	<5 U	<5 U	<10 U	<25 U	<25 U	<25 U	<25 U	<5 U	<5 U	<5 U	<5 U	<5 U
Vinyl Chloride	75-01-4	**2**	ug/l	<1 U	<1 U	<1 U	<1 U	**6.7**	<5 U	0.42 J	<5 U	0.41 J	0.2 J	0.19 J	0.23 J	0.6 J	0.13 J

Table 1
EZVI Remedial Design
Passive Diffusion Bag (PDB) Groundwater Sample Analytical Results

1487 First Avenue
New York, New York
NYSDEC BCP Site No.: C231152
Langan Project No.: 100963701

Analyte	CAS Number	NYSDEC SGVs	Location	LMW-9R-S	LMW-9R-S	LMW-9R-S	LMW-10R-D	LMW-10R-D	LMW-10R-S	LMW-10R-S	LMW-10R-S	LMW-10R-S	LMW-10R-S
			Sample Name	LMW-9R-S_15	LMW-9R-S_22	LMW-9R-S_30.5	LMW-10R-D_49	LMW-10R-D_63	LMW-10R-S_21.5	LMW-10R-S_26.5	LMW-10R-S_28.5	LMW-10R-S_34	LMW-10R-S_36
			Sample Date	09/29/2022	09/29/2022	09/29/2022	09/29/2022	09/29/2022	09/29/2022	09/29/2022	09/29/2022	09/29/2022	09/29/2022
			Pump Intake Depth	15	22	30.5	49	63	21.5	26.5	28.5	34	36
			Unit	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Volatile Organic Compounds													
1,1,1,2-Tetrachloroethane	630-20-6	5	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,1,1-Trichloroethane	71-55-6	5	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,1,2,2-Tetrachloroethane	79-34-5	5	ug/l	<0.5 U	<1 U	<1.2 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,1,2-Trichloroethane	79-00-5	1	ug/l	<1.5 U	<3 U	<3.8 U	<1.5 U	<1.5 U	<1.5 U	<1.5 U	<1.5 U	<1.5 U	<1.5 U
1,1-Dichloroethane	75-34-3	5	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,1-Dichloroethene	75-35-4	5	ug/l	<0.5 U	<1 U	<1.2 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,1-Dichloropropene	563-58-6	5	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,2,3-Trichlorobenzene	87-61-6	5	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,2,3-Trichloropropane	96-18-4	0.04	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,2,4,5-Tetramethylbenzene	95-93-2	5	ug/l	<2 U	<4 U	<5 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
1,2,4-Trichlorobenzene	120-82-1	5	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,2,4-Trimethylbenzene	95-63-6	5	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,2-Dibromo-3-Chloropropane	96-12-8	0.04	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 UJ	<2.5 U	<2.5 U	<2.5 UJ	<2.5 UJ	<2.5 UJ
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	0.0006	ug/l	<2 U	<4 U	<5 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
1,2-Dichlorobenzene	95-50-1	3	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,2-Dichloroethane	107-06-2	0.6	ug/l	<0.5 U	<1 U	<1.2 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,2-Dichloropropane	78-87-5	1	ug/l	<1 U	<2 U	<2.5 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	5	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,3-Dichlorobenzene	541-73-1	3	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,3-Dichloropropane	142-28-9	5	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,4-Dichlorobenzene	106-46-7	3	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,4-Diethyl Benzene	105-05-5	NS	ug/l	<2 U	<4 U	<5 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
1,4-Dioxane (P-Dioxane)	123-91-1	NS	ug/l	<250 U	<500 UJ	<620 UJ	<250 UJ	<250 U	<250 U	<250 UJ	<250 U	<250 U	<250 U
2,2-Dichloropropane	594-20-7	5	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
2-Chlorotoluene	95-49-8	5	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
2-Hexanone (MBK)	591-78-6	50	ug/l	<5 U	<10 U	<12 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U
4-Chlorotoluene	106-43-4	5	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
4-Ethyltoluene	622-96-8	NS	ug/l	<2 U	<4 U	<5 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
Acetone	67-64-1	**50**	ug/l	12	16	26	**100**	**91**	**91**	**84**	**88**	**100**	**160**
Acrylonitrile	107-13-1	5	ug/l	<5 U	<10 U	<12 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U
Benzene	71-43-2	**1**	ug/l	**8**	**8.5**	**7.4**	<0.5 U	<0.5 U	0.26 J	0.25 J	0.24 J	0.25 J	0.25 J
Bromobenzene	108-86-1	5	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Bromochloromethane	74-97-5	5	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Bromodichloromethane	75-27-4	50	ug/l	<0.5 U	<1 U	<1.2 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
Bromoform	75-25-2	50	ug/l	<2 U	<4 U	<5 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
Bromomethane	74-83-9	5	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Carbon Disulfide	75-15-0	60	ug/l	<5 U	<10 U	<12 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U
Carbon Tetrachloride	56-23-5	5	ug/l	<0.5 U	<1 U	<1.2 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
Chlorobenzene	108-90-7	5	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Chloroethane	75-00-3	5	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Chloroform	67-66-3	**7**	ug/l	**8.9**	**7.9**	**7.5**	**52**	**47**	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Chloromethane	74-87-3	5	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Cis-1,2-Dichloroethene	156-59-2	**5**	ug/l	**28**	**28**	**28**	5	4.3	**100**	**110**	**90**	**91**	**92**
Cis-1,3-Dichloropropene	10061-01-5	0.4	ug/l	<0.5 U	<1 U	<1.2 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
Cymene	99-87-6	5	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Dibromochloromethane	124-48-1	50	ug/l	<0.5 U	<1 U	<1.2 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
Dibromomethane	74-95-3	5	ug/l	<5 U	<10 U	<12 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U
Dichlorodifluoromethane	75-71-8	5	ug/l	<5 U	<10 U	<12 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U
Diethyl Ether (Ethyl Ether)	60-29-7	NS	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Ethylbenzene	100-41-4	5	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Hexachlorobutadiene	87-68-3	0.5	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Isopropylbenzene (Cumene)	98-82-8	5	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
M,P-Xylene	179601-23-1	5	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Methyl Ethyl Ketone (2-Butanone)	78-93-3	50	ug/l	<5 U	<10 UJ	<12 UJ	23 J	21	21	17 J	21	24	35
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1	NS	ug/l	<5 U	<10 U	<12 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U
Methylene Chloride	75-09-2	**5**	ug/l	<2.5 U	<5 U	<6.2 U	3	2.5	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Naphthalene	91-20-3	10	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
n-Butylbenzene	104-51-8	5	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
n-Propylbenzene	103-65-1	5	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
o-Xylene (1,2-Dimethylbenzene)	95-47-6	5	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Sec-Butylbenzene	135-98-8	5	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Styrene	100-42-5	5	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
T-Butylbenzene	98-06-6	5	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Tert-Butyl Methyl Ether	1634-04-4	10	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Tetrachloroethene (PCE)	127-18-4	**5**	ug/l	**140**	**190**	**250**	0.78	0.74	2.7	2.6	2	2	2.1
Toluene	108-88-3	5	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Total 1,2-Dichloroethene (Cis and Trans)	540-59-0	NS	ug/l	28	28	28	5	4.3	100	110	90	91	92
Total Xylenes	1330-20-7	5	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Total, 1,3-Dichloropropene (Cis And Trans)	542-75-6	0.4	ug/l	<0.5 U	<1 U	<1.2 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
Trans-1,2-Dichloroethene	156-60-5	5	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Trans-1,3-Dichloropropene	10061-02-6	0.4	ug/l	<0.5 U	<1 U	<1.2 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
Trans-1,4-Dichloro-2-Butene	110-57-6	5	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Trichloroethene (TCE)	79-01-6	**5**	ug/l	**58**	**56**	**58**	1.6	1.6	**5.4**	**5.5**	4.9	4.8	4.7
Trichlorofluoromethane	75-69-4	5	ug/l	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Vinyl Acetate	108-05-4	NS	ug/l	<5 U	<10 U	<12 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U
Vinyl Chloride	75-01-4	**2**	ug/l	1.1	1 J	0.96 J	<1 U	<1 U	0.63 J	0.6 J	0.39 J	0.39 J	0.4 J

Table 1
EZVI Remedial Design
Passive Diffusion Bag (PDB) Groundwater Sample Analytical Results

1487 First Avenue
New York, New York
NYSDEC BCP Site No.: C231152
Langan Project No.: 100963701

Analyte	CAS Number	NYSDEC SGVs	Location	LMW-11R-D	LMW-11R-D	LMW-11R-S	LMW-11R-S	LMW-11R-S	LMW-11R-S	LMW-11R-S
			Sample Name	LMW-11R-D_57.5	LMW-11R-D_76	LMW-11R-S_20.5	LMW-11R-S_23	LMW-11R-S_26.5	LMW-11R-S_29.5	LMW-11R-S_40.5
			Sample Date	09/29/2022	09/29/2022	09/29/2022	09/29/2022	09/29/2022	09/29/2022	09/29/2022
			Pump Intake Depth	57.5	76	20.5	23	26.5	29.5	40.5
			Unit	Result	Result	Result	Result	Result	Result	Result
Volatile Organic Compounds										
1,1,1,2-Tetrachloroethane	630-20-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,1,1-Trichloroethane	71-55-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,1,2,2-Tetrachloroethane	79-34-5	5	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,1,2-Trichloroethane	79-00-5	1	ug/l	<1.5 U	<1.5 U	<1.5 U	<1.5 U	<1.5 U	<1.5 U	<1.5 U
1,1-Dichloroethane	75-34-3	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,1-Dichloroethene	75-35-4	5	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,1-Dichloropropene	563-58-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,2,3-Trichlorobenzene	87-61-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,2,3-Trichloropropane	96-18-4	0.04	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,2,4,5-Tetramethylbenzene	95-93-2	5	ug/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
1,2,4-Trichlorobenzene	120-82-1	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,2,4-Trimethylbenzene	95-63-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,2-Dibromo-3-Chloropropane	96-12-8	0.04	ug/l	<2.5 U	<2.5 UJ	<2.5 UJ	<2.5 UJ	<2.5 U	<2.5 UJ	<2.5 UJ
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	0.0006	ug/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
1,2-Dichlorobenzene	95-50-1	3	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,2-Dichloroethane	107-06-2	0.6	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,2-Dichloropropane	78-87-5	1	ug/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,3-Dichlorobenzene	541-73-1	3	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,3-Dichloropropane	142-28-9	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,4-Dichlorobenzene	106-46-7	3	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,4-Diethyl Benzene	105-05-5	NS	ug/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
1,4-Dioxane (P-Dioxane)	123-91-1	NS	ug/l	<250 UJ	<250 U	<250 U	<250 U	<250 UJ	<250 U	<250 U
2,2-Dichloropropane	594-20-7	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
2-Chlorotoluene	95-49-8	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
2-Hexanone (MBK)	591-78-6	50	ug/l	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U
4-Chlorotoluene	106-43-4	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
4-Ethyltoluene	622-96-8	NS	ug/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
Acetone	67-64-1	**50**	ug/l	14	25	11	10	12	9.2	8.9
Acrylonitrile	107-13-1	5	ug/l	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U
Benzene	71-43-2	**1**	ug/l	**15**	**13**	0.6	0.63	0.79	0.64	0.61
Bromobenzene	108-86-1	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Bromochloromethane	74-97-5	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Bromodichloromethane	75-27-4	50	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
Bromoform	75-25-2	50	ug/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
Bromomethane	74-83-9	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Carbon Disulfide	75-15-0	60	ug/l	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U
Carbon Tetrachloride	56-23-5	5	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
Chlorobenzene	108-90-7	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Chloroethane	75-00-3	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Chloroform	67-66-3	**7**	ug/l	**24**	**20**	**7.2**	**7.4**	**8.4**	6.9	6.7
Chloromethane	74-87-3	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Cis-1,2-Dichloroethene	156-59-2	**5**	ug/l	**17**	**15**	**28**	**29**	**35**	**28**	**28**
Cis-1,3-Dichloropropene	10061-01-5	0.4	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
Cymene	99-87-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Dibromochloromethane	124-48-1	50	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
Dibromomethane	74-95-3	5	ug/l	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U
Dichlorodifluoromethane	75-71-8	5	ug/l	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U
Diethyl Ether (Ethyl Ether)	60-29-7	NS	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Ethylbenzene	100-41-4	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Hexachlorobutadiene	87-68-3	0.5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Isopropylbenzene (Cumene)	98-82-8	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
M,P-Xylene	179601-23-1	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Methyl Ethyl Ketone (2-Butanone)	78-93-3	50	ug/l	<5 UJ	<5 U	<5 U	<5 U	<5 UJ	<5 U	<5 U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1	NS	ug/l	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U
Methylene Chloride	75-09-2	**5**	ug/l	<2.5 U	<2.5 U	0.94 J	0.99 J	1.2 J	0.97 J	0.91 J
Naphthalene	91-20-3	10	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
n-Butylbenzene	104-51-8	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
n-Propylbenzene	103-65-1	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
o-Xylene (1,2-Dimethylbenzene)	95-47-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Sec-Butylbenzene	135-98-8	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Styrene	100-42-5	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
T-Butylbenzene	98-06-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Tert-Butyl Methyl Ether	1634-04-4	10	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Tetrachloroethene (PCE)	127-18-4	**5**	ug/l	3.6	2.9	**12**	**12**	**14**	**12**	**12**
Toluene	108-88-3	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Total 1,2-Dichloroethene (Cis and Trans)	540-59-0	NS	ug/l	17	15	28	29	35	28	28
Total Xylenes	1330-20-7	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Total, 1,3-Dichloropropene (Cis And Trans)	542-75-6	0.4	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
Trans-1,2-Dichloroethene	156-60-5	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Trans-1,3-Dichloropropene	10061-02-6	0.4	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
Trans-1,4-Dichloro-2-Butene	110-57-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Trichloroethene (TCE)	79-01-6	**5**	ug/l	1.9	1.6	**11**	**12**	**14**	**11**	**11**
Trichlorofluoromethane	75-69-4	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Vinyl Acetate	108-05-4	NS	ug/l	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U
Vinyl Chloride	75-01-4	**2**	ug/l	0.17 J	0.13 J	0.2 J	0.24 J	0.32 J	0.2 J	0.2 J

Table 1
EZVI Remedial Design
Passive Diffusion Bag (PDB) Groundwater Sample Analytical Results

1487 First Avenue
New York, New York
NYSDEC BCP Site No.: C231152
Langan Project No.: 100963701

Analyte	CAS Number	NYSDEC SGVs	Location	LMW-12R-D	LMW-12R-D	LMW-12R-S	LMW-12R-S	LMW-12R-S	LMW-12R-S	LMW-12R-S	LMW-13R-D	LMW-13R-D	LMW-13R-S
			Sample Name	LMW-12R-D_53	LMW-12R-D_67	LMW-12R-S_17	LMW-12R-S_20.5	LMW-12R-S_24.5	LMW-12R-S_28.5	LMW-12R-S_36	LMW-13R-D_55.5	LMW-13R-D_75	LMW-13R-S_26
			Sample Date	09/29/2022	09/29/2022	09/29/2022	09/29/2022	09/29/2022	09/29/2022	09/29/2022	09/29/2022	09/29/2022	09/29/2022
			Pump Intake Depth	53	67	17	20.5	24.5	28.5	36	55.5	75	26
			Unit	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Volatile Organic Compounds													
1,1,1,2-Tetrachloroethane	630-20-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,1,1-Trichloroethane	71-55-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,1,2,2-Tetrachloroethane	79-34-5	5	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,1,2-Trichloroethane	79-00-5	1	ug/l	<1.5 U	<1.5 U	<1.5 U	<1.5 U	<1.5 U	<1.5 U	<1.5 U	<1.5 U	<1.5 U	<1.5 U
1,1-Dichloroethane	75-34-3	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,1-Dichloroethene	75-35-4	5	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,1-Dichloropropene	563-58-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,2,3-Trichlorobenzene	87-61-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,2,3-Trichloropropane	96-18-4	0.04	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,2,4,5-Tetramethylbenzene	95-93-2	5	ug/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
1,2,4-Trichlorobenzene	120-82-1	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,2,4-Trimethylbenzene	95-63-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,2-Dibromo-3-Chloropropane	96-12-8	0.04	ug/l	<2.5 U	<2.5 UJ	<2.5 UJ	<2.5 UJ	<2.5 UJ	<2.5 U	<2.5 UJ	<2.5 U	<2.5 U	<2.5 U
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	0.0006	ug/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
1,2-Dichlorobenzene	95-50-1	3	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,2-Dichloroethane	107-06-2	0.6	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,2-Dichloropropane	78-87-5	1	ug/l	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,3-Dichlorobenzene	541-73-1	3	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,3-Dichloropropane	142-28-9	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,4-Dichlorobenzene	106-46-7	3	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,4-Diethyl Benzene	105-05-5	NS	ug/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
1,4-Dioxane (P-Dioxane)	123-91-1	NS	ug/l	<250 UJ	<250 U	<250 U	<250 U	<250 U	<250 UJ	<250 U	<250 UJ	<250 UJ	<250 UJ
2,2-Dichloropropane	594-20-7	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
2-Chlorotoluene	95-49-8	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
2-Hexanone (MBK)	591-78-6	50	ug/l	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U
4-Chlorotoluene	106-43-4	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
4-Ethyltoluene	622-96-8	NS	ug/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
Acetone	67-64-1	**50**	ug/l	10	**170**	11	26	26	12	22	11	14	8.2
Acrylonitrile	107-13-1	5	ug/l	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U
Benzene	71-43-2	**1**	ug/l	0.21 J	0.16 J	0.28 J	0.31 J	0.2 J	0.24 J	0.23 J	**28**	**27**	0.39 J
Bromobenzene	108-86-1	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Bromochloromethane	74-97-5	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Bromodichloromethane	75-27-4	50	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
Bromoform	75-25-2	50	ug/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U
Bromomethane	74-83-9	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Carbon Disulfide	75-15-0	60	ug/l	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U
Carbon Tetrachloride	56-23-5	5	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
Chlorobenzene	108-90-7	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Chloroethane	75-00-3	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Chloroform	67-66-3	**7**	ug/l	**7.4**	6.3	**18**	**18**	**16**	**20**	**8.8**	**30**	**29**	**19**
Chloromethane	74-87-3	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Cis-1,2-Dichloroethene	156-59-2	**5**	ug/l	**28**	**23**	**27**	**29**	**27**	**32**	**35**	**9.6**	**9.6**	**33**
Cis-1,3-Dichloropropene	10061-01-5	0.4	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
Cymene	99-87-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Dibromochloromethane	124-48-1	50	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
Dibromomethane	74-95-3	5	ug/l	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U
Dichlorodifluoromethane	75-71-8	5	ug/l	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U
Diethyl Ether (Ethyl Ether)	60-29-7	NS	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Ethylbenzene	100-41-4	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Hexachlorobutadiene	87-68-3	0.5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Isopropylbenzene (Cumene)	98-82-8	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
M,P-Xylene	179601-23-1	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Methyl Ethyl Ketone (2-Butanone)	78-93-3	50	ug/l	<5 UJ	41	<5 U	2.2 J	<5 U	<5 UJ	2.4 J	<5 UJ	<5 UJ	<5 UJ
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1	NS	ug/l	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U
Methylene Chloride	75-09-2	**5**	ug/l	**9.4**	**8.1**	2.3 J	2.4 J	3.5	4.1	1.8 J	<2.5 U	<2.5 U	2.6
Naphthalene	91-20-3	10	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
n-Butylbenzene	104-51-8	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
n-Propylbenzene	103-65-1	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
o-Xylene (1,2-Dimethylbenzene)	95-47-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Sec-Butylbenzene	135-98-8	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Styrene	100-42-5	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
T-Butylbenzene	98-06-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Tert-Butyl Methyl Ether	1634-04-4	10	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Tetrachloroethene (PCE)	127-18-4	**5**	ug/l	1	0.97	3.3	3.6	1.4	2.5	3	3.9	3.7	1.7
Toluene	108-88-3	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Total 1,2-Dichloroethene (Cis and Trans)	540-59-0	NS	ug/l	28	23	27	29	27	32	35	9.6	9.6	33
Total Xylenes	1330-20-7	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Total, 1,3-Dichloropropene (Cis And Trans)	542-75-6	0.4	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
Trans-1,2-Dichloroethene	156-60-5	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Trans-1,3-Dichloropropene	10061-02-6	0.4	ug/l	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
Trans-1,4-Dichloro-2-Butene	110-57-6	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Trichloroethene (TCE)	79-01-6	**5**	ug/l	0.66	0.54	3.7	3.8	3.7	4.2	4.9	1.3	1.3	3.3
Trichlorofluoromethane	75-69-4	5	ug/l	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Vinyl Acetate	108-05-4	NS	ug/l	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U
Vinyl Chloride	75-01-4	**2**	ug/l	**3.8**	**2.7**	0.08 J	0.07 J	0.17 J	0.23 J	0.2 J	0.25 J	0.29 J	0.1 J

Table 1
EZVI Remedial Design
Passive Diffusion Bag (PDB) Groundwater Sample Analytical Results

1487 First Avenue
New York, New York
NYSDEC BCP Site No.: C231152
Langan Project No.: 100963701

Notes:

CAS - Chemical Abstract Service
NS - No standard
ug/l - microgram per liter
NA - Not analyzed
RL - Reporting limit
<RL - Not detected
Groundwater sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Title 6 of the Official Compilation of New York Codes, Rules, and Regulations (NYCRR) Part 703.5 and the NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values for Class GA Water (herein collectively referenced as "NYSDEC SGVs").

Qualifiers:

J - The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
UJ - The analyte was not detected at a level greater than or equal to the RL; however, the reported RL is approximate and may be inaccurate or imprecise.
U - The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.

Exceedance Summary:

10 - Result exceeds NYSDEC SGVs

Table 2
EZVI Remedial Design
Baseline Groundwater Sample Analytical Results

1487 First Avenue
New York, New York
NYSDEC BCP Site No.: C231152
Langan Project No.: 100963701

Analyte	CAS Number	NYSDEC SGVs	Location	LMW-6R-D	LMW-6R-S	LMW-7R-D	LMW-7R-D	LMW-7R-S	LMW-7R-S	LMW-7R-S	LMW-8R-D	LMW-8R-D	LMW-8R-D	LMW-8R-S	LMW-8R-S	LMW-10R-D	LMW-10R-S	LMW-10R-S	LMW-13R-D	LMW-13R-S
			Sample Name	LMW-6R-D_47.75	LMW-6R-S_20.5	LMW-7R-D_42	LMW-7R-D_66	LMW-7R-S_20	LMW-7R-S_25.5	LMW-7R-S_38	LMW-8R-D_47.25	LMW-8R-D_56.75	LMW-8R-D_76	LMW-8R-S_14.5	LMW-8R-S_24.75	LMW-10R-D_40.5	LMW-10R-S_13	LMW-10R-S_18.25	LMW-13R-D_45.25	LMW-13R-S_25.75
			Sample Date	12/28/2022	12/28/2022	12/21/2022	12/21/2022	12/19/2022	12/20/2022	12/21/2022	12/27/2022	12/27/2022	12/27/2022	12/22/2022	12/22/2022	12/23/2022	12/22/2022	12/23/2022	12/28/2022	12/28/2022
			Pump Intake Depth	47.75	20.5	42	66	20	25.5	38	47.25	56.75	76	14.5	24.75	40.5	13	18.25	45.25	25.75
			Unit	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Volatile Organic Compounds																				
1,1,1,2-Tetrachloroethane	630-20-6	5	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,1,1-Trichloroethane	71-55-6	5	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,1,2,2-Tetrachloroethane	79-34-5	5	ug/l	<0.5 U	<0.5 U	<1 U	<0.5 U	<0.5 U	<1 U	<1.2 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<1.2 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,1,2-Trichloroethane	79-00-5	1	ug/l	<1.5 U	<1.5 U	<3 U	<1.5 U	<1.5 U	<3 U	<3.8 U	<1.5 U	<1.5 U	<1.5 U	<15 U	<3.8 U	<1.5 U	<1.5 U	<1.5 U	<1.5 U	<1.5 U
1,1-Dichloroethane	75-34-3	5	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,1-Dichloroethene	75-35-4	5	ug/l	<0.5 U	<0.5 U	0.42 J	0.31 J	0.34 J	0.47 J	0.75 J	<0.5 U	<0.5 U	<0.5 U	<5 U	0.74 J	<0.5 U	<0.5 U	0.23 J	<0.5 U	<0.5 U
1,1-Dichloropropene	563-58-6	5	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,2,3-Trichlorobenzene	87-61-6	5	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,2,3-Trichloropropane	96-18-4	0.04	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,2,4,5-Tetramethylbenzene	95-93-2	5	ug/l	<2 U	<2 U	<4 U	<2 U	<2 U	<4 U	<5 U	<2 U	<2 U	<2 U	<20 U	<5 U	<2 U	<2 U	<2 U	<2 U	<2 U
1,2,4-Trichlorobenzene	120-82-1	5	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,2,4-Trimethylbenzene	95-63-6	5	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,2-Dibromo-3-Chloropropane	96-12-8	0.04	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 UJ	<2.5 UJ	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	0.0006	ug/l	<2 U	<2 U	<4 U	<2 U	<2 U	<4 U	<5 U	<2 U	<2 U	<2 U	<20 U	<5 U	<2 U	<2 U	<2 U	<2 U	<2 U
1,2-Dichlorobenzene	95-50-1	3	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,2-Dichloroethane	107-06-2	0.6	ug/l	<0.5 U	<0.5 U	<1 U	<0.5 U	<0.5 U	<1 U	<1.2 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<1.2 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,2-Dichloropropane	78-87-5	1	ug/l	<1 U	<1 U	<2 U	<1 U	<1 U	<2 U	<2.5 U	<1 U	<1 U	<1 U	<10 U	<2.5 U	<1 U	<1 U	<1 U	<1 U	<1 U
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	5	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,3-Dichlorobenzene	541-73-1	3	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,3-Dichloropropane	142-28-9	5	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,4-Dichlorobenzene	106-46-7	3	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
1,4-Diethyl Benzene	105-05-5	NS	ug/l	<2 U	<2 U	<4 U	<2 U	<2 U	<4 U	<5 U	<2 U	<2 U	<2 U	<20 U	<5 U	<2 U	<2 U	<2 U	<2 U	<2 U
1,4-Dioxane (P-Dioxane)	123-91-1	NS	ug/l	<250 U	<250 U	<500 U	<250 U	<250 U	<500 U	<620 U	<250 U	<250 U	<250 U	<2,500 U	<620 U	<250 U	<250 U	<250 U	<250 U	<250 U
2,2-Dichloropropane	594-20-7	5	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
2-Chlorotoluene	95-49-8	5	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
2-Hexanone (MBK)	591-78-6	50	ug/l	<5 U	<5 U	<10 U	<5 U	<5 UJ	<10 U	<12 U	<5 U	<5 U	<5 U	<50 U	<12 U	<5 U	<5 U	<5 U	<5 U	<5 U
4-Chlorotoluene	106-43-4	5	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
4-Ethyltoluene	622-96-8	NS	ug/l	<2 U	<2 U	<4 U	<2 U	<2 U	<4 U	<5 U	<2 U	<2 U	<2 U	<20 U	<5 U	<2 U	<2 U	<2 U	<2 U	<2 U
Acetone	67-64-1	50	ug/l	4.4 J	10 J	9.5 J	6	<5 U	6 J	26	24 J	29 J	5.5 J	<50 U	<12 U	2.3 J	<5 U	2.1 J	12 J	4.5 J
Acrylonitrile	107-13-1	5	ug/l	<5 U	<5 U	<10 U	<5 UJ	<5 U	<10 U	<12 U	<5 U	<5 U	<5 U	<50 UJ	<12 UJ	<5 U	<5 U	<5 U	<5 U	<5 U
Benzene	71-43-2	**1**	ug/l	<0.5 U	0.72	0.77 J	0.52	0.52	0.47 J	0.51 J	0.16 J	**2**	**5.5**	<5 U	<1.2 U	0.2 J	<0.5 U	0.25 J	**8.5**	0.45 J
Bromobenzene	108-86-1	5	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Bromochloromethane	74-97-5	5	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Bromodichloromethane	75-27-4	50	ug/l	<0.5 U	<0.5 U	<1 U	<0.5 U	<0.5 U	<1 U	<1.2 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<1.2 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
Bromoform	75-25-2	50	ug/l	<2 U	<2 U	<4 U	<2 U	<2 U	<4 U	<5 U	<2 U	<2 U	<2 U	<20 U	<5 U	<2 U	<2 U	<2 U	<2 U	<2 U
Bromomethane	74-83-9	5	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Carbon Disulfide	75-15-0	60	ug/l	<5 U	<5 U	<10 U	<5 U	<5 U	<10 U	<12 U	<5 U	<5 U	<5 U	<50 U	<12 U	<5 U	<5 U	<5 U	<5 U	<5 U
Carbon Tetrachloride	56-23-5	5	ug/l	<0.5 U	<0.5 U	<1 U	<0.5 U	<0.5 U	<1 U	<1.2 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<1.2 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
Chlorobenzene	108-90-7	5	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Chloroethane	75-00-3	5	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Chloroform	67-66-3	**7**	ug/l	**7.4**	1.4 J	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	2.6	<2.5 U	<2.5 U	2.2 J	1.7 J
Chloromethane	74-87-3	5	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Cis-1,2-Dichloroethene	156-59-2	**5**	ug/l	3.1	**29**	**220**	**160**	**120**	**340**	**400**	**8.2**	**7.7**	**47**	**270**	**390**	**18**	**16**	**140**	**10**	**47**
Cis-1,3-Dichloropropene	10061-01-5	0.4	ug/l	<0.5 U	<0.5 U	<1 U	<0.5 U	<0.5 U	<1 U	<1.2 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<1.2 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
Cymene	99-87-6	5	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Dibromochloromethane	124-48-1	50	ug/l	<0.5 U	<0.5 U	<1 U	<0.5 U	<0.5 U	<1 U	<1.2 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<1.2 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
Dibromomethane	74-95-3	5	ug/l	<5 U	<5 U	<10 U	<5 U	<5 U	<10 U	<12 U	<5 U	<5 U	<5 U	<50 U	<12 U	<5 U	<5 U	<5 U	<5 U	<5 U
Dichlorodifluoromethane	75-71-8	5	ug/l	<5 U	<5 U	<10 U	<5 U	<5 U	<10 U	<12 U	<5 U	<5 U	<5 U	<50 U	<12 U	<5 U	<5 U	<5 U	<5 U	1 J
Diethyl Ether (Ethyl Ether)	60-29-7	NS	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Ethylbenzene	100-41-4	5	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Hexachlorobutadiene	87-68-3	0.5	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Isopropylbenzene (Cumene)	98-82-8	5	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
M,P-Xylene	179601-23-1	5	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Methyl Ethyl Ketone (2-Butanone)	78-93-3	50	ug/l	<5 U	<5 U	<10 U	2 J	<5 U	<10 U	<12 U	8.7	4.6 J	<5 U	<50 UJ	<12 UJ	<5 U	<5 U	<5 U	<5 U	<5 U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1	NS	ug/l	<5 U	<5 U	<10 U	<5 UJ	<5 U	<10 U	<12 U	1.5 J	<5 U	<5 U	<50 UJ	<12 UJ	<5 U	<5 U	<5 U	<5 U	<5 U
Methylene Chloride	75-09-2	5	ug/l	1.6 J	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Naphthalene	91-20-3	10	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
n-Butylbenzene	104-51-8	5	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
n-Propylbenzene	103-65-1	5	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
o-Xylene (1,2-Dimethylbenzene)	95-47-6	5	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Sec-Butylbenzene	135-98-8	5	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Styrene	100-42-5	5	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
T-Butylbenzene	98-06-6	5	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Tert-Butyl Methyl Ether	1634-04-4	10	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Tetrachloroethene (PCE)	127-18-4	**5**	ug/l	0.57	**10**	**18**	2.5	**20**	**43**	**50**	0.18 J	0.54	0.21 J	**900**	**63**	2.1	**10**	**26**	**7.2**	**35**
Toluene	108-88-3	**5**	ug/l	1.5 J	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	**9**	2 J	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Total 1,2-Dichloroethene (Cis and Trans)	540-59-0	NS	ug/l	3.1	29	220	160	120	340 J	400 J	8.2	7.7	47	270	390 J	18	16	140	10	47
Total Xylenes	1330-20-7	5	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Total, 1,3-Dichloropropene (Cis And Trans)	542-75-6	0.4	ug/l	<0.5 U	<0.5 U	<1 U	<0.5 U	<0.5 U	<1 U	<1.2 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<1.2 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
Trans-1,2-Dichloroethene	156-60-5	5	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	1.9 J	2 J	<2.5 U	<2.5 U	<2.5 U	<25 U	1.8 J	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Trans-1,3-Dichloropropene	10061-02-6	0.4	ug/l	<0.5 U	<0.5 U	<1 U	<0.5 U	<0.5 U	<1 U	<1.2 U	<0.5 U	<0.5 U	<0.5 U	<5 U	<1.2 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
Trans-1,4-Dichloro-2-Butene	110-57-6	5	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Trichloroethene (TCE)	79-01-6	**5**	ug/l	0.33 J	**6.3**	**22**	**16**	**18**	**56**	**61**	0.37 J	0.24 J	0.24 J	**360**	**52**	1.1	**8.8**	**33**	2.2	**9.7**
Trichlorofluoromethane	75-69-4	5	ug/l	<2.5 U	<2.5 U	<5 U	<2.5 U	<2.5 U	<5 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<25 U	<6.2 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Vinyl Acetate	108-05-4	NS	ug/l	<5 U	<5 U	<10 U	<5 U	<5 U	<10 U	<12 U	<5 U	<5 U	<5 U	<50 U	<12 U	<5 U	<5 U	<5 U	<5 U	<5 U
Vinyl Chloride	75-01-4	**2**	ug/l	<1 U	<1 U	0.62 J	**4.4**	0.44 J	0.64 J	0.71 J	<1 U	1	**6.4**	2 J	1.2 J	0.11 J	<1 U	0.37 J	0.18 J	0.27 J
Metals																				
Calcium	7440-70-2	NS	ug/l	90,800	220,000	205,000	146,000	200,000	234,000	236,000	54,400	58,500	95,000	289,000	234,000	97,700	264,000	184,000	136,000	178,000
Hardness (As CaCO3)	HARDNESS	NS	ug/l	235,400	788,400	995,100	547,900	800,300	864,600	1,048,000	174,600	185,100	303,800	1,146,000	868,600	362,800	891,400	693,900	508,600	641,300
Iron	7439-89-6	**300**	ug/l	**7,230**	**14,900**	**98,500**	**25,600**	**17,700**	**29,500**	**76,300**	**5,660**	**9,480**	**6,650**	**31,300**	**34,200**	**12,600**	**17,500**	**33,000**	**17,500**	**12,600**
Magnesium	7439-95-4	**35000**	ug/l	2,140	**58,100**	**117,000**	**44,200**	**73,100**	**67,700**	**111,000**	9,420	9,450	16,200	**103,000**	**68,700**	28,800	**56,600**	**57,100**	**40,800**	**47,800**
Manganese	7439-96-5	**300**	ug/l	108	**2,978**	**7,510**	**2,320**	**5,733**	**4,074**	**8,344**	235.1	**363.8**	**448.3**	**9,421**	**6,069**	**1,638**	**4,386**	**2,861**	**2,363**	**2,307**
General Chemistry - Total																				
Alkalinity, Total (as CaCO3)	471-34-1	NS	ug/l	193,000 J	158,000	119,000	187,000	158,000	128,000	129,000	85,800 J	116,000	141,000	163,000	155,000	177,000	220,000	156,000	220,000	185,000
Chloride (As Cl)	16887-00-6	**250000**	ug/l	25,000	110,000	**340,000**	190,000	**520,000**	**600,000**	**600,000**	54,000	48,000	83,000	110,000	**340,000**	66,000	88,000	97,000	45,000	85,000
Dissolved Organic Carbon	DOC	NS	ug/l	8,000 J	8,200	3,700	8,900 J	2,400 J	1,100	2,500	6,900	8,700	4,000 J	6,100 J	4,400 J	5,300	7,800	5,600	14,000	7,000
Nitrogen, Nitrate (As N)	14797-55-8	10000	ug/l	<100 U	93 J	429	89 J	261	212	175	27 J	104	44 J	120	116	47 J	153	79 J	<100 U	<100 U
Sulfate (As SO4)	14808-79-8	**250000**	ug/l	55,000	**580,000**	**610,000**	**670,000**	**520,000**	**510,000**	**510,000**	140,000	130,000	130,000	**1,100,000**	**600,000**	190,000	**630,000**	**530,000**	**540,000**	**560,000**
Total Organic Carbon	TOC	NS	ug/l	7,600	8,400	3,100	9,200 J	2,200	920	2,300	7,100	8,500	3,500	6,200	3,800	5,700	7,800	5,500	14,000	7,100

Table 2
EZVI Remedial Design
Baseline Groundwater Sample Analytical Results

1487 First Avenue
New York, New York
NYSDEC BCP Site No.: C231152
Langan Project No.: 100963701

Notes:

CAS - Chemical Abstract Service
NS - No standard
ug/l - microgram per liter
NA - Not analyzed
RL - Reporting limit
<RL - Not detected
Groundwater sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Title 6 of the Official Compilation of New York Codes, Rules, and Regulations (NYCRR) Part 703.5 and the NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values for Class GA Water (herein collectively referenced as "NYSDEC SGVs").

Qualifiers:

J - The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
UJ - The analyte was not detected at a level greater than or equal to the RL; however, the reported RL is approximate and may be inaccurate or imprecise.
U - The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.

Exceedance Summary:

10 - Result exceeds NYSDEC SGVs

Table 3
Remedial Design
Bedrock Reagent Demand Summary

1487 First Avenue
New York City, New York
Langan Project No. 100963701

Bedrock Injection Wells		**LMW-6R-S**	**LMW-7R-S**	**LMW-8R-S**	**LMW-9R-S**	**LMW-10R-S**	**LMW-10R-S**	**LMW-11R-S**	**LMW-12R-S**	**LMW-13R-S**	**LMW-6R-D**	**LMW-6RD**	**LMW-7R-D**	**LMW-7R-D**	**LMW-8R-D**	**LMW-9R-D**	**LMW-10R-D**	**LMW-11R-D**	**LMW-12R-D**	**LMW-13R-D**	**Total**
Treatment Interval	feet btoc	18-46	19-49	14-42	16-46	13-18	18-41	16-46	20-40	16-31	43-53	63-78	43-48	48-79	76-81	58-78	41-66	45-80	50-75	51-61 71-81	-
Treatment Zone Thickness	feet	28	30	28	30	5	23	30	20	15	10	15	5	31	5	20	25	35	25	20	-
Injection ROI	feet	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	-
Fracture Porosity	fraction	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	-
Treatment Pore Volume Under the Injection ROI	gallons	14,900	15,900	14,900	15,900	2,700	12,200	15,900	10,600	8,000	5,300	8,000	2,700	16,400	2,700	10,600	13,300	18,600	13,300	10,600	212,500
Average Hydraulic Gradient	feet/feet	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-
Hydraulic Conductivity	feet/day	3.9	5.3	1.2	5.3	2.6	0.3	3.9	3.9	6.9	0.30	0.30	0.4	3.8	1.6	1.9	1.2	1.9	1.9	2.4	-
Groundwater Seepage Velocity	feet/day	0.4	0.5	0.1	0.5	0.3	0.0	0.4	0.4	0.7	0.03	0.03	0.04	0.4	0.2	0.2	0.1	0.2	0.2	0.2	-
Pore Volume Targeted for Injections	%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	-
Injection Solution Volume	gallons	2,235	2,385	2,235	2,385	405	1,830	2,385	1,590	1,200	795	1,200	405	2,460	405	1,590	1,995	2,790	1,995	1,590	31,875
Reagent Demand																					
ZVI Target Levels in Pore Volume	g/L	2.0	3.0	2.0	3.0	2.5	0.5	2.5	2.5	3.5	0	0.4	2.5	2.5	1.0	2.0	1.0	1.5	1.5	1.5	-
ZVI Demand	pounds	248	397	248	397	56	51	331	220	233	0	27	56	341	22	176	111	232	166	132	3,443
ZVI in EVO+ZVI Emulsion (SRS®-Z)	%	20%	20%	20%	20%	10%	20%	20%	20%	20%	0%	20%	20%	20%	20%	20%	20%	20%	20%	20%	-
EVO in EVO+ZVI Emulsion (SRS®-Z)	%	80%	80%	80%	80%	90%	80%	80%	80%	80%	100%	80%	80%	80%	80%	80%	80%	80%	80%	80%	-
EVO Demand	pounds	991	1,587	991	1,587	505	203	1,322	881	931	70	106	225	1,364	90	705	442	928	664	529	14,122
EVO Loading in Pore Volume	g/L	8	12	8	12	22	2	10	10	14	2	2	10	10	4	8	4	6	6	6	-
SRS®-Z Demand	gallons	128	204	128	204	64	26	170	114	120	0	14	29	176	12	91	57	120	86	68	1,810
	pounds	1,239	1,983	1,239	1,983	561	254	1,653	1,102	1,164	0	1	3	18	1	9	6	12	9	7	11,246
SRS®-EVO Demand	pounds	0	0	0	0	0	0	0	0	0	70	0	0	0	0	0	0	0	0	0	70
TSI-Ferrous Sulfide Activator Dosage	g/L	0.2	0.3	0.2	0.3	0.3	0.1	0.3	0.3	0.4	0.0	0.0	0.3	0.3	0.1	0.2	0.1	0.2	0.2	0.2	-
TSI-Ferrous Sulfide Activator Demand in Pore Volume	pounds	24.8	39.7	24.8	39.7	5.6	5.1	33.1	22.0	23.3	0.0	2.7	5.6	34.1	2.2	17.6	11.1	23.2	16.6	13.2	344
	gallons	2.5	4.0	2.5	4.0	0.6	0.5	3.3	2.2	2.4	0.0	0.3	0.6	3.5	0.2	1.8	1.1	2.3	1.7	1.3	35
TSI-DC® Target Levels	cells/Liter	2.E+07	2.E+07	2.E+07	2.E+07	2.E+07	2.E+07	2.E+07	2.E+07	2.E+07	2.E+07	9.E+06	2.E+07	2.E+07	2.E+07	2.E+07	2.E+07	2.E+07	2.E+07	2.E+07	-
TSI-DC® Demand	liters	10.1	10.8	10.1	10.8	1.8	8.3	10.8	7.2	5.4	4.5	2.7	1.8	11.2	1.8	7.2	9.0	12.7	9.0	7.2	143
DAP Target Levels in Pore Volume	mg/L	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	-
DAP Total Demand	pounds	31	33	31	33	6	25	33	22	17	11	17	6	34	6	22	28	39	28	22	442
DAP supplied by EVO	pounds	0.5	0.8	0.5	0.8	0.3	0.1	0.7	0.4	0.5	0.04	0.1	0.1	0.7	0.0	0.4	0.2	0.5	0.3	0.3	7
Additional DAP Demand	pounds	30	32	30	32	5	25	32	22	16	11	17	6	33	6	22	27	38	27	22	435
Yeast Extract Target Levels in Pore Volume	mg/L	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	-
Yeast Extract Total Demand	pounds	31	33	31	33	6	25	33	22	17	11	17	6	34	6	22	28	39	28	22	442
Yeast Extract Supplied by EVO	pounds	3	5	3	5	2	1	4	3	3	0.2	0.3	1	4	0	2	1	3	2	2	42
Additional Yeast Extract Demand	pounds	28	28	28	28	4	25	29	19	14	11	16	5	30	5	20	26	36	26	20	399
Calcium Carbonate Target Levels in Pore Volume	g/L	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	0.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	-
Calcium Carbonate Demand	pounds	434	463	434	463	79	355	463	309	233	0	233	79	477	79	309	387	541	387	309	6,031
$CoBuphH_{Mg}$ Demand	pounds	0	0	0	0	178	0	0	0	0	0	0	0	0	0	0	0	0	0	0	178
Target level of Sodium Ascorbate in Injection Mix	lb/1000 gallons	8	8	8	8	8	8	8	8	8	9	9	8	8	8	8	8	8	8	8	-
Sodium Ascorbate Demand	pounds	18	19	18	19	3	15	19	13	10	7	11	3	20	3	13	16	22	16	13	257

Notes:
btoc - below top of the casing
DAP - diammonium phosphate
EVO - emulsified vegetable oil
g/L - grams per liter
mg/L - milligrams per liter
lb/1000 gallon - pounds per 1000 gallons
ROI - radius of influence
ZVI - Zero valent iron (4 micron)
TOC - total organic carbon
NA - data is not available
Hydraulic gradient is an average of low and high gradient computed from September 14, 2022 groundwater monitoring data.
Hydraulic conductivity in a well is an average of hydraulic conductivity calculated for different packer intervals in the well. For wells where packer tests were not performed, data from adjacent wells is used.
A fracture porosity of 0.1 was used for injection calculations.
Based on field observations up to 15% of pore volume will be injected.
ZVI target levels in pore volume range from 0.5 to 3.5 g/L depending upon the concentration of chlorinated volatile organic compounds (CVOCs) in the well and the levels of total organic carbon that are reached in the pore volume using a EVO and ZVI emulsion.
EVO demand is calculated based on percentage of ZVI and EVO in the SRS®-Z emulsion and was adjusted to reach at least approximately 500 mg/L TOC levels in the design volume.
EVO demand meets or is in excess of EVO demand estimated using Environmental Security Technology Certification Program (ESTCP) substrate requirements for hydrogen demand calculation sheet.
SRS®-ZVI is a proprietary product, combined emulsified vegetable oil substrate and zero valent, formulated by Terra Systems, Inc. (Claymont, DE).
The density of SRS®-Z with 20% ZVI is 9.7 pounds/gallon and with 10% ZVI is 8.81 pounds/gallon.
SRS®-EVO is a proprietary emulsified vegetable oil substrate, formulated by Terra Systems, Inc. (Claymont, DE).
TSI-Ferrous Sulfide Activator (mix of ferrous sulfide and sodium sulfide solution) distributed by Terra Systems, Inc. will be added to the SRS®-Z to form the sulfidated ZVI.
The density of ferrous sulfide solution is 1.15 to 1.22 grams per milliliter or an average of 9.88 pounds per gallon.
TSI-DC® Bioaugmentation Culture® - *Dehalococcoides* containing microbial consortium for anaerobic bioremediation is cultured by APTIM Corporation, Lawrenceville, NJ.
Approximately 0.3% yeast extract and 0.05% diammonium phosphate (DAP) are included in commercial SRS®-ZVI formulation. Additional dosage of yeast extract and diammonium phosphate will be added to facilitate microbial growth.
$CoBuphH_{Mg}$ is a colloidal suspension of magnesium hydroxide, formulated by EOS Remediation, LLC. (Research Triangle Park, NC).
$CoBuphH_{Mg}$ will be added to LMW-10R-S only, as SRS®-Z at LMW-10R-S includes 90% EVO and 10% ZVI, which would result in higher acidity generation compared to other wells where SRS®-Z includes 80% EVO and 20% ZVI.
LMW-6R-D had high pH (above 11) at pump depth of 50.75 feet, as per sampling conducted in December 2022. Groundwater high pH at LMW-6R-D (between 9 - 45 feet btoc) was verified on March 1, 2023 using an in-well probe. Therefore, at LMW-6R-D (between 43 to 53 feet btoc), SRS®-EVO and 5 liters of high pH resistant bioaugmentation culture will be injected.

Table 4
Remedial Design
Injection Monitoring

1487 First Avenue
New York City, New York
Langan Project No. 100963701

Location	Matrix	Parameters	Frequency	Monitoring Instruments/Method
Monitoring Locations[a]	Groundwater[b]	Groundwater elevation	Before injection event begins and 2 to 3 times daily during injections	Water level meter
		Field parameters	Before injection event begins and 2 to 3 times daily during injection	Horiba U-52 or YSI meter
	Well Field	Surfacing/Leaks	Before injection event begins and every 30 - 60 mins	Visual Inspection
Injection System including Skid, Distribution Manifold and Injection Well Heads[c]	Injection Mix	Flow-rate, volume injected and injection pressure	Every 30 - 60 mins	Pressure gauges, and totalizers
Anaerobic Water Tank	Water	Dissolved oxygen and pH	2 to 3 times daily during injection	Horiba U-52 or YSI meter

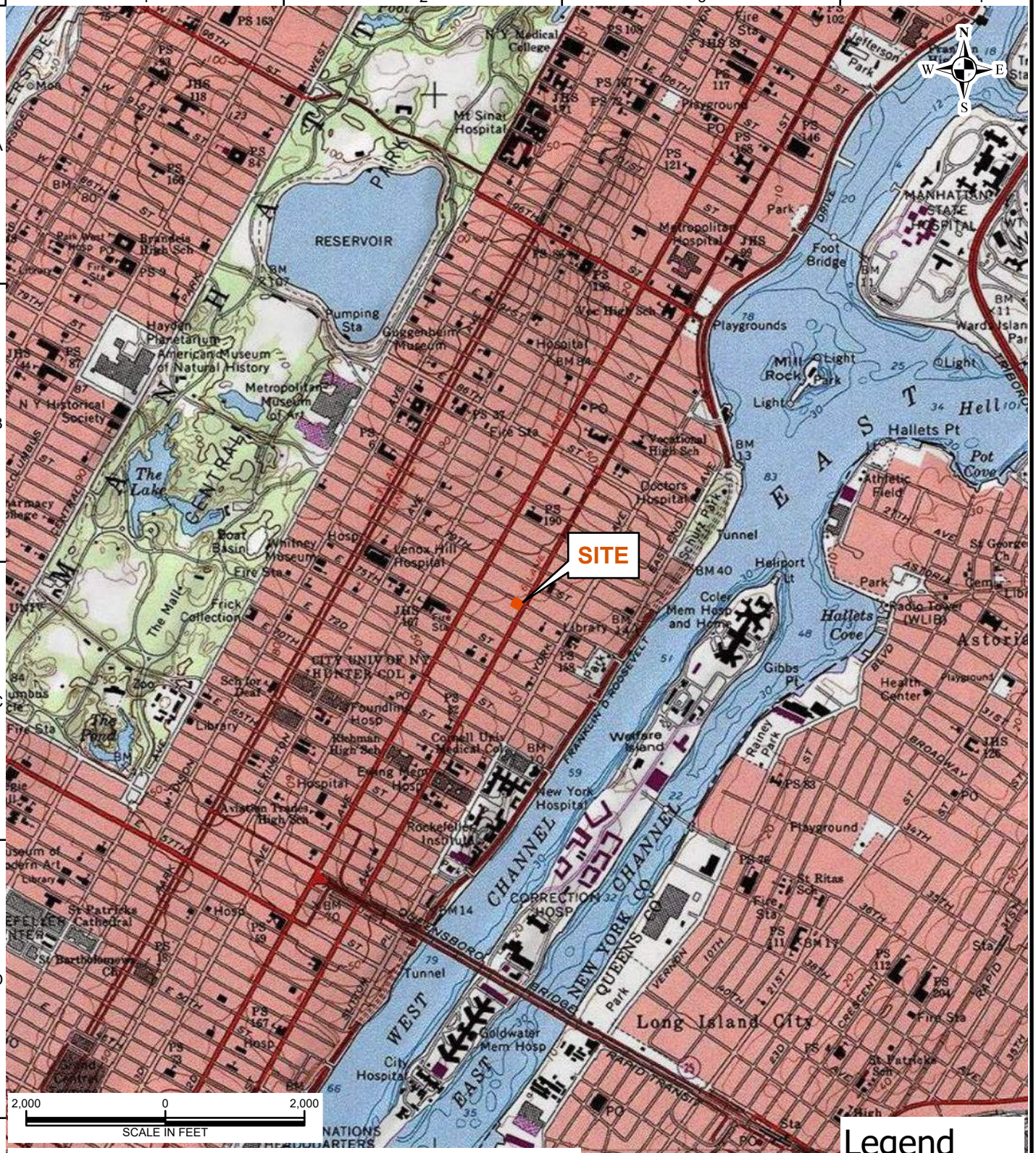
Notes:

Field parameters - dissolved oxygen, oxidation-reduction potential, conductivity, pH, temperature, turbidity, total dissolved solids and salinity

[a] - Wells for injection monitoring will include all wells identified for injections in Table 3.

[b] - In well water quality measurements will be performed.

FIGURES



Notes:
Topographic basemap is provided through Langan's Esri ArcGIS software licensing and ArcGIS online © 2011 National Geographic Society, i-cubed.

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Langan Engineering & Environmental Services, Inc.
Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.
Langan International LLC
Collectively known as Langan

Project
1487 FIRST AVENUE REDEVELOPMENT SITE
BLOCK No. 1452, LOT No.27
MANHATTAN
NEW YORK NEW YORK

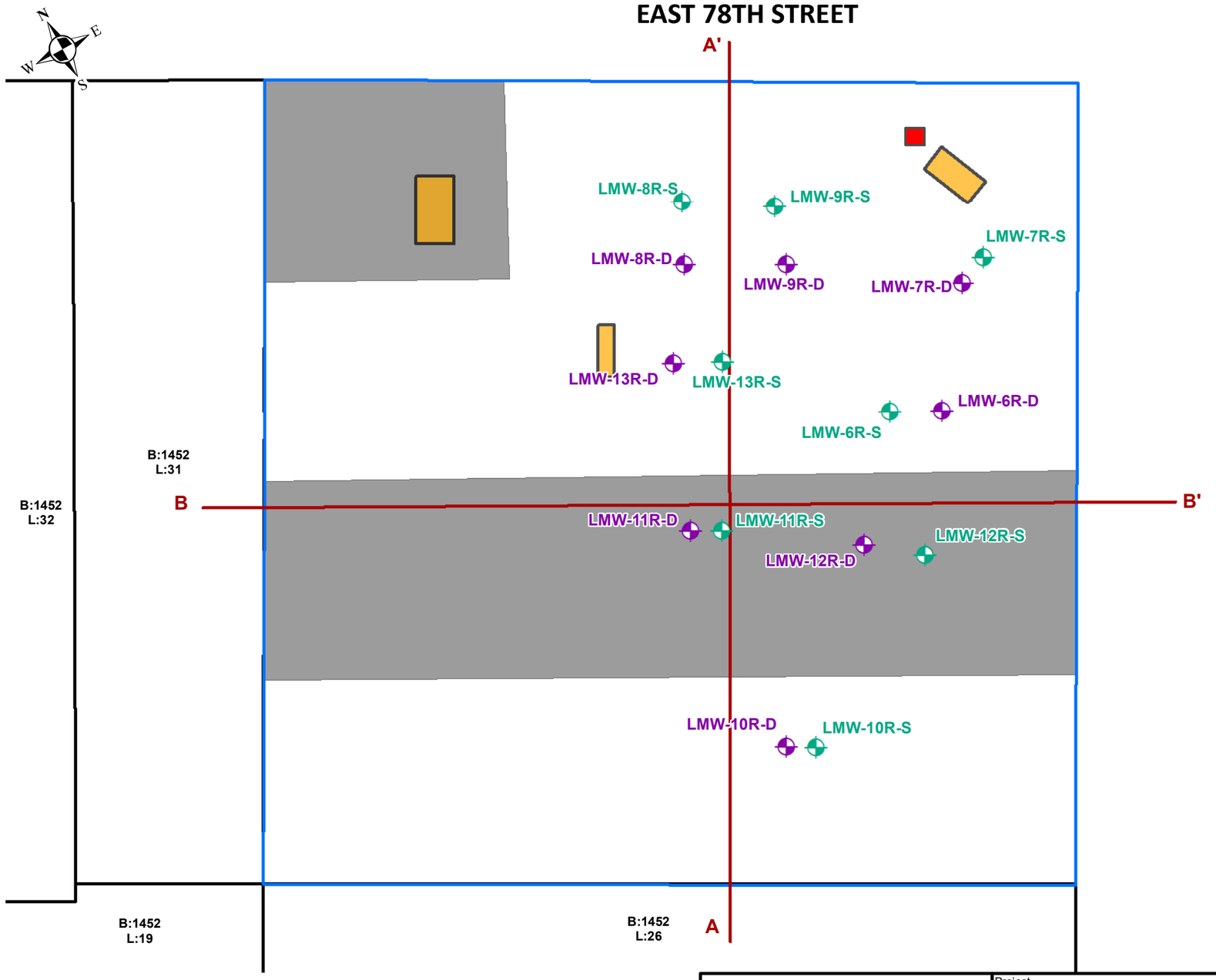
Drawing Title
SITE LOCATION MAP

Project No.	100963701
Date	2/25/2022
Scale	1"=2,000'
Drawn By	JF
Submission Date	

Figure 1

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Path: \\langan.com\data\PAR\data7\100963701\Project Data\ArcGIS\APRX\100963701\100963701.aprx Date: 2/25/2022 User: ibaker Time: 11:33 AM



LEGEND

- SITE BOUNDARY
- TAX LOT BOUNDARY
- AOC-1: FORMER SOLVENT TANK
- AOC-2: FUEL OIL ASTs
- AOC-3: HISTORICAL SITE USES
- PETROLEUM IMPACTED SOIL LOCATION FROM AST REMOVAL
- CROSS SECTION
- 2022 RI SHALLOW BEDROCK MONITORING WELL LOCATION
- 2022 RI DEEP BEDROCK MONITORING WELL LOCATION

NOTES:
1. SAMPLING LOCATIONS ARE BASED ON FIELD MEASUREMENTS.
2. VERTICAL ELEVATION DATUM: NATIONAL VERTICAL DATUM OF 1988 (NAVD88)
3. 2016 SOIL BORING AND SOIL GAS LOCATIONS SAMPLED DURING THE CIDER PHASE II ESA.
4. 2021/2022 SAMPLES LOCATIONS AS PRESENTED IN THE 2022 LANGAN PHASE II EI REPORT.
5. AOC-4 CONSISTS OF HISTORIC FILL, WHICH IS PRESENT THROUGHOUT THE SITE.

15 0 15
SCALE IN FEET

LANGAN
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Langan International LLC
Collectively known as Langan
NJ CERTIFICATE OF AUTHORIZATION No. 24GA27996400

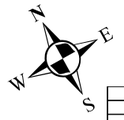
Project
1487 FIRST AVENUE REDEVELOPMENT SITE
BLOCK No. 1452, LOT No. 27
MANHATTAN
NEW YORK NEW YORK

Drawing Title
SITE PLAN

Project No.	100963701
Date	2/9/2023
Scale	1 " = 15 '
Drawn By	IHB
Figure	2

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Path: \\langan.com\data\PAR\data7\100963701\Project Data\ArcGIS\MXD\Environmental_Figures\2022-09 RIR\Figure 3 - Site Planv2.mxd Date: 2/9/2023 User: ibaker Time: 4:38:00 PM



Location	LMW-8R-S	LMW-8R-S	LMW-8R-S	LMW-8R-S
Sample Name	LMW-8R-S_15	LMW-8R-S_17.5	LMW-8R-S_22.5	LMW-8R-S_27
Sample Date	9/29/2022	9/29/2022	9/29/2022	9/29/2022
Sample Depth	15	17.5	22.5	27
VOCs				
Acetone	17 J	27	17 J	26
Benzene	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Chloroform	<12 U	<12 U	<12 U	<12 U
Cis-1,2-Dichloroethene	**200**	**190**	**190**	**180**
Methylene Chloride	<12 U	<12 U	<12 U	<12 U
Tetrachloroethene (PCE)	**540**	**600**	**640**	**570**
Trichloroethene (TCE)	**380**	**390**	**390**	**350**
Vinyl Chloride	<5 U	0.42 J	<5 U	0.41 J

Location	LMW-8R-D	LMW-8R-D	LMW-8R-D	LMW-8R-D	LMW-8R-D
Sample Name	LMW-8R-D_46.5	LMW-8R-D_48.5	LMW-8R-D_58	LMW-8R-D_73	LMW-8R-D_77
Sample Date	9/29/2022	9/29/2022	9/29/2022	9/29/2022	9/29/2022
Sample Depth	46.5	48.5	58	73	77
VOCs					
Acetone	8.5	10	11	28	17
Benzene	<0.5 U	<0.5 U	<0.5 U	<0.5 U	**31**
Chloroform	1.5 J	<2.5 U	<2.5 U	<2.5 U	<5 U
Cis-1,2-Dichloroethene	0.8 J	0.85 J	1 J	0.86 J	**200**
Methylene Chloride	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<5 U
Tetrachloroethene (PCE)	<0.5 U	<0.5 U	0.25 J	<0.5 U	0.41 J
Trichloroethene (TCE)	<0.5 U	<0.5 U	0.18 J	<0.5 U	0.39 J
Vinyl Chloride	<1 U	<1 U	<1 U	<1 U	**6.7**

Location	LMW-13R-D	LMW-13R-D
Sample Name	LMW-13R-D_55.5	LMW-13R-D_75
Sample Date	9/29/2022	9/29/2022
Sample Depth	55.5	75
VOCs		
Acetone	11	14
Benzene	**28**	**27**
Chloroform	**30**	**29**
Cis-1,2-Dichloroethene	**9.6**	**9.6**
Methylene Chloride	<2.5 U	<2.5 U
Tetrachloroethene (PCE)	3.9	3.7
Trichloroethene (TCE)	1.3	1.3
Vinyl Chloride	0.25 J	0.29 J

Location	LMW-11R-D	LMW-11R-D
Sample Name	LMW-11R-D_57.5	LMW-11R-D_76
Sample Date	9/29/2022	9/29/2022
Sample Depth	57.5	76
VOCs		
Acetone	14	25
Benzene	**15**	**13**
Chloroform	**24**	**20**
Cis-1,2-Dichloroethene	**17**	**15**
Methylene Chloride	<2.5 U	<2.5 U
Tetrachloroethene (PCE)	3.6	2.9
Trichloroethene (TCE)	1.9	1.6
Vinyl Chloride	0.17 J	0.13 J

Location	LMW-11R-S	LMW-11R-S	LMW-11R-S	LMW-11R-S	LMW-11R-S
Sample Name	LMW-11R-S_20.5	LMW-11R-S_23	LMW-11R-S_26.5	LMW-11R-S_29.5	LMW-11R-S_40.5
Sample Date	9/29/2022	9/29/2022	9/29/2022	9/29/2022	9/29/2022
Sample Depth	20.5	23	26.5	29.5	40.5
VOCs					
Acetone	11	10	12	9.2	8.9
Benzene	0.6	0.63	0.79	0.64	0.61
Chloroform	**7.2**	**7.4**	**8.4**	6.9	6.7
Cis-1,2-Dichloroethene	**28**	**29**	**35**	**28**	**28**
Methylene Chloride	0.94 J	0.99 J	1.2 J	0.97 J	0.91 J
Tetrachloroethene (PCE)	**12**	**12**	**14**	**12**	**12**
Trichloroethene (TCE)	**11**	**12**	**14**	**11**	**11**
Vinyl Chloride	0.2 J	0.24 J	0.32 J	0.2 J	0.2 J

Location	LMW-13R-S
Sample Name	LMW-13R-S_26
Sample Date	9/29/2022
Sample Depth	26
VOCs	
Acetone	8.2
Benzene	0.39 J
Chloroform	**19**
Cis-1,2-Dichloroethene	**33**
Methylene Chloride	2.6
Tetrachloroethene (PCE)	1.7
Trichloroethene (TCE)	3.3
Vinyl Chloride	0.1 J

Location	LMW-10R-D	LMW-10R-D
Sample Name	LMW-10R-D_49	LMW-10R-D_63
Sample Date	9/29/2022	9/29/2022
Sample Depth	49	63
VOCs		
Acetone	**100**	**91**
Benzene	<0.5 U	<0.5 U
Chloroform	**52**	**47**
Cis-1,2-Dichloroethene	5	4.3
Methylene Chloride	3	2.5
Tetrachloroethene (PCE)	0.78	0.74
Trichloroethene (TCE)	1.6	1.6
Vinyl Chloride	<1 U	<1 U

Location	LMW-10R-S	LMW-10R-S	LMW-10R-S	LMW-10R-S	LMW-10R-S
Sample Name	LMW-10R-S_21.5	LMW-10R-S_26.5	LMW-10R-S_28.5	LMW-10R-S_34	LMW-10R-S_36
Sample Date	9/29/2022	9/29/2022	9/29/2022	9/29/2022	9/29/2022
Sample Depth	21.5	26.5	28.5	34	36
VOCs					
Acetone	**91**	**84**	**88**	**100**	**160**
Benzene	0.26 J	0.25 J	0.24 J	0.25 J	0.25 J
Chloroform	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Cis-1,2-Dichloroethene	**100**	**110**	**90**	**91**	**92**
Methylene Chloride	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U
Tetrachloroethene (PCE)	2.7	2.6	2	2	2.1
Trichloroethene (TCE)	**5.4**	**5.5**	4.9	4.8	4.7
Vinyl Chloride	0.63 J	0.6 J	0.39 J	0.39 J	0.4 J

Location	LMW-12R-D	LMW-12R-D
Sample Name	LMW-12R-D_53	LMW-12R-D_67
Sample Date	9/29/2022	9/29/2022
Sample Depth	53	67
VOCs		
Acetone	10	**170**
Benzene	0.21 J	0.16 J
Chloroform	**7.4**	6.3
Cis-1,2-Dichloroethene	**28**	**23**
Methylene Chloride	**9.4**	**8.1**
Tetrachloroethene (PCE)	1	0.97
Trichloroethene (TCE)	0.66	0.54
Vinyl Chloride	**3.8**	**2.7**

Location	LMW-9R-D	LMW-9R-D	LMW-9R-D	LMW-9R-D	LMW-9R-D
Sample Name	LMW-9R-D_43.5	LMW-9R-D_46.5	LMW-9R-D_60.5	LMW-9R-D_63.5	LMW-9R-D_76
Sample Date	9/29/2022	9/29/2022	9/29/2022	9/29/2022	9/29/2022
Sample Depth	43.5	46.5	60.5	63.5	76
VOCs					
Acetone	8.4	6.8	20	6.2	13
Benzene	0.6	0.56	0.65	**1.6**	0.19 J
Chloroform	1.2 J	1.2 J	<2.5 U	3.8	**34**
Cis-1,2-Dichloroethene	**9.6**	**8.8**	**9.6**	**11**	2.3 J
Methylene Chloride	<2.5 U	<2.5 U	<2.5 U	<2.5 U	**8**
Tetrachloroethene (PCE)	2.7	2.5	2.4	2.1	0.34 J
Trichloroethene (TCE)	0.75	0.68	0.65	0.65	<0.5 U
Vinyl Chloride	0.2 J	0.19 J	0.23 J	0.6 J	0.13 J

Location	LMW-9R-S	LMW-9R-S	LMW-9R-S
Sample Name	LMW-9R-S_15	LMW-9R-S_22	LMW-9R-S_30.5
Sample Date	9/29/2022	9/29/2022	9/29/2022
Sample Depth	15	22	30.5
VOCs			
Acetone	12	16	26
Benzene	**8**	**8.5**	**7.4**
Chloroform	**8.9**	**7.9**	**7.5**
Cis-1,2-Dichloroethene	**28**	**28**	**28**
Methylene Chloride	<2.5 U	<5 U	<6.2 U
Tetrachloroethene (PCE)	**140**	**190**	**250**
Trichloroethene (TCE)	**58**	**56**	**58**
Vinyl Chloride	1.1	1 J	0.96 J

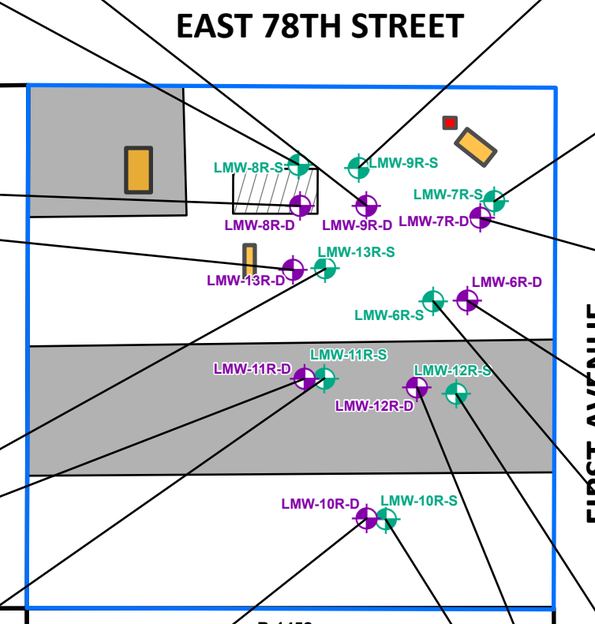
Location	LMW-7R-S	LMW-7R-S	LMW-7R-S	LMW-7R-S
Sample Name	LMW-7R-S_21.5	LMW-7R-S_27	LMW-7R-S_39	LMW-7R-S_42.5
Sample Date	9/29/2022	9/29/2022	9/29/2022	9/29/2022
Sample Depth	21.5	27	39	42.5
VOCs				
Acetone	34	25	26	30
Benzene	0.63 J	0.46 J	<2.5 U	<2.5 U
Chloroform	2.9 J	2.5 J	<12 U	<12 U
Cis-1,2-Dichloroethene	**330**	**390**	**480**	**710**
Methylene Chloride	<5 U	<6.2 U	<12 U	<12 U
Tetrachloroethene (PCE)	**11**	**23**	**31**	**26**
Trichloroethene (TCE)	**50**	**90**	**110**	**86**
Vinyl Chloride	1.1 J	1.1 J	1.2 J	1.6 J

Location	LMW-7R-D	LMW-7R-D	LMW-7R-D
Sample Name	LMW-7R-D_48	LMW-7R-D_68.5	LMW-7R-D_75
Sample Date	9/29/2022	9/29/2022	9/29/2022
Sample Depth	48	68.5	75
VOCs			
Acetone	31	23	19
Benzene	**1.1**	**1.1**	0.34 J
Chloroform	<5 U	<5 U	1.8 J
Cis-1,2-Dichloroethene	**170**	**180**	**100**
Methylene Chloride	<5 U	<5 U	<2.5 U
Tetrachloroethene (PCE)	**12**	**9.4**	2.1
Trichloroethene (TCE)	**20**	**20**	**8.2**
Vinyl Chloride	1 J	1 J	1

Location	LMW-6R-D	LMW-6R-D	LMW-6R-D
Sample Name	LMW-6R-D_46	LMW-6R-D_70	LMW-6R-D_75
Sample Date	9/29/2022	9/29/2022	9/29/2022
Sample Depth	46	70	75
VOCs			
Acetone	19	17	33
Benzene	<0.5 U	<0.5 U	<0.5 U
Chloroform	**55**	**56**	**55**
Cis-1,2-Dichloroethene	4.3	4	3.8
Methylene Chloride	3.9	4	3.6
Tetrachloroethene (PCE)	0.19 J	0.18 J	<0.5 U
Trichloroethene (TCE)	0.29 J	0.34 J	0.18 J
Vinyl Chloride	<1 U	0.09 J	0.12 J

Location	LMW-6R-S	LMW-6R-S
Sample Name	LMW-6R-S_21.5	LMW-6R-S_31
Sample Date	9/29/2022	9/29/2022
Sample Depth	21.5	31
VOCs		
Acetone	8.8	6.7
Benzene	0.16 J	<0.5 U
Chloroform	**24**	**25**
Cis-1,2-Dichloroethene	**17**	**16**
Methylene Chloride	2.6	2.9
Tetrachloroethene (PCE)	**25**	**24**
Trichloroethene (TCE)	**10**	**9.7**
Vinyl Chloride	0.31 J	0.34 J

Location	LMW-12R-S	LMW-12R-S	LMW-12R-S	LMW-12R-S	LMW-12R-S
Sample Name	LMW-12R-S_17	LMW-12R-S_20.5	LMW-12R-S_24.5	LMW-12R-S_28.5	LMW-12R-S_36
Sample Date	9/29/2022	9/29/2022	9/29/2022	9/29/2022	9/29/2022
Sample Depth	17	20.5	24.5	28.5	36
VOCs					
Acetone	11	26	26	12	22
Benzene	0.28 J	0.31 J	0.2 J	0.24 J	0.23 J
Chloroform	**18**	**18**	**16**	**20**	**8.8**
Cis-1,2-Dichloroethene	**27**	**29**	**27**	**32**	**35**
Methylene Chloride	2.3 J	2.4 J	3.5	4.1	1.8 J
Tetrachloroethene (PCE)	3.3	3.6	1.4	2.5	3
Trichloroethene (TCE)	3.7	3.8	3.7	4.2	4.9
Vinyl Chloride	0.08 J	0.07 J	0.17 J	0.23 J	0.2 J



LEGEND

- SITE BOUNDARY
- AOC-1: FORMER SOLVENT TANK
- AOC-2: FUEL OIL ASTs
- AOC-3: HISTORICAL SITE USES
- PETROLEUM IMPACTED SOIL LOCATION FROM AST REMOVAL
- TAX LOT BOUNDARY
- 2022 RI SHALLOW BEDROCK MONITORING WELL LOCATION
- 2022 RI DEEP BEDROCK MONITORING WELL LOCATION

Analyte	NYSDEC SGVs
VOCs	
Acetone	50
Benzene	1
Chloroform	7
Cis-1,2-Dichloroethene	5
Methylene Chloride	5
Tetrachloroethene (PCE)	5
Trichloroethene (TCE)	5
Vinyl Chloride	2

Exceedance Summary:

10 - Result exceeds NYSDEC SGVs

NOTES:
1. SAMPLING LOCATIONS FOR THE MONITORING WELLS INSTALLED AS PART OF THE 2022 RI ARE BASED ON THE WELL AS-BUILT SURVEY PREPARED BY TRUE NORTH SURVEYORS, INC. DATED 21 OCTOBER 2022.
2. AOC-4 CONSISTS OF HISTORIC FILL, WHICH IS PRESENT THROUGHOUT THE SITE.

30 0 30
SCALE IN FEET

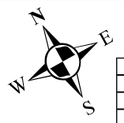
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NJ CERTIFICATE OF AUTHORIZATION No. 24GA27996400

Project
1487 FIRST AVENUE REDEVELOPMENT SITE
BLOCK No. 1452, LOT No. 27
MANHATTAN
NEW YORK NEW YORK

Drawing Title
PASSIVE DIFFUSION BAG (PDB) GROUNDWATER ANALYTICAL RESULTS

Project No. 100963701
Date 2/10/2023
Scale 1"=30'
Drawn By PDT
Figure 3

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Location	LMW-8R-D	LMW-8R-D	LMW-8R-D
Sample Name	LMW-8R-D_47.25	LMW-8R-D_56.75	LMW-8R-D_76
Sample Date	12/27/2022	12/27/2022	12/27/2022
Sample Depth	47.25	56.75	76
VOCs			
Benzene	0.16 J	**2**	**5.5**
Chloroform	<2.5 U	<2.5 U	<2.5 U
Cis-1,2-Dichloroethene	**8.2**	**7.7**	**47**
Tetrachloroethene (PCE)	0.18 J	0.54	0.21 J
Toluene	<2.5 U	**9**	2 J
Trichloroethene (TCE)	0.37 J	0.24 J	0.24 J
Vinyl Chloride	<1 U	1	**6.4**
Metals			
Iron	**5,660**	**9,480**	**6,650**
Magnesium	9,420	9,450	16,200
Manganese	235.1	**363.8**	**448.3**
General Chemistry			
Chloride (As Cl)	54,000	48,000	83,000
Sulfate (As SO4)	140,000	130,000	130,000

Location	LMW-13R-D
Sample Name	LMW-13R-D_45.25
Sample Date	12/28/2022
Sample Depth	45.25
VOCs	
Benzene	**8.5**
Chloroform	2.2 J
Cis-1,2-Dichloroethene	**10**
Tetrachloroethene (PCE)	**7.2**
Toluene	<2.5 U
Trichloroethene (TCE)	2.2
Vinyl Chloride	0.18 J
Metals	
Iron	**17,500**
Magnesium	**40,800**
Manganese	**2,363**
General Chemistry	
Chloride (As Cl)	45,000
Sulfate (As SO4)	**540,000**

Location	LMW-13R-S
Sample Name	LMW-13R-S_25.75
Sample Date	12/28/2022
Sample Depth	25.75
VOCs	
Benzene	0.45 J
Chloroform	1.7 J
Cis-1,2-Dichloroethene	**47**
Tetrachloroethene (PCE)	**35**
Toluene	<2.5 U
Trichloroethene (TCE)	**9.7**
Vinyl Chloride	0.27 J
Metals	
Iron	**12,600**
Magnesium	**47,800**
Manganese	**2,307**
General Chemistry	
Chloride (As Cl)	85,000
Sulfate (As SO4)	**560,000**

Location	LMW-8R-S	LMW-8R-S
Sample Name	LMW-8R-S_14.5	LMW-8R-S_24.75
Sample Date	12/22/2022	12/22/2022
Sample Depth	14.5	24.75
VOCs		
Benzene	<5 U	<1.2 U
Chloroform	<25 U	<6.2 U
Cis-1,2-Dichloroethene	**270**	**390**
Tetrachloroethene (PCE)	**900**	**63**
Toluene	<25 U	<6.2 U
Trichloroethene (TCE)	**360**	**52**
Vinyl Chloride	2 J	1.2 J
Metals		
Iron	**31,300**	**34,200**
Magnesium	**103,000**	**68,700**
Manganese	**9,421**	**6,069**
General Chemistry		
Chloride (As Cl)	110,000	**340,000**
Sulfate (As SO4)	**1,100,000**	**600,000**

Location	LMW-7R-S	LMW-7R-S	LMW-7R-S
Sample Name	LMW-7R-S_20	LMW-7R-S_25.5	LMW-7R-S_38
Sample Date	12/19/2022	12/20/2022	12/21/2022
Sample Depth	20	25.5	38
VOCs			
Benzene	0.52	0.47 J	0.51 J
Chloroform	<2.5 U	<5 U	<6.2 U
Cis-1,2-Dichloroethene	**120**	**340**	**400**
Tetrachloroethene (PCE)	**20**	**43**	**50**
Toluene	<2.5 U	<5 U	<6.2 U
Trichloroethene (TCE)	**18**	**56**	**61**
Vinyl Chloride	0.44 J	0.64 J	0.71 J
Metals			
Iron	**17,700**	**29,500**	**76,300**
Magnesium	**73,100**	**67,700**	**111,000**
Manganese	**5,733**	**4,074**	**8,344**
General Chemistry			
Chloride (As Cl)	**520,000**	**600,000**	**600,000**
Sulfate (As SO4)	**520,000**	**510,000**	**510,000**

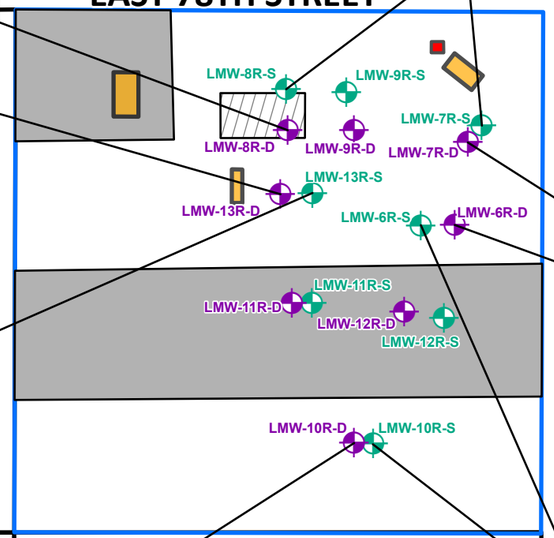
Location	LMW-7R-D	LMW-7R-D
Sample Name	LMW-7R-D_42	LMW-7R-D_66
Sample Date	12/21/2022	12/21/2022
Sample Depth	42	66
VOCs		
Benzene	0.77 J	0.52
Chloroform	<5 U	<2.5 U
Cis-1,2-Dichloroethene	**220**	**160**
Tetrachloroethene (PCE)	**18**	2.5
Toluene	<5 U	<2.5 U
Trichloroethene (TCE)	**22**	**16**
Vinyl Chloride	0.62 J	**4.4**
Metals		
Iron	**98,500**	**25,600**
Magnesium	**117,000**	**44,200**
Manganese	**7,510**	**2,320**
General Chemistry		
Chloride (As Cl)	**340,000**	190,000
Sulfate (As SO4)	**610,000**	**670,000**

Location	LMW-6R-D
Sample Name	LMW-6R-D_47.75
Sample Date	12/28/2022
Sample Depth	47.75
VOCs	
Benzene	<0.5 U
Chloroform	**7.4**
Cis-1,2-Dichloroethene	3.1
Tetrachloroethene (PCE)	0.57
Toluene	1.5 J
Trichloroethene (TCE)	0.33 J
Vinyl Chloride	<1 U
Metals	
Iron	**7,230**
Magnesium	2,140
Manganese	108
General Chemistry	
Chloride (As Cl)	25,000
Sulfate (As SO4)	55,000

Location	LMW-10R-D
Sample Name	LMW-10R-D_40.5
Sample Date	12/23/2022
Sample Depth	40.5
VOCs	
Benzene	0.2 J
Chloroform	2.6
Cis-1,2-Dichloroethene	**18**
Tetrachloroethene (PCE)	2.1
Toluene	<2.5 U
Trichloroethene (TCE)	1.1
Vinyl Chloride	0.11 J
Metals	
Iron	**12,600**
Magnesium	28,800
Manganese	**1,638**
General Chemistry	
Chloride (As Cl)	66,000
Sulfate (As SO4)	190,000

Location	LMW-10R-S	LMW-10R-S
Sample Name	LMW-10R-S_13	LMW-10R-S_18.25
Sample Date	12/22/2022	12/23/2022
Sample Depth	13	18.25
VOCs		
Benzene	<0.5 U	0.25 J
Chloroform	<2.5 U	<2.5 U
Cis-1,2-Dichloroethene	**16**	**140**
Tetrachloroethene (PCE)	**10**	**26**
Toluene	<2.5 U	<2.5 U
Trichloroethene (TCE)	**8.8**	**33**
Vinyl Chloride	<1 U	0.37 J
Metals		
Iron	**17,500**	**33,000**
Magnesium	**56,600**	**57,100**
Manganese	**4,386**	**2,861**
General Chemistry		
Chloride (As Cl)	88,000	97,000
Sulfate (As SO4)	**630,000**	**530,000**

Location	LMW-6R-S
Sample Name	LMW-6R-S_20.5
Sample Date	12/28/2022
Sample Depth	20.5
VOCs	
Benzene	0.72
Chloroform	1.4 J
Cis-1,2-Dichloroethene	**29**
Tetrachloroethene (PCE)	**10**
Toluene	<2.5 U
Trichloroethene (TCE)	**6.3**
Vinyl Chloride	<1 U
Metals	
Iron	**14,900**
Magnesium	**58,100**
Manganese	**2,978**
General Chemistry	
Chloride (As Cl)	110,000
Sulfate (As SO4)	**580,000**



LEGEND

- SITE BOUNDARY
- PETROLEUM IMPACTED SOIL LOCATION FROM AST REMOVAL
- AOC-1: FORMER SOLVENT TANK
- AOC-2: FUEL OIL ASTs
- AOC-3: HISTORICAL SITE USES
- TAX LOT BOUNDARY
- 2022 RI SHALLOW BEDROCK MONITORING WELL LOCATION
- 2022 RI DEEP BEDROCK MONITORING WELL LOCATION

Analyte	NYSDEC SGVs
VOCs	
Benzene	1
Chloroform	7
Cis-1,2-Dichloroethene	5
Tetrachloroethene (PCE)	5
Toluene	5
Trichloroethene (TCE)	5
Vinyl Chloride	2
Metals	
Iron	300
Magnesium	35000
Manganese	300
General Chemistry	
Chloride (As Cl)	250000
Sulfate (As SO4)	250000

Exceedance Summary:

10 - Result exceeds NYSDEC SGVs

NOTES:
1. SAMPLING LOCATIONS FOR THE MONITORING WELLS INSTALLED AS PART OF THE 2022 RI ARE BASED ON THE WELL AS-BUILT SURVEY PREPARED BY TRUE NORTH SURVEYORS, INC. DATED 21 OCTOBER 2022.
2. AOC-4 CONSISTS OF HISTORIC FILL, WHICH IS PRESENT THROUGHOUT THE SITE.

30 0 30
SCALE IN FEET

LANGAN
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Langan International LLC
Collectively known as Langan
NJ CERTIFICATE OF AUTHORIZATION No. 24GA27996400

Project
1487 FIRST AVENUE REDEVELOPMENT SITE
BLOCK No. 1452, LOT No. 27
MANHATTAN
NEW YORK NEW YORK

Drawing Title
BASELINE BEDROCK GROUNDWATER ANALYTICAL RESULTS

Project No. 100963701
Date 2/10/2023
Scale 1"=30'
Drawn By PDT
Figure 4

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Interval	20.5-22.5
VOCs	
Chloroform	7.2
cis-1,2-DCE	28
PCE	12
TCE	11
VC	0.2 J

Interval	23-25
VOCs	
Chloroform	7.4
cis-1,2-DCE	29
PCE	12
TCE	12
VC	0.24 J

Interval	26.5-28.5
VOCs	
Chloroform	8.4
cis-1,2-DCE	35
PCE	14
TCE	14
VC	0.32 J

Interval	29.5-31.5
VOCs	
Chloroform	6.9
cis-1,2-DCE	28
PCE	12
TCE	11
VC	0.2 J

Interval	40.5-42.5
VOCs	
Chloroform	6.7
cis-1,2-DCE	28
PCE	12
TCE	11
VC	0.2 J

Interval	57.5-59.5
VOCs	
Chloroform	24
cis-1,2-DCE	17
PCE	3.6
TCE	1.9
VC	0.17 J

Interval	76-78
VOCs	
Chloroform	20
cis-1,2-DCE	15
PCE	2.9
TCE	1.6
VC	0.13 J

Interval	14.5-19.5
VOCs	
Chloroform	<25 U
cis-1,2-DCE	270
PCE	900
TCE	360
VC	2 J

Interval	15-17
VOCs	
Chloroform	<12 U
cis-1,2-DCE	200
PCE	540
TCE	380
VC	<5 U

Interval	17.5-19.5
VOCs	
Chloroform	<12 U
cis-1,2-DCE	190
PCE	600
TCE	390
VC	0.42 J

Interval	27-29
VOCs	
Chloroform	<12 U
cis-1,2-DCE	180
PCE	570
TCE	350
VC	0.41 J

Interval	45.25-50.25
VOCs	
Chloroform	2.2 J
cis-1,2-DCE	10
PCE	7.2
TCE	2.2
VC	0.18 J

Interval	47.25-52.25
VOCs	
Chloroform	<2.5 U
cis-1,2-DCE	8.2
PCE	0.18 J
TCE	0.37 J
VC	<1 U

Interval	48.5-50.5
VOCs	
Chloroform	<2.5 U
cis-1,2-DCE	0.85 J
PCE	<0.5 U
TCE	<0.5 U
VC	<1 U

Interval	55.5-57.5
VOCs	
Chloroform	30
cis-1,2-DCE	9.6
PCE	3.9
TCE	1.3
VC	0.25 J

Interval	56.75-61.75
VOCs	
Chloroform	<2.5 U
cis-1,2-DCE	7.7
PCE	0.54
TCE	0.24 J
VC	1

Interval	75-77
VOCs	
Chloroform	29
cis-1,2-DCE	9.6
PCE	3.7
TCE	1.3
VC	0.29 J

Interval	77-79
VOCs	
Chloroform	<5 U
cis-1,2-DCE	200
PCE	0.41 J
TCE	0.39 J
VC	6.7

Interval	22.5-24.5
VOCs	
Chloroform	<12 U
cis-1,2-DCE	190
PCE	640
TCE	390
VC	<5 U

Interval	24.75-29.75
VOCs	
Chloroform	<6.2 U
cis-1,2-DCE	390
PCE	63
TCE	52
VC	1.2 J

Interval	46.5-48.5
VOCs	
Chloroform	1.5 J
cis-1,2-DCE	0.8 J
PCE	<0.5 U
TCE	<0.5 U
VC	<1 U

Interval	58-60
VOCs	
Chloroform	<2.5 U
cis-1,2-DCE	1 J
PCE	0.25 J
TCE	0.18 J
VC	<1 U

Interval	73-75
VOCs	
Chloroform	<2.5 U
cis-1,2-DCE	0.86 J
PCE	<0.5 U
TCE	<0.5 U
VC	<1 U

Interval	76-81
VOCs	
Chloroform	<2.5 U
cis-1,2-DCE	47
PCE	0.21 J
TCE	0.24 J
VC	6.4

Interval	25.75-30.75
VOCs	
Chloroform	1.7 J
cis-1,2-DCE	47
PCE	35
TCE	9.7
VC	0.27 J

Interval	26-28
VOCs	
Chloroform	19
cis-1,2-DCE	33
PCE	1.7
TCE	3.3
VC	0.1 J

Interval	15-17
VOCs	
Chloroform	8.9
cis-1,2-DCE	28
PCE	140
TCE	58
VC	1.1

Interval	22-24
VOCs	
Chloroform	7.9
cis-1,2-DCE	28
PCE	190
TCE	56
VC	1 J

Interval	30.5-32.5
VOCs	
Chloroform	7.5
cis-1,2-DCE	28
PCE	250
TCE	58
VC	0.96 J

Interval	43.5-45.5
VOCs	
Chloroform	1.2 J
cis-1,2-DCE	9.6
PCE	2.7
TCE	0.75
VC	0.2 J

Interval	46.5-48.5
VOCs	
Chloroform	1.2 J
cis-1,2-DCE	8.8
PCE	2.5
TCE	0.68
VC	0.19 J

Interval	60.5-62.5
VOCs	
Chloroform	<2.5 U
cis-1,2-DCE	9.6
PCE	2.4
TCE	0.65
VC	0.23 J

Interval	63.5-65.5
VOCs	
Chloroform	3.8
cis-1,2-DCE	11
PCE	2.1
TCE	0.65
VC	0.6 J

Interval	76-78
VOCs	
Chloroform	34
cis-1,2-DCE	2.3 J
PCE	0.34 J
TCE	<0.5 U
VC	0.13 J

Interval	13-18
VOCs	
Chloroform	<2.5 U
cis-1,2-DCE	16
PCE	10
TCE	8.8
VC	<1 U

Interval	18.25-23.25
VOCs	
Chloroform	<2.5 U
cis-1,2-DCE	140
PCE	26
TCE	33
VC	0.37 J

Interval	21.5-23.5
VOCs	
Chloroform	<2.5 U
cis-1,2-DCE	100
PCE	2.7
TCE	5.4
VC	0.63 J

Interval	26.5-28.5
VOCs	
Chloroform	<2.5 U
cis-1,2-DCE	110
PCE	2.6
TCE	5.5
VC	0.6 J

Interval	28.5-30.5
VOCs	
Chloroform	<2.5 U
cis-1,2-DCE	90
PCE	2
TCE	4.9
VC	0.39 J

Interval	34-36
VOCs	
Chloroform	<2.5 U
cis-1,2-DCE	91
PCE	2
TCE	4.8
VC	0.39 J

Interval	36-38
VOCs	
Chloroform	<2.5 U
cis-1,2-DCE	92
PCE	2.1
TCE	4.7
VC	0.4 J

Interval	40.5-45.5
VOCs	
Chloroform	2.6
cis-1,2-DCE	18
PCE	2.1
TCE	1.1
VC	0.11 J

Interval	49-51
VOCs	
Chloroform	52
cis-1,2-DCE	5
PCE	0.78
TCE	1.6
VC	<1 U

Interval	63-65
VOCs	
Chloroform	47
cis-1,2-DCE	4.3
PCE	0.74
TCE	1.6
VC	<1 U

Interval	20.5-25.5
VOCs	
Chloroform	1.4 J
cis-1,2-DCE	29
PCE	10
TCE	6.3
VC	<1 U

Interval	21.5-23.5
VOCs	
Chloroform	24
cis-1,2-DCE	17
PCE	25
TCE	10
VC	0.31 J

Interval	31-33
VOCs	
Chloroform	25
cis-1,2-DCE	16
PCE	24
TCE	9.7
VC	0.34 J

Interval	53-55
VOCs	
Chloroform	7.4
cis-1,2-DCE	28
PCE	1
TCE	0.66
VC	3.8

Interval	67-69
VOCs	
Chloroform	6.3
cis-1,2-DCE	23
PCE	0.97
TCE	0.54
VC	2.7

Interval	17-19
VOCs	
Chloroform	18
cis-1,2-DCE	27
PCE	3.3
TCE	3.7
VC	0.08 J

Interval	20.5-22.5
VOCs	
Chloroform	18
cis-1,2-DCE	29
PCE	3.6
TCE	3.8
VC	0.07 J

Interval	24.5-26.5
VOCs	
Chloroform	16
cis-1,2-DCE	27
PCE	1.4
TCE	3.7
VC	0.17 J

Interval	28.5-30.5
VOCs	
Chloroform	20
cis-1,2-DCE	32
PCE	2.5
TCE	4.2
VC	0.23 J

Interval	36-38
VOCs	
Chloroform	8.8
cis-1,2-DCE	35
PCE	3
TCE	4.9
VC	0.2 J

Interval	46-48
VOCs	
Chloroform	55
cis-1,2-DCE	4.3
PCE	0.19 J
TCE	0.29 J
VC	<1 U

Interval	47.75-52.75
VOCs	
Chloroform	7.4
cis-1,2-DCE	3.1
PCE	0.57
TCE	0.33 J
VC	<1 U

Interval	70-72
VOCs	
Chloroform	56
cis-1,2-DCE	4
PCE	0.18 J
TCE	0.34 J
VC	0.09 J

Interval	75-77
VOCs	
Chloroform	55
cis-1,2-DCE	3.8
PCE	<0.5 U
TCE	0.18 J
VC	0.12 J

Interval	20-25
VOCs	
Chloroform	<2.5 U
cis-1,2-DCE	120
PCE	20
TCE	18
VC	0.44 J

Interval	21.5-23.5
VOCs	
Chloroform	2.9 J
cis-1,2-DCE	330
PCE	11
TCE	50
VC	1.1 J

Interval	25.5-30.5
VOCs	
Chloroform	<5 U
cis-1,2-DCE	340
PCE	43
TCE	56
VC	0.64 J

Interval	27-29
VOCs	
Chloroform	2.5 J
cis-1,2-DCE	390
PCE	23
TCE	90
VC	1.1 J

Interval	38-43
VOCs	
Chloroform	<6.2 U
cis-1,2-DCE	400
PCE	50
TCE	61
VC	0.71 J

Interval	39-41
VOCs	
Chloroform	<12 U
cis-1,2-DCE	480
PCE	31
TCE	110
VC	1.2 J

Interval	42-47
VOCs	
Chloroform	<5 U
cis-1,2-DCE	220
PCE	18
TCE	22
VC	0.62 J

Interval	42.5-44.5
VOCs	
Chloroform	<12 U
cis-1,2-DCE	710
PCE	26
TCE	86
VC	1.6 J

Interval	48-50
VOCs	
Chloroform	<5 U
cis-1,2-DCE	170
PCE	12
TCE	20
VC	1 J

Interval	66-71
VOCs	
Chloroform	<2.5 U
cis-1,2-DCE	160
PCE	2.5
TCE	16
VC	4.4

Interval	68.5-70.5
VOCs	
Chloroform	<5 U
cis-1,2-DCE	180
PCE	9.4
TCE	20
VC	1 J

Interval	75-77
VOCs	
Chloroform	1.8 J
cis-1,2-DCE	100
PCE	2.1
TCE	8.2
VC	1

BORING KEY:

LB-X (OW-X)
(EL XX±)
XX (XX)

LEGEND:

LB-X (OW-X) — DRILLED BORING AND TEMPORARY GROUNDWATER LEVEL OBSERVATION WELL IDENTIFICATION

EL XX± — APPROXIMATE GROUND SURFACE ELEVATION AT THE TIME OF THE BORING (NAVD88)

XX (XX) — GENERAL SOIL/ROCK DESCRIPTION (MAY INCLUDE2014 NYCBC CLASSIFICATION)

GROUNDWATER LEVEL OBSERVED IN WELL DURING GAUGING COMPLETED ON 14 SEPTEMBER 2022

NOTES:

1. THIS PROFILE SHOWS GENERALIZED SUBSURFACE CONDITIONS AT THE RESPECTIVE BORING LOCATIONS. VARIATIONS IN SUBSURFACE CONDITIONS SHOULD BE EXPECTED BETWEEN BORINGS. FOR A DETAILED DESCRIPTION OF CONDITIONS ENCOUNTERED IN THE DRILLED BORINGS, SEE BORING LOGS INCLUDED IN APPENDIX A.
2. THE ELEVATIONS FOR BORINGS LB-1(OW-1), LB-2, LB-3, LB-4, LB-5, LSB-10, LSB-18, LSB-21, LSB-27, AND LSB-31 ARE APPROXIMATE AND ARE INFERRED FROM A 22 FEBRUARY (REVISED 10 MARCH) 2022 SURVEY PREPARED BY TRUE NORTH SURVEYORS, PC. THE ELEVATIONS FOR BORINGS LMW-6R-S/D, LMW-8R-D, LMW-10R-S/D, LMW-11R-S/D, LMW-12R-S/D, AND LMW-13R-S/D ARE BASED ON THE WELL AS-BUILT SURVEY PREPARED BY TRUE NORTH SURVEYORS, INC. DATED 21 OCTOBER 2022.
3. ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD88, WHICH IS 1.1 FEET ABOVE THE NATIONAL GEODETIC VERTICAL DATUM OF 1929, NGVD29, PER THE UNITED STATES GEOLOGIC SURVEY, USGS.
4. BORINGS LB-1, LB-3, AND LB-5 WERE INSTALLED AS PART OF THE INVESTIGATION DOCUMENTED IN THE APRIL 2022 GEOTECHNICAL INVESTIGATION REPORT. BORINGS LB-01/LMW-1, LB-03/LMW-3, LB-06, AND LSB-9/MW-05 WERE INSTALLED AS PART OF THE NOVEMBER 2021 AND JANUARY/FEBRUARY 2022 PHASE II ESI. BORINGS LSB-19/LMW-6, LSB-20, LSB-31, LMW-6R-S/D, LMW-8R-S/D, LMW-9R-S/D, LMW-10R-S/D, LMW-11R-D, LMW-12R-S/D, LMW-13R-S, AND LMW-13R-D WERE INSTALLED AS PART OF THE AUGUST 2022 RI.
5. BOREHOLE FLOW AND WATER PRODUCING LOGGING INTERVALS DERIVED FROM THE BOREHOLE GEOPHYSICAL LOGGING DATA REPORT PREPARED BY HAGER-RIGHTER GEOSCIENCE, INC. DATED NOVEMBER 2022.

FLOW UNDER PUMPING CONDITIONS WITHIN BOREHOLE:

- FLOW INTO & UP BOREHOLE
- POSSIBLE FLOW IN OR OUT OF BOREHOLE
- X NO FLOW DETECTED

FLOW UNDER AMBIENT (NON-PUMPING) CONDITIONS WITHIN BOREHOLE:

- FLOW INTO & DOWN BOREHOLE
- FLOW OUT OF BOREHOLE

*NO FLOW WAS DETECTED UNDER AMBIENT CONDITIONS AT ANY WELL EXCEPT LMW-7R-S

- GROUNDWATER PRODUCING INTERVAL
- MINOR GROUNDWATER PRODUCING INTERVAL
- PACKER SAMPLING INTERVAL

*ALL SAMPLING INTERVALS ARE BELOW TOP OF CASING

SECTION B-B'

VERTICAL SCALE: 1" = 6'
HORIZONTAL SCALE: N.T.S.

6 0 3 6
VERTICAL SCALE: 1 INCH = 6 FEET

WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, LAND SURVEYOR OR GEOLOGIST, TO ALTER THIS ITEM IN ANY WAY.

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NJ CERTIFICATE OF AUTHORIZATION No. 24GA27996400

Project
PROPOSED
1487 FIRST AVENUE
DEVELOPMENT
MANHATTAN NEW YORK

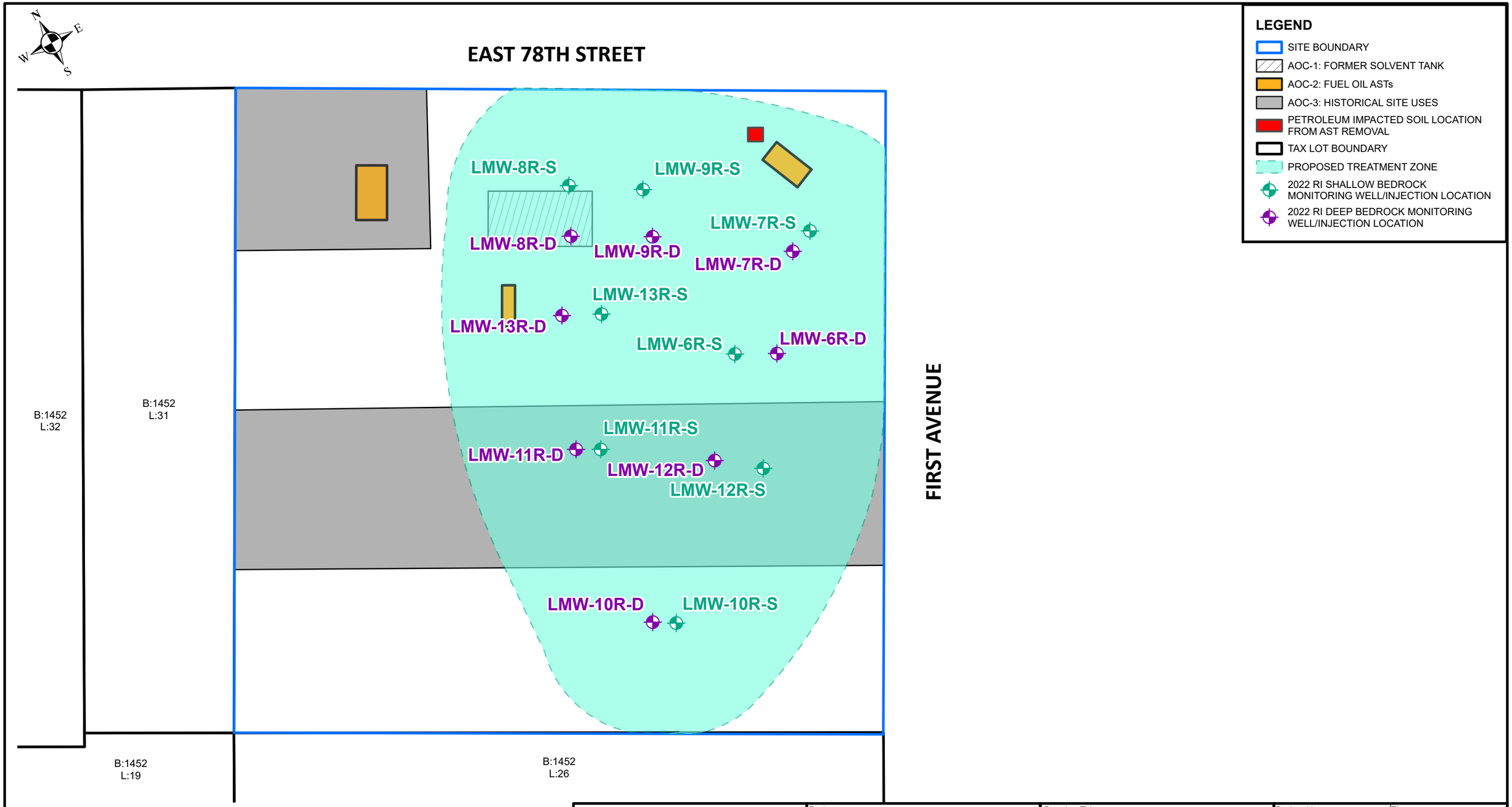
Drawing Title
CHLORINATED VOC ANALYTICAL RESULTS ON SUBSURFACE PROFILE B-B'

Project No.	Drawing No.
100963701	5
Date: 11/17/2022	
Drawn By: AC	
Checked By: CR	

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NOTES:
1. SAMPLING LOCATIONS FOR THE MONITORING WELLS INSTALLED AS PART OF THE 2022 RI ARE BASED ON THE WELL AS-BUILT SURVEY PREPARED BY TRUE NORTH SURVEYORS, INC. DATED 21 OCTOBER 2022.
2. AOC-4 CONSISTS OF HISTORIC FILL, WHICH IS PRESENT THROUGHOUT THE SITE.
3. THE PROPOSED TREATMENT AREA IS BASED ON AN ESTIMATED RADIUS OF INFLUENCE OF 15-FEET FROM EACH INJECTION LOCATION.

15 0 15
SCALE IN FEET

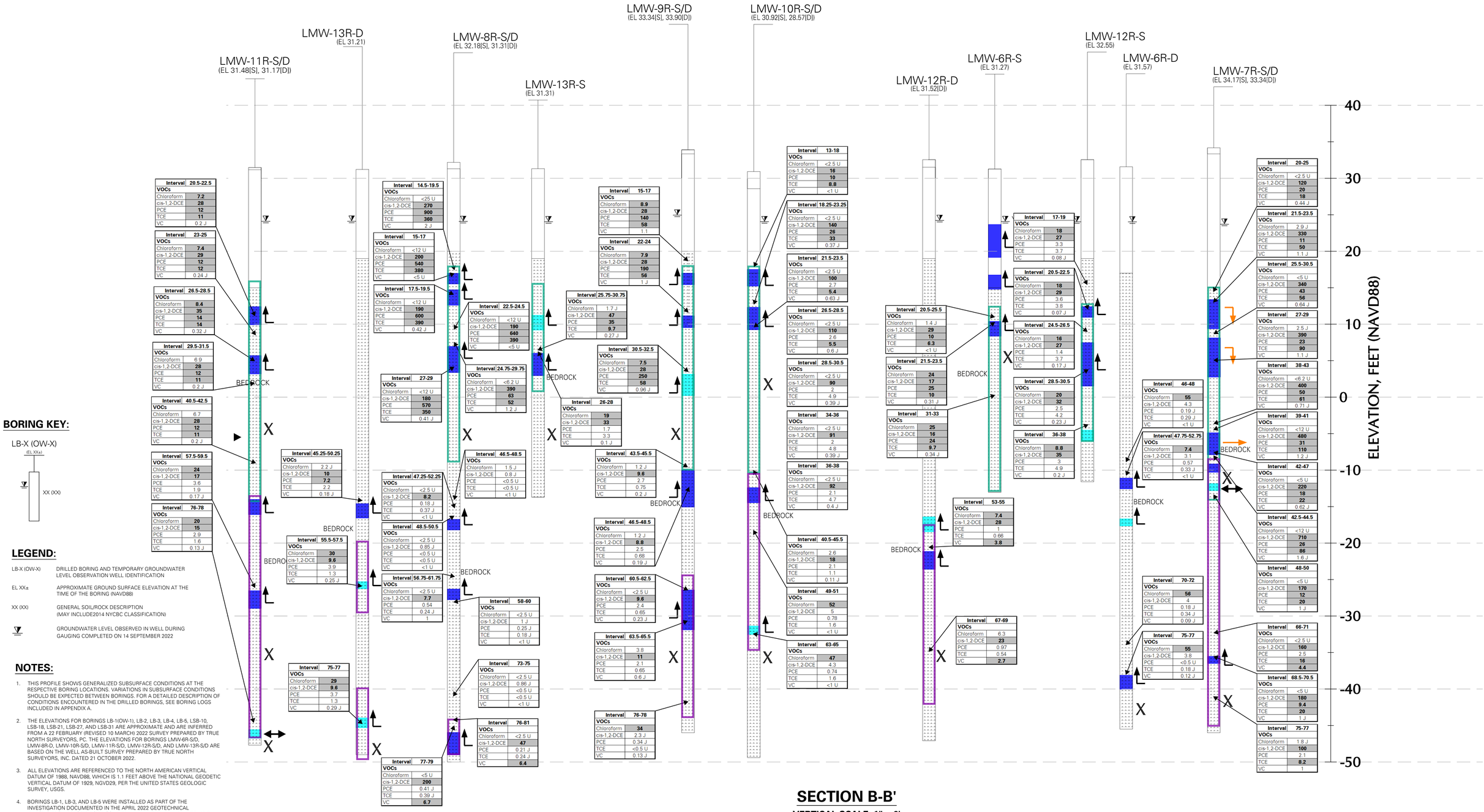
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Collectively known as Langan
NJ CERTIFICATE OF AUTHORIZATION No. 24GA27996400

Project
1487 FIRST AVENUE REDEVELOPMENT SITE
BLOCK No. 1452, LOT No. 27
MANHATTAN
NEW YORK NEW YORK

Drawing Title
BEDROCK TREATMENT AREA AND INJECTION LOCATIONS

Project No.	Figure
100963701	6A
Date: 2/10/2023	
Scale: 1"=30'	
Drawn By: PDT	

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BORING KEY:

LB-X (OW-X)
(EL XX±)
XX (XX)

LEGEND:

LB-X (OW-X)	DRILLED BORING AND TEMPORARY GROUNDWATER LEVEL OBSERVATION WELL IDENTIFICATION
EL XX±	APPROXIMATE GROUND SURFACE ELEVATION AT THE TIME OF THE BORING (NAVD88)
XX (XX)	GENERAL SOIL/ROCK DESCRIPTION (MAY INCLUDE2014 NYCBC CLASSIFICATION)
	GROUNDWATER LEVEL OBSERVED IN WELL DURING GAUGING COMPLETED ON 14 SEPTEMBER 2022

NOTES:

1. THIS PROFILE SHOWS GENERALIZED SUBSURFACE CONDITIONS AT THE RESPECTIVE BORING LOCATIONS. VARIATIONS IN SUBSURFACE CONDITIONS SHOULD BE EXPECTED BETWEEN BORINGS. FOR A DETAILED DESCRIPTION OF CONDITIONS ENCOUNTERED IN THE DRILLED BORINGS, SEE BORING LOGS INCLUDED IN APPENDIX A.
2. THE ELEVATIONS FOR BORINGS LB-1(OW-1), LB-2, LB-3, LB-4, LB-5, LSB-10, LSB-18, LSB-21, LSB-27, AND LSB-31 ARE APPROXIMATE AND ARE INFERRED FROM A 22 FEBRUARY (REVISED 10 MARCH) 2022 SURVEY PREPARED BY TRUE NORTH SURVEYORS, PC. THE ELEVATIONS FOR BORINGS LMW-6R-S/D, LMW-8R-D, LMW-10R-S/D, LMW-11R-S/D, LMW-12R-S/D, AND LMW-13R-S/D ARE BASED ON THE WELL AS-BUILT SURVEY PREPARED BY TRUE NORTH SURVEYORS, INC. DATED 21 OCTOBER 2022.
3. ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD88, WHICH IS 1.1 FEET ABOVE THE NATIONAL GEODETIC VERTICAL DATUM OF 1929, NGVD29, PER THE UNITED STATES GEOLOGIC SURVEY, USGS.
4. BORINGS LB-1, LB-3, AND LB-5 WERE INSTALLED AS PART OF THE INVESTIGATION DOCUMENTED IN THE APRIL 2022 GEOTECHNICAL INVESTIGATION REPORT. BORINGS LB-01/LMW-1, LB-03/LMW-3, LB-06, AND LSB-9/MW-05 WERE INSTALLED AS PART OF THE NOVEMBER 2021 AND JANUARY/FEBRUARY 2022 PHASE II ESI. BORINGS LSB-19/LMW-6, LSB-20, LSB-31, LMW-6R-S/D, LMW-8R-S/D, LMW-9R-S/D, LMW-10R-S/D, LMW-11R-D, LMW-12R-S/D, LMW-13R-S, AND LMW-13R-D WERE INSTALLED AS PART OF THE AUGUST 2022 RI.
5. BOREHOLE FLOW AND WATER PRODUCING LOGGING INTERVALS DERIVED FROM THE BOREHOLE GEOPHYSICAL LOGGING DATA REPORT PREPARED BY HAGER-RICHTER GEOSCIENCE, INC. DATED NOVEMBER 2022.
6. REFER TO TABLE 3 OF THE DESIGN DOCUMENT FOR INJECTION DETAILS.

FLOW UNDER PUMPING CONDITIONS WITHIN BOREHOLE:

- FLOW INTO & UP BOREHOLE
- POSSIBLE FLOW IN OR OUT OF BOREHOLE
- X NO FLOW DETECTED

FLOW UNDER AMBIENT (NON-PUMPING) CONDITIONS WITHIN BOREHOLE:

- FLOW INTO & DOWN BOREHOLE
- FLOW OUT OF BOREHOLE

*NO FLOW WAS DETECTED UNDER AMBIENT CONDITIONS AT ANY WELL EXCEPT LMW-7R-S

- GROUNDWATER PRODUCING INTERVAL
- MINOR GROUNDWATER PRODUCING INTERVAL
- SHALLOW BEDROCK INJECTION INTERVAL
- DEEP BEDROCK INJECTION INTERVAL

*ALL SAMPLING INTERVALS ARE BELOW TOP OF CASING

6 0 3 6
VERTICAL SCALE: 1 INCH = 6 FEET

SECTION B-B'

VERTICAL SCALE: 1" = 6'
HORIZONTAL SCALE: N.T.S.

WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, LAND SURVEYOR OR GEOLOGIST, TO ALTER THIS ITEM IN ANY WAY.

LANGAN
Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.
300 Kimball Drive
Parsippany, NJ 07054
T: 973.560.4900 F: 973.560.4901 www.langan.com
NJ CERTIFICATE OF AUTHORIZATION No. 24GA27996400

Project
PROPOSED
1487 FIRST AVENUE
DEVELOPMENT
MANHATTAN NEW YORK

Drawing Title
BEDROCK
TREATMENT
INJECTION INTERVALS

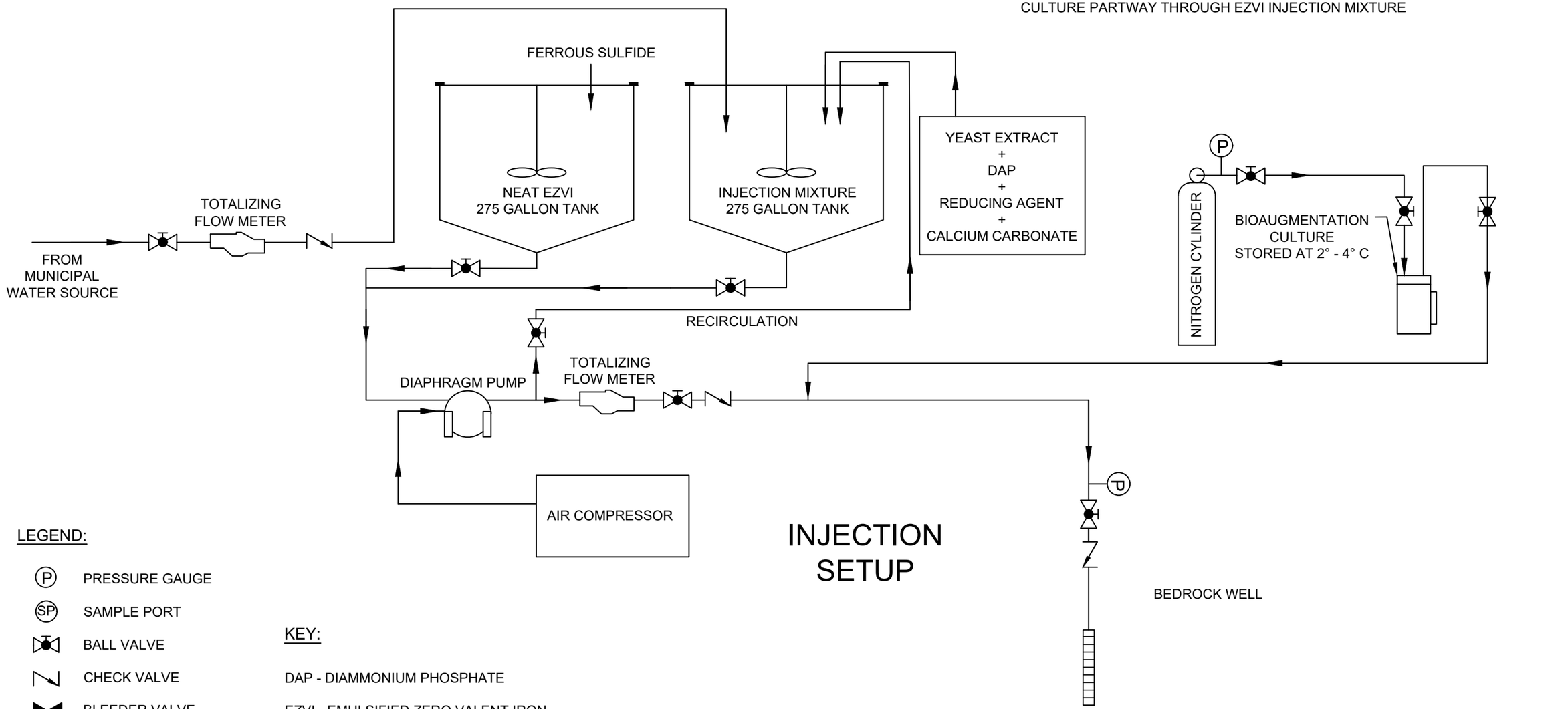
Project No. 100963701	Drawing No. 6B
Date 11/17/2022	
Drawn By AC	
Checked By CR	

PROJECT NO. 100963701

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Filename: C:\Users\Aruane\Documents\Project Work\WorkFromHome-Covid\100963701\CAD\FG06-100963701-0201-BI201-0101.dwg Date: 1/6/2023 Time: 11:55 User: aruane Style Table: Langan.stb Layout: B-B-STRECH

MIXING SETUP



INJECTION SETUP

LEGEND:

- (P) PRESSURE GAUGE
- (SP) SAMPLE PORT
- BALL VALVE
- CHECK VALVE
- BLEEDER VALVE

KEY:

DAP - DIAMMONIUM PHOSPHATE

EZVI - EMULSIFIED ZERO VALENT IRON

WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, LAND SURVEYOR OR GEOLOGIST, TO ALTER THIS ITEM IN ANY WAY.

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Parsippany, NJ 07054
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NJ Certificate of Authorization No.24GA27996400

Project
1487 FIRST AVENUE REDEVELOPMENT SITE
BLOCK No. 1452, LOT No. 27
MANHATTAN
NEW YORK NEW YORK

Drawing Title
INJECTION PROCESS DIAGRAM

Project No.	100766601
Date	01/26/2023
Drawn By	AB/AL
Checked By	AO

Figure No. 7

Sheet 6 of 6

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Filename: \\langan.com\data\PAR\data6\100766601\Project Data\CAD\01\Sheet Files\EZVI Injection Design\INJECTION PROCESS DIAGRAM.dwg Date: 2/13/2023 Time: 13:30 User: aboodram Style Table: Langan.stb Layout: FIG 6 - INJECTION PROCESS

APPENDIX A

LABORATORY ANALYTICAL PACKAGES

ANALYTICAL REPORT

Lab Number:	L2254047
Client:	Langan Engineering & Environmental 300 Kimball Drive 4th Floor Parsippany, NJ 07054
ATTN:	Ashley Sandve
Phone:	(973) 560-4871
Project Name:	1487 FIRST AVENUE
Project Number:	100963701
Report Date:	10/06/22

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: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2254047
Report Date: 10/06/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2254047-01	LMW-6R-S_21.5	WATER	NEW YORK, NY	09/29/22 09:50	09/30/22
L2254047-02	LMW-6R-S_31	WATER	NEW YORK, NY	09/29/22 10:00	09/30/22
L2254047-03	LMW-6R-D_46	WATER	NEW YORK, NY	09/29/22 10:10	09/30/22
L2254047-04	LMW-6R-D_70	WATER	NEW YORK, NY	09/29/22 10:20	09/30/22
L2254047-05	LMW-6R-D_75	WATER	NEW YORK, NY	09/29/22 10:30	09/30/22
L2254047-06	LMW-7R-S_21.5	WATER	NEW YORK, NY	09/29/22 11:15	09/30/22
L2254047-07	LMW-7R-S_27	WATER	NEW YORK, NY	09/29/22 11:25	09/30/22
L2254047-08	LMW-7R-S_39	WATER	NEW YORK, NY	09/29/22 11:35	09/30/22
L2254047-09	LMW-7R-S_42.5	WATER	NEW YORK, NY	09/29/22 11:45	09/30/22
L2254047-10	LMW-7R-D_48	WATER	NEW YORK, NY	09/29/22 10:45	09/30/22
L2254047-11	LMW-7R-D_68.5	WATER	NEW YORK, NY	09/29/22 10:55	09/30/22
L2254047-12	LMW-7R-D_75	WATER	NEW YORK, NY	09/29/22 11:05	09/30/22
L2254047-13	LMW-8R-S_15	WATER	NEW YORK, NY	09/29/22 11:55	09/30/22
L2254047-14	LMW-8R-S_17.5	WATER	NEW YORK, NY	09/29/22 12:05	09/30/22
L2254047-15	LMW-8R-S_22.5	WATER	NEW YORK, NY	09/29/22 12:15	09/30/22
L2254047-16	LMW-8R-S_27	WATER	NEW YORK, NY	09/29/22 12:25	09/30/22
L2254047-17	LMW-8R-D_46.5	WATER	NEW YORK, NY	09/29/22 12:35	09/30/22
L2254047-18	LMW-8R-D_48.5	WATER	NEW YORK, NY	09/29/22 12:55	09/30/22
L2254047-19	LMW-8R-D_58	WATER	NEW YORK, NY	09/29/22 13:05	09/30/22
L2254047-20	LMW-8R-D_73	WATER	NEW YORK, NY	09/29/22 12:45	09/30/22
L2254047-21	LMW-8R-D_77	WATER	NEW YORK, NY	09/29/22 13:15	09/30/22
L2254047-22	LMW-9R-S_15	WATER	NEW YORK, NY	09/29/22 13:35	09/30/22
L2254047-23	LMW-9R-S_22	WATER	NEW YORK, NY	09/29/22 13:25	09/30/22
L2254047-24	LMW-9R-S_30.5	WATER	NEW YORK, NY	09/29/22 13:45	09/30/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2254047-25	LMW-9R-D_43.5	WATER	NEW YORK, NY	09/29/22 13:50	09/30/22
L2254047-26	LMW-9R-D_46.5	WATER	NEW YORK, NY	09/29/22 13:55	09/30/22
L2254047-27	LMW-9R-D_60.5	WATER	NEW YORK, NY	09/29/22 14:05	09/30/22
L2254047-28	LMW-9R-D_63.5	WATER	NEW YORK, NY	09/29/22 14:15	09/30/22
L2254047-29	LMW-9R-D_76	WATER	NEW YORK, NY	09/29/22 14:25	09/30/22
L2254047-30	LMW-10R-S_21.5	WATER	NEW YORK, NY	09/29/22 09:00	09/30/22
L2254047-31	LMW-10R-S_28.5	WATER	NEW YORK, NY	09/29/22 09:20	09/30/22
L2254047-32	LMW-10R-S_26.5	WATER	NEW YORK, NY	09/29/22 09:10	09/30/22
L2254047-33	LMW-10R-S_34	WATER	NEW YORK, NY	09/29/22 09:30	09/30/22
L2254047-34	LMW-10R-S_36	WATER	NEW YORK, NY	09/29/22 09:40	09/30/22
L2254047-35	LMW-10R-D_49	WATER	NEW YORK, NY	09/29/22 08:40	09/30/22
L2254047-36	LMW-10R-D_63	WATER	NEW YORK, NY	09/29/22 08:50	09/30/22
L2254047-37	LMW-11R-S_20.5	WATER	NEW YORK, NY	09/29/22 14:55	09/30/22
L2254047-38	LMW-11R-S_23	WATER	NEW YORK, NY	09/29/22 15:15	09/30/22
L2254047-39	LMW-11R-S_26.5	WATER	NEW YORK, NY	09/29/22 14:45	09/30/22
L2254047-40	LMW-11R-S_29.5	WATER	NEW YORK, NY	09/29/22 15:35	09/30/22
L2254047-41	LMW-11R-S_40.5	WATER	NEW YORK, NY	09/29/22 15:25	09/30/22
L2254047-42	LMW-11R-D_57.5	WATER	NEW YORK, NY	09/29/22 15:05	09/30/22
L2254047-43	LMW-11R-D_76	WATER	NEW YORK, NY	09/29/22 14:35	09/30/22
L2254047-44	LMW-12R-S_24.5	WATER	NEW YORK, NY	09/29/22 15:45	09/30/22
L2254047-45	LMW-12R-S_28.5	WATER	NEW YORK, NY	09/29/22 15:55	09/30/22
L2254047-46	LMW-12R-S_36	WATER	NEW YORK, NY	09/29/22 16:05	09/30/22
L2254047-47	LMW-12R-D_53	WATER	NEW YORK, NY	09/29/22 16:15	09/30/22
L2254047-48	LMW-12R-D_67	WATER	NEW YORK, NY	09/29/22 16:25	09/30/22
L2254047-49	LMW-12R-S_17	WATER	NEW YORK, NY	09/29/22 16:45	09/30/22
L2254047-50	LMW-12R-S_20.5	WATER	NEW YORK, NY	09/29/22 16:55	09/30/22
L2254047-51	LMW-13R-S_26	WATER	NEW YORK, NY	09/29/22 17:05	09/30/22
L2254047-52	LMW-13R-D_55.5	WATER	NEW YORK, NY	09/29/22 16:35	09/30/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2254047-53	LMW-13R-D_75	WATER	NEW YORK, NY	09/29/22 17:15	09/30/22
L2254047-54	TRIP BLANK-09292022	WATER	NEW YORK, NY	09/29/22 00:00	09/30/22

Project Name:	1487 FIRST AVENUE	**Lab Number:**	L2254047
Project Number:	100963701	**Report Date:**	10/06/22

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:	1487 FIRST AVENUE	**Lab Number:**	L2254047
Project Number:	100963701	**Report Date:**	10/06/22

Case Narrative (continued)

Report Submission

October 06, 2022: This final report includes the results of all requested analyses.

October 05, 2022: This is a preliminary report.

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: Melissa Sturgis Melissa Sturgis

Title: Technical Director/Representative Date: 10/06/22

ORGANICS

VOLATILES

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-01
Client ID: LMW-6R-S_21.5
Sample Location: NEW YORK, NY
Date Collected: 09/29/22 09:50
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/04/22 19:18
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	2.6		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	24		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	25		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	0.16	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	0.31	J	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-01 Date Collected: 09/29/22 09:50

Client ID: LMW-6R-S_21.5 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	10		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	17		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	17		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	8.8		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-01 Date Collected: 09/29/22 09:50

Client ID: LMW-6R-S_21.5 Date Received: 09/30/22

Sample Location: NEW YORK, 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	113		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	113		70-130
Dibromofluoromethane	110		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-02
Client ID: LMW-6R-S_31
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 10:00
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/03/22 09:02
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	2.9		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	25		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	24		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	0.34	J	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-02 Date Collected: 09/29/22 10:00

Client ID: LMW-6R-S_31 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	9.7		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	16		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	16		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	1.0	J	ug/l	5.0	1.0	1
Acetone	6.7		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-02 Date Collected: 09/29/22 10:00

Client ID: LMW-6R-S_31 Date Received: 09/30/22

Sample Location: NEW YORK, 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	109		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	108		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-03
Client ID: LMW-6R-D_46
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 10:10
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/04/22 19:39
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	3.9		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	55		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	0.19	J	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-03 Date Collected: 09/29/22 10:10

Client ID: LMW-6R-D_46 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	0.29	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	4.3		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	4.3		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	19		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	2.7	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-03 Date Collected: 09/29/22 10:10

Client ID: LMW-6R-D_46 Date Received: 09/30/22

Sample Location: NEW YORK, 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	118		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	110		70-130
Dibromofluoromethane	116		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-04
Client ID: LMW-6R-D_70
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 10:20
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/03/22 09:23
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	4.0		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	56		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	0.18	J	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	0.09	J	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-04 Date Collected: 09/29/22 10:20

Client ID: LMW-6R-D_70 Date Received: 09/30/22

Sample Location: NEW YORK, 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	4.0		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	4.0		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	17		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-04 Date Collected: 09/29/22 10:20

Client ID: LMW-6R-D_70 Date Received: 09/30/22

Sample Location: NEW YORK, 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	114		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	115		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-05
Client ID: LMW-6R-D_75
Sample Location: NEW YORK, NY
Date Collected: 09/29/22 10:30
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/04/22 20:00
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	3.6		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	55		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	0.12	J	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-05 Date Collected: 09/29/22 10:30

Client ID: LMW-6R-D_75 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	0.18	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	3.8		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	3.8		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	33		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-05 Date Collected: 09/29/22 10:30

Client ID: LMW-6R-D_75 Date Received: 09/30/22

Sample Location: NEW YORK, 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	110		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	114		70-130
Dibromofluoromethane	113		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-06 D
Client ID: LMW-7R-S_21.5
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 11:15
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/04/22 23:49
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	5.0	1.4	2
1,1-Dichloroethane	ND		ug/l	5.0	1.4	2
Chloroform	2.9	J	ug/l	5.0	1.4	2
Carbon tetrachloride	ND		ug/l	1.0	0.27	2
1,2-Dichloropropane	ND		ug/l	2.0	0.27	2
Dibromochloromethane	ND		ug/l	1.0	0.30	2
1,1,2-Trichloroethane	ND		ug/l	3.0	1.0	2
Tetrachloroethene	11		ug/l	1.0	0.36	2
Chlorobenzene	ND		ug/l	5.0	1.4	2
Trichlorofluoromethane	ND		ug/l	5.0	1.4	2
1,2-Dichloroethane	ND		ug/l	1.0	0.26	2
1,1,1-Trichloroethane	ND		ug/l	5.0	1.4	2
Bromodichloromethane	ND		ug/l	1.0	0.38	2
trans-1,3-Dichloropropene	ND		ug/l	1.0	0.33	2
cis-1,3-Dichloropropene	ND		ug/l	1.0	0.29	2
1,3-Dichloropropene, Total	ND		ug/l	1.0	0.29	2
1,1-Dichloropropene	ND		ug/l	5.0	1.4	2
Bromoform	ND		ug/l	4.0	1.3	2
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.33	2
Benzene	0.63	J	ug/l	1.0	0.32	2
Toluene	ND		ug/l	5.0	1.4	2
Ethylbenzene	ND		ug/l	5.0	1.4	2
Chloromethane	ND		ug/l	5.0	1.4	2
Bromomethane	ND		ug/l	5.0	1.4	2
Vinyl chloride	1.1	J	ug/l	2.0	0.14	2
Chloroethane	ND		ug/l	5.0	1.4	2
1,1-Dichloroethene	0.53	J	ug/l	1.0	0.34	2
trans-1,2-Dichloroethene	ND		ug/l	5.0	1.4	2

Project Name: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-06 D Date Collected: 09/29/22 11:15

Client ID: LMW-7R-S_21.5 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	50		ug/l	1.0	0.35	2
1,2-Dichlorobenzene	ND		ug/l	5.0	1.4	2
1,3-Dichlorobenzene	ND		ug/l	5.0	1.4	2
1,4-Dichlorobenzene	ND		ug/l	5.0	1.4	2
Methyl tert butyl ether	ND		ug/l	5.0	1.4	2
p/m-Xylene	ND		ug/l	5.0	1.4	2
o-Xylene	ND		ug/l	5.0	1.4	2
Xylenes, Total	ND		ug/l	5.0	1.4	2
cis-1,2-Dichloroethene	330		ug/l	5.0	1.4	2
1,2-Dichloroethene, Total	330		ug/l	5.0	1.4	2
Dibromomethane	ND		ug/l	10	2.0	2
1,2,3-Trichloropropane	ND		ug/l	5.0	1.4	2
Acrylonitrile	ND		ug/l	10	3.0	2
Styrene	ND		ug/l	5.0	1.4	2
Dichlorodifluoromethane	ND		ug/l	10	2.0	2
Acetone	34		ug/l	10	2.9	2
Carbon disulfide	ND		ug/l	10	2.0	2
2-Butanone	ND		ug/l	10	3.9	2
Vinyl acetate	ND		ug/l	10	2.0	2
4-Methyl-2-pentanone	ND		ug/l	10	2.0	2
2-Hexanone	ND		ug/l	10	2.0	2
Bromochloromethane	ND		ug/l	5.0	1.4	2
2,2-Dichloropropane	ND		ug/l	5.0	1.4	2
1,2-Dibromoethane	ND		ug/l	4.0	1.3	2
1,3-Dichloropropane	ND		ug/l	5.0	1.4	2
1,1,1,2-Tetrachloroethane	ND		ug/l	5.0	1.4	2
Bromobenzene	ND		ug/l	5.0	1.4	2
n-Butylbenzene	ND		ug/l	5.0	1.4	2
sec-Butylbenzene	ND		ug/l	5.0	1.4	2
tert-Butylbenzene	ND		ug/l	5.0	1.4	2
o-Chlorotoluene	ND		ug/l	5.0	1.4	2
p-Chlorotoluene	ND		ug/l	5.0	1.4	2
1,2-Dibromo-3-chloropropane	ND		ug/l	5.0	1.4	2
Hexachlorobutadiene	ND		ug/l	5.0	1.4	2
Isopropylbenzene	ND		ug/l	5.0	1.4	2
p-Isopropyltoluene	ND		ug/l	5.0	1.4	2
Naphthalene	ND		ug/l	5.0	1.4	2

Project Name: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-06 D Date Collected: 09/29/22 11:15

Client ID: LMW-7R-S_21.5 Date Received: 09/30/22

Sample Location: NEW YORK, 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	5.0	1.4	2
1,2,3-Trichlorobenzene	ND		ug/l	5.0	1.4	2
1,2,4-Trichlorobenzene	ND		ug/l	5.0	1.4	2
1,3,5-Trimethylbenzene	ND		ug/l	5.0	1.4	2
1,2,4-Trimethylbenzene	ND		ug/l	5.0	1.4	2
1,4-Dioxane	ND		ug/l	500	120	2
p-Diethylbenzene	ND		ug/l	4.0	1.4	2
p-Ethyltoluene	ND		ug/l	4.0	1.4	2
1,2,4,5-Tetramethylbenzene	ND		ug/l	4.0	1.1	2
Ethyl ether	ND		ug/l	5.0	1.4	2
trans-1,4-Dichloro-2-butene	ND		ug/l	5.0	1.4	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	115		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	113		70-130
Dibromofluoromethane	108		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-07 D
Client ID: LMW-7R-S_27
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 11:25
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/03/22 09:43
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	6.2	1.8	2.5
1,1-Dichloroethane	ND		ug/l	6.2	1.8	2.5
Chloroform	2.5	J	ug/l	6.2	1.8	2.5
Carbon tetrachloride	ND		ug/l	1.2	0.34	2.5
1,2-Dichloropropane	ND		ug/l	2.5	0.34	2.5
Dibromochloromethane	ND		ug/l	1.2	0.37	2.5
1,1,2-Trichloroethane	ND		ug/l	3.8	1.2	2.5
Tetrachloroethene	23		ug/l	1.2	0.45	2.5
Chlorobenzene	ND		ug/l	6.2	1.8	2.5
Trichlorofluoromethane	ND		ug/l	6.2	1.8	2.5
1,2-Dichloroethane	ND		ug/l	1.2	0.33	2.5
1,1,1-Trichloroethane	ND		ug/l	6.2	1.8	2.5
Bromodichloromethane	ND		ug/l	1.2	0.48	2.5
trans-1,3-Dichloropropene	ND		ug/l	1.2	0.41	2.5
cis-1,3-Dichloropropene	ND		ug/l	1.2	0.36	2.5
1,3-Dichloropropene, Total	ND		ug/l	1.2	0.36	2.5
1,1-Dichloropropene	ND		ug/l	6.2	1.8	2.5
Bromoform	ND		ug/l	5.0	1.6	2.5
1,1,2,2-Tetrachloroethane	ND		ug/l	1.2	0.42	2.5
Benzene	0.46	J	ug/l	1.2	0.40	2.5
Toluene	ND		ug/l	6.2	1.8	2.5
Ethylbenzene	ND		ug/l	6.2	1.8	2.5
Chloromethane	ND		ug/l	6.2	1.8	2.5
Bromomethane	ND		ug/l	6.2	1.8	2.5
Vinyl chloride	1.1	J	ug/l	2.5	0.18	2.5
Chloroethane	ND		ug/l	6.2	1.8	2.5
1,1-Dichloroethene	0.69	J	ug/l	1.2	0.42	2.5
trans-1,2-Dichloroethene	ND		ug/l	6.2	1.8	2.5

Project Name: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-07 D Date Collected: 09/29/22 11:25

Client ID: LMW-7R-S_27 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	90		ug/l	1.2	0.44	2.5
1,2-Dichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,3-Dichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,4-Dichlorobenzene	ND		ug/l	6.2	1.8	2.5
Methyl tert butyl ether	ND		ug/l	6.2	1.8	2.5
p/m-Xylene	ND		ug/l	6.2	1.8	2.5
o-Xylene	ND		ug/l	6.2	1.8	2.5
Xylenes, Total	ND		ug/l	6.2	1.8	2.5
cis-1,2-Dichloroethene	390		ug/l	6.2	1.8	2.5
1,2-Dichloroethene, Total	390		ug/l	6.2	1.8	2.5
Dibromomethane	ND		ug/l	12	2.5	2.5
1,2,3-Trichloropropane	ND		ug/l	6.2	1.8	2.5
Acrylonitrile	ND		ug/l	12	3.8	2.5
Styrene	ND		ug/l	6.2	1.8	2.5
Dichlorodifluoromethane	ND		ug/l	12	2.5	2.5
Acetone	25		ug/l	12	3.6	2.5
Carbon disulfide	ND		ug/l	12	2.5	2.5
2-Butanone	ND		ug/l	12	4.8	2.5
Vinyl acetate	ND		ug/l	12	2.5	2.5
4-Methyl-2-pentanone	ND		ug/l	12	2.5	2.5
2-Hexanone	ND		ug/l	12	2.5	2.5
Bromochloromethane	ND		ug/l	6.2	1.8	2.5
2,2-Dichloropropane	ND		ug/l	6.2	1.8	2.5
1,2-Dibromoethane	ND		ug/l	5.0	1.6	2.5
1,3-Dichloropropane	ND		ug/l	6.2	1.8	2.5
1,1,1,2-Tetrachloroethane	ND		ug/l	6.2	1.8	2.5
Bromobenzene	ND		ug/l	6.2	1.8	2.5
n-Butylbenzene	ND		ug/l	6.2	1.8	2.5
sec-Butylbenzene	ND		ug/l	6.2	1.8	2.5
tert-Butylbenzene	ND		ug/l	6.2	1.8	2.5
o-Chlorotoluene	ND		ug/l	6.2	1.8	2.5
p-Chlorotoluene	ND		ug/l	6.2	1.8	2.5
1,2-Dibromo-3-chloropropane	ND		ug/l	6.2	1.8	2.5
Hexachlorobutadiene	ND		ug/l	6.2	1.8	2.5
Isopropylbenzene	ND		ug/l	6.2	1.8	2.5
p-Isopropyltoluene	ND		ug/l	6.2	1.8	2.5
Naphthalene	ND		ug/l	6.2	1.8	2.5

Project Name: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-07 D Date Collected: 09/29/22 11:25

Client ID: LMW-7R-S_27 Date Received: 09/30/22

Sample Location: NEW YORK, 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	6.2	1.8	2.5
1,2,3-Trichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,2,4-Trichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,3,5-Trimethylbenzene	ND		ug/l	6.2	1.8	2.5
1,2,4-Trimethylbenzene	ND		ug/l	6.2	1.8	2.5
1,4-Dioxane	ND		ug/l	620	150	2.5
p-Diethylbenzene	ND		ug/l	5.0	1.8	2.5
p-Ethyltoluene	ND		ug/l	5.0	1.8	2.5
1,2,4,5-Tetramethylbenzene	ND		ug/l	5.0	1.4	2.5
Ethyl ether	ND		ug/l	6.2	1.8	2.5
trans-1,4-Dichloro-2-butene	ND		ug/l	6.2	1.8	2.5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	112		70-130
Dibromofluoromethane	112		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-08 D
Client ID: LMW-7R-S_39
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 11:35
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/05/22 00:10
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	12	3.5	5
1,1-Dichloroethane	ND		ug/l	12	3.5	5
Chloroform	ND		ug/l	12	3.5	5
Carbon tetrachloride	ND		ug/l	2.5	0.67	5
1,2-Dichloropropane	ND		ug/l	5.0	0.68	5
Dibromochloromethane	ND		ug/l	2.5	0.74	5
1,1,2-Trichloroethane	ND		ug/l	7.5	2.5	5
Tetrachloroethene	31		ug/l	2.5	0.90	5
Chlorobenzene	ND		ug/l	12	3.5	5
Trichlorofluoromethane	ND		ug/l	12	3.5	5
1,2-Dichloroethane	ND		ug/l	2.5	0.66	5
1,1,1-Trichloroethane	ND		ug/l	12	3.5	5
Bromodichloromethane	ND		ug/l	2.5	0.96	5
trans-1,3-Dichloropropene	ND		ug/l	2.5	0.82	5
cis-1,3-Dichloropropene	ND		ug/l	2.5	0.72	5
1,3-Dichloropropene, Total	ND		ug/l	2.5	0.72	5
1,1-Dichloropropene	ND		ug/l	12	3.5	5
Bromoform	ND		ug/l	10	3.2	5
1,1,2,2-Tetrachloroethane	ND		ug/l	2.5	0.84	5
Benzene	ND		ug/l	2.5	0.80	5
Toluene	ND		ug/l	12	3.5	5
Ethylbenzene	ND		ug/l	12	3.5	5
Chloromethane	ND		ug/l	12	3.5	5
Bromomethane	ND		ug/l	12	3.5	5
Vinyl chloride	1.2	J	ug/l	5.0	0.36	5
Chloroethane	ND		ug/l	12	3.5	5
1,1-Dichloroethene	0.88	J	ug/l	2.5	0.84	5
trans-1,2-Dichloroethene	ND		ug/l	12	3.5	5

Project Name: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-08 D Date Collected: 09/29/22 11:35

Client ID: LMW-7R-S_39 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	110		ug/l	2.5	0.88	5
1,2-Dichlorobenzene	ND		ug/l	12	3.5	5
1,3-Dichlorobenzene	ND		ug/l	12	3.5	5
1,4-Dichlorobenzene	ND		ug/l	12	3.5	5
Methyl tert butyl ether	ND		ug/l	12	3.5	5
p/m-Xylene	ND		ug/l	12	3.5	5
o-Xylene	ND		ug/l	12	3.5	5
Xylenes, Total	ND		ug/l	12	3.5	5
cis-1,2-Dichloroethene	480		ug/l	12	3.5	5
1,2-Dichloroethene, Total	480		ug/l	12	3.5	5
Dibromomethane	ND		ug/l	25	5.0	5
1,2,3-Trichloropropane	ND		ug/l	12	3.5	5
Acrylonitrile	ND		ug/l	25	7.5	5
Styrene	ND		ug/l	12	3.5	5
Dichlorodifluoromethane	ND		ug/l	25	5.0	5
Acetone	26		ug/l	25	7.3	5
Carbon disulfide	ND		ug/l	25	5.0	5
2-Butanone	ND		ug/l	25	9.7	5
Vinyl acetate	ND		ug/l	25	5.0	5
4-Methyl-2-pentanone	ND		ug/l	25	5.0	5
2-Hexanone	ND		ug/l	25	5.0	5
Bromochloromethane	ND		ug/l	12	3.5	5
2,2-Dichloropropane	ND		ug/l	12	3.5	5
1,2-Dibromoethane	ND		ug/l	10	3.2	5
1,3-Dichloropropane	ND		ug/l	12	3.5	5
1,1,1,2-Tetrachloroethane	ND		ug/l	12	3.5	5
Bromobenzene	ND		ug/l	12	3.5	5
n-Butylbenzene	ND		ug/l	12	3.5	5
sec-Butylbenzene	ND		ug/l	12	3.5	5
tert-Butylbenzene	ND		ug/l	12	3.5	5
o-Chlorotoluene	ND		ug/l	12	3.5	5
p-Chlorotoluene	ND		ug/l	12	3.5	5
1,2-Dibromo-3-chloropropane	ND		ug/l	12	3.5	5
Hexachlorobutadiene	ND		ug/l	12	3.5	5
Isopropylbenzene	ND		ug/l	12	3.5	5
p-Isopropyltoluene	ND		ug/l	12	3.5	5
Naphthalene	ND		ug/l	12	3.5	5

Project Name: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-08 D Date Collected: 09/29/22 11:35

Client ID: LMW-7R-S_39 Date Received: 09/30/22

Sample Location: NEW YORK, 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	12	3.5	5
1,2,3-Trichlorobenzene	ND		ug/l	12	3.5	5
1,2,4-Trichlorobenzene	ND		ug/l	12	3.5	5
1,3,5-Trimethylbenzene	ND		ug/l	12	3.5	5
1,2,4-Trimethylbenzene	ND		ug/l	12	3.5	5
1,4-Dioxane	ND		ug/l	1200	300	5
p-Diethylbenzene	ND		ug/l	10	3.5	5
p-Ethyltoluene	ND		ug/l	10	3.5	5
1,2,4,5-Tetramethylbenzene	ND		ug/l	10	2.7	5
Ethyl ether	ND		ug/l	12	3.5	5
trans-1,4-Dichloro-2-butene	ND		ug/l	12	3.5	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	113		70-130
Dibromofluoromethane	110		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-09 D
Client ID: LMW-7R-S_42.5
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 11:45
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/05/22 00:31
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	12	3.5	5
1,1-Dichloroethane	ND		ug/l	12	3.5	5
Chloroform	ND		ug/l	12	3.5	5
Carbon tetrachloride	ND		ug/l	2.5	0.67	5
1,2-Dichloropropane	ND		ug/l	5.0	0.68	5
Dibromochloromethane	ND		ug/l	2.5	0.74	5
1,1,2-Trichloroethane	ND		ug/l	7.5	2.5	5
Tetrachloroethene	26		ug/l	2.5	0.90	5
Chlorobenzene	ND		ug/l	12	3.5	5
Trichlorofluoromethane	ND		ug/l	12	3.5	5
1,2-Dichloroethane	ND		ug/l	2.5	0.66	5
1,1,1-Trichloroethane	ND		ug/l	12	3.5	5
Bromodichloromethane	ND		ug/l	2.5	0.96	5
trans-1,3-Dichloropropene	ND		ug/l	2.5	0.82	5
cis-1,3-Dichloropropene	ND		ug/l	2.5	0.72	5
1,3-Dichloropropene, Total	ND		ug/l	2.5	0.72	5
1,1-Dichloropropene	ND		ug/l	12	3.5	5
Bromoform	ND		ug/l	10	3.2	5
1,1,2,2-Tetrachloroethane	ND		ug/l	2.5	0.84	5
Benzene	ND		ug/l	2.5	0.80	5
Toluene	ND		ug/l	12	3.5	5
Ethylbenzene	ND		ug/l	12	3.5	5
Chloromethane	ND		ug/l	12	3.5	5
Bromomethane	ND		ug/l	12	3.5	5
Vinyl chloride	1.6	J	ug/l	5.0	0.36	5
Chloroethane	ND		ug/l	12	3.5	5
1,1-Dichloroethene	1.2	J	ug/l	2.5	0.84	5
trans-1,2-Dichloroethene	ND		ug/l	12	3.5	5

Project Name: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-09 D Date Collected: 09/29/22 11:45
Client ID: LMW-7R-S_42.5 Date Received: 09/30/22
Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	86		ug/l	2.5	0.88	5
1,2-Dichlorobenzene	ND		ug/l	12	3.5	5
1,3-Dichlorobenzene	ND		ug/l	12	3.5	5
1,4-Dichlorobenzene	ND		ug/l	12	3.5	5
Methyl tert butyl ether	ND		ug/l	12	3.5	5
p/m-Xylene	ND		ug/l	12	3.5	5
o-Xylene	ND		ug/l	12	3.5	5
Xylenes, Total	ND		ug/l	12	3.5	5
cis-1,2-Dichloroethene	710		ug/l	12	3.5	5
1,2-Dichloroethene, Total	710		ug/l	12	3.5	5
Dibromomethane	ND		ug/l	25	5.0	5
1,2,3-Trichloropropane	ND		ug/l	12	3.5	5
Acrylonitrile	ND		ug/l	25	7.5	5
Styrene	ND		ug/l	12	3.5	5
Dichlorodifluoromethane	ND		ug/l	25	5.0	5
Acetone	30		ug/l	25	7.3	5
Carbon disulfide	ND		ug/l	25	5.0	5
2-Butanone	ND		ug/l	25	9.7	5
Vinyl acetate	ND		ug/l	25	5.0	5
4-Methyl-2-pentanone	ND		ug/l	25	5.0	5
2-Hexanone	ND		ug/l	25	5.0	5
Bromochloromethane	ND		ug/l	12	3.5	5
2,2-Dichloropropane	ND		ug/l	12	3.5	5
1,2-Dibromoethane	ND		ug/l	10	3.2	5
1,3-Dichloropropane	ND		ug/l	12	3.5	5
1,1,1,2-Tetrachloroethane	ND		ug/l	12	3.5	5
Bromobenzene	ND		ug/l	12	3.5	5
n-Butylbenzene	ND		ug/l	12	3.5	5
sec-Butylbenzene	ND		ug/l	12	3.5	5
tert-Butylbenzene	ND		ug/l	12	3.5	5
o-Chlorotoluene	ND		ug/l	12	3.5	5
p-Chlorotoluene	ND		ug/l	12	3.5	5
1,2-Dibromo-3-chloropropane	ND		ug/l	12	3.5	5
Hexachlorobutadiene	ND		ug/l	12	3.5	5
Isopropylbenzene	ND		ug/l	12	3.5	5
p-Isopropyltoluene	ND		ug/l	12	3.5	5
Naphthalene	ND		ug/l	12	3.5	5

Project Name: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-09 D Date Collected: 09/29/22 11:45

Client ID: LMW-7R-S_42.5 Date Received: 09/30/22

Sample Location: NEW YORK, 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	12	3.5	5
1,2,3-Trichlorobenzene	ND		ug/l	12	3.5	5
1,2,4-Trichlorobenzene	ND		ug/l	12	3.5	5
1,3,5-Trimethylbenzene	ND		ug/l	12	3.5	5
1,2,4-Trimethylbenzene	ND		ug/l	12	3.5	5
1,4-Dioxane	ND		ug/l	1200	300	5
p-Diethylbenzene	ND		ug/l	10	3.5	5
p-Ethyltoluene	ND		ug/l	10	3.5	5
1,2,4,5-Tetramethylbenzene	ND		ug/l	10	2.7	5
Ethyl ether	ND		ug/l	12	3.5	5
trans-1,4-Dichloro-2-butene	ND		ug/l	12	3.5	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	116		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	112		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-10 D
Client ID: LMW-7R-D_48
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 10:45
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/05/22 00:52
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	5.0	1.4	2
1,1-Dichloroethane	ND		ug/l	5.0	1.4	2
Chloroform	ND		ug/l	5.0	1.4	2
Carbon tetrachloride	ND		ug/l	1.0	0.27	2
1,2-Dichloropropane	ND		ug/l	2.0	0.27	2
Dibromochloromethane	ND		ug/l	1.0	0.30	2
1,1,2-Trichloroethane	ND		ug/l	3.0	1.0	2
Tetrachloroethene	12		ug/l	1.0	0.36	2
Chlorobenzene	ND		ug/l	5.0	1.4	2
Trichlorofluoromethane	ND		ug/l	5.0	1.4	2
1,2-Dichloroethane	ND		ug/l	1.0	0.26	2
1,1,1-Trichloroethane	ND		ug/l	5.0	1.4	2
Bromodichloromethane	ND		ug/l	1.0	0.38	2
trans-1,3-Dichloropropene	ND		ug/l	1.0	0.33	2
cis-1,3-Dichloropropene	ND		ug/l	1.0	0.29	2
1,3-Dichloropropene, Total	ND		ug/l	1.0	0.29	2
1,1-Dichloropropene	ND		ug/l	5.0	1.4	2
Bromoform	ND		ug/l	4.0	1.3	2
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.33	2
Benzene	1.1		ug/l	1.0	0.32	2
Toluene	ND		ug/l	5.0	1.4	2
Ethylbenzene	ND		ug/l	5.0	1.4	2
Chloromethane	ND		ug/l	5.0	1.4	2
Bromomethane	ND		ug/l	5.0	1.4	2
Vinyl chloride	1.0	J	ug/l	2.0	0.14	2
Chloroethane	ND		ug/l	5.0	1.4	2
1,1-Dichloroethene	ND		ug/l	1.0	0.34	2
trans-1,2-Dichloroethene	ND		ug/l	5.0	1.4	2

Project Name: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-10 D Date Collected: 09/29/22 10:45

Client ID: LMW-7R-D_48 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	20		ug/l	1.0	0.35	2
1,2-Dichlorobenzene	ND		ug/l	5.0	1.4	2
1,3-Dichlorobenzene	ND		ug/l	5.0	1.4	2
1,4-Dichlorobenzene	ND		ug/l	5.0	1.4	2
Methyl tert butyl ether	ND		ug/l	5.0	1.4	2
p/m-Xylene	ND		ug/l	5.0	1.4	2
o-Xylene	ND		ug/l	5.0	1.4	2
Xylenes, Total	ND		ug/l	5.0	1.4	2
cis-1,2-Dichloroethene	170		ug/l	5.0	1.4	2
1,2-Dichloroethene, Total	170		ug/l	5.0	1.4	2
Dibromomethane	ND		ug/l	10	2.0	2
1,2,3-Trichloropropane	ND		ug/l	5.0	1.4	2
Acrylonitrile	ND		ug/l	10	3.0	2
Styrene	ND		ug/l	5.0	1.4	2
Dichlorodifluoromethane	ND		ug/l	10	2.0	2
Acetone	31		ug/l	10	2.9	2
Carbon disulfide	ND		ug/l	10	2.0	2
2-Butanone	ND		ug/l	10	3.9	2
Vinyl acetate	ND		ug/l	10	2.0	2
4-Methyl-2-pentanone	ND		ug/l	10	2.0	2
2-Hexanone	ND		ug/l	10	2.0	2
Bromochloromethane	ND		ug/l	5.0	1.4	2
2,2-Dichloropropane	ND		ug/l	5.0	1.4	2
1,2-Dibromoethane	ND		ug/l	4.0	1.3	2
1,3-Dichloropropane	ND		ug/l	5.0	1.4	2
1,1,1,2-Tetrachloroethane	ND		ug/l	5.0	1.4	2
Bromobenzene	ND		ug/l	5.0	1.4	2
n-Butylbenzene	ND		ug/l	5.0	1.4	2
sec-Butylbenzene	ND		ug/l	5.0	1.4	2
tert-Butylbenzene	ND		ug/l	5.0	1.4	2
o-Chlorotoluene	ND		ug/l	5.0	1.4	2
p-Chlorotoluene	ND		ug/l	5.0	1.4	2
1,2-Dibromo-3-chloropropane	ND		ug/l	5.0	1.4	2
Hexachlorobutadiene	ND		ug/l	5.0	1.4	2
Isopropylbenzene	ND		ug/l	5.0	1.4	2
p-Isopropyltoluene	ND		ug/l	5.0	1.4	2
Naphthalene	ND		ug/l	5.0	1.4	2

Project Name: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-10 D Date Collected: 09/29/22 10:45

Client ID: LMW-7R-D_48 Date Received: 09/30/22

Sample Location: NEW YORK, 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	5.0	1.4	2
1,2,3-Trichlorobenzene	ND		ug/l	5.0	1.4	2
1,2,4-Trichlorobenzene	ND		ug/l	5.0	1.4	2
1,3,5-Trimethylbenzene	ND		ug/l	5.0	1.4	2
1,2,4-Trimethylbenzene	ND		ug/l	5.0	1.4	2
1,4-Dioxane	ND		ug/l	500	120	2
p-Diethylbenzene	ND		ug/l	4.0	1.4	2
p-Ethyltoluene	ND		ug/l	4.0	1.4	2
1,2,4,5-Tetramethylbenzene	ND		ug/l	4.0	1.1	2
Ethyl ether	ND		ug/l	5.0	1.4	2
trans-1,4-Dichloro-2-butene	ND		ug/l	5.0	1.4	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	116		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	113		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-11 D
Client ID: LMW-7R-D_68.5
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 10:55
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/03/22 10:03
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	5.0	1.4	2
1,1-Dichloroethane	ND		ug/l	5.0	1.4	2
Chloroform	ND		ug/l	5.0	1.4	2
Carbon tetrachloride	ND		ug/l	1.0	0.27	2
1,2-Dichloropropane	ND		ug/l	2.0	0.27	2
Dibromochloromethane	ND		ug/l	1.0	0.30	2
1,1,2-Trichloroethane	ND		ug/l	3.0	1.0	2
Tetrachloroethene	9.4		ug/l	1.0	0.36	2
Chlorobenzene	ND		ug/l	5.0	1.4	2
Trichlorofluoromethane	ND		ug/l	5.0	1.4	2
1,2-Dichloroethane	ND		ug/l	1.0	0.26	2
1,1,1-Trichloroethane	ND		ug/l	5.0	1.4	2
Bromodichloromethane	ND		ug/l	1.0	0.38	2
trans-1,3-Dichloropropene	ND		ug/l	1.0	0.33	2
cis-1,3-Dichloropropene	ND		ug/l	1.0	0.29	2
1,3-Dichloropropene, Total	ND		ug/l	1.0	0.29	2
1,1-Dichloropropene	ND		ug/l	5.0	1.4	2
Bromoform	ND		ug/l	4.0	1.3	2
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.33	2
Benzene	1.1		ug/l	1.0	0.32	2
Toluene	ND		ug/l	5.0	1.4	2
Ethylbenzene	ND		ug/l	5.0	1.4	2
Chloromethane	ND		ug/l	5.0	1.4	2
Bromomethane	ND		ug/l	5.0	1.4	2
Vinyl chloride	1.0	J	ug/l	2.0	0.14	2
Chloroethane	ND		ug/l	5.0	1.4	2
1,1-Dichloroethene	ND		ug/l	1.0	0.34	2
trans-1,2-Dichloroethene	ND		ug/l	5.0	1.4	2

Project Name: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-11 D Date Collected: 09/29/22 10:55
Client ID: LMW-7R-D_68.5 Date Received: 09/30/22
Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	20		ug/l	1.0	0.35	2
1,2-Dichlorobenzene	ND		ug/l	5.0	1.4	2
1,3-Dichlorobenzene	ND		ug/l	5.0	1.4	2
1,4-Dichlorobenzene	ND		ug/l	5.0	1.4	2
Methyl tert butyl ether	ND		ug/l	5.0	1.4	2
p/m-Xylene	ND		ug/l	5.0	1.4	2
o-Xylene	ND		ug/l	5.0	1.4	2
Xylenes, Total	ND		ug/l	5.0	1.4	2
cis-1,2-Dichloroethene	180		ug/l	5.0	1.4	2
1,2-Dichloroethene, Total	180		ug/l	5.0	1.4	2
Dibromomethane	ND		ug/l	10	2.0	2
1,2,3-Trichloropropane	ND		ug/l	5.0	1.4	2
Acrylonitrile	ND		ug/l	10	3.0	2
Styrene	ND		ug/l	5.0	1.4	2
Dichlorodifluoromethane	ND		ug/l	10	2.0	2
Acetone	23		ug/l	10	2.9	2
Carbon disulfide	ND		ug/l	10	2.0	2
2-Butanone	ND		ug/l	10	3.9	2
Vinyl acetate	ND		ug/l	10	2.0	2
4-Methyl-2-pentanone	ND		ug/l	10	2.0	2
2-Hexanone	ND		ug/l	10	2.0	2
Bromochloromethane	ND		ug/l	5.0	1.4	2
2,2-Dichloropropane	ND		ug/l	5.0	1.4	2
1,2-Dibromoethane	ND		ug/l	4.0	1.3	2
1,3-Dichloropropane	ND		ug/l	5.0	1.4	2
1,1,1,2-Tetrachloroethane	ND		ug/l	5.0	1.4	2
Bromobenzene	ND		ug/l	5.0	1.4	2
n-Butylbenzene	ND		ug/l	5.0	1.4	2
sec-Butylbenzene	ND		ug/l	5.0	1.4	2
tert-Butylbenzene	ND		ug/l	5.0	1.4	2
o-Chlorotoluene	ND		ug/l	5.0	1.4	2
p-Chlorotoluene	ND		ug/l	5.0	1.4	2
1,2-Dibromo-3-chloropropane	ND		ug/l	5.0	1.4	2
Hexachlorobutadiene	ND		ug/l	5.0	1.4	2
Isopropylbenzene	ND		ug/l	5.0	1.4	2
p-Isopropyltoluene	ND		ug/l	5.0	1.4	2
Naphthalene	ND		ug/l	5.0	1.4	2

Project Name: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-11 D Date Collected: 09/29/22 10:55

Client ID: LMW-7R-D_68.5 Date Received: 09/30/22

Sample Location: NEW YORK, 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	5.0	1.4	2
1,2,3-Trichlorobenzene	ND		ug/l	5.0	1.4	2
1,2,4-Trichlorobenzene	ND		ug/l	5.0	1.4	2
1,3,5-Trimethylbenzene	ND		ug/l	5.0	1.4	2
1,2,4-Trimethylbenzene	ND		ug/l	5.0	1.4	2
1,4-Dioxane	ND		ug/l	500	120	2
p-Diethylbenzene	ND		ug/l	4.0	1.4	2
p-Ethyltoluene	ND		ug/l	4.0	1.4	2
1,2,4,5-Tetramethylbenzene	ND		ug/l	4.0	1.1	2
Ethyl ether	ND		ug/l	5.0	1.4	2
trans-1,4-Dichloro-2-butene	ND		ug/l	5.0	1.4	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	113		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-12
Client ID: LMW-7R-D_75
Sample Location: NEW YORK, NY
Date Collected: 09/29/22 11:05
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/04/22 20:21
Analyst: PD

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	1.8	J	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	2.1		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	0.34	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	1.0		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-12 Date Collected: 09/29/22 11:05

Client ID: LMW-7R-D_75 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	8.2		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	100		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	100		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	19		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-12 Date Collected: 09/29/22 11:05

Client ID: LMW-7R-D_75 Date Received: 09/30/22

Sample Location: NEW YORK, 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	117		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	112		70-130
Dibromofluoromethane	109		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-13 D
Client ID: LMW-8R-S_15
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 11:55
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/05/22 01:12
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	12	3.5	5
1,1-Dichloroethane	ND		ug/l	12	3.5	5
Chloroform	ND		ug/l	12	3.5	5
Carbon tetrachloride	ND		ug/l	2.5	0.67	5
1,2-Dichloropropane	ND		ug/l	5.0	0.68	5
Dibromochloromethane	ND		ug/l	2.5	0.74	5
1,1,2-Trichloroethane	ND		ug/l	7.5	2.5	5
Tetrachloroethene	540		ug/l	2.5	0.90	5
Chlorobenzene	ND		ug/l	12	3.5	5
Trichlorofluoromethane	ND		ug/l	12	3.5	5
1,2-Dichloroethane	ND		ug/l	2.5	0.66	5
1,1,1-Trichloroethane	ND		ug/l	12	3.5	5
Bromodichloromethane	ND		ug/l	2.5	0.96	5
trans-1,3-Dichloropropene	ND		ug/l	2.5	0.82	5
cis-1,3-Dichloropropene	ND		ug/l	2.5	0.72	5
1,3-Dichloropropene, Total	ND		ug/l	2.5	0.72	5
1,1-Dichloropropene	ND		ug/l	12	3.5	5
Bromoform	ND		ug/l	10	3.2	5
1,1,2,2-Tetrachloroethane	ND		ug/l	2.5	0.84	5
Benzene	ND		ug/l	2.5	0.80	5
Toluene	ND		ug/l	12	3.5	5
Ethylbenzene	ND		ug/l	12	3.5	5
Chloromethane	ND		ug/l	12	3.5	5
Bromomethane	ND		ug/l	12	3.5	5
Vinyl chloride	ND		ug/l	5.0	0.36	5
Chloroethane	ND		ug/l	12	3.5	5
1,1-Dichloroethene	ND		ug/l	2.5	0.84	5
trans-1,2-Dichloroethene	ND		ug/l	12	3.5	5

Project Name: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-13 D Date Collected: 09/29/22 11:55
Client ID: LMW-8R-S_15 Date Received: 09/30/22
Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	380		ug/l	2.5	0.88	5
1,2-Dichlorobenzene	ND		ug/l	12	3.5	5
1,3-Dichlorobenzene	ND		ug/l	12	3.5	5
1,4-Dichlorobenzene	ND		ug/l	12	3.5	5
Methyl tert butyl ether	ND		ug/l	12	3.5	5
p/m-Xylene	ND		ug/l	12	3.5	5
o-Xylene	ND		ug/l	12	3.5	5
Xylenes, Total	ND		ug/l	12	3.5	5
cis-1,2-Dichloroethene	200		ug/l	12	3.5	5
1,2-Dichloroethene, Total	200		ug/l	12	3.5	5
Dibromomethane	ND		ug/l	25	5.0	5
1,2,3-Trichloropropane	ND		ug/l	12	3.5	5
Acrylonitrile	ND		ug/l	25	7.5	5
Styrene	ND		ug/l	12	3.5	5
Dichlorodifluoromethane	ND		ug/l	25	5.0	5
Acetone	17	J	ug/l	25	7.3	5
Carbon disulfide	ND		ug/l	25	5.0	5
2-Butanone	ND		ug/l	25	9.7	5
Vinyl acetate	ND		ug/l	25	5.0	5
4-Methyl-2-pentanone	ND		ug/l	25	5.0	5
2-Hexanone	ND		ug/l	25	5.0	5
Bromochloromethane	ND		ug/l	12	3.5	5
2,2-Dichloropropane	ND		ug/l	12	3.5	5
1,2-Dibromoethane	ND		ug/l	10	3.2	5
1,3-Dichloropropane	ND		ug/l	12	3.5	5
1,1,1,2-Tetrachloroethane	ND		ug/l	12	3.5	5
Bromobenzene	ND		ug/l	12	3.5	5
n-Butylbenzene	ND		ug/l	12	3.5	5
sec-Butylbenzene	ND		ug/l	12	3.5	5
tert-Butylbenzene	ND		ug/l	12	3.5	5
o-Chlorotoluene	ND		ug/l	12	3.5	5
p-Chlorotoluene	ND		ug/l	12	3.5	5
1,2-Dibromo-3-chloropropane	ND		ug/l	12	3.5	5
Hexachlorobutadiene	ND		ug/l	12	3.5	5
Isopropylbenzene	ND		ug/l	12	3.5	5
p-Isopropyltoluene	ND		ug/l	12	3.5	5
Naphthalene	ND		ug/l	12	3.5	5

Project Name: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-13 D Date Collected: 09/29/22 11:55

Client ID: LMW-8R-S_15 Date Received: 09/30/22

Sample Location: NEW YORK, 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	12	3.5	5
1,2,3-Trichlorobenzene	ND		ug/l	12	3.5	5
1,2,4-Trichlorobenzene	ND		ug/l	12	3.5	5
1,3,5-Trimethylbenzene	ND		ug/l	12	3.5	5
1,2,4-Trimethylbenzene	ND		ug/l	12	3.5	5
1,4-Dioxane	ND		ug/l	1200	300	5
p-Diethylbenzene	ND		ug/l	10	3.5	5
p-Ethyltoluene	ND		ug/l	10	3.5	5
1,2,4,5-Tetramethylbenzene	ND		ug/l	10	2.7	5
Ethyl ether	ND		ug/l	12	3.5	5
trans-1,4-Dichloro-2-butene	ND		ug/l	12	3.5	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	115		70-130
Dibromofluoromethane	105		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-14 D
Client ID: LMW-8R-S_17.5
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 12:05
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/03/22 10:24
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	12	3.5	5
1,1-Dichloroethane	ND		ug/l	12	3.5	5
Chloroform	ND		ug/l	12	3.5	5
Carbon tetrachloride	ND		ug/l	2.5	0.67	5
1,2-Dichloropropane	ND		ug/l	5.0	0.68	5
Dibromochloromethane	ND		ug/l	2.5	0.74	5
1,1,2-Trichloroethane	ND		ug/l	7.5	2.5	5
Tetrachloroethene	600		ug/l	2.5	0.90	5
Chlorobenzene	ND		ug/l	12	3.5	5
Trichlorofluoromethane	ND		ug/l	12	3.5	5
1,2-Dichloroethane	ND		ug/l	2.5	0.66	5
1,1,1-Trichloroethane	ND		ug/l	12	3.5	5
Bromodichloromethane	ND		ug/l	2.5	0.96	5
trans-1,3-Dichloropropene	ND		ug/l	2.5	0.82	5
cis-1,3-Dichloropropene	ND		ug/l	2.5	0.72	5
1,3-Dichloropropene, Total	ND		ug/l	2.5	0.72	5
1,1-Dichloropropene	ND		ug/l	12	3.5	5
Bromoform	ND		ug/l	10	3.2	5
1,1,2,2-Tetrachloroethane	ND		ug/l	2.5	0.84	5
Benzene	ND		ug/l	2.5	0.80	5
Toluene	ND		ug/l	12	3.5	5
Ethylbenzene	ND		ug/l	12	3.5	5
Chloromethane	ND		ug/l	12	3.5	5
Bromomethane	ND		ug/l	12	3.5	5
Vinyl chloride	0.42	J	ug/l	5.0	0.36	5
Chloroethane	ND		ug/l	12	3.5	5
1,1-Dichloroethene	ND		ug/l	2.5	0.84	5
trans-1,2-Dichloroethene	ND		ug/l	12	3.5	5

Project Name: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-14 D Date Collected: 09/29/22 12:05
Client ID: LMW-8R-S_17.5 Date Received: 09/30/22
Sample Location: NEW YORK, 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	2.5	0.88	5
1,2-Dichlorobenzene	ND		ug/l	12	3.5	5
1,3-Dichlorobenzene	ND		ug/l	12	3.5	5
1,4-Dichlorobenzene	ND		ug/l	12	3.5	5
Methyl tert butyl ether	ND		ug/l	12	3.5	5
p/m-Xylene	ND		ug/l	12	3.5	5
o-Xylene	ND		ug/l	12	3.5	5
Xylenes, Total	ND		ug/l	12	3.5	5
cis-1,2-Dichloroethene	190		ug/l	12	3.5	5
1,2-Dichloroethene, Total	190		ug/l	12	3.5	5
Dibromomethane	ND		ug/l	25	5.0	5
1,2,3-Trichloropropane	ND		ug/l	12	3.5	5
Acrylonitrile	ND		ug/l	25	7.5	5
Styrene	ND		ug/l	12	3.5	5
Dichlorodifluoromethane	ND		ug/l	25	5.0	5
Acetone	27		ug/l	25	7.3	5
Carbon disulfide	ND		ug/l	25	5.0	5
2-Butanone	ND		ug/l	25	9.7	5
Vinyl acetate	ND		ug/l	25	5.0	5
4-Methyl-2-pentanone	ND		ug/l	25	5.0	5
2-Hexanone	ND		ug/l	25	5.0	5
Bromochloromethane	ND		ug/l	12	3.5	5
2,2-Dichloropropane	ND		ug/l	12	3.5	5
1,2-Dibromoethane	ND		ug/l	10	3.2	5
1,3-Dichloropropane	ND		ug/l	12	3.5	5
1,1,1,2-Tetrachloroethane	ND		ug/l	12	3.5	5
Bromobenzene	ND		ug/l	12	3.5	5
n-Butylbenzene	ND		ug/l	12	3.5	5
sec-Butylbenzene	ND		ug/l	12	3.5	5
tert-Butylbenzene	ND		ug/l	12	3.5	5
o-Chlorotoluene	ND		ug/l	12	3.5	5
p-Chlorotoluene	ND		ug/l	12	3.5	5
1,2-Dibromo-3-chloropropane	ND		ug/l	12	3.5	5
Hexachlorobutadiene	ND		ug/l	12	3.5	5
Isopropylbenzene	ND		ug/l	12	3.5	5
p-Isopropyltoluene	ND		ug/l	12	3.5	5
Naphthalene	ND		ug/l	12	3.5	5

Project Name: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-14 D Date Collected: 09/29/22 12:05

Client ID: LMW-8R-S_17.5 Date Received: 09/30/22

Sample Location: NEW YORK, 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	12	3.5	5
1,2,3-Trichlorobenzene	ND		ug/l	12	3.5	5
1,2,4-Trichlorobenzene	ND		ug/l	12	3.5	5
1,3,5-Trimethylbenzene	ND		ug/l	12	3.5	5
1,2,4-Trimethylbenzene	ND		ug/l	12	3.5	5
1,4-Dioxane	ND		ug/l	1200	300	5
p-Diethylbenzene	ND		ug/l	10	3.5	5
p-Ethyltoluene	ND		ug/l	10	3.5	5
1,2,4,5-Tetramethylbenzene	ND		ug/l	10	2.7	5
Ethyl ether	ND		ug/l	12	3.5	5
trans-1,4-Dichloro-2-butene	ND		ug/l	12	3.5	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	107		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-15 D
Client ID: LMW-8R-S_22.5
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 12:15
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/05/22 01:33
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	12	3.5	5
1,1-Dichloroethane	ND		ug/l	12	3.5	5
Chloroform	ND		ug/l	12	3.5	5
Carbon tetrachloride	ND		ug/l	2.5	0.67	5
1,2-Dichloropropane	ND		ug/l	5.0	0.68	5
Dibromochloromethane	ND		ug/l	2.5	0.74	5
1,1,2-Trichloroethane	ND		ug/l	7.5	2.5	5
Tetrachloroethene	640		ug/l	2.5	0.90	5
Chlorobenzene	ND		ug/l	12	3.5	5
Trichlorofluoromethane	ND		ug/l	12	3.5	5
1,2-Dichloroethane	ND		ug/l	2.5	0.66	5
1,1,1-Trichloroethane	ND		ug/l	12	3.5	5
Bromodichloromethane	ND		ug/l	2.5	0.96	5
trans-1,3-Dichloropropene	ND		ug/l	2.5	0.82	5
cis-1,3-Dichloropropene	ND		ug/l	2.5	0.72	5
1,3-Dichloropropene, Total	ND		ug/l	2.5	0.72	5
1,1-Dichloropropene	ND		ug/l	12	3.5	5
Bromoform	ND		ug/l	10	3.2	5
1,1,2,2-Tetrachloroethane	ND		ug/l	2.5	0.84	5
Benzene	ND		ug/l	2.5	0.80	5
Toluene	ND		ug/l	12	3.5	5
Ethylbenzene	ND		ug/l	12	3.5	5
Chloromethane	ND		ug/l	12	3.5	5
Bromomethane	ND		ug/l	12	3.5	5
Vinyl chloride	ND		ug/l	5.0	0.36	5
Chloroethane	ND		ug/l	12	3.5	5
1,1-Dichloroethene	ND		ug/l	2.5	0.84	5
trans-1,2-Dichloroethene	ND		ug/l	12	3.5	5

Project Name: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-15 D Date Collected: 09/29/22 12:15
Client ID: LMW-8R-S_22.5 Date Received: 09/30/22
Sample Location: NEW YORK, 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	2.5	0.88	5
1,2-Dichlorobenzene	ND		ug/l	12	3.5	5
1,3-Dichlorobenzene	ND		ug/l	12	3.5	5
1,4-Dichlorobenzene	ND		ug/l	12	3.5	5
Methyl tert butyl ether	ND		ug/l	12	3.5	5
p/m-Xylene	ND		ug/l	12	3.5	5
o-Xylene	ND		ug/l	12	3.5	5
Xylenes, Total	ND		ug/l	12	3.5	5
cis-1,2-Dichloroethene	190		ug/l	12	3.5	5
1,2-Dichloroethene, Total	190		ug/l	12	3.5	5
Dibromomethane	ND		ug/l	25	5.0	5
1,2,3-Trichloropropane	ND		ug/l	12	3.5	5
Acrylonitrile	ND		ug/l	25	7.5	5
Styrene	ND		ug/l	12	3.5	5
Dichlorodifluoromethane	ND		ug/l	25	5.0	5
Acetone	17	J	ug/l	25	7.3	5
Carbon disulfide	ND		ug/l	25	5.0	5
2-Butanone	ND		ug/l	25	9.7	5
Vinyl acetate	ND		ug/l	25	5.0	5
4-Methyl-2-pentanone	ND		ug/l	25	5.0	5
2-Hexanone	ND		ug/l	25	5.0	5
Bromochloromethane	ND		ug/l	12	3.5	5
2,2-Dichloropropane	ND		ug/l	12	3.5	5
1,2-Dibromoethane	ND		ug/l	10	3.2	5
1,3-Dichloropropane	ND		ug/l	12	3.5	5
1,1,1,2-Tetrachloroethane	ND		ug/l	12	3.5	5
Bromobenzene	ND		ug/l	12	3.5	5
n-Butylbenzene	ND		ug/l	12	3.5	5
sec-Butylbenzene	ND		ug/l	12	3.5	5
tert-Butylbenzene	ND		ug/l	12	3.5	5
o-Chlorotoluene	ND		ug/l	12	3.5	5
p-Chlorotoluene	ND		ug/l	12	3.5	5
1,2-Dibromo-3-chloropropane	ND		ug/l	12	3.5	5
Hexachlorobutadiene	ND		ug/l	12	3.5	5
Isopropylbenzene	ND		ug/l	12	3.5	5
p-Isopropyltoluene	ND		ug/l	12	3.5	5
Naphthalene	ND		ug/l	12	3.5	5

Project Name: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-15 D Date Collected: 09/29/22 12:15

Client ID: LMW-8R-S_22.5 Date Received: 09/30/22

Sample Location: NEW YORK, 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	12	3.5	5
1,2,3-Trichlorobenzene	ND		ug/l	12	3.5	5
1,2,4-Trichlorobenzene	ND		ug/l	12	3.5	5
1,3,5-Trimethylbenzene	ND		ug/l	12	3.5	5
1,2,4-Trimethylbenzene	ND		ug/l	12	3.5	5
1,4-Dioxane	ND		ug/l	1200	300	5
p-Diethylbenzene	ND		ug/l	10	3.5	5
p-Ethyltoluene	ND		ug/l	10	3.5	5
1,2,4,5-Tetramethylbenzene	ND		ug/l	10	2.7	5
Ethyl ether	ND		ug/l	12	3.5	5
trans-1,4-Dichloro-2-butene	ND		ug/l	12	3.5	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	113		70-130
Dibromofluoromethane	105		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-16 D
Client ID: LMW-8R-S_27
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 12:25
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/03/22 10:44
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	12	3.5	5
1,1-Dichloroethane	ND		ug/l	12	3.5	5
Chloroform	ND		ug/l	12	3.5	5
Carbon tetrachloride	ND		ug/l	2.5	0.67	5
1,2-Dichloropropane	ND		ug/l	5.0	0.68	5
Dibromochloromethane	ND		ug/l	2.5	0.74	5
1,1,2-Trichloroethane	ND		ug/l	7.5	2.5	5
Tetrachloroethene	570		ug/l	2.5	0.90	5
Chlorobenzene	ND		ug/l	12	3.5	5
Trichlorofluoromethane	ND		ug/l	12	3.5	5
1,2-Dichloroethane	ND		ug/l	2.5	0.66	5
1,1,1-Trichloroethane	ND		ug/l	12	3.5	5
Bromodichloromethane	ND		ug/l	2.5	0.96	5
trans-1,3-Dichloropropene	ND		ug/l	2.5	0.82	5
cis-1,3-Dichloropropene	ND		ug/l	2.5	0.72	5
1,3-Dichloropropene, Total	ND		ug/l	2.5	0.72	5
1,1-Dichloropropene	ND		ug/l	12	3.5	5
Bromoform	ND		ug/l	10	3.2	5
1,1,2,2-Tetrachloroethane	ND		ug/l	2.5	0.84	5
Benzene	ND		ug/l	2.5	0.80	5
Toluene	ND		ug/l	12	3.5	5
Ethylbenzene	ND		ug/l	12	3.5	5
Chloromethane	ND		ug/l	12	3.5	5
Bromomethane	ND		ug/l	12	3.5	5
Vinyl chloride	0.41	J	ug/l	5.0	0.36	5
Chloroethane	ND		ug/l	12	3.5	5
1,1-Dichloroethene	ND		ug/l	2.5	0.84	5
trans-1,2-Dichloroethene	ND		ug/l	12	3.5	5

Project Name: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-16 D Date Collected: 09/29/22 12:25

Client ID: LMW-8R-S_27 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	350		ug/l	2.5	0.88	5
1,2-Dichlorobenzene	ND		ug/l	12	3.5	5
1,3-Dichlorobenzene	ND		ug/l	12	3.5	5
1,4-Dichlorobenzene	ND		ug/l	12	3.5	5
Methyl tert butyl ether	ND		ug/l	12	3.5	5
p/m-Xylene	ND		ug/l	12	3.5	5
o-Xylene	ND		ug/l	12	3.5	5
Xylenes, Total	ND		ug/l	12	3.5	5
cis-1,2-Dichloroethene	180		ug/l	12	3.5	5
1,2-Dichloroethene, Total	180		ug/l	12	3.5	5
Dibromomethane	ND		ug/l	25	5.0	5
1,2,3-Trichloropropane	ND		ug/l	12	3.5	5
Acrylonitrile	ND		ug/l	25	7.5	5
Styrene	ND		ug/l	12	3.5	5
Dichlorodifluoromethane	ND		ug/l	25	5.0	5
Acetone	26		ug/l	25	7.3	5
Carbon disulfide	ND		ug/l	25	5.0	5
2-Butanone	ND		ug/l	25	9.7	5
Vinyl acetate	ND		ug/l	25	5.0	5
4-Methyl-2-pentanone	ND		ug/l	25	5.0	5
2-Hexanone	ND		ug/l	25	5.0	5
Bromochloromethane	ND		ug/l	12	3.5	5
2,2-Dichloropropane	ND		ug/l	12	3.5	5
1,2-Dibromoethane	ND		ug/l	10	3.2	5
1,3-Dichloropropane	ND		ug/l	12	3.5	5
1,1,1,2-Tetrachloroethane	ND		ug/l	12	3.5	5
Bromobenzene	ND		ug/l	12	3.5	5
n-Butylbenzene	ND		ug/l	12	3.5	5
sec-Butylbenzene	ND		ug/l	12	3.5	5
tert-Butylbenzene	ND		ug/l	12	3.5	5
o-Chlorotoluene	ND		ug/l	12	3.5	5
p-Chlorotoluene	ND		ug/l	12	3.5	5
1,2-Dibromo-3-chloropropane	ND		ug/l	12	3.5	5
Hexachlorobutadiene	ND		ug/l	12	3.5	5
Isopropylbenzene	ND		ug/l	12	3.5	5
p-Isopropyltoluene	ND		ug/l	12	3.5	5
Naphthalene	ND		ug/l	12	3.5	5

Project Name: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-16 D Date Collected: 09/29/22 12:25

Client ID: LMW-8R-S_27 Date Received: 09/30/22

Sample Location: NEW YORK, 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	12	3.5	5
1,2,3-Trichlorobenzene	ND		ug/l	12	3.5	5
1,2,4-Trichlorobenzene	ND		ug/l	12	3.5	5
1,3,5-Trimethylbenzene	ND		ug/l	12	3.5	5
1,2,4-Trimethylbenzene	ND		ug/l	12	3.5	5
1,4-Dioxane	ND		ug/l	1200	300	5
p-Diethylbenzene	ND		ug/l	10	3.5	5
p-Ethyltoluene	ND		ug/l	10	3.5	5
1,2,4,5-Tetramethylbenzene	ND		ug/l	10	2.7	5
Ethyl ether	ND		ug/l	12	3.5	5
trans-1,4-Dichloro-2-butene	ND		ug/l	12	3.5	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	112		70-130
Dibromofluoromethane	103		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-17
Client ID: LMW-8R-D_46.5
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 12:35
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/04/22 20:42
Analyst: PD

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	1.5	J	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-17 Date Collected: 09/29/22 12:35

Client ID: LMW-8R-D_46.5 Date Received: 09/30/22

Sample Location: NEW YORK, 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	0.80	J	ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	0.80	J	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	8.5		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-17 Date Collected: 09/29/22 12:35

Client ID: LMW-8R-D_46.5 Date Received: 09/30/22

Sample Location: NEW YORK, 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	117		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	114		70-130
Dibromofluoromethane	108		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-18
Client ID: LMW-8R-D_48.5
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 12:55
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/04/22 21:02
Analyst: PD

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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-18 Date Collected: 09/29/22 12:55

Client ID: LMW-8R-D_48.5 Date Received: 09/30/22

Sample Location: NEW YORK, 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	0.85	J	ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	0.85	J	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	10		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-18 Date Collected: 09/29/22 12:55

Client ID: LMW-8R-D_48.5 Date Received: 09/30/22

Sample Location: NEW YORK, 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	111		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	117		70-130
Dibromofluoromethane	110		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-19
Client ID: LMW-8R-D_58
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 13:05
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/03/22 11:04
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	0.25	J	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-19 Date Collected: 09/29/22 13:05

Client ID: LMW-8R-D_58 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	0.18	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	1.0	J	ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	1.0	J	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	11		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-19 Date Collected: 09/29/22 13:05

Client ID: LMW-8R-D_58 Date Received: 09/30/22

Sample Location: NEW YORK, 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	108		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	113		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-20
Client ID: LMW-8R-D_73
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 12:45
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/04/22 21:23
Analyst: PD

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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-20 Date Collected: 09/29/22 12:45

Client ID: LMW-8R-D_73 Date Received: 09/30/22

Sample Location: NEW YORK, 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	0.86	J	ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	0.86	J	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	28		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-20 Date Collected: 09/29/22 12:45

Client ID: LMW-8R-D_73 Date Received: 09/30/22

Sample Location: NEW YORK, 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	120		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	113		70-130
Dibromofluoromethane	112		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-21 D
Client ID: LMW-8R-D_77
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 13:15
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/05/22 01:54
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	5.0	1.4	2
1,1-Dichloroethane	ND		ug/l	5.0	1.4	2
Chloroform	ND		ug/l	5.0	1.4	2
Carbon tetrachloride	ND		ug/l	1.0	0.27	2
1,2-Dichloropropane	ND		ug/l	2.0	0.27	2
Dibromochloromethane	ND		ug/l	1.0	0.30	2
1,1,2-Trichloroethane	ND		ug/l	3.0	1.0	2
Tetrachloroethene	0.41	J	ug/l	1.0	0.36	2
Chlorobenzene	ND		ug/l	5.0	1.4	2
Trichlorofluoromethane	ND		ug/l	5.0	1.4	2
1,2-Dichloroethane	ND		ug/l	1.0	0.26	2
1,1,1-Trichloroethane	ND		ug/l	5.0	1.4	2
Bromodichloromethane	ND		ug/l	1.0	0.38	2
trans-1,3-Dichloropropene	ND		ug/l	1.0	0.33	2
cis-1,3-Dichloropropene	ND		ug/l	1.0	0.29	2
1,3-Dichloropropene, Total	ND		ug/l	1.0	0.29	2
1,1-Dichloropropene	ND		ug/l	5.0	1.4	2
Bromoform	ND		ug/l	4.0	1.3	2
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.33	2
Benzene	31		ug/l	1.0	0.32	2
Toluene	ND		ug/l	5.0	1.4	2
Ethylbenzene	ND		ug/l	5.0	1.4	2
Chloromethane	ND		ug/l	5.0	1.4	2
Bromomethane	ND		ug/l	5.0	1.4	2
Vinyl chloride	6.7		ug/l	2.0	0.14	2
Chloroethane	ND		ug/l	5.0	1.4	2
1,1-Dichloroethene	ND		ug/l	1.0	0.34	2
trans-1,2-Dichloroethene	ND		ug/l	5.0	1.4	2

Project Name: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-21 D Date Collected: 09/29/22 13:15
Client ID: LMW-8R-D_77 Date Received: 09/30/22
Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	0.39	J	ug/l	1.0	0.35	2
1,2-Dichlorobenzene	ND		ug/l	5.0	1.4	2
1,3-Dichlorobenzene	ND		ug/l	5.0	1.4	2
1,4-Dichlorobenzene	ND		ug/l	5.0	1.4	2
Methyl tert butyl ether	ND		ug/l	5.0	1.4	2
p/m-Xylene	ND		ug/l	5.0	1.4	2
o-Xylene	ND		ug/l	5.0	1.4	2
Xylenes, Total	ND		ug/l	5.0	1.4	2
cis-1,2-Dichloroethene	200		ug/l	5.0	1.4	2
1,2-Dichloroethene, Total	200		ug/l	5.0	1.4	2
Dibromomethane	ND		ug/l	10	2.0	2
1,2,3-Trichloropropane	ND		ug/l	5.0	1.4	2
Acrylonitrile	ND		ug/l	10	3.0	2
Styrene	ND		ug/l	5.0	1.4	2
Dichlorodifluoromethane	ND		ug/l	10	2.0	2
Acetone	17		ug/l	10	2.9	2
Carbon disulfide	ND		ug/l	10	2.0	2
2-Butanone	ND		ug/l	10	3.9	2
Vinyl acetate	ND		ug/l	10	2.0	2
4-Methyl-2-pentanone	ND		ug/l	10	2.0	2
2-Hexanone	ND		ug/l	10	2.0	2
Bromochloromethane	ND		ug/l	5.0	1.4	2
2,2-Dichloropropane	ND		ug/l	5.0	1.4	2
1,2-Dibromoethane	ND		ug/l	4.0	1.3	2
1,3-Dichloropropane	ND		ug/l	5.0	1.4	2
1,1,1,2-Tetrachloroethane	ND		ug/l	5.0	1.4	2
Bromobenzene	ND		ug/l	5.0	1.4	2
n-Butylbenzene	ND		ug/l	5.0	1.4	2
sec-Butylbenzene	ND		ug/l	5.0	1.4	2
tert-Butylbenzene	ND		ug/l	5.0	1.4	2
o-Chlorotoluene	ND		ug/l	5.0	1.4	2
p-Chlorotoluene	ND		ug/l	5.0	1.4	2
1,2-Dibromo-3-chloropropane	ND		ug/l	5.0	1.4	2
Hexachlorobutadiene	ND		ug/l	5.0	1.4	2
Isopropylbenzene	ND		ug/l	5.0	1.4	2
p-Isopropyltoluene	ND		ug/l	5.0	1.4	2
Naphthalene	ND		ug/l	5.0	1.4	2

Project Name: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-21 D Date Collected: 09/29/22 13:15
Client ID: LMW-8R-D_77 Date Received: 09/30/22
Sample Location: NEW YORK, 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	5.0	1.4	2
1,2,3-Trichlorobenzene	ND		ug/l	5.0	1.4	2
1,2,4-Trichlorobenzene	ND		ug/l	5.0	1.4	2
1,3,5-Trimethylbenzene	ND		ug/l	5.0	1.4	2
1,2,4-Trimethylbenzene	ND		ug/l	5.0	1.4	2
1,4-Dioxane	ND		ug/l	500	120	2
p-Diethylbenzene	ND		ug/l	4.0	1.4	2
p-Ethyltoluene	ND		ug/l	4.0	1.4	2
1,2,4,5-Tetramethylbenzene	ND		ug/l	4.0	1.1	2
Ethyl ether	ND		ug/l	5.0	1.4	2
trans-1,4-Dichloro-2-butene	ND		ug/l	5.0	1.4	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	119		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	114		70-130
Dibromofluoromethane	108		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-22
Client ID: LMW-9R-S_15
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 13:35
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/04/22 21:44
Analyst: PD

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	8.9		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	140		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	8.0		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	1.1		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-22 Date Collected: 09/29/22 13:35

Client ID: LMW-9R-S_15 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	58		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	28		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	28		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	12		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-22 Date Collected: 09/29/22 13:35

Client ID: LMW-9R-S_15 Date Received: 09/30/22

Sample Location: NEW YORK, 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	107		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	110		70-130
Dibromofluoromethane	107		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-23 D
Client ID: LMW-9R-S_22
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 13:25
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/03/22 11:25
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	5.0	1.4	2
1,1-Dichloroethane	ND		ug/l	5.0	1.4	2
Chloroform	7.9		ug/l	5.0	1.4	2
Carbon tetrachloride	ND		ug/l	1.0	0.27	2
1,2-Dichloropropane	ND		ug/l	2.0	0.27	2
Dibromochloromethane	ND		ug/l	1.0	0.30	2
1,1,2-Trichloroethane	ND		ug/l	3.0	1.0	2
Tetrachloroethene	190		ug/l	1.0	0.36	2
Chlorobenzene	ND		ug/l	5.0	1.4	2
Trichlorofluoromethane	ND		ug/l	5.0	1.4	2
1,2-Dichloroethane	ND		ug/l	1.0	0.26	2
1,1,1-Trichloroethane	ND		ug/l	5.0	1.4	2
Bromodichloromethane	ND		ug/l	1.0	0.38	2
trans-1,3-Dichloropropene	ND		ug/l	1.0	0.33	2
cis-1,3-Dichloropropene	ND		ug/l	1.0	0.29	2
1,3-Dichloropropene, Total	ND		ug/l	1.0	0.29	2
1,1-Dichloropropene	ND		ug/l	5.0	1.4	2
Bromoform	ND		ug/l	4.0	1.3	2
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.33	2
Benzene	8.5		ug/l	1.0	0.32	2
Toluene	ND		ug/l	5.0	1.4	2
Ethylbenzene	ND		ug/l	5.0	1.4	2
Chloromethane	ND		ug/l	5.0	1.4	2
Bromomethane	ND		ug/l	5.0	1.4	2
Vinyl chloride	1.0	J	ug/l	2.0	0.14	2
Chloroethane	ND		ug/l	5.0	1.4	2
1,1-Dichloroethene	ND		ug/l	1.0	0.34	2
trans-1,2-Dichloroethene	ND		ug/l	5.0	1.4	2

Project Name: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-23 D Date Collected: 09/29/22 13:25
Client ID: LMW-9R-S_22 Date Received: 09/30/22
Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	56		ug/l	1.0	0.35	2
1,2-Dichlorobenzene	ND		ug/l	5.0	1.4	2
1,3-Dichlorobenzene	ND		ug/l	5.0	1.4	2
1,4-Dichlorobenzene	ND		ug/l	5.0	1.4	2
Methyl tert butyl ether	ND		ug/l	5.0	1.4	2
p/m-Xylene	ND		ug/l	5.0	1.4	2
o-Xylene	ND		ug/l	5.0	1.4	2
Xylenes, Total	ND		ug/l	5.0	1.4	2
cis-1,2-Dichloroethene	28		ug/l	5.0	1.4	2
1,2-Dichloroethene, Total	28		ug/l	5.0	1.4	2
Dibromomethane	ND		ug/l	10	2.0	2
1,2,3-Trichloropropane	ND		ug/l	5.0	1.4	2
Acrylonitrile	ND		ug/l	10	3.0	2
Styrene	ND		ug/l	5.0	1.4	2
Dichlorodifluoromethane	ND		ug/l	10	2.0	2
Acetone	16		ug/l	10	2.9	2
Carbon disulfide	ND		ug/l	10	2.0	2
2-Butanone	ND		ug/l	10	3.9	2
Vinyl acetate	ND		ug/l	10	2.0	2
4-Methyl-2-pentanone	ND		ug/l	10	2.0	2
2-Hexanone	ND		ug/l	10	2.0	2
Bromochloromethane	ND		ug/l	5.0	1.4	2
2,2-Dichloropropane	ND		ug/l	5.0	1.4	2
1,2-Dibromoethane	ND		ug/l	4.0	1.3	2
1,3-Dichloropropane	ND		ug/l	5.0	1.4	2
1,1,1,2-Tetrachloroethane	ND		ug/l	5.0	1.4	2
Bromobenzene	ND		ug/l	5.0	1.4	2
n-Butylbenzene	ND		ug/l	5.0	1.4	2
sec-Butylbenzene	ND		ug/l	5.0	1.4	2
tert-Butylbenzene	ND		ug/l	5.0	1.4	2
o-Chlorotoluene	ND		ug/l	5.0	1.4	2
p-Chlorotoluene	ND		ug/l	5.0	1.4	2
1,2-Dibromo-3-chloropropane	ND		ug/l	5.0	1.4	2
Hexachlorobutadiene	ND		ug/l	5.0	1.4	2
Isopropylbenzene	ND		ug/l	5.0	1.4	2
p-Isopropyltoluene	ND		ug/l	5.0	1.4	2
Naphthalene	ND		ug/l	5.0	1.4	2

Project Name: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-23 D Date Collected: 09/29/22 13:25

Client ID: LMW-9R-S_22 Date Received: 09/30/22

Sample Location: NEW YORK, 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	5.0	1.4	2
1,2,3-Trichlorobenzene	ND		ug/l	5.0	1.4	2
1,2,4-Trichlorobenzene	ND		ug/l	5.0	1.4	2
1,3,5-Trimethylbenzene	ND		ug/l	5.0	1.4	2
1,2,4-Trimethylbenzene	ND		ug/l	5.0	1.4	2
1,4-Dioxane	ND		ug/l	500	120	2
p-Diethylbenzene	ND		ug/l	4.0	1.4	2
p-Ethyltoluene	ND		ug/l	4.0	1.4	2
1,2,4,5-Tetramethylbenzene	ND		ug/l	4.0	1.1	2
Ethyl ether	ND		ug/l	5.0	1.4	2
trans-1,4-Dichloro-2-butene	ND		ug/l	5.0	1.4	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	105		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-24 D
Client ID: LMW-9R-S_30.5
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 13:45
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/03/22 11:45
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	6.2	1.8	2.5
1,1-Dichloroethane	ND		ug/l	6.2	1.8	2.5
Chloroform	7.5		ug/l	6.2	1.8	2.5
Carbon tetrachloride	ND		ug/l	1.2	0.34	2.5
1,2-Dichloropropane	ND		ug/l	2.5	0.34	2.5
Dibromochloromethane	ND		ug/l	1.2	0.37	2.5
1,1,2-Trichloroethane	ND		ug/l	3.8	1.2	2.5
Tetrachloroethene	250		ug/l	1.2	0.45	2.5
Chlorobenzene	ND		ug/l	6.2	1.8	2.5
Trichlorofluoromethane	ND		ug/l	6.2	1.8	2.5
1,2-Dichloroethane	ND		ug/l	1.2	0.33	2.5
1,1,1-Trichloroethane	ND		ug/l	6.2	1.8	2.5
Bromodichloromethane	ND		ug/l	1.2	0.48	2.5
trans-1,3-Dichloropropene	ND		ug/l	1.2	0.41	2.5
cis-1,3-Dichloropropene	ND		ug/l	1.2	0.36	2.5
1,3-Dichloropropene, Total	ND		ug/l	1.2	0.36	2.5
1,1-Dichloropropene	ND		ug/l	6.2	1.8	2.5
Bromoform	ND		ug/l	5.0	1.6	2.5
1,1,2,2-Tetrachloroethane	ND		ug/l	1.2	0.42	2.5
Benzene	7.4		ug/l	1.2	0.40	2.5
Toluene	ND		ug/l	6.2	1.8	2.5
Ethylbenzene	ND		ug/l	6.2	1.8	2.5
Chloromethane	ND		ug/l	6.2	1.8	2.5
Bromomethane	ND		ug/l	6.2	1.8	2.5
Vinyl chloride	0.96	J	ug/l	2.5	0.18	2.5
Chloroethane	ND		ug/l	6.2	1.8	2.5
1,1-Dichloroethene	ND		ug/l	1.2	0.42	2.5
trans-1,2-Dichloroethene	ND		ug/l	6.2	1.8	2.5

Project Name: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-24 D Date Collected: 09/29/22 13:45

Client ID: LMW-9R-S_30.5 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	58		ug/l	1.2	0.44	2.5
1,2-Dichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,3-Dichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,4-Dichlorobenzene	ND		ug/l	6.2	1.8	2.5
Methyl tert butyl ether	ND		ug/l	6.2	1.8	2.5
p/m-Xylene	ND		ug/l	6.2	1.8	2.5
o-Xylene	ND		ug/l	6.2	1.8	2.5
Xylenes, Total	ND		ug/l	6.2	1.8	2.5
cis-1,2-Dichloroethene	28		ug/l	6.2	1.8	2.5
1,2-Dichloroethene, Total	28		ug/l	6.2	1.8	2.5
Dibromomethane	ND		ug/l	12	2.5	2.5
1,2,3-Trichloropropane	ND		ug/l	6.2	1.8	2.5
Acrylonitrile	ND		ug/l	12	3.8	2.5
Styrene	ND		ug/l	6.2	1.8	2.5
Dichlorodifluoromethane	ND		ug/l	12	2.5	2.5
Acetone	26		ug/l	12	3.6	2.5
Carbon disulfide	ND		ug/l	12	2.5	2.5
2-Butanone	ND		ug/l	12	4.8	2.5
Vinyl acetate	ND		ug/l	12	2.5	2.5
4-Methyl-2-pentanone	ND		ug/l	12	2.5	2.5
2-Hexanone	ND		ug/l	12	2.5	2.5
Bromochloromethane	ND		ug/l	6.2	1.8	2.5
2,2-Dichloropropane	ND		ug/l	6.2	1.8	2.5
1,2-Dibromoethane	ND		ug/l	5.0	1.6	2.5
1,3-Dichloropropane	ND		ug/l	6.2	1.8	2.5
1,1,1,2-Tetrachloroethane	ND		ug/l	6.2	1.8	2.5
Bromobenzene	ND		ug/l	6.2	1.8	2.5
n-Butylbenzene	ND		ug/l	6.2	1.8	2.5
sec-Butylbenzene	ND		ug/l	6.2	1.8	2.5
tert-Butylbenzene	ND		ug/l	6.2	1.8	2.5
o-Chlorotoluene	ND		ug/l	6.2	1.8	2.5
p-Chlorotoluene	ND		ug/l	6.2	1.8	2.5
1,2-Dibromo-3-chloropropane	ND		ug/l	6.2	1.8	2.5
Hexachlorobutadiene	ND		ug/l	6.2	1.8	2.5
Isopropylbenzene	ND		ug/l	6.2	1.8	2.5
p-Isopropyltoluene	ND		ug/l	6.2	1.8	2.5
Naphthalene	ND		ug/l	6.2	1.8	2.5

Project Name: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-24 D Date Collected: 09/29/22 13:45

Client ID: LMW-9R-S_30.5 Date Received: 09/30/22

Sample Location: NEW YORK, 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	6.2	1.8	2.5
1,2,3-Trichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,2,4-Trichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,3,5-Trimethylbenzene	ND		ug/l	6.2	1.8	2.5
1,2,4-Trimethylbenzene	ND		ug/l	6.2	1.8	2.5
1,4-Dioxane	ND		ug/l	620	150	2.5
p-Diethylbenzene	ND		ug/l	5.0	1.8	2.5
p-Ethyltoluene	ND		ug/l	5.0	1.8	2.5
1,2,4,5-Tetramethylbenzene	ND		ug/l	5.0	1.4	2.5
Ethyl ether	ND		ug/l	6.2	1.8	2.5
trans-1,4-Dichloro-2-butene	ND		ug/l	6.2	1.8	2.5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	112		70-130
Dibromofluoromethane	104		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-25
Client ID: LMW-9R-D_43.5
Sample Location: NEW YORK, NY
Date Collected: 09/29/22 13:50
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/04/22 22:05
Analyst: PD

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	1.2	J	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	2.7		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	0.60		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	0.20	J	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-25 Date Collected: 09/29/22 13:50

Client ID: LMW-9R-D_43.5 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	0.75		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	9.6		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	9.6		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	8.4		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	2.0	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-25 Date Collected: 09/29/22 13:50

Client ID: LMW-9R-D_43.5 Date Received: 09/30/22

Sample Location: NEW YORK, 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	118		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	110		70-130
Dibromofluoromethane	112		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-26
Client ID: LMW-9R-D_46.5
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 13:55
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/04/22 22:26
Analyst: PD

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	1.2	J	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	2.5		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	0.56		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	0.19	J	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-26 Date Collected: 09/29/22 13:55

Client ID: LMW-9R-D_46.5 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	0.68		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	8.8		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	8.8		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	6.8		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-26 Date Collected: 09/29/22 13:55

Client ID: LMW-9R-D_46.5 Date Received: 09/30/22

Sample Location: NEW YORK, 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	117		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	111		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-27
Client ID: LMW-9R-D_60.5
Sample Location: NEW YORK, NY
Date Collected: 09/29/22 14:05
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/04/22 22:47
Analyst: PD

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	2.4		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	0.65		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	0.23	J	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-27 Date Collected: 09/29/22 14:05

Client ID: LMW-9R-D_60.5 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	0.65		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	9.6		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	9.6		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	20		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	1.9	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-27 Date Collected: 09/29/22 14:05

Client ID: LMW-9R-D_60.5 Date Received: 09/30/22

Sample Location: NEW YORK, 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	116		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	110		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-28
Client ID: LMW-9R-D_63.5
Sample Location: NEW YORK, NY
Date Collected: 09/29/22 14:15
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/03/22 12:06
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	3.8		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	2.1		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	1.6		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	0.60	J	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-28 Date Collected: 09/29/22 14:15

Client ID: LMW-9R-D_63.5 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	0.65		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	11		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	11		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	6.2		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-28 Date Collected: 09/29/22 14:15

Client ID: LMW-9R-D_63.5 Date Received: 09/30/22

Sample Location: NEW YORK, 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	114		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	112		70-130
Dibromofluoromethane	112		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-29
Client ID: LMW-9R-D_76
Sample Location: NEW YORK, NY
Date Collected: 09/29/22 14:25
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/04/22 23:08
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	8.0		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	34		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	0.34	J	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	0.19	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	0.13	J	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-29 Date Collected: 09/29/22 14:25

Client ID: LMW-9R-D_76 Date Received: 09/30/22

Sample Location: NEW YORK, 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	2.3	J	ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	2.3	J	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	13		ug/l	5.0	1.5	1
Carbon disulfide	1.0	J	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-29 Date Collected: 09/29/22 14:25

Client ID: LMW-9R-D_76 Date Received: 09/30/22

Sample Location: NEW YORK, 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	118		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	110		70-130
Dibromofluoromethane	116		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-30
Client ID: LMW-10R-S_21.5
Sample Location: NEW YORK, NY
Date Collected: 09/29/22 09:00
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/04/22 23:28
Analyst: PD

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	2.7		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	0.26	J	ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	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	0.63	J	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-30 Date Collected: 09/29/22 09:00

Client ID: LMW-10R-S_21.5 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	5.4		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	100		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	100		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	91		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	21		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-30 Date Collected: 09/29/22 09:00

Client ID: LMW-10R-S_21.5 Date Received: 09/30/22

Sample Location: NEW YORK, 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	115		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	105		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-31
Client ID: LMW-10R-S_28.5
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 09:20
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/05/22 09:09
Analyst: LAC

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	2.0		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	0.24	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	0.39	J	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-31 Date Collected: 09/29/22 09:20

Client ID: LMW-10R-S_28.5 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	4.9		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	90		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	90		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	88		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	21		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-31 Date Collected: 09/29/22 09:20

Client ID: LMW-10R-S_28.5 Date Received: 09/30/22

Sample Location: NEW YORK, 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	101		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	115		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-32
Client ID: LMW-10R-S_26.5
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 09:10
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/03/22 12:27
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	2.6		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	0.25	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	0.60	J	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-32 Date Collected: 09/29/22 09:10

Client ID: LMW-10R-S_26.5 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	5.5		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	110		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	110		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	84		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	17		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-32 Date Collected: 09/29/22 09:10

Client ID: LMW-10R-S_26.5 Date Received: 09/30/22

Sample Location: NEW YORK, 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	117		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	109		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-33
Client ID: LMW-10R-S_34
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 09:30
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/05/22 09:32
Analyst: LAC

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	2.0		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	0.25	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	0.39	J	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-33 Date Collected: 09/29/22 09:30

Client ID: LMW-10R-S_34 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	4.8		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	91		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	91		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	100		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	24		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-33 Date Collected: 09/29/22 09:30

Client ID: LMW-10R-S_34 Date Received: 09/30/22

Sample Location: NEW YORK, 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	106		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	116		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-34
Client ID: LMW-10R-S_36
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 09:40
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/05/22 09:56
Analyst: LAC

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	2.1		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	0.25	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	0.40	J	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-34 Date Collected: 09/29/22 09:40

Client ID: LMW-10R-S_36 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	4.7		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	92		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	92		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	160		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	35		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: 1487 FIRST AVENUE
Lab Number: L2254047
Project Number: 100963701
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-34
Client ID: LMW-10R-S_36
Sample Location: NEW YORK, NY
Date Collected: 09/29/22 09:40
Date Received: 09/30/22
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	109		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	115		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-35
Client ID: LMW-10R-D_49
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 08:40
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/03/22 12:47
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	3.0		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	52		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	0.78		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-35 Date Collected: 09/29/22 08:40

Client ID: LMW-10R-D_49 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	1.6		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	5.0		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	5.0		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	100		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	23		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-35 Date Collected: 09/29/22 08:40

Client ID: LMW-10R-D_49 Date Received: 09/30/22

Sample Location: NEW YORK, 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	111		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	112		70-130

Project Name: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-36 Date Collected: 09/29/22 08:50
Client ID: LMW-10R-D_63 Date Received: 09/30/22
Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/05/22 10:19
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	2.5		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	47		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	0.74		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-36 Date Collected: 09/29/22 08:50

Client ID: LMW-10R-D_63 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	1.6		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	4.3		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	4.3		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	91		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	21		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-36 Date Collected: 09/29/22 08:50

Client ID: LMW-10R-D_63 Date Received: 09/30/22

Sample Location: NEW YORK, 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	108		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	118		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-37
Client ID: LMW-11R-S_20.5
Sample Location: NEW YORK, NY
Date Collected: 09/29/22 14:55
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/05/22 10:42
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	0.94	J	ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	7.2		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	12		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	0.60		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	0.20	J	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-37 Date Collected: 09/29/22 14:55

Client ID: LMW-11R-S_20.5 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	11		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	28		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	28		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	11		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-37 Date Collected: 09/29/22 14:55

Client ID: LMW-11R-S_20.5 Date Received: 09/30/22

Sample Location: NEW YORK, 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	108		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	116		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-38
Client ID: LMW-11R-S_23
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 15:15
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/05/22 11:05
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	0.99	J	ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	7.4		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	12		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	0.63		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	0.24	J	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-38 Date Collected: 09/29/22 15:15

Client ID: LMW-11R-S_23 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	12		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	29		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	10		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-38 Date Collected: 09/29/22 15:15

Client ID: LMW-11R-S_23 Date Received: 09/30/22

Sample Location: NEW YORK, 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	111		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	119		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-39
Client ID: LMW-11R-S_26.5
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 14:45
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/03/22 13:08
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	1.2	J	ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	8.4		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	14		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	0.79		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	0.32	J	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-39 Date Collected: 09/29/22 14:45

Client ID: LMW-11R-S_26.5 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	14		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	35		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	35		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	12		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-39 Date Collected: 09/29/22 14:45

Client ID: LMW-11R-S_26.5 Date Received: 09/30/22

Sample Location: NEW YORK, 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	122		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	110		70-130
Dibromofluoromethane	117		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-40
Client ID: LMW-11R-S_29.5
Sample Location: NEW YORK, NY
Date Collected: 09/29/22 15:35
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/05/22 11:29
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	0.97	J	ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	6.9		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	12		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	0.64		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	0.20	J	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-40 Date Collected: 09/29/22 15:35

Client ID: LMW-11R-S_29.5 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	11		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	28		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	28		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	9.2		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-40 Date Collected: 09/29/22 15:35

Client ID: LMW-11R-S_29.5 Date Received: 09/30/22

Sample Location: NEW YORK, 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	111		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	120		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-41
Client ID: LMW-11R-S_40.5
Sample Location: NEW YORK, NY
Date Collected: 09/29/22 15:25
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/05/22 11:52
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	0.91	J	ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	6.7		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	12		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	0.61		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	0.20	J	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-41 Date Collected: 09/29/22 15:25

Client ID: LMW-11R-S_40.5 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	11		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	28		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	28		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	8.9		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-41 Date Collected: 09/29/22 15:25

Client ID: LMW-11R-S_40.5 Date Received: 09/30/22

Sample Location: NEW YORK, 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	110		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	121		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-42
Client ID: LMW-11R-D_57.5
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 15:05
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/03/22 13:28
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	24		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	3.6		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	15		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	0.17	J	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-42 Date Collected: 09/29/22 15:05

Client ID: LMW-11R-D_57.5 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	1.9		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	17		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	17		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	14		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-42 Date Collected: 09/29/22 15:05

Client ID: LMW-11R-D_57.5 Date Received: 09/30/22

Sample Location: NEW YORK, 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	112		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	108		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-43
Client ID: LMW-11R-D_76
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 14:35
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/05/22 12:15
Analyst: LAC

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	20		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	2.9		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	13		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	0.13	J	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-43 Date Collected: 09/29/22 14:35

Client ID: LMW-11R-D_76 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	1.6		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	15		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	15		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	25		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-43 Date Collected: 09/29/22 14:35

Client ID: LMW-11R-D_76 Date Received: 09/30/22

Sample Location: NEW YORK, 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	107		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	114		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-44
Client ID: LMW-12R-S_24.5
Sample Location: NEW YORK, NY
Date Collected: 09/29/22 15:45
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/05/22 12:39
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	3.5		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	16		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	1.4		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	0.20	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	0.17	J	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-44 Date Collected: 09/29/22 15:45

Client ID: LMW-12R-S_24.5 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	3.7		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	27		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	27		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	26		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-44 Date Collected: 09/29/22 15:45

Client ID: LMW-12R-S_24.5 Date Received: 09/30/22

Sample Location: NEW YORK, 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	110		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	114		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-45
Client ID: LMW-12R-S_28.5
Sample Location: NEW YORK, NY
Date Collected: 09/29/22 15:55
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/03/22 13:48
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	4.1		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	20		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	2.5		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	0.24	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	0.23	J	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-45 Date Collected: 09/29/22 15:55

Client ID: LMW-12R-S_28.5 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	4.2		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	32		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	32		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	12		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-45 Date Collected: 09/29/22 15:55

Client ID: LMW-12R-S_28.5 Date Received: 09/30/22

Sample Location: NEW YORK, 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	120		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	112		70-130
Dibromofluoromethane	119		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-46
Client ID: LMW-12R-S_36
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 16:05
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/05/22 13:02
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	1.8	J	ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	8.8		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	3.0		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	0.23	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	0.20	J	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-46 Date Collected: 09/29/22 16:05

Client ID: LMW-12R-S_36 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	4.9		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	35		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	35		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	22		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	2.4	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-46 Date Collected: 09/29/22 16:05

Client ID: LMW-12R-S_36 Date Received: 09/30/22

Sample Location: NEW YORK, 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	107		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	116		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-47
Client ID: LMW-12R-D_53
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 16:15
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/03/22 14:09
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	9.4		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	7.4		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	1.0		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	0.21	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	3.8		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-47 Date Collected: 09/29/22 16:15

Client ID: LMW-12R-D_53 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	0.66		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	28		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	28		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	10		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-47 Date Collected: 09/29/22 16:15

Client ID: LMW-12R-D_53 Date Received: 09/30/22

Sample Location: NEW YORK, 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	119		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	115		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-48
Client ID: LMW-12R-D_67
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 16:25
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/05/22 13:25
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	8.1		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	6.3		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	0.97		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	0.16	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	2.7		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-48 Date Collected: 09/29/22 16:25

Client ID: LMW-12R-D_67 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	0.54		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	23		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	23		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	170		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	41		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-48 Date Collected: 09/29/22 16:25

Client ID: LMW-12R-D_67 Date Received: 09/30/22

Sample Location: NEW YORK, 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	109		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	116		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-49
Client ID: LMW-12R-S_17
Sample Location: NEW YORK, NY
Date Collected: 09/29/22 16:45
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/05/22 13:49
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	2.3	J	ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	18		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	3.3		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	0.28	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	0.08	J	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-49 Date Collected: 09/29/22 16:45

Client ID: LMW-12R-S_17 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	3.7		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	27		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	27		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	11		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-49 Date Collected: 09/29/22 16:45

Client ID: LMW-12R-S_17 Date Received: 09/30/22

Sample Location: NEW YORK, 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	111		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	119		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-50
Client ID: LMW-12R-S_20.5
Sample Location: NEW YORK, NY
Date Collected: 09/29/22 16:55
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/05/22 14:12
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	2.4	J	ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	18		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	3.6		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	0.31	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	0.07	J	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-50 Date Collected: 09/29/22 16:55

Client ID: LMW-12R-S_20.5 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	3.8		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	29		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	26		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	2.2	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-50 Date Collected: 09/29/22 16:55

Client ID: LMW-12R-S_20.5 Date Received: 09/30/22

Sample Location: NEW YORK, 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	110		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	122		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-51
Client ID: LMW-13R-S_26
Sample Location: NEW YORK, NY
Date Collected: 09/29/22 17:05
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/03/22 14:29
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	2.6		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	19		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	1.7		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	0.39	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	0.10	J	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-51 Date Collected: 09/29/22 17:05

Client ID: LMW-13R-S_26 Date Received: 09/30/22

Sample Location: NEW YORK, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	3.3		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	33		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	33		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	8.2		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-51 Date Collected: 09/29/22 17:05

Client ID: LMW-13R-S_26 Date Received: 09/30/22

Sample Location: NEW YORK, 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	113		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	114		70-130
Dibromofluoromethane	111		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-52
Client ID: LMW-13R-D_55.5
Sample Location: NEW YORK, NY
Date Collected: 09/29/22 16:35
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/03/22 14:50
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	30		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	3.9		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	28		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	0.25	J	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-52 Date Collected: 09/29/22 16:35

Client ID: LMW-13R-D_55.5 Date Received: 09/30/22

Sample Location: NEW YORK, 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	9.6		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	9.6		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	11		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-52 Date Collected: 09/29/22 16:35

Client ID: LMW-13R-D_55.5 Date Received: 09/30/22

Sample Location: NEW YORK, 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	113		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	106		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-53
Client ID: LMW-13R-D_75
Sample Location: NEW YORK, NY

Date Collected: 09/29/22 17:15
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/03/22 15:11
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	29		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	3.7		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	27		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	0.29	J	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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-53 Date Collected: 09/29/22 17:15

Client ID: LMW-13R-D_75 Date Received: 09/30/22

Sample Location: NEW YORK, 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	9.6		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	9.6		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	14		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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-53 Date Collected: 09/29/22 17:15

Client ID: LMW-13R-D_75 Date Received: 09/30/22

Sample Location: NEW YORK, 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	114		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	111		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-54
Client ID: TRIP BLANK-09292022
Sample Location: NEW YORK, NY
Date Collected: 09/29/22 00:00
Date Received: 09/30/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/05/22 14:35
Analyst: LAC

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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-54 Date Collected: 09/29/22 00:00

Client ID: TRIP BLANK-09292022 Date Received: 09/30/22

Sample Location: NEW YORK, 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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

SAMPLE RESULTS

Lab ID: L2254047-54 Date Collected: 09/29/22 00:00

Client ID: TRIP BLANK-09292022 Date Received: 09/30/22

Sample Location: NEW YORK, 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	111		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	118		70-130

Project Name: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/03/22 08:42
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02,04,07,11,14,16,19,23-24,28,32,35,39,42,45,47,51-53 Batch: WG1695132-5					
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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/03/22 08:42
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02,04,07,11,14,16,19,23-24,28,32,35,39,42,45,47,51-53 Batch: WG1695132-5					
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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/03/22 08:42
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02,04,07,11,14,16,19,23-24,28,32,35,39,42,45,47,51-53 Batch: WG1695132-5					
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	111		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	107		70-130

Project Name: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/04/22 18:57
Analyst: TMS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01,03,05-06,08-10,12-13,15,17-18,20-22,25-27,29-30 Batch: WG1695834-5					
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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/04/22 18:57
Analyst: TMS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01,03,05-06,08-10,12-13,15,17-18,20-22,25-27,29-30 Batch: WG1695834-5					
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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/04/22 18:57
Analyst: TMS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01,03,05-06,08-10,12-13,15,17-18,20-22,25-27,29-30 Batch: WG1695834-5					
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	122		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	118		70-130
Dibromofluoromethane	112		70-130

Project Name: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/05/22 08:46
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 31,33-34,36-38,40-41,43-44,46,48-50,54 Batch: WG1695994-5					
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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/05/22 08:46
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 31,33-34,36-38,40-41,43-44,46,48-50,54 Batch: WG1695994-5					
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: 1487 FIRST AVENUE **Lab Number:** L2254047

Project Number: 100963701 **Report Date:** 10/06/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/05/22 08:46
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 31,33-34,36-38,40-41,43-44,46,48-50,54 Batch: WG1695994-5					
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	109		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	118		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2254047
Report Date: 10/06/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02,04,07,11,14,16,19,23-24,28,32,35,39,42,45,47,51-53 Batch: WG1695132-3 WG1695132-4								
Methylene chloride	100		110		70-130	10		20
1,1-Dichloroethane	120		120		70-130	0		20
Chloroform	100		110		70-130	10		20
Carbon tetrachloride	110		110		63-132	0		20
1,2-Dichloropropane	110		120		70-130	9		20
Dibromochloromethane	92		89		63-130	3		20
1,1,2-Trichloroethane	94		89		70-130	5		20
Tetrachloroethene	100		100		70-130	0		20
Chlorobenzene	100		100		75-130	0		20
Trichlorofluoromethane	94		100		62-150	6		20
1,2-Dichloroethane	100		110		70-130	10		20
1,1,1-Trichloroethane	100		110		67-130	10		20
Bromodichloromethane	100		110		67-130	10		20
trans-1,3-Dichloropropene	99		100		70-130	1		20
cis-1,3-Dichloropropene	100		100		70-130	0		20
1,1-Dichloropropene	110		110		70-130	0		20
Bromoform	83		84		54-136	1		20
1,1,2,2-Tetrachloroethane	91		95		67-130	4		20
Benzene	100		110		70-130	10		20
Toluene	100		100		70-130	0		20
Ethylbenzene	100		100		70-130	0		20
Chloromethane	130		130		64-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2254047
Report Date: 10/06/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02,04,07,11,14,16,19,23-24,28,32,35,39,42,45,47,51-53 Batch: WG1695132-3 WG1695132-4								
Bromomethane	86		84		39-139	2		20
Vinyl chloride	120		120		55-140	0		20
Chloroethane	85		90		55-138	6		20
1,1-Dichloroethene	100		100		61-145	0		20
trans-1,2-Dichloroethene	100		100		70-130	0		20
Trichloroethene	99		100		70-130	1		20
1,2-Dichlorobenzene	95		97		70-130	2		20
1,3-Dichlorobenzene	100		100		70-130	0		20
1,4-Dichlorobenzene	95		100		70-130	5		20
Methyl tert butyl ether	85		91		63-130	7		20
p/m-Xylene	105		105		70-130	0		20
o-Xylene	100		100		70-130	0		20
cis-1,2-Dichloroethene	100		96		70-130	4		20
Dibromomethane	90		91		70-130	1		20
1,2,3-Trichloropropane	91		96		64-130	5		20
Acrylonitrile	89		92		70-130	3		20
Styrene	100		100		70-130	0		20
Dichlorodifluoromethane	95		99		36-147	4		20
Acetone	85		90		58-148	6		20
Carbon disulfide	110		110		51-130	0		20
2-Butanone	**61**	Q	66		63-138	8		20
Vinyl acetate	110		110		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2254047
Report Date: 10/06/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02,04,07,11,14,16,19,23-24,28,32,35,39,42,45,47,51-53 Batch: WG1695132-3 WG1695132-4								
4-Methyl-2-pentanone	75		75		59-130	0		20
2-Hexanone	74		74		57-130	0		20
Bromochloromethane	95		100		70-130	5		20
2,2-Dichloropropane	120		120		63-133	0		20
1,2-Dibromoethane	87		91		70-130	4		20
1,3-Dichloropropane	98		98		70-130	0		20
1,1,1,2-Tetrachloroethane	100		100		64-130	0		20
Bromobenzene	100		100		70-130	0		20
n-Butylbenzene	95		100		53-136	5		20
sec-Butylbenzene	99		100		70-130	1		20
tert-Butylbenzene	97		100		70-130	3		20
o-Chlorotoluene	110		120		70-130	9		20
p-Chlorotoluene	110		110		70-130	0		20
1,2-Dibromo-3-chloropropane	65		67		41-144	3		20
Hexachlorobutadiene	90		97		63-130	7		20
Isopropylbenzene	100		110		70-130	10		20
p-Isopropyltoluene	94		98		70-130	4		20
Naphthalene	70		74		70-130	6		20
n-Propylbenzene	110		110		69-130	0		20
1,2,3-Trichlorobenzene	84		89		70-130	6		20
1,2,4-Trichlorobenzene	90		93		70-130	3		20
1,3,5-Trimethylbenzene	100		110		64-130	10		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1487 FIRST AVENUE

Project Number: 100963701

Lab Number: L2254047

Report Date: 10/06/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02,04,07,11,14,16,19,23-24,28,32,35,39,42,45,47,51-53 Batch: WG1695132-3 WG1695132-4								
1,2,4-Trimethylbenzene	100		110		70-130	10		20
1,4-Dioxane	66		82		56-162	**22**	Q	20
p-Diethylbenzene	91		96		70-130	5		20
p-Ethyltoluene	100		110		70-130	10		20
1,2,4,5-Tetramethylbenzene	80		82		70-130	2		20
Ethyl ether	86		89		59-134	3		20
trans-1,4-Dichloro-2-butene	91		91		70-130	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	101		104		70-130
Toluene-d8	99		100		70-130
4-Bromofluorobenzene	113		113		70-130
Dibromofluoromethane	100		108		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2254047
Report Date: 10/06/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,03,05-06,08-10,12-13,15,17-18,20-22,25-27,29-30 Batch: WG1695834-3 WG1695834-4								
Methylene chloride	120		120		70-130	0		20
1,1-Dichloroethane	120		130		70-130	8		20
Chloroform	120		120		70-130	0		20
Carbon tetrachloride	120		120		63-132	0		20
1,2-Dichloropropane	120		130		70-130	8		20
Dibromochloromethane	100		100		63-130	0		20
1,1,2-Trichloroethane	110		100		70-130	10		20
Tetrachloroethene	120		110		70-130	9		20
Chlorobenzene	110		110		75-130	0		20
Trichlorofluoromethane	110		110		62-150	0		20
1,2-Dichloroethane	130		120		70-130	8		20
1,1,1-Trichloroethane	120		120		67-130	0		20
Bromodichloromethane	120		120		67-130	0		20
trans-1,3-Dichloropropene	120		120		70-130	0		20
cis-1,3-Dichloropropene	120		120		70-130	0		20
1,1-Dichloropropene	120		130		70-130	8		20
Bromoform	92		93		54-136	1		20
1,1,2,2-Tetrachloroethane	100		110		67-130	10		20
Benzene	120		120		70-130	0		20
Toluene	120		110		70-130	9		20
Ethylbenzene	120		120		70-130	0		20
Chloromethane	130		**140**	Q	64-130	7		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2254047
Report Date: 10/06/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,03,05-06,08-10,12-13,15,17-18,20-22,25-27,29-30 Batch: WG1695834-3 WG1695834-4								
Bromomethane	68		70		39-139	3		20
Vinyl chloride	130		130		55-140	0		20
Chloroethane	93		95		55-138	2		20
1,1-Dichloroethene	120		120		61-145	0		20
trans-1,2-Dichloroethene	110		120		70-130	9		20
Trichloroethene	110		110		70-130	0		20
1,2-Dichlorobenzene	100		110		70-130	10		20
1,3-Dichlorobenzene	110		100		70-130	10		20
1,4-Dichlorobenzene	100		100		70-130	0		20
Methyl tert butyl ether	100		110		63-130	10		20
p/m-Xylene	115		110		70-130	4		20
o-Xylene	110		110		70-130	0		20
cis-1,2-Dichloroethene	110		120		70-130	9		20
Dibromomethane	100		100		70-130	0		20
1,2,3-Trichloropropane	100		110		64-130	10		20
Acrylonitrile	120		110		70-130	9		20
Styrene	110		110		70-130	0		20
Dichlorodifluoromethane	120		110		36-147	9		20
Acetone	140		130		58-148	7		20
Carbon disulfide	120		120		51-130	0		20
2-Butanone	90		100		63-138	11		20
Vinyl acetate	130		130		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2254047
Report Date: 10/06/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,03,05-06,08-10,12-13,15,17-18,20-22,25-27,29-30 Batch: WG1695834-3 WG1695834-4								
4-Methyl-2-pentanone	95		94		59-130	1		20
2-Hexanone	100		94		57-130	6		20
Bromochloromethane	100		120		70-130	18		20
2,2-Dichloropropane	**140**	Q	**140**	Q	63-133	0		20
1,2-Dibromoethane	100		110		70-130	10		20
1,3-Dichloropropane	110		110		70-130	0		20
1,1,1,2-Tetrachloroethane	110		110		64-130	0		20
Bromobenzene	110		110		70-130	0		20
n-Butylbenzene	100		110		53-136	10		20
sec-Butylbenzene	110		110		70-130	0		20
tert-Butylbenzene	100		110		70-130	10		20
o-Chlorotoluene	120		120		70-130	0		20
p-Chlorotoluene	120		120		70-130	0		20
1,2-Dibromo-3-chloropropane	80		85		41-144	6		20
Hexachlorobutadiene	100		100		63-130	0		20
Isopropylbenzene	120		110		70-130	9		20
p-Isopropyltoluene	100		110		70-130	10		20
Naphthalene	87		87		70-130	0		20
n-Propylbenzene	120		120		69-130	0		20
1,2,3-Trichlorobenzene	98		96		70-130	2		20
1,2,4-Trichlorobenzene	100		100		70-130	0		20
1,3,5-Trimethylbenzene	110		110		64-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1487 FIRST AVENUE

Project Number: 100963701

Lab Number: L2254047

Report Date: 10/06/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,03,05-06,08-10,12-13,15,17-18,20-22,25-27,29-30 Batch: WG1695834-3 WG1695834-4								
1,2,4-Trimethylbenzene	110		110		70-130	0		20
1,4-Dioxane	84		84		56-162	0		20
p-Diethylbenzene	100		100		70-130	0		20
p-Ethyltoluene	110		110		70-130	0		20
1,2,4,5-Tetramethylbenzene	89		91		70-130	2		20
Ethyl ether	110		110		59-134	0		20
trans-1,4-Dichloro-2-butene	110		110		70-130	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	106		110		70-130
Toluene-d8	103		101		70-130
4-Bromofluorobenzene	114		114		70-130
Dibromofluoromethane	100		105		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2254047
Report Date: 10/06/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 31,33-34,36-38,40-41,43-44,46,48-50,54 Batch: WG1695994-3 WG1695994-4								
Methylene chloride	97		100		70-130	3		20
1,1-Dichloroethane	95		100		70-130	5		20
Chloroform	100		100		70-130	0		20
Carbon tetrachloride	98		100		63-132	2		20
1,2-Dichloropropane	95		100		70-130	5		20
Dibromochloromethane	97		100		63-130	3		20
1,1,2-Trichloroethane	95		100		70-130	5		20
Tetrachloroethene	93		96		70-130	3		20
Chlorobenzene	96		99		75-130	3		20
Trichlorofluoromethane	120		130		62-150	8		20
1,2-Dichloroethane	96		100		70-130	4		20
1,1,1-Trichloroethane	96		100		67-130	4		20
Bromodichloromethane	100		110		67-130	10		20
trans-1,3-Dichloropropene	97		100		70-130	3		20
cis-1,3-Dichloropropene	98		110		70-130	12		20
1,1-Dichloropropene	92		99		70-130	7		20
Bromoform	89		86		54-136	3		20
1,1,2,2-Tetrachloroethane	90		95		67-130	5		20
Benzene	97		100		70-130	3		20
Toluene	93		95		70-130	2		20
Ethylbenzene	91		93		70-130	2		20
Chloromethane	79		80		64-130	1		20
Bromomethane	85		93		39-139	9		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2254047
Report Date: 10/06/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 31,33-34,36-38,40-41,43-44,46,48-50,54 Batch: WG1695994-3 WG1695994-4								
Vinyl chloride	93		100		55-140	7		20
Chloroethane	**140**	Q	**160**	Q	55-138	13		20
1,1-Dichloroethene	89		97		61-145	9		20
trans-1,2-Dichloroethene	96		99		70-130	3		20
Trichloroethene	93		97		70-130	4		20
1,2-Dichlorobenzene	94		96		70-130	2		20
1,3-Dichlorobenzene	93		97		70-130	4		20
1,4-Dichlorobenzene	92		97		70-130	5		20
Methyl tert butyl ether	85		96		63-130	12		20
p/m-Xylene	90		90		70-130	0		20
o-Xylene	85		90		70-130	6		20
cis-1,2-Dichloroethene	97		100		70-130	3		20
Dibromomethane	100		120		70-130	18		20
1,2,3-Trichloropropane	91		95		64-130	4		20
Acrylonitrile	90		95		70-130	5		20
Styrene	95		95		70-130	0		20
Dichlorodifluoromethane	91		96		36-147	5		20
Acetone	91		98		58-148	7		20
Carbon disulfide	92		96		51-130	4		20
2-Butanone	83		94		63-138	12		20
Vinyl acetate	79		87		70-130	10		20
4-Methyl-2-pentanone	72		75		59-130	4		20
2-Hexanone	74		76		57-130	3		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2254047
Report Date: 10/06/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 31,33-34,36-38,40-41,43-44,46,48-50,54 Batch: WG1695994-3 WG1695994-4								
Bromochloromethane	100		110		70-130	10		20
2,2-Dichloropropane	98		100		63-133	2		20
1,2-Dibromoethane	94		97		70-130	3		20
1,3-Dichloropropane	98		100		70-130	2		20
1,1,1,2-Tetrachloroethane	98		100		64-130	2		20
Bromobenzene	92		93		70-130	1		20
n-Butylbenzene	92		95		53-136	3		20
sec-Butylbenzene	90		92		70-130	2		20
tert-Butylbenzene	88		92		70-130	4		20
o-Chlorotoluene	90		93		70-130	3		20
p-Chlorotoluene	88		90		70-130	2		20
1,2-Dibromo-3-chloropropane	78		100		41-144	**25**	Q	20
Hexachlorobutadiene	100		100		63-130	0		20
Isopropylbenzene	86		90		70-130	5		20
p-Isopropyltoluene	91		94		70-130	3		20
Naphthalene	81		90		70-130	11		20
n-Propylbenzene	90		94		69-130	4		20
1,2,3-Trichlorobenzene	89		95		70-130	7		20
1,2,4-Trichlorobenzene	91		95		70-130	4		20
1,3,5-Trimethylbenzene	86		89		64-130	3		20
1,2,4-Trimethylbenzene	87		89		70-130	2		20
1,4-Dioxane	128		138		56-162	8		20
p-Diethylbenzene	87		90		70-130	3		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1487 FIRST AVENUE

Project Number: 100963701

Lab Number: L2254047

Report Date: 10/06/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 31,33-34,36-38,40-41,43-44,46,48-50,54 Batch: WG1695994-3 WG1695994-4								
p-Ethyltoluene	87		91		70-130	4		20
1,2,4,5-Tetramethylbenzene	84		86		70-130	2		20
Ethyl ether	**140**	Q	**150**	Q	59-134	7		20
trans-1,4-Dichloro-2-butene	79		83		70-130	5		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	107		112		70-130
Toluene-d8	103		101		70-130
4-Bromofluorobenzene	96		97		70-130
Dibromofluoromethane	113		115		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2254047
Report Date: 10/06/22

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(*)
L2254047-01A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-01B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-01C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-02A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-02B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-02C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-03A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-03B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-03C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-04A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-04B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-04C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-05A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-05B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-05C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-06A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-06B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-06C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-07A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-07B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-07C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-08A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-08B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2254047
Report Date: 10/06/22

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2254047-08C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-09A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-09B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-09C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-10A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-10B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-10C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-11A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-11B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-11C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-12A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-12B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-12C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-13A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-13B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-13C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-14A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-14B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-14C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-15A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-15B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-15C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-16A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-16B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-16C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-17A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-17B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-17C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2254047
Report Date: 10/06/22

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2254047-18A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-18B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-18C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-19A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-19B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-19C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-20A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-20B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-20C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-21A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-21B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-21C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-22A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-22B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-22C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-23A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-23B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-23C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-24A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-24B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-24C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-25A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-25B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-25C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-26A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-26B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-26C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-27A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2254047
Report Date: 10/06/22

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2254047-27B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-27C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-28A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-28B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-28C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-29A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-29B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-29C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-30A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-30B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-30C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-31A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-31B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-31C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-32A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-32B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-32C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-33A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-33B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-33C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-34A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-34B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-34C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-35A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-35B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-35C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-36A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-36B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2254047
Report Date: 10/06/22

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2254047-36C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-37A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-37B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-37C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-38A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-38B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-38C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-39A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-39B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-39C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-40A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-40B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-40C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-41A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-41B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-41C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-42A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-42B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-42C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-43A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-43B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-43C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-44A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-44B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-44C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-45A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-45B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-45C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2254047
Report Date: 10/06/22

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2254047-46A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-46B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-46C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-47A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-47B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-47C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-48A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-48B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-48C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-49A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-49B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-49C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-50A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-50B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-50C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-51A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-51B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-51C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-52A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-52B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-52C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-53A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-53B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-53C	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-54A	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)
L2254047-54B	Vial HCl preserved	A	NA		3.2	Y	Absent		NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name:	1487 FIRST AVENUE	**Lab Number:**	L2254047
Project Number:	100963701	**Report Date:**	10/06/22

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:	1487 FIRST AVENUE	**Lab Number:**	L2254047
Project Number:	100963701	**Report Date:**	10/06/22

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:	1487 FIRST AVENUE	**Lab Number:**	L2254047
Project Number:	100963701	**Report Date:**	10/06/22

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.)

Report Format: DU Report with 'J' Qualifiers

Project Name:	1487 FIRST AVENUE	**Lab Number:**	L2254047
Project Number:	100963701	**Report Date:**	10/06/22

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.

Certification Information

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

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

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

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

Westborough Facility:

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

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

Mansfield Facility:

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

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

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

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

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 6

Date Rec'd in Lab: 9/30/22

ALPHA Job #: L2254047

Client Information

Client: Langan
Address: 300 Kimball Drive
Parsippany NJ
Phone: 973 560 4900
Fax: 4901
Email: asandve@langan.com

Project Information

Project Name: 1487 First Avenue
Project Location: New York, NY
Project #: 1009603701
(Use Project name as Project #)
Project Manager: Ashley Sandve
ALPHAQuote #:

Turn-Around Time

Standard [X] Due Date: 10/4/22
Rush (only if pre approved) [X] See notes # of Days: 3

Deliverables

- [ ] ASP-A
- [X] ASP-B
- [ ] EQuIS (1 File)
- [ ] EQuIS (4 File)
- [X] Other Langan EDD

Regulatory Requirement

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

Billing Information

- [X] Same as Client Info

PO #

Disposal Site Information

Please identify below location of applicable disposal facilities.

Disposal Facility:
- [ ] NJ
- [ ] NY
- [ ] Other:

These samples have been previously analyzed by Alpha [ ]

Other project specific requirements/comments:

See notes for 3 day TAT samples. Standard TAT for all other samples

Please specify Metals or TAL.

ANALYSIS

VOCs

Sample Filtration
- [ ] Done
- [ ] Lab to do

Preservation
- [ ] Lab to do

(Please Specify below)

Total Bottle

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs	Sample Specific Comments
54047-01	LMW-6R-S-21.5	9/29/22	9:50	GW	BA/MY	X	
-02	LMW-6R-S-31	9/29/22	10:00			X	3-DAY TAT
-03	LMW-6R-D-46		10:10			X	
-04	LMW-6R-D-70		10:20			X	3-DAY TAT
-05	LMW-6R-D-75		10:30			X	
-06	LMW-7R-S-21.5		11:15			X	
-07	LMW-7R-S-27		11:25			X	3-DAY TAT
-08	LMW-7R-S-39		11:55			X	
-09	LMW-7R-S-40.95		11:45			X	
-10	LMW-7R-D-48	↓	10:45	↓	↓	X	

Container Type: V
Preservative: B

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

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

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

Relinquished By:	Date/Time	Received By:	Date/Time
	9/29/22 1830		9/29/22 1830
	9/30/22 1015	Dan D.	9/30/22 1020
Dan D.	9/30/22 1615	MSM via mail	9/30 1642
MSM via mail	9/30		

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

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

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

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

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

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

Page: 2 of 6

Date Rec'd in Lab: 9/30/22

ALPHA Job #: L2254047

Client Information

Client: See page 1
Address:
Phone:
Fax:
Email:

Project Information

Project Name:
Project Location:
Project #
(Use Project name as Project #) ☐
Project Manager:
ALPHAQuote #:

Turn-Around Time

Standard ☒ Due Date:
Rush (only if pre approved) ☒ # of Days: 3

Deliverables

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

Regulatory Requirement

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

Billing Information

☑ Same as Client Info
PO #

Disposal Site Information

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

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

See notes for 3day TAT samples. Standard TAT for all other samples.

Please specify Metals or TAL.

ANALYSIS

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs	Total Bottle	Sample Specific Comments
54047-11	LMW7R-D_68.5	9/29/22	10 55	GW	BA/MY	x		3-DAY TAT
-12	LMW-7R-D_75		11 05			x		
-13	LMW-8R-S_15		11 55			x		
-14	LMW-8R-S_17.5		1205			x		3-DAY TAT
-15	LMW-8R-S_22.5		1215			x		
-16	LMW-8R-S_27		1225			x		3-DAY TAT
-17	LMW-8R-D_46.5		1235			x		
-18	LMW-8R-D_48.5		1255			x		
-19	LMW-8R-D_58		1305			x		3-DAY TAT
-20	LMW-8R-D_73	↓	1245	↓	↓	x		

Container Type: V
Preservative: B

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

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

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

Relinquished By:	Date/Time	Received By:	Date/Time
	9/29/22 1830		9/29/22 18:30
	9/30/22 1015	DonD AAL	9/30/22 1022
DonD AAL	9/30/22 1615		9/30 16 CR
	9/30		9/30/22 22:00

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

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

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

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8 Walkup Dr.
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TEL: 508-822-9300
FAX: 508-822-3288

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

Page 3 of 6

Date Rec'd in Lab: 9/30/22

ALPHA Job #: L2254047

Client Information
Client:
Address: See page 1
Phone:
Fax:
Email:

Project Information
Project Name:
Project Location:
Project # See page 1
(Use Project name as Project #) ☐
Project Manager:
ALPHAQuote #:

Turn-Around Time
Standard ☒ Due Date: 10/4/22
Rush (only if pre approved) ☒ # of Days: 3

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

Billing Information
☑ Same as Client Info
PO #

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

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

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:
See notes for 3-day TAT samples. Standard TAT for all other samples.

Please specify Metals or TAL.

ANALYSIS

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs	Total Bottle	Sample Specific Comments
54047-21	LMW-8R-D_77	9/29/22	1315	GW	MW/BA	X		
-22	LMW-9R-S_15		1335			X		
-23	LMW-9R-S_22		1325			X		3-DAY TAT
-24	LMW-9R-S_30.5		1345			X		3-DAY TAT
-25	LMW-9R-D_43.5		1350			X		
-26	LMW-9R-D_46.5		1355			X		
-27	LMW-9R-D_60.5		1405			X		
-28	LMW-9R-D_63.5		1415			X		3-DAY TAT
-29	LMW-9R-D_76		1425			X		
-30	LMW-10R-S_21.5	↓	900	↓	↓	X		

Container Type: V
Preservative: B

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

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

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

Relinquished By:	Date/Time	Received By:	Date/Time
	9/29/22 1830		9/29/22 1830
	9/30/22 1015	Dan D. [illegible]	9/30/22 1030
Dan D. [illegible]	9/30/22 1615	MS/MW	9/30 1642
MS/MW	9/30		9/30/22

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

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

dlt 10/20/22 22:00

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

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: 508-822-9288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
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Page 4 of 6

Date Rec'd in Lab: 9/30/22

ALPHA Job #: L2254047

Client Information
Client:
Address:
Phone: see page 1
Fax:
Email:

Project Information
Project Name:
Project Location:
Project # see page 1
(Use Project name as Project #) ☐
Project Manager:
ALPHAQuote #:

Turn-Around Time
Standard ☒ Due Date: 10/4/22
Rush (only if pre approved) ☒ See notes # of Days: 3

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

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

Billing Information
☑ Same as Client Info
PO #

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

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

See notes for 3 day TAT samples

Please specify Metals or TAL.

ANALYSIS

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs	Sample Specific Comments	Total Bottle
54047-31	LMW-10R-S_28.5	9/29/22	9:20	GW	BA/MA	X		
-32	LMW-10R-S_26.5	"	9:10	"	"	X	3-DAY TAT	
-33	LMW-10R-S_34	"	9:30	"	"	X		
-34	LMW-10R-S_36	"	9:40	"	"	X		
-35	LMW-10R-D_49	"	8:40	"	"	X	3-DAY TAT	
-36	LMW-10R-D_63	"	8:50	"	"	X		
-37	LMW-11R-S_20.5	"	14:55	"	"	X		
-38	LMW-11R-S_23	"	15:15	"	"	X		
-39	LMW-11R-S-26.5	"	14:45	"	"	X	3-DAY TAT	
-40	LMW-11R-S-29.5	↓	15:35	↓	↓	X		

Container Type: V
Preservative: B

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

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

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

Relinquished By:	Date/Time	Received By:	Date/Time
	9/29/22 1830		9/29/22 1830
	9/30/22 1015		9/30/22 1015
	9/30/22 1615		9/30/22 1642
	9/30		9/30 2200

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.)

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Page 5 of 6

Date Rec'd in Lab: 9/30/22

ALPHA Job #: L2254047

Client Information

Client:
Address: See page 1
Phone:
Fax:
Email:

Project Information

Project Name:
Project Location:
Project # See page 1
(Use Project name as Project #) ☐
Project Manager:
ALPHAQuote #:

Turn-Around Time

Standard ☒ Due Date: 10/4/22
Rush (only if pre approved) ☒ See notes # of Days: 3

Deliverables

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

Regulatory Requirement

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

Billing Information

☑ Same as Client Info
PO #

Disposal Site Information

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

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

See notes for 3 day TAT samples. Standard TAT for all other samples.

Please specify Metals or TAL

ANALYSIS

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs	Total Bottle	Sample Specific Comments
54047-41	LMW-11R-S_40.5	9/29/22	1525	GW	BA/MY	X		
-42	LMW-11R-D_57.5		1505			X		3-DAY TAT
-43	LMW-11R-D_76		1435			X		
-44	LMW-12R-S_24.5		1545			X		
-45	LMW-12R-S_28.5		1555			X		3-DAY TAT
-46	LMW-12R-S_36		1605			X		
-47	LMW-12R-D_53		1615			X		3-DAY TAT
-48	LMW-12R-D_67		1625			X		
-49	LMW-12R-S_17		1645			X		
-50	LMW-12R-S_20.5		1655			X		

Container Type: V
Preservative: B

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

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

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

Relinquished By:	Date/Time	Received By:	Date/Time
	9/29/22 1830		9/29/22 1830
	9/30/22 1015		9/30/22 1015
	9/30/22 1615	MSM	9/30/22 1615
MSM	9/30		9/30 1612
	9/30/22 2000		9/30/22 22:00

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

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FAX: 508-822-3288

NEW YORK CHAIN OF CUSTODY

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Page 6 of 6

Date Rec'd in Lab: 9/30/22

ALPHA Job #: L2254047

Client Information
Client: /
Address: see page 1
Phone: see page 1
Fax:
Email: /

Project Information
Project Name:
Project Location:
Project #: see page 1
(Use Project name as Project #) ☐
Project Manager: /
ALPHAQuote #:

Turn-Around Time
Standard ☒ Due Date: 10/4/22
Rush (only if pre approved) ☒ See notes # of Days: 3

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

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

Billing Information
☒ Same as Client Info
PO #

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

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:
See notes for 3-day TAT samples. Standard TAT for all other samples.

Please specify Metals or TAL.

ANALYSIS
VOC's

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

Total Bottle

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC's	Sample Specific Comments
54047-51	LMW-13R-S-26	9/29/22	17:05	GW	BH/MW	X	3-DAY TAT
-52	LMW-13R-D-55.5	"	16:35	GW	"	X	3-DAY TAT
-53	LMW-13R-D-75	"	17:15	GW	"	X	3-DAY TAT
-54	Trip Blank-092922	↓	17:25	AQ	↓	X	

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

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

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

Container Type	V										
Preservative	B										

Relinquished By:	Date/Time	Received By:	Date/Time
	9/29/22 1830		9/29/22 1830
	9/30/22 1015		9/30/22 1020
	9/30/22 1615		9/30 1642
	9/30 2200		9/30/22 22:00

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

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

ANALYTICAL REPORT

Lab Number:	L2271355
Client:	Langan Engineering & Environmental 300 Kimball Drive 4th Floor Parsippany, NJ 07054
ATTN:	Ashley Sandve
Phone:	(973) 560-4871
Project Name:	1487 FIRST AVE
Project Number:	100963701
Report Date:	12/23/22

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: 1487 FIRST AVE
Project Number: 100963701

Lab Number: L2271355
Report Date: 12/23/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2271355-01	LMW-7R-S_20	WATER	MANHATTAN, NY	12/19/22 16:00	12/19/22
L2271355-02	FIELD BLANK_20221219	WATER	MANHATTAN, NY	12/19/22 15:55	12/19/22
L2271355-03	TRIP BLANK_20221219	WATER	MANHATTAN, NY	12/19/22 00:00	12/19/22

Project Name:	1487 FIRST AVE	**Lab Number:**	L2271355
Project Number:	100963701	**Report Date:**	12/23/22

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:	1487 FIRST AVE	**Lab Number:**	L2271355
Project Number:	100963701	**Report Date:**	12/23/22

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.

Volatile Organics

L2271355-03: The Trip Blank has a result for acrylonitrile present above the reporting limit. The sample was re-analyzed and did not confirm the original results. The results of both analyses are reported.

Total Metals

The WG1725404-3 MS recoveries for iron (160%), magnesium (65%) and manganese (0%), performed on L2271355-01, do not apply because the sample concentrations are greater than four times the spike amounts added.

Alkalinity, Total

L2271355-02: The Field Blank has a concentration above the reporting limit for Alkalinity, Total. Since the associated sample concentrations are greater than 10x the blank concentration for this analyte, no corrective action is required.

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

Caitlin Walukevich

Title: Technical Director/Representative Date: 12/23/22

ORGANICS

VOLATILES

Project Name: 1487 FIRST AVE
Project Number: 100963701
Lab Number: L2271355
Report Date: 12/23/22

SAMPLE RESULTS

Lab ID: L2271355-01
Client ID: LMW-7R-S_20
Sample Location: MANHATTAN, NY
Date Collected: 12/19/22 16:00
Date Received: 12/19/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 12/21/22 10:06
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	20		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	0.52		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	0.44	J	ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	0.34	J	ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1

Project Name: 1487 FIRST AVE **Lab Number:** L2271355

Project Number: 100963701 **Report Date:** 12/23/22

SAMPLE RESULTS

Lab ID: L2271355-01 Date Collected: 12/19/22 16:00

Client ID: LMW-7R-S_20 Date Received: 12/19/22

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	18		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	120		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	120		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: 1487 FIRST AVE
Project Number: 100963701
Lab Number: L2271355
Report Date: 12/23/22

SAMPLE RESULTS

Lab ID: L2271355-01
Client ID: LMW-7R-S_20
Sample Location: MANHATTAN, NY
Date Collected: 12/19/22 16:00
Date Received: 12/19/22
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	90		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	109		70-130

Project Name: 1487 FIRST AVE **Lab Number:** L2271355

Project Number: 100963701 **Report Date:** 12/23/22

SAMPLE RESULTS

Lab ID: L2271355-02 Date Collected: 12/19/22 15:55
Client ID: FIELD BLANK_20221219 Date Received: 12/19/22
Sample Location: MANHATTAN, NY Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 12/21/22 09:42
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: 1487 FIRST AVE **Lab Number:** L2271355

Project Number: 100963701 **Report Date:** 12/23/22

SAMPLE RESULTS

Lab ID: L2271355-02 Date Collected: 12/19/22 15:55

Client ID: FIELD BLANK_20221219 Date Received: 12/19/22

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: 1487 FIRST AVE **Lab Number:** L2271355

Project Number: 100963701 **Report Date:** 12/23/22

SAMPLE RESULTS

Lab ID: L2271355-02 Date Collected: 12/19/22 15:55

Client ID: FIELD BLANK_20221219 Date Received: 12/19/22

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	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	91		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	110		70-130

Project Name: 1487 FIRST AVE
Project Number: 100963701
Lab Number: L2271355
Report Date: 12/23/22

SAMPLE RESULTS

Lab ID: L2271355-03
Client ID: TRIP BLANK_20221219
Sample Location: MANHATTAN, NY
Date Collected: 12/19/22 00:00
Date Received: 12/19/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 12/21/22 09:17
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: 1487 FIRST AVE **Lab Number:** L2271355

Project Number: 100963701 **Report Date:** 12/23/22

SAMPLE RESULTS

Lab ID: L2271355-03 Date Collected: 12/19/22 00:00

Client ID: TRIP BLANK_20221219 Date Received: 12/19/22

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	5.0		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: 1487 FIRST AVE **Lab Number:** L2271355

Project Number: 100963701 **Report Date:** 12/23/22

SAMPLE RESULTS

Lab ID: L2271355-03 Date Collected: 12/19/22 00:00

Client ID: TRIP BLANK_20221219 Date Received: 12/19/22

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	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	88		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	113		70-130

Project Name: 1487 FIRST AVE
Project Number: 100963701
Lab Number: L2271355
Report Date: 12/23/22

SAMPLE RESULTS

Lab ID: L2271355-03 R
Client ID: TRIP BLANK_20221219
Sample Location: MANHATTAN, NY

Date Collected: 12/19/22 00:00
Date Received: 12/19/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 12/22/22 18:11
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: 1487 FIRST AVE **Lab Number:** L2271355

Project Number: 100963701 **Report Date:** 12/23/22

SAMPLE RESULTS

Lab ID: L2271355-03 R
Client ID: TRIP BLANK_20221219
Sample Location: MANHATTAN, NY

Date Collected: 12/19/22 00:00
Date Received: 12/19/22
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: 1487 FIRST AVE **Lab Number:** L2271355

Project Number: 100963701 **Report Date:** 12/23/22

SAMPLE RESULTS

Lab ID: L2271355-03 R Date Collected: 12/19/22 00:00

Client ID: TRIP BLANK_20221219 Date Received: 12/19/22

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	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	106		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	114		70-130
Dibromofluoromethane	104		70-130

Project Name: 1487 FIRST AVE
Project Number: 100963701
Lab Number: L2271355
Report Date: 12/23/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 12/21/22 08:53
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1726668-5					
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: 1487 FIRST AVE
Project Number: 100963701
Lab Number: L2271355
Report Date: 12/23/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 12/21/22 08:53
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1726668-5					
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: 1487 FIRST AVE
Project Number: 100963701
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Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 12/21/22 08:53
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1726668-5					
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	91		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	111		70-130

Project Name: 1487 FIRST AVE
Project Number: 100963701
Lab Number: L2271355
Report Date: 12/23/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 12/22/22 17:51
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG1726975-5					
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: 1487 FIRST AVE
Project Number: 100963701
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Report Date: 12/23/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 12/22/22 17:51
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG1726975-5					
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: 1487 FIRST AVE
Project Number: 100963701
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Report Date: 12/23/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 12/22/22 17:51
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG1726975-5					
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	109		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	110		70-130
Dibromofluoromethane	105		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVE
Project Number: 100963701

Lab Number: L2271355
Report Date: 12/23/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1726668-3 WG1726668-4								
Methylene chloride	100		110		70-130	10		20
1,1-Dichloroethane	100		100		70-130	0		20
Chloroform	93		86		70-130	8		20
Carbon tetrachloride	81		85		63-132	5		20
1,2-Dichloropropane	95		100		70-130	5		20
Dibromochloromethane	73		75		63-130	3		20
1,1,2-Trichloroethane	78		85		70-130	9		20
Tetrachloroethene	89		88		70-130	1		20
Chlorobenzene	92		93		75-130	1		20
Trichlorofluoromethane	97		97		62-150	0		20
1,2-Dichloroethane	79		82		70-130	4		20
1,1,1-Trichloroethane	86		87		67-130	1		20
Bromodichloromethane	82		84		67-130	2		20
trans-1,3-Dichloropropene	77		79		70-130	3		20
cis-1,3-Dichloropropene	84		91		70-130	8		20
1,1-Dichloropropene	90		98		70-130	9		20
Bromoform	72		80		54-136	11		20
1,1,2,2-Tetrachloroethane	91		98		67-130	7		20
Benzene	96		98		70-130	2		20
Toluene	90		91		70-130	1		20
Ethylbenzene	96		98		70-130	2		20
Chloromethane	110		110		64-130	0		20
Bromomethane	67		73		39-139	9		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVE
Project Number: 100963701

Lab Number: L2271355
Report Date: 12/23/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1726668-3 WG1726668-4								
Vinyl chloride	110		120		55-140	9		20
Chloroethane	120		120		55-138	0		20
1,1-Dichloroethene	100		100		61-145	0		20
trans-1,2-Dichloroethene	99		99		70-130	0		20
Trichloroethene	85		91		70-130	7		20
1,2-Dichlorobenzene	96		98		70-130	2		20
1,3-Dichlorobenzene	99		100		70-130	1		20
1,4-Dichlorobenzene	95		99		70-130	4		20
Methyl tert butyl ether	76		83		63-130	9		20
p/m-Xylene	100		100		70-130	0		20
o-Xylene	100		100		70-130	0		20
cis-1,2-Dichloroethene	94		94		70-130	0		20
Dibromomethane	88		96		70-130	9		20
1,2,3-Trichloropropane	90		100		64-130	11		20
Acrylonitrile	100		110		70-130	10		20
Styrene	95		100		70-130	5		20
Dichlorodifluoromethane	110		120		36-147	9		20
Acetone	100		92		58-148	8		20
Carbon disulfide	110		110		51-130	0		20
2-Butanone	82		89		63-138	8		20
Vinyl acetate	88		98		70-130	11		20
4-Methyl-2-pentanone	87		91		59-130	4		20
2-Hexanone	89		110		57-130	**21**	Q	20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1487 FIRST AVE

Project Number: 100963701

Lab Number: L2271355

Report Date: 12/23/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1726668-3 WG1726668-4								
Bromochloromethane	90		95		70-130	5		20
2,2-Dichloropropane	97		99		63-133	2		20
1,2-Dibromoethane	80		85		70-130	6		20
1,3-Dichloropropane	85		88		70-130	3		20
1,1,1,2-Tetrachloroethane	76		77		64-130	1		20
Bromobenzene	94		97		70-130	3		20
n-Butylbenzene	110		110		53-136	0		20
sec-Butylbenzene	110		110		70-130	0		20
tert-Butylbenzene	100		100		70-130	0		20
o-Chlorotoluene	100		110		70-130	10		20
p-Chlorotoluene	100		110		70-130	10		20
1,2-Dibromo-3-chloropropane	85		90		41-144	6		20
Hexachlorobutadiene	95		99		63-130	4		20
Isopropylbenzene	100		100		70-130	0		20
p-Isopropyltoluene	100		100		70-130	0		20
Naphthalene	89		96		70-130	8		20
n-Propylbenzene	110		110		69-130	0		20
1,2,3-Trichlorobenzene	86		92		70-130	7		20
1,2,4-Trichlorobenzene	83		89		70-130	7		20
1,3,5-Trimethylbenzene	98		100		64-130	2		20
1,2,4-Trimethylbenzene	95		99		70-130	4		20
1,4-Dioxane	94		104		56-162	10		20
p-Diethylbenzene	100		100		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVE
Project Number: 100963701

Lab Number: L2271355
Report Date: 12/23/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1726668-3 WG1726668-4								
p-Ethyltoluene	100		110		70-130	10		20
1,2,4,5-Tetramethylbenzene	78		84		70-130	7		20
Ethyl ether	94		100		59-134	6		20
trans-1,4-Dichloro-2-butene	87		92		70-130	6		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	90		92		70-130
Toluene-d8	102		101		70-130
4-Bromofluorobenzene	105		104		70-130
Dibromofluoromethane	99		100		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVE
Project Number: 100963701

Lab Number: L2271355
Report Date: 12/23/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG1726975-3 WG1726975-4								
Methylene chloride	100		96		70-130	4		20
1,1-Dichloroethane	100		95		70-130	5		20
Chloroform	99		94		70-130	5		20
Carbon tetrachloride	98		91		63-132	7		20
1,2-Dichloropropane	99		93		70-130	6		20
Dibromochloromethane	88		84		63-130	5		20
1,1,2-Trichloroethane	90		91		70-130	1		20
Tetrachloroethene	89		85		70-130	5		20
Chlorobenzene	92		89		75-130	3		20
Trichlorofluoromethane	110		98		62-150	12		20
1,2-Dichloroethane	100		97		70-130	3		20
1,1,1-Trichloroethane	100		93		67-130	7		20
Bromodichloromethane	97		92		67-130	5		20
trans-1,3-Dichloropropene	91		88		70-130	3		20
cis-1,3-Dichloropropene	94		90		70-130	4		20
1,1-Dichloropropene	100		95		70-130	5		20
Bromoform	77		76		54-136	1		20
1,1,2,2-Tetrachloroethane	84		88		67-130	5		20
Benzene	97		92		70-130	5		20
Toluene	92		90		70-130	2		20
Ethylbenzene	96		92		70-130	4		20
Chloromethane	110		97		64-130	13		20
Bromomethane	110		100		39-139	10		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1487 FIRST AVE

Project Number: 100963701

Lab Number: L2271355

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG1726975-3 WG1726975-4								
Vinyl chloride	110		96		55-140	14		20
Chloroethane	100		91		55-138	9		20
1,1-Dichloroethene	100		93		61-145	7		20
trans-1,2-Dichloroethene	100		96		70-130	4		20
Trichloroethene	96		92		70-130	4		20
1,2-Dichlorobenzene	90		89		70-130	1		20
1,3-Dichlorobenzene	92		88		70-130	4		20
1,4-Dichlorobenzene	92		89		70-130	3		20
Methyl tert butyl ether	99		93		63-130	6		20
p/m-Xylene	95		90		70-130	5		20
o-Xylene	95		90		70-130	5		20
cis-1,2-Dichloroethene	100		92		70-130	8		20
Dibromomethane	98		92		70-130	6		20
1,2,3-Trichloropropane	86		89		64-130	3		20
Acrylonitrile	100		96		70-130	4		20
Styrene	95		90		70-130	5		20
Dichlorodifluoromethane	110		100		36-147	10		20
Acetone	100		88		58-148	13		20
Carbon disulfide	110		97		51-130	13		20
2-Butanone	100		100		63-138	0		20
Vinyl acetate	100		97		70-130	3		20
4-Methyl-2-pentanone	84		91		59-130	8		20
2-Hexanone	92		92		57-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1487 FIRST AVE

Project Number: 100963701

Lab Number: L2271355

Report Date: 12/23/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG1726975-3 WG1726975-4								
Bromochloromethane	98		92		70-130	6		20
2,2-Dichloropropane	110		100		63-133	10		20
1,2-Dibromoethane	88		86		70-130	2		20
1,3-Dichloropropane	91		90		70-130	1		20
1,1,1,2-Tetrachloroethane	82		81		64-130	1		20
Bromobenzene	89		85		70-130	5		20
n-Butylbenzene	91		90		53-136	1		20
sec-Butylbenzene	94		91		70-130	3		20
tert-Butylbenzene	92		88		70-130	4		20
o-Chlorotoluene	92		88		70-130	4		20
p-Chlorotoluene	96		92		70-130	4		20
1,2-Dibromo-3-chloropropane	88		80		41-144	10		20
Hexachlorobutadiene	87		85		63-130	2		20
Isopropylbenzene	93		89		70-130	4		20
p-Isopropyltoluene	91		88		70-130	3		20
Naphthalene	85		85		70-130	0		20
n-Propylbenzene	95		90		69-130	5		20
1,2,3-Trichlorobenzene	83		85		70-130	2		20
1,2,4-Trichlorobenzene	84		83		70-130	1		20
1,3,5-Trimethylbenzene	89		86		64-130	3		20
1,2,4-Trimethylbenzene	88		86		70-130	2		20
1,4-Dioxane	78		76		56-162	3		20
p-Diethylbenzene	86		85		70-130	1		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVE
Project Number: 100963701

Lab Number: L2271355
Report Date: 12/23/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG1726975-3 WG1726975-4								
p-Ethyltoluene	93		90		70-130	3		20
1,2,4,5-Tetramethylbenzene	78		79		70-130	1		20
Ethyl ether	100		100		59-134	0		20
trans-1,4-Dichloro-2-butene	93		86		70-130	8		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	109		105		70-130
Toluene-d8	99		101		70-130
4-Bromofluorobenzene	100		102		70-130
Dibromofluoromethane	104		101		70-130

METALS

Project Name: 1487 FIRST AVE
Project Number: 100963701
Lab Number: L2271355
Report Date: 12/23/22

SAMPLE RESULTS

Lab ID: L2271355-01
Client ID: LMW-7R-S_20
Sample Location: MANHATTAN, NY
Sample Depth:
Matrix: Water

Date Collected: 12/19/22 16:00
Date Received: 12/19/22
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Calcium, Total	200.		mg/l	0.100	0.0394	1	12/20/22 10:01	12/22/22 23:13	EPA 3005A	1,6020B	WKP
Iron, Total	17.7		mg/l	0.0500	0.0191	1	12/20/22 10:01	12/22/22 23:13	EPA 3005A	1,6020B	WKP
Magnesium, Total	73.1		mg/l	0.0700	0.0242	1	12/20/22 10:01	12/22/22 23:13	EPA 3005A	1,6020B	WKP
Manganese, Total	5.733		mg/l	0.00100	0.00044	1	12/20/22 10:01	12/22/22 23:13	EPA 3005A	1,6020B	WKP
Total Hardness (by calculation) - Mansfield Lab											
Hardness	800.3		mg/l	0.5400	NA	1	12/20/22 10:01	12/22/22 23:13	EPA 3005A	1,6020B	WKP

Project Name: 1487 FIRST AVE
Project Number: 100963701
Lab Number: L2271355
Report Date: 12/23/22

SAMPLE RESULTS

Lab ID: L2271355-02
Client ID: FIELD BLANK_20221219
Sample Location: MANHATTAN, NY
Date Collected: 12/19/22 15:55
Date Received: 12/19/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Calcium, Total	ND		mg/l	0.100	0.0394	1	12/20/22 10:01	12/22/22 22:47	EPA 3005A	1,6020B	WKP
Iron, Total	ND		mg/l	0.0500	0.0191	1	12/20/22 10:01	12/22/22 22:47	EPA 3005A	1,6020B	WKP
Magnesium, Total	ND		mg/l	0.0700	0.0242	1	12/20/22 10:01	12/22/22 22:47	EPA 3005A	1,6020B	WKP
Manganese, Total	ND		mg/l	0.00100	0.00044	1	12/20/22 10:01	12/22/22 22:47	EPA 3005A	1,6020B	WKP
Total Hardness (by calculation) - Mansfield Lab											
Hardness	ND		mg/l	0.5400	NA	1	12/20/22 10:01	12/22/22 22:47	EPA 3005A	1,6020B	WKP

Project Name: 1487 FIRST AVE
Project Number: 100963701
Lab Number: L2271355
Report Date: 12/23/22

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-02 Batch: WG1725404-1										
Calcium, Total	ND		mg/l	0.100	0.0394	1	12/20/22 10:01	12/22/22 22:42	1,6020B	WKP
Iron, Total	ND		mg/l	0.0500	0.0191	1	12/20/22 10:01	12/22/22 22:42	1,6020B	WKP
Magnesium, Total	ND		mg/l	0.0700	0.0242	1	12/20/22 10:01	12/22/22 22:42	1,6020B	WKP
Manganese, Total	ND		mg/l	0.00100	0.00044	1	12/20/22 10:01	12/22/22 22:42	1,6020B	WKP

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness (by calculation) - Mansfield Lab for sample(s): 01-02 Batch: WG1725404-1										
Hardness	ND		mg/l	0.5400	NA	1	12/20/22 10:01	12/22/22 22:42	1,6020B	WKP

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1487 FIRST AVE

Project Number: 100963701

Lab Number: L2271355

Report Date: 12/23/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1725404-2								
Calcium, Total	88		-		80-120	-		
Iron, Total	93		-		80-120	-		
Magnesium, Total	91		-		80-120	-		
Manganese, Total	94		-		80-120	-		
Total Hardness (by calculation) - Mansfield Lab Associated sample(s): 01-02 Batch: WG1725404-2								
Hardness	90		-		80-120	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 1487 FIRST AVE
Project Number: 100963701

Lab Number: L2271355
Report Date: 12/23/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1725404-3 QC Sample: L2271355-01 Client ID: LMW-7R-S_20												
Calcium, Total	200.	10	210	100		-	-		75-125	-		20
Iron, Total	17.7	1	19.3	**160**	Q	-	-		75-125	-		20
Magnesium, Total	73.1	10	79.6	**65**	Q	-	-		75-125	-		20
Manganese, Total	5.733	0.5	5.479	**0**	Q	-	-		75-125	-		20
Total Hardness (by calculation) - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1725404-3 QC Sample: L2271355-01 Client ID: LMW-7R-S_20												
Hardness	800.3	66.2	852.1	78		-	-		75-125	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: 1487 FIRST AVE

Project Number: 100963701

Lab Number: L2271355

Report Date: 12/23/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1725404-4 QC Sample: L2271355-01 Client ID: LMW-7R-S_20						
Calcium, Total	200.	198	mg/l	1		20
Iron, Total	17.7	17.5	mg/l	1		20
Magnesium, Total	73.1	71.8	mg/l	2		20
Manganese, Total	5.733	5.704	mg/l	1		20
Total Hardness (by calculation) - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1725404-4 QC Sample: L2271355-01 Client ID: LMW-7R-S_20						
Hardness	800.3	790.8	mg/l	1		20

Project Name: 1487 FIRST AVE
Project Number: 100963701

Lab Serial Dilution Analysis
Batch Quality Control

Lab Number: L2271355
Report Date: 12/23/22

Parameter	Native Sample	Serial Dilution	Units	% D	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1725404-6 QC Sample: L2271355-01 Client ID: LMW-7R-S_20						
Calcium, Total	200.	201.	mg/l	1		20
Iron, Total	17.7	17.9	mg/l	1		20
Magnesium, Total	73.1	71.0	mg/l	3		20
Manganese, Total	5.733	4.912	mg/l	14		20

INORGANICS
&
MISCELLANEOUS

Project Name: 1487 FIRST AVE
Project Number: 100963701

Lab Number: L2271355
Report Date: 12/23/22

SAMPLE RESULTS

Lab ID: L2271355-01
Client ID: LMW-7R-S_20
Sample Location: MANHATTAN, NY

Date Collected: 12/19/22 16:00
Date Received: 12/19/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Total	158.		mg CaCO3/L	2.00	NA	1	-	12/21/22 07:52	121,2320B	MKT
Chloride	520		mg/l	10	8.9	10	-	12/21/22 20:59	121,4500CL-E	TLH
Nitrogen, Nitrate	0.261		mg/l	0.100	0.022	1	-	12/21/22 05:01	121,4500NO3-F	KAF
Sulfate	520		mg/l	500	68.	50	12/21/22 12:31	12/21/22 12:31	1,9038	MCU
Total Organic Carbon	2.2		mg/l	1.0	0.19	2	-	12/20/22 04:17	1,9060A	DEW
Dissolved Organic Carbon	2.4		mg/l	2.0	0.09	2	12/20/22 08:50	12/20/22 13:52	1,9060A	DEW

Project Name: 1487 FIRST AVE
Project Number: 100963701

Lab Number: L2271355
Report Date: 12/23/22

SAMPLE RESULTS

Lab ID: L2271355-02
Client ID: FIELD BLANK_20221219
Sample Location: MANHATTAN, NY

Date Collected: 12/19/22 15:55
Date Received: 12/19/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Total	2.20		mg CaCO3/L	2.00	NA	1	-	12/21/22 07:52	121,2320B	MKT
Chloride	ND		mg/l	1.0	0.89	1	-	12/21/22 21:03	121,4500CL-E	TLH
Nitrogen, Nitrate	ND		mg/l	0.100	0.022	1	-	12/21/22 05:02	121,4500NO3-F	KAF
Sulfate	8.6	J	mg/l	10	1.4	1	12/21/22 12:31	12/21/22 12:31	1,9038	MCU
Total Organic Carbon	0.13	J	mg/l	0.50	0.09	1	-	12/20/22 04:17	1,9060A	DEW
Dissolved Organic Carbon	0.58	J	mg/l	1.0	0.04	1	12/20/22 08:50	12/20/22 13:14	1,9060A	DEW

Project Name: 1487 FIRST AVE
Project Number: 100963701
Lab Number: L2271355
Report Date: 12/23/22

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1725372-1										
Dissolved Organic Carbon	ND		mg/l	1.0	0.04	1	-	12/20/22 05:15	1,9060A	DEW
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1725373-1										
Total Organic Carbon	ND		mg/l	0.50	0.09	1	-	12/20/22 04:17	1,9060A	DEW
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1725833-1										
Nitrogen, Nitrate	ND		mg/l	0.100	0.022	1	-	12/21/22 03:31	121,4500NO3-F	KAF
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1725935-1										
Alkalinity, Total	ND		mg CaCO3/L	2.00	NA	1	-	12/21/22 07:52	121,2320B	MKT
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1726135-1										
Sulfate	2.2	J	mg/l	10	1.4	1	12/21/22 12:31	12/21/22 12:31	1,9038	MCU
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1726243-1										
Chloride	ND		mg/l	1.0	0.89	1	-	12/21/22 18:52	121,4500CL-E	TLH

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1487 FIRST AVE

Project Number: 100963701

Lab Number: L2271355

Report Date: 12/23/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1725372-2								
Dissolved Organic Carbon	95		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1725373-2								
Total Organic Carbon	100		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1725833-2								
Nitrogen, Nitrate	96		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1725935-2								
Alkalinity, Total	105		-		90-110	-		10
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1726135-2								
Sulfate	90		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1726243-2								
Chloride	103		-		90-110	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 1487 FIRST AVE
Project Number: 100963701

Lab Number: L2271355
Report Date: 12/23/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1725372-4 QC Sample: L2268605-01 Client ID: MS Sample												
Dissolved Organic Carbon	4.5	16	22	107		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1725373-4 QC Sample: L2270481-01 Client ID: MS Sample												
Total Organic Carbon	82.	320	420	106		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1725833-4 QC Sample: L2271521-01 Client ID: MS Sample												
Nitrogen, Nitrate	0.101	4	4.15	101		-	-		83-113	-		17
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1725935-4 QC Sample: L2271518-02 Client ID: MS Sample												
Alkalinity, Total	81.0	100	193	112		-	-		86-116	-		10
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1726135-4 QC Sample: L2269573-01 Client ID: MS Sample												
Sulfate	98.	100	200	104		-	-		55-147	-		14
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1726243-4 QC Sample: L2271284-01 Client ID: MS Sample												
Chloride	390	20	400	**50**	Q	-	-		58-140	-		7

Lab Duplicate Analysis
Batch Quality Control

Project Name: 1487 FIRST AVE
Project Number: 100963701

Lab Number: L2271355
Report Date: 12/23/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1725372-3 QC Sample: L2268605-01 Client ID: DUP Sample						
Dissolved Organic Carbon	4.5	4.6	mg/l	2		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1725373-3 QC Sample: L2270481-01 Client ID: DUP Sample						
Total Organic Carbon	82.	83	mg/l	1		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1725833-3 QC Sample: L2271521-01 Client ID: DUP Sample						
Nitrogen, Nitrate	0.101	0.082J	mg/l	NC		17
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1725935-3 QC Sample: L2271518-02 Client ID: DUP Sample						
Alkalinity, Total	81.0	81.8	mg CaCO3/L	1		10
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1726135-3 QC Sample: L2269573-01 Client ID: DUP Sample						
Sulfate	98.	98	mg/l	0		14
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1726243-3 QC Sample: L2271284-01 Client ID: DUP Sample						
Chloride	390	390	mg/l	0		7

Project Name: 1487 FIRST AVE
Project Number: 100963701

Lab Number: L2271355
Report Date: 12/23/22

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(*)
L2271355-01A	Vial HCl preserved	A	NA		3.1	Y	Absent		NYTCL-8260(14)
L2271355-01B	Vial HCl preserved	A	NA		3.1	Y	Absent		NYTCL-8260(14)
L2271355-01C	Vial HCl preserved	A	NA		3.1	Y	Absent		NYTCL-8260(14)
L2271355-01D	Vial H2SO4 preserved	A	NA		3.1	Y	Absent		TOC-9060(28)
L2271355-01E	Vial H2SO4 preserved	A	NA		3.1	Y	Absent		TOC-9060(28)
L2271355-01F	Vial H2SO4 preserved	A	NA		3.1	Y	Absent		TOC-9060(28)
L2271355-01G	Vial unpreserved	A	NA		3.1	Y	Absent		DOC-9060(28),FILTER(1)
L2271355-01H	Vial unpreserved	A	NA		3.1	Y	Absent		DOC-9060(28),FILTER(1)
L2271355-01I	Vial unpreserved	A	NA		3.1	Y	Absent		DOC-9060(28),FILTER(1)
L2271355-01J	Plastic 250ml unpreserved/No Headspace	A	NA		3.1	Y	Absent		ALK-T-2320(14)
L2271355-01K	Plastic 250ml unpreserved	A	7	7	3.1	Y	Absent		SO4-9038(28),CL-4500(28),NO3-4500(2)
L2271355-01L	Plastic 250ml HNO3 preserved	A	<2	<2	3.1	Y	Absent		FE-6020T(180),CA-6020T(180),MN-6020T(180),MG-6020T(180),HARDT-6020(180)
L2271355-01X	Vial H2SO4 preserved Filtrates	A	NA		3.1	Y	Absent		DOC-9060(28)
L2271355-01Y	Vial H2SO4 preserved Filtrates	A	NA		3.1	Y	Absent		DOC-9060(28)
L2271355-01Z	Vial H2SO4 preserved Filtrates	A	NA		3.1	Y	Absent		DOC-9060(28)
L2271355-02A	Vial HCl preserved	A	NA		3.1	Y	Absent		NYTCL-8260(14)
L2271355-02B	Vial HCl preserved	A	NA		3.1	Y	Absent		NYTCL-8260(14)
L2271355-02C	Vial HCl preserved	A	NA		3.1	Y	Absent		NYTCL-8260(14)
L2271355-02D	Vial H2SO4 preserved	A	NA		3.1	Y	Absent		TOC-9060(28)
L2271355-02E	Vial H2SO4 preserved	A	NA		3.1	Y	Absent		TOC-9060(28)
L2271355-02F	Vial H2SO4 preserved	A	NA		3.1	Y	Absent		TOC-9060(28)
L2271355-02G	Vial unpreserved	A	NA		3.1	Y	Absent		DOC-9060(28),FILTER(1)
L2271355-02H	Vial unpreserved	A	NA		3.1	Y	Absent		DOC-9060(28),FILTER(1)

*Values in parentheses indicate holding time in days

Project Name: 1487 FIRST AVE
Project Number: 100963701

Lab Number: L2271355
Report Date: 12/23/22

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2271355-02I	Vial unpreserved	A	NA		3.1	Y	Absent		DOC-9060(28),FILTER(1)
L2271355-02J	Plastic 250ml unpreserved/No Headspace	A	NA		3.1	Y	Absent		ALK-T-2320(14)
L2271355-02K	Plastic 250ml unpreserved	A	7	7	3.1	Y	Absent		SO4-9038(28),CL-4500(28),NO3-4500(2)
L2271355-02L	Plastic 250ml HNO3 preserved	A	<2	<2	3.1	Y	Absent		FE-6020T(180),CA-6020T(180),MN-6020T(180),HARDT-6020(180),MG-6020T(180)
L2271355-02X	Vial H2SO4 preserved Filtrates	A	NA		3.1	Y	Absent		DOC-9060(28)
L2271355-02Y	Vial H2SO4 preserved Filtrates	A	NA		3.1	Y	Absent		DOC-9060(28)
L2271355-02Z	Vial H2SO4 preserved Filtrates	A	NA		3.1	Y	Absent		DOC-9060(28)
L2271355-03A	Vial HCl preserved	A	NA		3.1	Y	Absent		NYTCL-8260(14)
L2271355-03B	Vial HCl preserved	A	NA		3.1	Y	Absent		NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name:	1487 FIRST AVE	**Lab Number:**	L2271355
Project Number:	100963701	**Report Date:**	12/23/22

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:	1487 FIRST AVE	**Lab Number:**	L2271355
Project Number:	100963701	**Report Date:**	12/23/22

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:	1487 FIRST AVE	**Lab Number:**	L2271355
Project Number:	100963701	**Report Date:**	12/23/22

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.)

Report Format: DU Report with 'J' Qualifiers

Project Name:	1487 FIRST AVE	**Lab Number:**	L2271355
Project Number:	100963701	**Report Date:**	12/23/22

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, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

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

Mansfield Facility:

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

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

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

NEW JERSEY CHAIN OF CUSTODY

ALPHA ANALYTICAL

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: 12/19/21

ALPHA Job #: L2271355

Client Information
Client: Langan
Address: 300 Kimball Dr
Parsippany NJ
Phone: 973 560 4900
Fax:
Email: asandve@langan.com

Project Information
Project Name: 1487 First Ave
Project Location: Manhattan NY
Project #: 100963701
(Use Project name as Project #) ☐
Project Manager: Bijan Rao
ALPHAQuote #:

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

Deliverables
☐ NJ Full / Reduced ☒ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other ☒ NYSDEC

Billing Information
☒ Same as Client Info
PO # 100963701

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 ☐

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.

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

Sample Specific Comments

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs	Iron, Calcium, Manganese, Chloride, Sulfate, Nitrate	TDS	DOC	Alk, Hardness			Total Bottle
71355-01	LMW-7R-S-20	12/19/2022	1600	GW	SH	X	X	X	X	X	X		12
-02	FieldBlank-20221219	12/19/2022	1555	AQ	AS	X	X	X	X	X	X		12
-03	TripBlank-20221219	12/19/2022	—	AQ	—	X							2

Container Type: V P P V V P
Preservative: B C A D A A

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

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

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

Relinquished By:	Date/Time	Received By:	Date/Time
	12/19/2022	MCMA	12/19 16:10
MCMA	12/19 1803		12/19/22 19:30
	12/19/22 2130		12/19/22 2130
	12/19/22 2320		12/19/22 2320

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

Form No: 01-14 HC (rev. 30-Sept-2013)

ANALYTICAL REPORT

Lab Number:	L2271606
Client:	Langan Engineering & Environmental 300 Kimball Drive 4th Floor Parsippany, NJ 07054
ATTN:	Ashley Sandve
Phone:	(973) 560-4871
Project Name:	1487 FIRST AVENUE
Project Number:	100963701
Report Date:	12/30/22

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: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2271606
Report Date: 12/30/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2271606-01	LMW-7R-S_25.5	WATER	MANHATTAN, NY	12/20/22 09:10	12/20/22
L2271606-02	TRIP BLANK_20221220	WATER	MANHATTAN, NY	12/20/22 00:00	12/20/22

Project Name:	1487 FIRST AVENUE	**Lab Number:**	L2271606
Project Number:	100963701	**Report Date:**	12/30/22

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:	1487 FIRST AVENUE	**Lab Number:**	L2271606
Project Number:	100963701	**Report Date:**	12/30/22

Case Narrative (continued)

Report Submission

December 30, 2022: This final report includes the results of all requested analyses.

December 27, 2022: This is a preliminary report.

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

The analyses of DHC and EBAC were subcontracted. A copy of the laboratory report is included as an addendum. Please note: This data is only available in PDF format and is not available on Data Merger.

Dissolved Organic Carbon

L2271606-01: The DOC result is greater than the TOC result due to the filtering procedure required by the DOC method.

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: Tiffani Morrissey - Tiffani Morrissey

Title: Technical Director/Representative Date: 12/30/22

ORGANICS

VOLATILES

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2271606
Report Date: 12/30/22

SAMPLE RESULTS

Lab ID: L2271606-01 D
Client ID: LMW-7R-S_25.5
Sample Location: MANHATTAN, NY

Date Collected: 12/20/22 09:10
Date Received: 12/20/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 12/22/22 00:46
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	5.0	1.4	2
1,1-Dichloroethane	ND		ug/l	5.0	1.4	2
Chloroform	ND		ug/l	5.0	1.4	2
Carbon tetrachloride	ND		ug/l	1.0	0.27	2
1,2-Dichloropropane	ND		ug/l	2.0	0.27	2
Dibromochloromethane	ND		ug/l	1.0	0.30	2
1,1,2-Trichloroethane	ND		ug/l	3.0	1.0	2
Tetrachloroethene	43		ug/l	1.0	0.36	2
Chlorobenzene	ND		ug/l	5.0	1.4	2
Trichlorofluoromethane	ND		ug/l	5.0	1.4	2
1,2-Dichloroethane	ND		ug/l	1.0	0.26	2
1,1,1-Trichloroethane	ND		ug/l	5.0	1.4	2
Bromodichloromethane	ND		ug/l	1.0	0.38	2
trans-1,3-Dichloropropene	ND		ug/l	1.0	0.33	2
cis-1,3-Dichloropropene	ND		ug/l	1.0	0.29	2
1,3-Dichloropropene, Total	ND		ug/l	1.0	0.29	2
1,1-Dichloropropene	ND		ug/l	5.0	1.4	2
Bromoform	ND		ug/l	4.0	1.3	2
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.33	2
Benzene	0.47	J	ug/l	1.0	0.32	2
Toluene	ND		ug/l	5.0	1.4	2
Ethylbenzene	ND		ug/l	5.0	1.4	2
Chloromethane	ND		ug/l	5.0	1.4	2
Bromomethane	ND		ug/l	5.0	1.4	2
Vinyl chloride	0.64	J	ug/l	2.0	0.14	2
Chloroethane	ND		ug/l	5.0	1.4	2
1,1-Dichloroethene	0.47	J	ug/l	1.0	0.34	2
trans-1,2-Dichloroethene	1.9	J	ug/l	5.0	1.4	2

Project Name: 1487 FIRST AVENUE **Lab Number:** L2271606

Project Number: 100963701 **Report Date:** 12/30/22

SAMPLE RESULTS

Lab ID: L2271606-01 D Date Collected: 12/20/22 09:10
Client ID: LMW-7R-S_25.5 Date Received: 12/20/22
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	56		ug/l	1.0	0.35	2
1,2-Dichlorobenzene	ND		ug/l	5.0	1.4	2
1,3-Dichlorobenzene	ND		ug/l	5.0	1.4	2
1,4-Dichlorobenzene	ND		ug/l	5.0	1.4	2
Methyl tert butyl ether	ND		ug/l	5.0	1.4	2
p/m-Xylene	ND		ug/l	5.0	1.4	2
o-Xylene	ND		ug/l	5.0	1.4	2
Xylenes, Total	ND		ug/l	5.0	1.4	2
cis-1,2-Dichloroethene	340		ug/l	5.0	1.4	2
1,2-Dichloroethene, Total	340	J	ug/l	5.0	1.4	2
Dibromomethane	ND		ug/l	10	2.0	2
1,2,3-Trichloropropane	ND		ug/l	5.0	1.4	2
Acrylonitrile	ND		ug/l	10	3.0	2
Styrene	ND		ug/l	5.0	1.4	2
Dichlorodifluoromethane	ND		ug/l	10	2.0	2
Acetone	6.0	J	ug/l	10	2.9	2
Carbon disulfide	ND		ug/l	10	2.0	2
2-Butanone	ND		ug/l	10	3.9	2
Vinyl acetate	ND		ug/l	10	2.0	2
4-Methyl-2-pentanone	ND		ug/l	10	2.0	2
2-Hexanone	ND		ug/l	10	2.0	2
Bromochloromethane	ND		ug/l	5.0	1.4	2
2,2-Dichloropropane	ND		ug/l	5.0	1.4	2
1,2-Dibromoethane	ND		ug/l	4.0	1.3	2
1,3-Dichloropropane	ND		ug/l	5.0	1.4	2
1,1,1,2-Tetrachloroethane	ND		ug/l	5.0	1.4	2
Bromobenzene	ND		ug/l	5.0	1.4	2
n-Butylbenzene	ND		ug/l	5.0	1.4	2
sec-Butylbenzene	ND		ug/l	5.0	1.4	2
tert-Butylbenzene	ND		ug/l	5.0	1.4	2
o-Chlorotoluene	ND		ug/l	5.0	1.4	2
p-Chlorotoluene	ND		ug/l	5.0	1.4	2
1,2-Dibromo-3-chloropropane	ND		ug/l	5.0	1.4	2
Hexachlorobutadiene	ND		ug/l	5.0	1.4	2
Isopropylbenzene	ND		ug/l	5.0	1.4	2
p-Isopropyltoluene	ND		ug/l	5.0	1.4	2
Naphthalene	ND		ug/l	5.0	1.4	2

Project Name: 1487 FIRST AVENUE **Lab Number:** L2271606

Project Number: 100963701 **Report Date:** 12/30/22

SAMPLE RESULTS

Lab ID: L2271606-01 D Date Collected: 12/20/22 09:10

Client ID: LMW-7R-S_25.5 Date Received: 12/20/22

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	5.0	1.4	2
1,2,3-Trichlorobenzene	ND		ug/l	5.0	1.4	2
1,2,4-Trichlorobenzene	ND		ug/l	5.0	1.4	2
1,3,5-Trimethylbenzene	ND		ug/l	5.0	1.4	2
1,2,4-Trimethylbenzene	ND		ug/l	5.0	1.4	2
1,4-Dioxane	ND		ug/l	500	120	2
p-Diethylbenzene	ND		ug/l	4.0	1.4	2
p-Ethyltoluene	ND		ug/l	4.0	1.4	2
1,2,4,5-Tetramethylbenzene	ND		ug/l	4.0	1.1	2
Ethyl ether	ND		ug/l	5.0	1.4	2
trans-1,4-Dichloro-2-butene	ND		ug/l	5.0	1.4	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	105		70-130

Project Name: 1487 FIRST AVENUE **Lab Number:** L2271606

Project Number: 100963701 **Report Date:** 12/30/22

SAMPLE RESULTS

Lab ID: L2271606-02 Date Collected: 12/20/22 00:00
Client ID: TRIP BLANK_20221220 Date Received: 12/20/22
Sample Location: MANHATTAN, NY Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 12/21/22 19:05
Analyst: PID

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: 1487 FIRST AVENUE **Lab Number:** L2271606

Project Number: 100963701 **Report Date:** 12/30/22

SAMPLE RESULTS

Lab ID: L2271606-02 Date Collected: 12/20/22 00:00

Client ID: TRIP BLANK_20221220 Date Received: 12/20/22

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: 1487 FIRST AVENUE **Lab Number:** L2271606

Project Number: 100963701 **Report Date:** 12/30/22

SAMPLE RESULTS

Lab ID: L2271606-02 Date Collected: 12/20/22 00:00

Client ID: TRIP BLANK_20221220 Date Received: 12/20/22

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	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	104		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	107		70-130

Project Name: 1487 FIRST AVENUE **Lab Number:** L2271606

Project Number: 100963701 **Report Date:** 12/30/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 12/21/22 18:45
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1726449-5					
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: 1487 FIRST AVENUE **Lab Number:** L2271606

Project Number: 100963701 **Report Date:** 12/30/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 12/21/22 18:45
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1726449-5					
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: 1487 FIRST AVENUE **Lab Number:** L2271606

Project Number: 100963701 **Report Date:** 12/30/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 12/21/22 18:45
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1726449-5					
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	106		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	107		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1487 FIRST AVENUE

Project Number: 100963701

Lab Number: L2271606

Report Date: 12/30/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1726449-3 WG1726449-4								
Methylene chloride	98		94		70-130	4		20
1,1-Dichloroethane	110		100		70-130	10		20
Chloroform	96		93		70-130	3		20
Carbon tetrachloride	95		90		63-132	5		20
1,2-Dichloropropane	100		100		70-130	0		20
Dibromochloromethane	89		89		63-130	0		20
1,1,2-Trichloroethane	94		94		70-130	0		20
Tetrachloroethene	99		96		70-130	3		20
Chlorobenzene	96		93		75-130	3		20
Trichlorofluoromethane	68		64		62-150	6		20
1,2-Dichloroethane	98		96		70-130	2		20
1,1,1-Trichloroethane	95		91		67-130	4		20
Bromodichloromethane	89		87		67-130	2		20
trans-1,3-Dichloropropene	88		87		70-130	1		20
cis-1,3-Dichloropropene	86		86		70-130	0		20
1,1-Dichloropropene	97		95		70-130	2		20
Bromoform	79		78		54-136	1		20
1,1,2,2-Tetrachloroethane	88		90		67-130	2		20
Benzene	98		96		70-130	2		20
Toluene	97		94		70-130	3		20
Ethylbenzene	98		92		70-130	6		20
Chloromethane	120		110		64-130	9		20
Bromomethane	47		43		39-139	9		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2271606
Report Date: 12/30/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1726449-3 WG1726449-4								
Vinyl chloride	110		100		55-140	10		20
Chloroethane	66		58		55-138	13		20
1,1-Dichloroethene	70		66		61-145	6		20
trans-1,2-Dichloroethene	100		99		70-130	1		20
Trichloroethene	94		91		70-130	3		20
1,2-Dichlorobenzene	93		89		70-130	4		20
1,3-Dichlorobenzene	96		90		70-130	6		20
1,4-Dichlorobenzene	96		93		70-130	3		20
Methyl tert butyl ether	90		92		63-130	2		20
p/m-Xylene	100		90		70-130	11		20
o-Xylene	95		90		70-130	5		20
cis-1,2-Dichloroethene	99		95		70-130	4		20
Dibromomethane	87		86		70-130	1		20
1,2,3-Trichloropropane	82		83		64-130	1		20
Acrylonitrile	110		120		70-130	9		20
Styrene	90		85		70-130	6		20
Dichlorodifluoromethane	110		100		36-147	10		20
Acetone	120		130		58-148	8		20
Carbon disulfide	72		68		51-130	6		20
2-Butanone	100		110		63-138	10		20
Vinyl acetate	120		120		70-130	0		20
4-Methyl-2-pentanone	93		100		59-130	7		20
2-Hexanone	94		100		57-130	6		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1487 FIRST AVENUE

Project Number: 100963701

Lab Number: L2271606

Report Date: 12/30/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1726449-3 WG1726449-4								
Bromochloromethane	100		100		70-130	0		20
2,2-Dichloropropane	97		91		63-133	6		20
1,2-Dibromoethane	93		92		70-130	1		20
1,3-Dichloropropane	96		94		70-130	2		20
1,1,1,2-Tetrachloroethane	88		87		64-130	1		20
Bromobenzene	94		91		70-130	3		20
n-Butylbenzene	96		91		53-136	5		20
sec-Butylbenzene	97		91		70-130	6		20
tert-Butylbenzene	98		92		70-130	6		20
o-Chlorotoluene	98		92		70-130	6		20
p-Chlorotoluene	100		95		70-130	5		20
1,2-Dibromo-3-chloropropane	90		86		41-144	5		20
Hexachlorobutadiene	100		100		63-130	0		20
Isopropylbenzene	94		90		70-130	4		20
p-Isopropyltoluene	98		93		70-130	5		20
Naphthalene	99		92		70-130	7		20
n-Propylbenzene	97		92		69-130	5		20
1,2,3-Trichlorobenzene	97		93		70-130	4		20
1,2,4-Trichlorobenzene	100		96		70-130	4		20
1,3,5-Trimethylbenzene	96		92		64-130	4		20
1,2,4-Trimethylbenzene	99		93		70-130	6		20
1,4-Dioxane	112		106		56-162	6		20
p-Diethylbenzene	98		93		70-130	5		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2271606
Report Date: 12/30/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1726449-3 WG1726449-4								
p-Ethyltoluene	100		94		70-130	6		20
1,2,4,5-Tetramethylbenzene	100		94		70-130	6		20
Ethyl ether	68		66		59-134	3		20
trans-1,4-Dichloro-2-butene	88		88		70-130	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	97		99		70-130
Toluene-d8	103		102		70-130
4-Bromofluorobenzene	104		104		70-130
Dibromofluoromethane	101		99		70-130

METALS

Project Name: 1487 FIRST AVENUE
Lab Number: L2271606
Project Number: 100963701
Report Date: 12/30/22

SAMPLE RESULTS

Lab ID: L2271606-01
Client ID: LMW-7R-S_25.5
Sample Location: MANHATTAN, NY
Date Collected: 12/20/22 09:10
Date Received: 12/20/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Calcium, Total	234.		mg/l	0.100	0.0394	1	12/21/22 11:39	12/23/22 13:20	EPA 3005A	1,6020B	NTB
Iron, Total	29.5		mg/l	0.0500	0.0191	1	12/21/22 11:39	12/23/22 13:20	EPA 3005A	1,6020B	NTB
Magnesium, Total	67.7		mg/l	0.0700	0.0242	1	12/21/22 11:39	12/23/22 13:20	EPA 3005A	1,6020B	NTB
Manganese, Total	4.074		mg/l	0.00100	0.00044	1	12/21/22 11:39	12/23/22 13:20	EPA 3005A	1,6020B	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	864.6		mg/l	0.5400	NA	1	12/21/22 11:39	12/23/22 13:20	EPA 3005A	1,6020B	NTB

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2271606
Report Date: 12/30/22

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1726030-1										
Calcium, Total	ND		mg/l	0.100	0.0394	1	12/21/22 11:39	12/23/22 10:35	1,6020B	SV
Iron, Total	ND		mg/l	0.0500	0.0191	1	12/21/22 11:39	12/23/22 10:35	1,6020B	SV
Magnesium, Total	ND		mg/l	0.0700	0.0242	1	12/21/22 11:39	12/23/22 10:35	1,6020B	SV
Manganese, Total	ND		mg/l	0.00100	0.00044	1	12/21/22 11:39	12/23/22 10:35	1,6020B	SV

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness (by calculation) - Mansfield Lab for sample(s): 01 Batch: WG1726030-1										
Hardness	ND		mg/l	0.5400	NA	1	12/21/22 11:39	12/23/22 10:35	1,6020B	SV

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1487 FIRST AVENUE

Project Number: 100963701

Lab Number: L2271606

Report Date: 12/30/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1726030-2								
Calcium, Total	87		-		80-120	-		
Iron, Total	95		-		80-120	-		
Magnesium, Total	99		-		80-120	-		
Manganese, Total	94		-		80-120	-		
Total Hardness (by calculation) - Mansfield Lab Associated sample(s): 01 Batch: WG1726030-2								
Hardness	94		-		80-120	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2271606
Report Date: 12/30/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1726030-3 WG1726030-4 QC Sample: L2271029-07 Client ID: MS Sample												
Calcium, Total	38.8	10	48.6	98		50.5	117		75-125	4		20
Iron, Total	4.23	1	5.23	100		5.44	121		75-125	4		20
Magnesium, Total	5.48	10	15.5	100		16.1	106		75-125	4		20
Manganese, Total	2.707	0.5	3.398	**138**	Q	3.394	**137**	Q	75-125	0		20
Total Hardness (by calculation) - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1726030-3 WG1726030-4 QC Sample: L2271029-07 Client ID: MS Sample												
Hardness	119.6	66.2	185.2	99		192.7	110		75-125	4		20

INORGANICS
&
MISCELLANEOUS

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2271606
Report Date: 12/30/22

SAMPLE RESULTS

Lab ID: L2271606-01
Client ID: LMW-7R-S_25.5
Sample Location: MANHATTAN, NY

Date Collected: 12/20/22 09:10
Date Received: 12/20/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Total	128.		mg CaCO3/L	2.00	NA	1	-	12/27/22 07:23	121,2320B	MKT
Chloride	600		mg/l	10	8.9	10	-	12/21/22 21:03	121,4500CL-E	TLH
Nitrogen, Nitrate	0.212		mg/l	0.100	0.022	1	-	12/21/22 10:59	121,4500NO3-F	KAF
Sulfate	510		mg/l	500	68.	50	12/22/22 07:16	12/22/22 07:16	1,9038	MCU
Total Organic Carbon	0.92		mg/l	0.50	0.09	1	-	12/23/22 03:57	1,9060A	DEW
Dissolved Organic Carbon	1.1		mg/l	1.0	0.04	1	12/21/22 08:50	12/23/22 03:57	1,9060A	DEW

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2271606
Report Date: 12/30/22

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1725834-1										
Nitrogen, Nitrate	ND		mg/l	0.100	0.022	1	-	12/21/22 03:34	121,4500NO3-F	KAF
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1726243-1										
Chloride	ND		mg/l	1.0	0.89	1	-	12/21/22 18:52	121,4500CL-E	TLH
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1726445-1										
Sulfate	ND		mg/l	10	1.4	1	12/22/22 07:16	12/22/22 07:16	1,9038	MCU
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1726932-1										
Dissolved Organic Carbon	ND		mg/l	1.0	0.04	1	-	12/23/22 03:57	1,9060A	DEW
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1726933-1										
Total Organic Carbon	ND		mg/l	0.50	0.09	1	-	12/23/22 03:57	1,9060A	DEW
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1727569-1										
Alkalinity, Total	ND		mg CaCO3/L	2.00	NA	1	-	12/27/22 07:23	121,2320B	MKT

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1487 FIRST AVENUE

Project Number: 100963701

Lab Number: L2271606

Report Date: 12/30/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1725834-2								
Nitrogen, Nitrate	96		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1726243-2								
Chloride	103		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1726445-2								
Sulfate	95		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1726932-2								
Dissolved Organic Carbon	97		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1726933-2								
Total Organic Carbon	97		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1727569-2								
Alkalinity, Total	107		-		90-110	-		10

Matrix Spike Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2271606
Report Date: 12/30/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1725834-4 QC Sample: L2271340-01 Client ID: MS Sample												
Nitrogen, Nitrate	0.196	4	4.18	100		-	-		83-113	-		17
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1726243-4 QC Sample: L2271284-01 Client ID: MS Sample												
Chloride	390	20	400	**50**	Q	-	-		58-140	-		7
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1726445-4 QC Sample: L2269659-01 Client ID: MS Sample												
Sulfate	3.0J	40	42	105		-	-		55-147	-		14
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1726932-4 QC Sample: L2271666-01 Client ID: MS Sample												
Dissolved Organic Carbon	3.8	16	20	99		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1726933-4 QC Sample: L2271946-02 Client ID: MS Sample												
Total Organic Carbon	3.1	800	900	112		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1727569-4 QC Sample: L2270078-09 Client ID: MS Sample												
Alkalinity, Total	137.	100	243	106		-	-		86-116	-		10

Lab Duplicate Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2271606
Report Date: 12/30/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1725834-3 QC Sample: L2271340-01 Client ID: DUP Sample						
Nitrogen, Nitrate	0.196	0.184	mg/l	6		17
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1726243-3 QC Sample: L2271284-01 Client ID: DUP Sample						
Chloride	390	390	mg/l	0		7
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1726445-3 QC Sample: L2269659-01 Client ID: DUP Sample						
Sulfate	3.0J	3.4J	mg/l	NC		14
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1726932-3 QC Sample: L2271666-01 Client ID: DUP Sample						
Dissolved Organic Carbon	3.8	3.6	mg/l	5		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1726933-3 QC Sample: L2271946-02 Client ID: DUP Sample						
Total Organic Carbon	3.1	5.2J	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1727569-3 QC Sample: L2270078-09 Client ID: DUP Sample						
Alkalinity, Total	137.	137	mg CaCO3/L	0		10

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2271606
Report Date: 12/30/22

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(*)
L2271606-01A	Vial HCl preserved	A	NA		3.6	Y	Absent		NYTCL-8260(14)
L2271606-01B	Vial HCl preserved	A	NA		3.6	Y	Absent		NYTCL-8260(14)
L2271606-01C	Vial HCl preserved	A	NA		3.6	Y	Absent		NYTCL-8260(14)
L2271606-01D	Vial unpreserved	A	NA		3.6	Y	Absent		DOC-9060(28),FILTER(1)
L2271606-01E	Vial unpreserved	A	NA		3.6	Y	Absent		DOC-9060(28),FILTER(1)
L2271606-01F	Vial unpreserved	A	NA		3.6	Y	Absent		DOC-9060(28),FILTER(1)
L2271606-01G	Vial H2SO4 preserved	A	NA		3.6	Y	Absent		TOC-9060(28)
L2271606-01H	Vial H2SO4 preserved	A	NA		3.6	Y	Absent		TOC-9060(28)
L2271606-01I	Vial H2SO4 preserved	A	NA		3.6	Y	Absent		TOC-9060(28)
L2271606-01J	Plastic 250ml unpreserved/No Headspace	A	NA		3.6	Y	Absent		ALK-T-2320(14)
L2271606-01K	Plastic 250ml unpreserved	A	7	7	3.6	Y	Absent		CL-4500(28),SO4-9038(28),NO3-4500(2)
L2271606-01L	Plastic 250ml HNO3 preserved	A	<2	<2	3.6	Y	Absent		FE-6020T(180),CA-6020T(180),MN-6020T(180),HARDT-6020(180),MG-6020T(180)
L2271606-01X	Vial H2SO4 preserved Filtrates	A	NA		3.6	Y	Absent		DOC-9060(28)
L2271606-01Y	Vial H2SO4 preserved Filtrates	A	NA		3.6	Y	Absent		DOC-9060(28)
L2271606-01Z	Vial H2SO4 preserved Filtrates	A	NA		3.6	Y	Absent		DOC-9060(28)
L2271606-02A	Vial HCl preserved	A	NA		3.6	Y	Absent		NYTCL-8260(14)
L2271606-02B	Vial HCl preserved	A	NA		3.6	Y	Absent		NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name:	1487 FIRST AVENUE	**Lab Number:**	L2271606
Project Number:	100963701	**Report Date:**	12/30/22

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:	1487 FIRST AVENUE	**Lab Number:**	L2271606
Project Number:	100963701	**Report Date:**	12/30/22

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:	1487 FIRST AVENUE	**Lab Number:**	L2271606
Project Number:	100963701	**Report Date:**	12/30/22

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.)

Report Format: DU Report with 'J' Qualifiers

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2271606
Report Date: 12/30/22

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, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

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

Mansfield Facility:

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

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

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

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

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: 12/20/22

ALPHA Job #: L2271606

Client Information

Client: Langan
Address: 300 Kimball Drive
Parsippany, NJ
Phone: 973-560-4900
Fax:
Email: asandve@langan.com

Project Information

Project Name: 1487 First Avenue
Project Location: Manhattan, NY
Project #: 100963701
(Use Project name as Project #) ☐
Project Manager: Ben Rao
ALPHAQuote #: 18601

Turn-Around Time

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

Deliverables

☐ ASP-A ☑ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☑ Other NYS DEC EDD

Regulatory Requirement

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

Billing Information

☑ Same as Client Info
PO # 100963701

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:

**samples for DHC and EBAC were directly shipped to Microbial Insights

Please specify Metals or TAL.

ANALYSIS

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs	Iron, Calcium, Manganese,	Chloride, Sulfate, Nitrate	TOC	DOC	Alkalinity, Hardness	DHC, EBAC**		Sample Specific Comments	Total Bottle
71606-01	LMW-7R-S_25.5	12/20/22	9:10	GW	SH	X	X	X	X	X	X	X			13
-02	Trip Blank_20221220	12/20/22	—	AQ	SH	X									

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

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

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

Container Type	V	P	P	V	V	P	P						
Preservative	B	C	A	D	A	A	A						

Relinquished By:	Date/Time	Received By:	Date/Time
		MSMR (FedEx)	12/20 1533
MSMR (FedEx)	12/20 1740		12/20/22 1730
	12/20/22 2125		12/20/22 2125
	12/20/22 2315		12/20/22 2315

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.

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

microbialinsights
10515 Research Drive
Knoxville, TN 37932
Phone: (865) 573-8188
Fax: (865) 573-8133

ANAB ANSI National Accreditation Board ACCREDITED ISO/IEC 17025 TESTING LABORATORY

Client: Ben Rao
Alpha Analytical, Inc.
8 Walkup Dr
Westborough, MA 01581

Phone: 201-812-2633

Fax:

Identifier: 107TL **Date Rec:** 12/21/2022 **Report Date:** 12/28/2022

Client Project #: 100963701 **Client Project Name:** 1487 First Avenue

Purchase Order #: L2271606

Test results provided for: CENSUS

Reviewed By:

Charles Slater

NOTICE: This report is intended only for the addressee shown above and may contain confidential or privileged information. If the recipient of this material is not the intended recipient or if you have received this in error, please notify Microbial Insights, Inc. immediately. The data and other information in this report represent only the sample(s) analyzed and are rendered upon condition that it is not to be reproduced without approval from Microbial Insights, Inc. Thank you for your cooperation.

Results relate only to the items tested and the sample(s) as received by the laboratory.

MICROBIAL INSIGHTS, INC.

10515 Research Dr., Knoxville, TN 37932
Tel. (865) 573-8188 Fax. (865) 573-8133

CENSUS

Client: **Alpha Analytical, Inc.**
Project: 1487 First Avenue

MI Project Number: **107TL**
Date Received: 12/21/2022

Sample Information

Client Sample ID:	**LMW-7R-S-25.5**
Sample Date:	12/20/2022
Units:	cells/mL
Analyst/Reviewer:	OR/CS

Dechlorinating Bacteria

Dehalococcoides	*DHC*	**5.90E+01**

Phylogenetic Group

Total Eubacteria	EBAC	**6.66E+06**

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

Quality Assurance/Quality Control Data

Samples Received **12/21/2022**

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control	Extraction Blank	Negative Control
DHC	12/21/2022	12/28/2022	0 °C	107%	non-detect	non-detect
EBAC	12/21/2022	12/28/2022	0 °C	112%	non-detect	non-detect

ANALYTICAL REPORT

Lab Number:	L2271946
Client:	Langan Engineering & Environmental 300 Kimball Drive 4th Floor Parsippany, NJ 07054
ATTN:	Ashley Sandve
Phone:	(973) 560-4871
Project Name:	1487 FIRST AVENUE
Project Number:	100963701
Report Date:	01/03/23

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).

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2271946
Report Date: 01/03/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2271946-01	LMW-7R-S_38	WATER	MANHATTAN, NY	12/21/22 08:25	12/21/22
L2271946-02	LMW-7R-D_42	WATER	MANHATTAN, NY	12/21/22 11:00	12/21/22

Project Name:	1487 FIRST AVENUE	**Lab Number:**	L2271946
Project Number:	100963701	**Report Date:**	01/03/23

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:	1487 FIRST AVENUE	**Lab Number:**	L2271946
Project Number:	100963701	**Report Date:**	01/03/23

Case Narrative (continued)

Report Submission

January 03, 2023: This final report includes the results of all requested analyses.

December 28, 2022: This is a preliminary report.

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

The analyses of DHC and EBAC were subcontracted. A copy of the laboratory report is included as an addendum. Please note: This data is only available in PDF format and is not available on Data Merger.

Dissolved Organic Carbon

L2271946-01 and -02: The DOC result is greater than the TOC result due to the filtering procedure required by the DOC method.

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: Tiffani Morrissey - Tiffani Morrissey

Title: Technical Director/Representative Date: 01/03/23

ORGANICS

VOLATILES

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2271946
Report Date: 01/03/23

SAMPLE RESULTS

Lab ID: L2271946-01 D
Client ID: LMW-7R-S_38
Sample Location: MANHATTAN, NY

Date Collected: 12/21/22 08:25
Date Received: 12/21/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 12/23/22 11:36
Analyst: MJV

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	6.2	1.8	2.5
1,1-Dichloroethane	ND		ug/l	6.2	1.8	2.5
Chloroform	ND		ug/l	6.2	1.8	2.5
Carbon tetrachloride	ND		ug/l	1.2	0.34	2.5
1,2-Dichloropropane	ND		ug/l	2.5	0.34	2.5
Dibromochloromethane	ND		ug/l	1.2	0.37	2.5
1,1,2-Trichloroethane	ND		ug/l	3.8	1.2	2.5
Tetrachloroethene	50		ug/l	1.2	0.45	2.5
Chlorobenzene	ND		ug/l	6.2	1.8	2.5
Trichlorofluoromethane	ND		ug/l	6.2	1.8	2.5
1,2-Dichloroethane	ND		ug/l	1.2	0.33	2.5
1,1,1-Trichloroethane	ND		ug/l	6.2	1.8	2.5
Bromodichloromethane	ND		ug/l	1.2	0.48	2.5
trans-1,3-Dichloropropene	ND		ug/l	1.2	0.41	2.5
cis-1,3-Dichloropropene	ND		ug/l	1.2	0.36	2.5
1,3-Dichloropropene, Total	ND		ug/l	1.2	0.36	2.5
1,1-Dichloropropene	ND		ug/l	6.2	1.8	2.5
Bromoform	ND		ug/l	5.0	1.6	2.5
1,1,2,2-Tetrachloroethane	ND		ug/l	1.2	0.42	2.5
Benzene	0.51	J	ug/l	1.2	0.40	2.5
Toluene	ND		ug/l	6.2	1.8	2.5
Ethylbenzene	ND		ug/l	6.2	1.8	2.5
Chloromethane	ND		ug/l	6.2	1.8	2.5
Bromomethane	ND		ug/l	6.2	1.8	2.5
Vinyl chloride	0.71	J	ug/l	2.5	0.18	2.5
Chloroethane	ND		ug/l	6.2	1.8	2.5
1,1-Dichloroethene	0.75	J	ug/l	1.2	0.42	2.5
trans-1,2-Dichloroethene	2.0	J	ug/l	6.2	1.8	2.5

Project Name: 1487 FIRST AVENUE **Lab Number:** L2271946

Project Number: 100963701 **Report Date:** 01/03/23

SAMPLE RESULTS

Lab ID: L2271946-01 D Date Collected: 12/21/22 08:25
Client ID: LMW-7R-S_38 Date Received: 12/21/22
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	61		ug/l	1.2	0.44	2.5
1,2-Dichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,3-Dichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,4-Dichlorobenzene	ND		ug/l	6.2	1.8	2.5
Methyl tert butyl ether	ND		ug/l	6.2	1.8	2.5
p/m-Xylene	ND		ug/l	6.2	1.8	2.5
o-Xylene	ND		ug/l	6.2	1.8	2.5
Xylenes, Total	ND		ug/l	6.2	1.8	2.5
cis-1,2-Dichloroethene	400		ug/l	6.2	1.8	2.5
1,2-Dichloroethene, Total	400	J	ug/l	6.2	1.8	2.5
Dibromomethane	ND		ug/l	12	2.5	2.5
1,2,3-Trichloropropane	ND		ug/l	6.2	1.8	2.5
Acrylonitrile	ND		ug/l	12	3.8	2.5
Styrene	ND		ug/l	6.2	1.8	2.5
Dichlorodifluoromethane	ND		ug/l	12	2.5	2.5
Acetone	26		ug/l	12	3.6	2.5
Carbon disulfide	ND		ug/l	12	2.5	2.5
2-Butanone	ND		ug/l	12	4.8	2.5
Vinyl acetate	ND		ug/l	12	2.5	2.5
4-Methyl-2-pentanone	ND		ug/l	12	2.5	2.5
2-Hexanone	ND		ug/l	12	2.5	2.5
Bromochloromethane	ND		ug/l	6.2	1.8	2.5
2,2-Dichloropropane	ND		ug/l	6.2	1.8	2.5
1,2-Dibromoethane	ND		ug/l	5.0	1.6	2.5
1,3-Dichloropropane	ND		ug/l	6.2	1.8	2.5
1,1,1,2-Tetrachloroethane	ND		ug/l	6.2	1.8	2.5
Bromobenzene	ND		ug/l	6.2	1.8	2.5
n-Butylbenzene	ND		ug/l	6.2	1.8	2.5
sec-Butylbenzene	ND		ug/l	6.2	1.8	2.5
tert-Butylbenzene	ND		ug/l	6.2	1.8	2.5
o-Chlorotoluene	ND		ug/l	6.2	1.8	2.5
p-Chlorotoluene	ND		ug/l	6.2	1.8	2.5
1,2-Dibromo-3-chloropropane	ND		ug/l	6.2	1.8	2.5
Hexachlorobutadiene	ND		ug/l	6.2	1.8	2.5
Isopropylbenzene	ND		ug/l	6.2	1.8	2.5
p-Isopropyltoluene	ND		ug/l	6.2	1.8	2.5
Naphthalene	ND		ug/l	6.2	1.8	2.5

Project Name: 1487 FIRST AVENUE **Lab Number:** L2271946

Project Number: 100963701 **Report Date:** 01/03/23

SAMPLE RESULTS

Lab ID: L2271946-01 D Date Collected: 12/21/22 08:25

Client ID: LMW-7R-S_38 Date Received: 12/21/22

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	6.2	1.8	2.5
1,2,3-Trichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,2,4-Trichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,3,5-Trimethylbenzene	ND		ug/l	6.2	1.8	2.5
1,2,4-Trimethylbenzene	ND		ug/l	6.2	1.8	2.5
1,4-Dioxane	ND		ug/l	620	150	2.5
p-Diethylbenzene	ND		ug/l	5.0	1.8	2.5
p-Ethyltoluene	ND		ug/l	5.0	1.8	2.5
1,2,4,5-Tetramethylbenzene	ND		ug/l	5.0	1.4	2.5
Ethyl ether	ND		ug/l	6.2	1.8	2.5
trans-1,4-Dichloro-2-butene	ND		ug/l	6.2	1.8	2.5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	97		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2271946
Report Date: 01/03/23

SAMPLE RESULTS

Lab ID: L2271946-02 D
Client ID: LMW-7R-D_42
Sample Location: MANHATTAN, NY

Date Collected: 12/21/22 11:00
Date Received: 12/21/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 12/23/22 12:02
Analyst: MJV

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	5.0	1.4	2
1,1-Dichloroethane	ND		ug/l	5.0	1.4	2
Chloroform	ND		ug/l	5.0	1.4	2
Carbon tetrachloride	ND		ug/l	1.0	0.27	2
1,2-Dichloropropane	ND		ug/l	2.0	0.27	2
Dibromochloromethane	ND		ug/l	1.0	0.30	2
1,1,2-Trichloroethane	ND		ug/l	3.0	1.0	2
Tetrachloroethene	18		ug/l	1.0	0.36	2
Chlorobenzene	ND		ug/l	5.0	1.4	2
Trichlorofluoromethane	ND		ug/l	5.0	1.4	2
1,2-Dichloroethane	ND		ug/l	1.0	0.26	2
1,1,1-Trichloroethane	ND		ug/l	5.0	1.4	2
Bromodichloromethane	ND		ug/l	1.0	0.38	2
trans-1,3-Dichloropropene	ND		ug/l	1.0	0.33	2
cis-1,3-Dichloropropene	ND		ug/l	1.0	0.29	2
1,3-Dichloropropene, Total	ND		ug/l	1.0	0.29	2
1,1-Dichloropropene	ND		ug/l	5.0	1.4	2
Bromoform	ND		ug/l	4.0	1.3	2
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.33	2
Benzene	0.77	J	ug/l	1.0	0.32	2
Toluene	ND		ug/l	5.0	1.4	2
Ethylbenzene	ND		ug/l	5.0	1.4	2
Chloromethane	ND		ug/l	5.0	1.4	2
Bromomethane	ND		ug/l	5.0	1.4	2
Vinyl chloride	0.62	J	ug/l	2.0	0.14	2
Chloroethane	ND		ug/l	5.0	1.4	2
1,1-Dichloroethene	0.42	J	ug/l	1.0	0.34	2
trans-1,2-Dichloroethene	ND		ug/l	5.0	1.4	2

Project Name: 1487 FIRST AVENUE **Lab Number:** L2271946

Project Number: 100963701 **Report Date:** 01/03/23

SAMPLE RESULTS

Lab ID: L2271946-02 D Date Collected: 12/21/22 11:00
Client ID: LMW-7R-D_42 Date Received: 12/21/22
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	22		ug/l	1.0	0.35	2
1,2-Dichlorobenzene	ND		ug/l	5.0	1.4	2
1,3-Dichlorobenzene	ND		ug/l	5.0	1.4	2
1,4-Dichlorobenzene	ND		ug/l	5.0	1.4	2
Methyl tert butyl ether	ND		ug/l	5.0	1.4	2
p/m-Xylene	ND		ug/l	5.0	1.4	2
o-Xylene	ND		ug/l	5.0	1.4	2
Xylenes, Total	ND		ug/l	5.0	1.4	2
cis-1,2-Dichloroethene	220		ug/l	5.0	1.4	2
1,2-Dichloroethene, Total	220		ug/l	5.0	1.4	2
Dibromomethane	ND		ug/l	10	2.0	2
1,2,3-Trichloropropane	ND		ug/l	5.0	1.4	2
Acrylonitrile	ND		ug/l	10	3.0	2
Styrene	ND		ug/l	5.0	1.4	2
Dichlorodifluoromethane	ND		ug/l	10	2.0	2
Acetone	9.5	J	ug/l	10	2.9	2
Carbon disulfide	ND		ug/l	10	2.0	2
2-Butanone	ND		ug/l	10	3.9	2
Vinyl acetate	ND		ug/l	10	2.0	2
4-Methyl-2-pentanone	ND		ug/l	10	2.0	2
2-Hexanone	ND		ug/l	10	2.0	2
Bromochloromethane	ND		ug/l	5.0	1.4	2
2,2-Dichloropropane	ND		ug/l	5.0	1.4	2
1,2-Dibromoethane	ND		ug/l	4.0	1.3	2
1,3-Dichloropropane	ND		ug/l	5.0	1.4	2
1,1,1,2-Tetrachloroethane	ND		ug/l	5.0	1.4	2
Bromobenzene	ND		ug/l	5.0	1.4	2
n-Butylbenzene	ND		ug/l	5.0	1.4	2
sec-Butylbenzene	ND		ug/l	5.0	1.4	2
tert-Butylbenzene	ND		ug/l	5.0	1.4	2
o-Chlorotoluene	ND		ug/l	5.0	1.4	2
p-Chlorotoluene	ND		ug/l	5.0	1.4	2
1,2-Dibromo-3-chloropropane	ND		ug/l	5.0	1.4	2
Hexachlorobutadiene	ND		ug/l	5.0	1.4	2
Isopropylbenzene	ND		ug/l	5.0	1.4	2
p-Isopropyltoluene	ND		ug/l	5.0	1.4	2
Naphthalene	ND		ug/l	5.0	1.4	2

Project Name: 1487 FIRST AVENUE **Lab Number:** L2271946

Project Number: 100963701 **Report Date:** 01/03/23

SAMPLE RESULTS

Lab ID: L2271946-02 D Date Collected: 12/21/22 11:00

Client ID: LMW-7R-D_42 Date Received: 12/21/22

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	5.0	1.4	2
1,2,3-Trichlorobenzene	ND		ug/l	5.0	1.4	2
1,2,4-Trichlorobenzene	ND		ug/l	5.0	1.4	2
1,3,5-Trimethylbenzene	ND		ug/l	5.0	1.4	2
1,2,4-Trimethylbenzene	ND		ug/l	5.0	1.4	2
1,4-Dioxane	ND		ug/l	500	120	2
p-Diethylbenzene	ND		ug/l	4.0	1.4	2
p-Ethyltoluene	ND		ug/l	4.0	1.4	2
1,2,4,5-Tetramethylbenzene	ND		ug/l	4.0	1.1	2
Ethyl ether	ND		ug/l	5.0	1.4	2
trans-1,4-Dichloro-2-butene	ND		ug/l	5.0	1.4	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	112		70-130
Dibromofluoromethane	98		70-130

Project Name: 1487 FIRST AVENUE **Lab Number:** L2271946

Project Number: 100963701 **Report Date:** 01/03/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 12/23/22 08:59
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1727559-5					
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: 1487 FIRST AVENUE **Lab Number:** L2271946

Project Number: 100963701 **Report Date:** 01/03/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 12/23/22 08:59
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1727559-5					
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: 1487 FIRST AVENUE **Lab Number:** L2271946

Project Number: 100963701 **Report Date:** 01/03/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 12/23/22 08:59
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1727559-5					
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	103		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	113		70-130
Dibromofluoromethane	97		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2271946
Report Date: 01/03/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1727559-3 WG1727559-4								
Methylene chloride	98		99		70-130	1		20
1,1-Dichloroethane	110		100		70-130	10		20
Chloroform	100		100		70-130	0		20
Carbon tetrachloride	110		110		63-132	0		20
1,2-Dichloropropane	110		100		70-130	10		20
Dibromochloromethane	100		100		63-130	0		20
1,1,2-Trichloroethane	100		99		70-130	1		20
Tetrachloroethene	100		98		70-130	2		20
Chlorobenzene	98		97		75-130	1		20
Trichlorofluoromethane	110		110		62-150	0		20
1,2-Dichloroethane	110		100		70-130	10		20
1,1,1-Trichloroethane	110		110		67-130	0		20
Bromodichloromethane	110		100		67-130	10		20
trans-1,3-Dichloropropene	100		100		70-130	0		20
cis-1,3-Dichloropropene	100		100		70-130	0		20
1,1-Dichloropropene	110		110		70-130	0		20
Bromoform	100		100		54-136	0		20
1,1,2,2-Tetrachloroethane	100		100		67-130	0		20
Benzene	97		96		70-130	1		20
Toluene	100		100		70-130	0		20
Ethylbenzene	100		99		70-130	1		20
Chloromethane	96		94		64-130	2		20
Bromomethane	70		68		39-139	3		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2271946
Report Date: 01/03/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1727559-3 WG1727559-4								
Vinyl chloride	110		100		55-140	10		20
Chloroethane	110		110		55-138	0		20
1,1-Dichloroethene	100		100		61-145	0		20
trans-1,2-Dichloroethene	100		98		70-130	2		20
Trichloroethene	100		99		70-130	1		20
1,2-Dichlorobenzene	100		100		70-130	0		20
1,3-Dichlorobenzene	100		100		70-130	0		20
1,4-Dichlorobenzene	99		99		70-130	0		20
Methyl tert butyl ether	100		100		63-130	0		20
p/m-Xylene	100		100		70-130	0		20
o-Xylene	95		95		70-130	0		20
cis-1,2-Dichloroethene	100		100		70-130	0		20
Dibromomethane	100		100		70-130	0		20
1,2,3-Trichloropropane	100		100		64-130	0		20
Acrylonitrile	100		110		70-130	10		20
Styrene	85		85		70-130	0		20
Dichlorodifluoromethane	110		100		36-147	10		20
Acetone	100		110		58-148	10		20
Carbon disulfide	100		99		51-130	1		20
2-Butanone	110		110		63-138	0		20
Vinyl acetate	110		100		70-130	10		20
4-Methyl-2-pentanone	100		100		59-130	0		20
2-Hexanone	100		100		57-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2271946
Report Date: 01/03/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1727559-3 WG1727559-4								
Bromochloromethane	98		96		70-130	2		20
2,2-Dichloropropane	110		110		63-133	0		20
1,2-Dibromoethane	100		100		70-130	0		20
1,3-Dichloropropane	100		100		70-130	0		20
1,1,1,2-Tetrachloroethane	100		100		64-130	0		20
Bromobenzene	100		99		70-130	1		20
n-Butylbenzene	110		110		53-136	0		20
sec-Butylbenzene	110		100		70-130	10		20
tert-Butylbenzene	100		100		70-130	0		20
o-Chlorotoluene	100		110		70-130	10		20
p-Chlorotoluene	100		100		70-130	0		20
1,2-Dibromo-3-chloropropane	91		94		41-144	3		20
Hexachlorobutadiene	100		100		63-130	0		20
Isopropylbenzene	110		100		70-130	10		20
p-Isopropyltoluene	100		100		70-130	0		20
Naphthalene	100		110		70-130	10		20
n-Propylbenzene	100		100		69-130	0		20
1,2,3-Trichlorobenzene	99		100		70-130	1		20
1,2,4-Trichlorobenzene	100		100		70-130	0		20
1,3,5-Trimethylbenzene	100		100		64-130	0		20
1,2,4-Trimethylbenzene	100		100		70-130	0		20
1,4-Dioxane	114		120		56-162	5		20
p-Diethylbenzene	100		100		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2271946
Report Date: 01/03/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1727559-3 WG1727559-4								
p-Ethyltoluene	100		100		70-130	0		20
1,2,4,5-Tetramethylbenzene	100		100		70-130	0		20
Ethyl ether	99		100		59-134	1		20
trans-1,4-Dichloro-2-butene	100		100		70-130	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	101		100		70-130
Toluene-d8	101		100		70-130
4-Bromofluorobenzene	109		110		70-130
Dibromofluoromethane	99		100		70-130

METALS

Project Name: 1487 FIRST AVENUE
Lab Number: L2271946
Project Number: 100963701
Report Date: 01/03/23

SAMPLE RESULTS

Lab ID: L2271946-01
Client ID: LMW-7R-S_38
Sample Location: MANHATTAN, NY
Date Collected: 12/21/22 08:25
Date Received: 12/21/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Calcium, Total	236.		mg/l	0.100	0.0394	1	12/22/22 10:52	12/27/22 10:32	EPA 3005A	1,6020B	SMV
Iron, Total	76.3		mg/l	0.0500	0.0191	1	12/22/22 10:52	12/27/22 10:32	EPA 3005A	1,6020B	SMV
Magnesium, Total	111.		mg/l	0.0700	0.0242	1	12/22/22 10:52	12/27/22 10:32	EPA 3005A	1,6020B	SMV
Manganese, Total	8.344		mg/l	0.00100	0.00044	1	12/22/22 10:52	12/27/22 10:32	EPA 3005A	1,6020B	SMV
Total Hardness (by calculation) - Mansfield Lab											
Hardness	1048.		mg/l	0.5400	NA	1	12/22/22 10:52	12/27/22 10:32	EPA 3005A	1,6020B	SMV

Project Name: 1487 FIRST AVENUE
Lab Number: L2271946
Project Number: 100963701
Report Date: 01/03/23

SAMPLE RESULTS

Lab ID: L2271946-02
Client ID: LMW-7R-D_42
Sample Location: MANHATTAN, NY
Date Collected: 12/21/22 11:00
Date Received: 12/21/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Calcium, Total	205.		mg/l	0.100	0.0394	1	12/22/22 10:52	12/27/22 10:37	EPA 3005A	1,6020B	SMV
Iron, Total	98.5		mg/l	0.0500	0.0191	1	12/22/22 10:52	12/27/22 10:37	EPA 3005A	1,6020B	SMV
Magnesium, Total	117.		mg/l	0.0700	0.0242	1	12/22/22 10:52	12/27/22 10:37	EPA 3005A	1,6020B	SMV
Manganese, Total	7.510		mg/l	0.00100	0.00044	1	12/22/22 10:52	12/27/22 10:37	EPA 3005A	1,6020B	SMV
Total Hardness (by calculation) - Mansfield Lab											
Hardness	995.1		mg/l	0.5400	NA	1	12/22/22 10:52	12/27/22 10:37	EPA 3005A	1,6020B	SMV

Project Name: 1487 FIRST AVENUE **Lab Number:** L2271946

Project Number: 100963701 **Report Date:** 01/03/23

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-02 Batch: WG1726516-1										
Calcium, Total	ND		mg/l	0.100	0.0394	1	12/22/22 10:52	12/27/22 09:51	1,6020B	SMV
Iron, Total	ND		mg/l	0.0500	0.0191	1	12/22/22 10:52	12/27/22 09:51	1,6020B	SMV
Magnesium, Total	ND		mg/l	0.0700	0.0242	1	12/22/22 10:52	12/27/22 09:51	1,6020B	SMV
Manganese, Total	0.00066	J	mg/l	0.00100	0.00044	1	12/22/22 10:52	12/27/22 09:51	1,6020B	SMV

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness (by calculation) - Mansfield Lab for sample(s): 01-02 Batch: WG1726516-1										
Hardness	ND		mg/l	0.5400	NA	1	12/22/22 10:52	12/27/22 09:51	1,6020B	SMV

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1487 FIRST AVENUE

Project Number: 100963701

Lab Number: L2271946

Report Date: 01/03/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1726516-2								
Calcium, Total	93		-		80-120	-		
Iron, Total	97		-		80-120	-		
Magnesium, Total	103		-		80-120	-		
Manganese, Total	96		-		80-120	-		
Total Hardness (by calculation) - Mansfield Lab Associated sample(s): 01-02 Batch: WG1726516-2								
Hardness	99		-		80-120	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2271946
Report Date: 01/03/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1726516-3 WG1726516-4 QC Sample: L2271549-01 Client ID: MS Sample												
Calcium, Total	11.0	10	88.4	**774**	Q	94.0	**830**	Q	75-125	6		20
Iron, Total	0.112	1	1.11	100		1.10	99		75-125	1		20
Magnesium, Total	56.4	10	48.2	**0**	Q	50.2	**0**	Q	75-125	4		20
Manganese, Total	0.0038	0.5	0.4815	96		0.5019	100		75-125	4		20
Total Hardness (by calculation) - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1726516-3 WG1726516-4 QC Sample: L2271549-01 Client ID: MS Sample												
Hardness	259.6	66.2	419.2	**241**	Q	441.7	**275**	Q	75-125	5		20

INORGANICS
&
MISCELLANEOUS

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2271946
Report Date: 01/03/23

SAMPLE RESULTS

Lab ID: L2271946-01
Client ID: LMW-7R-S_38
Sample Location: MANHATTAN, NY

Date Collected: 12/21/22 08:25
Date Received: 12/21/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Total	129.		mg CaCO3/L	2.00	NA	1	-	12/28/22 04:39	121,2320B	MKT
Chloride	600		mg/l	10	8.9	10	-	12/27/22 23:35	121,4500CL-E	TLH
Nitrogen, Nitrate	0.175		mg/l	0.100	0.022	1	-	12/22/22 10:36	121,4500NO3-F	KAF
Sulfate	510		mg/l	500	68.	50	12/27/22 09:54	12/27/22 09:54	1,9038	MCU
Total Organic Carbon	2.3		mg/l	1.0	0.19	2	-	12/23/22 03:57	1,9060A	DEW
Dissolved Organic Carbon	2.5		mg/l	2.0	0.08	2	12/22/22 07:45	12/23/22 03:57	1,9060A	DEW

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2271946
Report Date: 01/03/23

SAMPLE RESULTS

Lab ID: L2271946-02
Client ID: LMW-7R-D_42
Sample Location: MANHATTAN, NY

Date Collected: 12/21/22 11:00
Date Received: 12/21/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Total	119.		mg CaCO3/L	2.00	NA	1	-	12/28/22 04:39	121,2320B	MKT
Chloride	340		mg/l	10	8.9	10	-	12/27/22 23:37	121,4500CL-E	TLH
Nitrogen, Nitrate	0.429		mg/l	0.100	0.022	1	-	12/22/22 10:38	121,4500NO3-F	KAF
Sulfate	610		mg/l	500	68.	50	12/27/22 09:54	12/27/22 09:54	1,9038	MCU
Total Organic Carbon	3.1		mg/l	1.0	0.19	2	-	12/23/22 03:57	1,9060A	DEW
Dissolved Organic Carbon	3.7		mg/l	2.0	0.08	2	12/22/22 07:45	12/23/22 03:57	1,9060A	DEW

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2271946
Report Date: 01/03/23

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1726357-1										
Nitrogen, Nitrate	ND		mg/l	0.100	0.022	1	-	12/22/22 03:02	121,4500NO3-F	KAF
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1726932-1										
Dissolved Organic Carbon	ND		mg/l	1.0	0.04	1	-	12/23/22 03:57	1,9060A	DEW
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1726933-1										
Total Organic Carbon	ND		mg/l	0.50	0.09	1	-	12/23/22 03:57	1,9060A	DEW
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1727562-1										
Sulfate	1.5	J	mg/l	10	1.4	1	12/27/22 09:54	12/27/22 09:54	1,9038	MCU
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1727810-1										
Chloride	ND		mg/l	1.0	0.89	1	-	12/27/22 21:03	121,4500CL-E	TLH
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1727940-1										
Alkalinity, Total	ND		mg CaCO3/L	2.00	NA	1	-	12/28/22 04:39	121,2320B	MKT

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1487 FIRST AVENUE

Project Number: 100963701

Lab Number: L2271946

Report Date: 01/03/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1726357-2								
Nitrogen, Nitrate	99		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1726932-2								
Dissolved Organic Carbon	97		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1726933-2								
Total Organic Carbon	97		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1727562-2								
Sulfate	100		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1727810-2								
Chloride	103		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1727940-2								
Alkalinity, Total	103		-		90-110	-		10

Matrix Spike Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2271946
Report Date: 01/03/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1726357-4 QC Sample: L2271947-02 Client ID: MS Sample												
Nitrogen, Nitrate	1.41	4	5.46	101		-	-		83-113	-		17
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1726932-4 QC Sample: L2271666-01 Client ID: MS Sample												
Dissolved Organic Carbon	3.8	16	20	99		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1726933-4 QC Sample: L2271946-02 Client ID: LMW-7R-D_42												
Total Organic Carbon	3.1	800	900	112		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1727562-4 QC Sample: L2270421-01 Client ID: MS Sample												
Sulfate	88.	100	180	87		-	-		55-147	-		14
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1727810-4 QC Sample: L2272250-01 Client ID: MS Sample												
Chloride	190	20	210	100		-	-		58-140	-		7
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1727940-4 QC Sample: L2270697-01 Client ID: MS Sample												
Alkalinity, Total	ND	100	99.0	99		-	-		86-116	-		10

Lab Duplicate Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2271946
Report Date: 01/03/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1726357-3 QC Sample: L2271947-02 Client ID: DUP Sample						
Nitrogen, Nitrate	1.41	1.42	mg/l	1		17
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1726932-3 QC Sample: L2271666-01 Client ID: DUP Sample						
Dissolved Organic Carbon	3.8	3.6	mg/l	5		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1726933-3 QC Sample: L2271946-02 Client ID: LMW-7R-D_42						
Total Organic Carbon	3.1	5.2J	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1727562-3 QC Sample: L2270421-01 Client ID: DUP Sample						
Sulfate	88.	90	mg/l	2		14
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1727810-3 QC Sample: L2272250-01 Client ID: DUP Sample						
Chloride	190	200	mg/l	5		7
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1727940-3 QC Sample: L2270697-01 Client ID: DUP Sample						
Alkalinity, Total	ND	ND	mg CaCO3/L	NC		10

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2271946
Report Date: 01/03/23

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(*)
L2271946-01A	Vial HCl preserved	A	NA		2.4	Y	Absent		NYTCL-8260(14)
L2271946-01B	Vial HCl preserved	A	NA		2.4	Y	Absent		NYTCL-8260(14)
L2271946-01C	Vial HCl preserved	A	NA		2.4	Y	Absent		NYTCL-8260(14)
L2271946-01D	Vial H2SO4 preserved	A	NA		2.4	Y	Absent		TOC-9060(28)
L2271946-01E	Vial H2SO4 preserved	A	NA		2.4	Y	Absent		TOC-9060(28)
L2271946-01F	Vial H2SO4 preserved	A	NA		2.4	Y	Absent		TOC-9060(28)
L2271946-01G	Vial unpreserved	A	NA	NA	2.4	Y	Absent		FILTER(1)
L2271946-01H	Vial unpreserved	A	NA	NA	2.4	Y	Absent		FILTER(1)
L2271946-01J	Vial unpreserved	A	NA	NA	2.4	Y	Absent		FILTER(1)
L2271946-01K	Plastic 250ml unpreserved/No Headspace	A	NA		2.4	Y	Absent		ALK-T-2320(14)
L2271946-01L	Plastic 250ml unpreserved	A	7	7	2.4	Y	Absent		CL-4500(28),SO4-9038(28),NO3-4500(2)
L2271946-01M	Plastic 250ml HNO3 preserved	A	<2	<2	2.4	Y	Absent		FE-6020T(180),CA-6020T(180),MN-6020T(180),HARDT-6020(180),MG-6020T(180)
L2271946-01X	Vial H2SO4 preserved Filtrates	A	NA		2.4	Y	Absent		DOC-9060(28)
L2271946-01Y	Vial H2SO4 preserved Filtrates	A	NA		2.4	Y	Absent		DOC-9060(28)
L2271946-01Z	Vial H2SO4 preserved Filtrates	A	NA		2.4	Y	Absent		DOC-9060(28)
L2271946-02A	Vial HCl preserved	A	NA		2.4	Y	Absent		NYTCL-8260(14)
L2271946-02B	Vial HCl preserved	A	NA		2.4	Y	Absent		NYTCL-8260(14)
L2271946-02C	Vial HCl preserved	A	NA		2.4	Y	Absent		NYTCL-8260(14)
L2271946-02D	Vial H2SO4 preserved	A	NA		2.4	Y	Absent		TOC-9060(28)
L2271946-02E	Vial H2SO4 preserved	A	NA		2.4	Y	Absent		TOC-9060(28)
L2271946-02F	Vial H2SO4 preserved	A	NA		2.4	Y	Absent		TOC-9060(28)
L2271946-02G	Vial unpreserved	A	NA	NA	2.4	Y	Absent		FILTER(1)
L2271946-02H	Vial unpreserved	A	NA	NA	2.4	Y	Absent		FILTER(1)

*Values in parentheses indicate holding time in days

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2271946
Report Date: 01/03/23

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2271946-02J	Vial unpreserved	A	NA	NA	2.4	Y	Absent		FILTER(1)
L2271946-02K	Plastic 250ml unpreserved/No Headspace	A	NA		2.4	Y	Absent		ALK-T-2320(14)
L2271946-02L	Plastic 250ml unpreserved	A	7	7	2.4	Y	Absent		SO4-9038(28),CL-4500(28),NO3-4500(2)
L2271946-02M	Plastic 250ml HNO3 preserved	A	<2	<2	2.4	Y	Absent		FE-6020T(180),CA-6020T(180),MN-6020T(180),HARDT-6020(180),MG-6020T(180)
L2271946-02X	Vial H2SO4 preserved Filtrates	A	NA		2.4	Y	Absent		DOC-9060(28)
L2271946-02Y	Vial H2SO4 preserved Filtrates	A	NA		2.4	Y	Absent		DOC-9060(28)
L2271946-02Z	Vial H2SO4 preserved Filtrates	A	NA		2.4	Y	Absent		DOC-9060(28)

*Values in parentheses indicate holding time in days

Project Name:	1487 FIRST AVENUE	**Lab Number:**	L2271946
Project Number:	100963701	**Report Date:**	01/03/23

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:	1487 FIRST AVENUE	**Lab Number:**	L2271946
Project Number:	100963701	**Report Date:**	01/03/23

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:	1487 FIRST AVENUE	**Lab Number:**	L2271946
Project Number:	100963701	**Report Date:**	01/03/23

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:	1487 FIRST AVENUE	**Lab Number:**	L2271946
Project Number:	100963701	**Report Date:**	01/03/23

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, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

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

Mansfield Facility:

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

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

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

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

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: 12/21/22

ALPHA Job #: L2271946

Client Information

Client: Langan
Address: 300 Kimball Drive
Parsippany, NJ
Phone: 973-560-4900
Fax:
Email: asandve@langan.com

Project Information

Project Name: 1487 First Avenue
Project Location: Manhattan, NY
Project #: 100963701
(Use Project name as Project #) ☐
Project Manager: Ben Rao
ALPHAQuote #: 18601

Turn-Around Time

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

Deliverables

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

Regulatory Requirement

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

Billing Information

☑ Same as Client Info
PO # 100963701

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:
**samples for DHC and EBAC were directly shipped to Microbial Insights

Please specify Metals or TAL.

ANALYSIS

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs	Iron, Calcium, Manganese,	Chloride, Sulfate, Nitrate	TOC	DOC	Alkalinity, Hardness	DHC, EBAC**	Sample Specific Comments	Total Bottle
71946-01	LMW-7R-5.38	12/21/22	0825	GW	SH	X	X	X	X	X	X	X		13
-02	LMW-7R-D.42	12/21/22	1100	GW	SH	X	X	X	X	X	X	X		13

Container Type	V	P	P	V	V	P	P
Preservative	B	C	A	D	A	A	A

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

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

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

Relinquished By:	Date/Time	Received By:	Date/Time
(Langan)	12/21/22 15:40	SSMT	12-21-22 15:41
SSMT	12/21/22 18:44		12/21/22 19:30
	12/21/22 2130		12/21/22 2130
	12/21/22 2315		12/21/22 2315

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.

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

microbialinsights
10515 Research Drive
Knoxville, TN 37932
Phone: (865) 573-8188
Fax: (865) 573-8133

ilac-MRA
ANAB
ANSI National Accreditation Board
ACCREDITED
ISO/IEC 17025
TESTING LABORATORY

Client: Ben Rao
Alpha Analytical, Inc.
8 Walkup Dr
Westborough, MA 01581

Phone: 201-812-2633

Fax:

Identifier: 114TL **Date Rec:** 12/22/2022 **Report Date:** 01/03/2023

Client Project #: 100963701 **Client Project Name:** 1487 First Avenue

Purchase Order #: L2271946

Test results provided for: CENSUS

Reviewed By:

Charles Slater

NOTICE: This report is intended only for the addressee shown above and may contain confidential or privileged information. If the recipient of this material is not the intended recipient or if you have received this in error, please notify Microbial Insights, Inc. immediately. The data and other information in this report represent only the sample(s) analyzed and are rendered upon condition that it is not to be reproduced without approval from Microbial Insights, Inc. Thank you for your cooperation.

Results relate only to the items tested and the sample(s) as received by the laboratory.

MICROBIAL INSIGHTS, INC.

10515 Research Dr., Knoxville, TN 37932
Tel. (865) 573-8188 Fax. (865) 573-8133

CENSUS

Client: **Alpha Analytical, Inc.**
Project: 1487 First Avenue

MI Project Number: **114TL**
Date Received: 12/22/2022

Sample Information

Client Sample ID:		**LMW-7R-S_38**	**LMW-7R-D_42**
Sample Date:		12/21/2022	12/21/2022
Units:		cells/mL	cells/mL
Analyst/Reviewer:		OR/CS	OR/CS
Dechlorinating Bacteria			
Dehalococcoides	*DHC*	**3.30E+01**	**4.60E+00**
Phylogenetic Group			
Total Eubacteria	EBAC	**4.81E+06**	**2.18E+07**

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

Quality Assurance/Quality Control Data

Samples Received **12/22/2022**

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control	Extraction Blank	Negative Control
DHC	12/22/2022	01/03/2023	0 °C	106%	non-detect	non-detect
EBAC	12/22/2022	01/03/2023	0 °C	105%	non-detect	non-detect

ANALYTICAL REPORT

Lab Number:	L2272250
Client:	Langan Engineering & Environmental 300 Kimball Drive 4th Floor Parsippany, NJ 07054
ATTN:	Ashley Sandve
Phone:	(973) 560-4871
Project Name:	1487 FIRST AVENUE
Project Number:	100963701
Report Date:	01/10/23

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: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272250
Report Date: 01/10/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2272250-01	LMW-7R-D_66	WATER	MANHATTAN, NY	12/21/22 17:00	12/22/22
L2272250-02	LMW-8R-S_14.5	WATER	MANHATTAN, NY	12/22/22 10:40	12/22/22
L2272250-03	LMW-8R-S_24.75	WATER	MANHATTAN, NY	12/22/22 12:30	12/22/22
L2272250-04	TRIP BLANK_20221222	WATER	MANHATTAN, NY	12/22/22 00:00	12/22/22

Project Name:	1487 FIRST AVENUE	**Lab Number:**	L2272250
Project Number:	100963701	**Report Date:**	01/10/23

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:	1487 FIRST AVENUE	**Lab Number:**	L2272250
Project Number:	100963701	**Report Date:**	01/10/23

Case Narrative (continued)

Report Submission

January 10, 2023: This final report includes the results of all requested analyses.

December 29, 2022: This is a preliminary report.

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

The analyses of Dehalococcoides and Total Eubacteria were subcontracted. A copy of the laboratory report is included as an addendum. Please note: This data is only available in PDF format and is not available on Data Merger.

Sample Receipt

L2272250-01 and -03: Headspace was noted in the sample containers submitted for Total Alkalinity. The analysis was performed.

L2272250-01, -02, and -03: The element list for metals analysis was specified by the client.

L2272250-02 and -03: At the client's request, the Subcontract Dehalococcoides and Total Eubacteria analyses were cancelled.

Dissolved Organic Carbon

L2272250-01, -02 and -03: The sample was filtered with the method required holding time exceeded.

Total Organic Carbon

L2272250-03: The DOC result is greater than the TOC result due to the filtering procedure required by the DOC method.

The WG1727529-4 MS recovery, performed on L2272250-01, is outside the acceptance criteria for total organic carbon (127%); however, the associated LCS recovery is within criteria. No further action was taken.

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

Authorized Signature: Melissa Sturgis Melissa Sturgis

Title: Technical Director/Representative Date: 01/10/23

ORGANICS

VOLATILES

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2272250
Report Date: 01/10/23

SAMPLE RESULTS

Lab ID: L2272250-01
Client ID: LMW-7R-D_66
Sample Location: MANHATTAN, NY
Date Collected: 12/21/22 17:00
Date Received: 12/22/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 12/24/22 16:07
Analyst: PID

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	2.5		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	0.52		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	4.4		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	0.31	J	ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1

Project Name: 1487 FIRST AVENUE **Lab Number:** L2272250

Project Number: 100963701 **Report Date:** 01/10/23

SAMPLE RESULTS

Lab ID: L2272250-01 Date Collected: 12/21/22 17:00

Client ID: LMW-7R-D_66 Date Received: 12/22/22

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	16		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	160		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	160		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	6.0		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	2.0	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: 1487 FIRST AVENUE **Lab Number:** L2272250

Project Number: 100963701 **Report Date:** 01/10/23

SAMPLE RESULTS

Lab ID: L2272250-01 Date Collected: 12/21/22 17:00

Client ID: LMW-7R-D_66 Date Received: 12/22/22

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	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	119		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	113		70-130
Dibromofluoromethane	109		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2272250
Report Date: 01/10/23

SAMPLE RESULTS

Lab ID: L2272250-02 D
Client ID: LMW-8R-S_14.5
Sample Location: MANHATTAN, NY

Date Collected: 12/22/22 10:40
Date Received: 12/22/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 12/24/22 15:47
Analyst: PID

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	900		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	2.0	J	ug/l	10	0.71	10
Chloroethane	ND		ug/l	25	7.0	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
trans-1,2-Dichloroethene	ND		ug/l	25	7.0	10

Project Name: 1487 FIRST AVENUE **Lab Number:** L2272250

Project Number: 100963701 **Report Date:** 01/10/23

SAMPLE RESULTS

Lab ID: L2272250-02 D Date Collected: 12/22/22 10:40
Client ID: LMW-8R-S_14.5 Date Received: 12/22/22
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	360		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	270		ug/l	25	7.0	10
1,2-Dichloroethene, Total	270		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	ND		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	ND		ug/l	25	7.0	10

Project Name: 1487 FIRST AVENUE **Lab Number:** L2272250

Project Number: 100963701 **Report Date:** 01/10/23

SAMPLE RESULTS

Lab ID: L2272250-02 D
Client ID: LMW-8R-S_14.5
Sample Location: MANHATTAN, NY

Date Collected: 12/22/22 10:40
Date Received: 12/22/22
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	113		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	116		70-130
Dibromofluoromethane	103		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2272250
Report Date: 01/10/23

SAMPLE RESULTS

Lab ID: L2272250-03 D
Client ID: LMW-8R-S_24.75
Sample Location: MANHATTAN, NY

Date Collected: 12/22/22 12:30
Date Received: 12/22/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 12/24/22 15:27
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	6.2	1.8	2.5
1,1-Dichloroethane	ND		ug/l	6.2	1.8	2.5
Chloroform	ND		ug/l	6.2	1.8	2.5
Carbon tetrachloride	ND		ug/l	1.2	0.34	2.5
1,2-Dichloropropane	ND		ug/l	2.5	0.34	2.5
Dibromochloromethane	ND		ug/l	1.2	0.37	2.5
1,1,2-Trichloroethane	ND		ug/l	3.8	1.2	2.5
Tetrachloroethene	63		ug/l	1.2	0.45	2.5
Chlorobenzene	ND		ug/l	6.2	1.8	2.5
Trichlorofluoromethane	ND		ug/l	6.2	1.8	2.5
1,2-Dichloroethane	ND		ug/l	1.2	0.33	2.5
1,1,1-Trichloroethane	ND		ug/l	6.2	1.8	2.5
Bromodichloromethane	ND		ug/l	1.2	0.48	2.5
trans-1,3-Dichloropropene	ND		ug/l	1.2	0.41	2.5
cis-1,3-Dichloropropene	ND		ug/l	1.2	0.36	2.5
1,3-Dichloropropene, Total	ND		ug/l	1.2	0.36	2.5
1,1-Dichloropropene	ND		ug/l	6.2	1.8	2.5
Bromoform	ND		ug/l	5.0	1.6	2.5
1,1,2,2-Tetrachloroethane	ND		ug/l	1.2	0.42	2.5
Benzene	ND		ug/l	1.2	0.40	2.5
Toluene	ND		ug/l	6.2	1.8	2.5
Ethylbenzene	ND		ug/l	6.2	1.8	2.5
Chloromethane	ND		ug/l	6.2	1.8	2.5
Bromomethane	ND		ug/l	6.2	1.8	2.5
Vinyl chloride	1.2	J	ug/l	2.5	0.18	2.5
Chloroethane	ND		ug/l	6.2	1.8	2.5
1,1-Dichloroethene	0.74	J	ug/l	1.2	0.42	2.5
trans-1,2-Dichloroethene	1.8	J	ug/l	6.2	1.8	2.5

Project Name: 1487 FIRST AVENUE **Lab Number:** L2272250

Project Number: 100963701 **Report Date:** 01/10/23

SAMPLE RESULTS

Lab ID: L2272250-03 D Date Collected: 12/22/22 12:30
Client ID: LMW-8R-S_24.75 Date Received: 12/22/22
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	52		ug/l	1.2	0.44	2.5
1,2-Dichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,3-Dichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,4-Dichlorobenzene	ND		ug/l	6.2	1.8	2.5
Methyl tert butyl ether	ND		ug/l	6.2	1.8	2.5
p/m-Xylene	ND		ug/l	6.2	1.8	2.5
o-Xylene	ND		ug/l	6.2	1.8	2.5
Xylenes, Total	ND		ug/l	6.2	1.8	2.5
cis-1,2-Dichloroethene	390		ug/l	6.2	1.8	2.5
1,2-Dichloroethene, Total	390	J	ug/l	6.2	1.8	2.5
Dibromomethane	ND		ug/l	12	2.5	2.5
1,2,3-Trichloropropane	ND		ug/l	6.2	1.8	2.5
Acrylonitrile	ND		ug/l	12	3.8	2.5
Styrene	ND		ug/l	6.2	1.8	2.5
Dichlorodifluoromethane	ND		ug/l	12	2.5	2.5
Acetone	ND		ug/l	12	3.6	2.5
Carbon disulfide	ND		ug/l	12	2.5	2.5
2-Butanone	ND		ug/l	12	4.8	2.5
Vinyl acetate	ND		ug/l	12	2.5	2.5
4-Methyl-2-pentanone	ND		ug/l	12	2.5	2.5
2-Hexanone	ND		ug/l	12	2.5	2.5
Bromochloromethane	ND		ug/l	6.2	1.8	2.5
2,2-Dichloropropane	ND		ug/l	6.2	1.8	2.5
1,2-Dibromoethane	ND		ug/l	5.0	1.6	2.5
1,3-Dichloropropane	ND		ug/l	6.2	1.8	2.5
1,1,1,2-Tetrachloroethane	ND		ug/l	6.2	1.8	2.5
Bromobenzene	ND		ug/l	6.2	1.8	2.5
n-Butylbenzene	ND		ug/l	6.2	1.8	2.5
sec-Butylbenzene	ND		ug/l	6.2	1.8	2.5
tert-Butylbenzene	ND		ug/l	6.2	1.8	2.5
o-Chlorotoluene	ND		ug/l	6.2	1.8	2.5
p-Chlorotoluene	ND		ug/l	6.2	1.8	2.5
1,2-Dibromo-3-chloropropane	ND		ug/l	6.2	1.8	2.5
Hexachlorobutadiene	ND		ug/l	6.2	1.8	2.5
Isopropylbenzene	ND		ug/l	6.2	1.8	2.5
p-Isopropyltoluene	ND		ug/l	6.2	1.8	2.5
Naphthalene	ND		ug/l	6.2	1.8	2.5

Project Name: 1487 FIRST AVENUE **Lab Number:** L2272250

Project Number: 100963701 **Report Date:** 01/10/23

SAMPLE RESULTS

Lab ID: L2272250-03 D
Client ID: LMW-8R-S_24.75
Sample Location: MANHATTAN, NY

Date Collected: 12/22/22 12:30
Date Received: 12/22/22
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	6.2	1.8	2.5
1,2,3-Trichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,2,4-Trichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,3,5-Trimethylbenzene	ND		ug/l	6.2	1.8	2.5
1,2,4-Trimethylbenzene	ND		ug/l	6.2	1.8	2.5
1,4-Dioxane	ND		ug/l	620	150	2.5
p-Diethylbenzene	ND		ug/l	5.0	1.8	2.5
p-Ethyltoluene	ND		ug/l	5.0	1.8	2.5
1,2,4,5-Tetramethylbenzene	ND		ug/l	5.0	1.4	2.5
Ethyl ether	ND		ug/l	6.2	1.8	2.5
trans-1,4-Dichloro-2-butene	ND		ug/l	6.2	1.8	2.5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	117		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	116		70-130
Dibromofluoromethane	105		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2272250
Report Date: 01/10/23

SAMPLE RESULTS

Lab ID: L2272250-04
Client ID: TRIP BLANK_20221222
Sample Location: MANHATTAN, NY

Date Collected: 12/22/22 00:00
Date Received: 12/22/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 01/02/23 21:47
Analyst: JIC

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: 1487 FIRST AVENUE **Lab Number:** L2272250

Project Number: 100963701 **Report Date:** 01/10/23

SAMPLE RESULTS

Lab ID: L2272250-04 Date Collected: 12/22/22 00:00

Client ID: TRIP BLANK_20221222 Date Received: 12/22/22

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: 1487 FIRST AVENUE **Lab Number:** L2272250

Project Number: 100963701 **Report Date:** 01/10/23

SAMPLE RESULTS

Lab ID: L2272250-04 Date Collected: 12/22/22 00:00

Client ID: TRIP BLANK_20221222 Date Received: 12/22/22

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	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	102		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	98		70-130

Project Name: 1487 FIRST AVENUE **Lab Number:** L2272250

Project Number: 100963701 **Report Date:** 01/10/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 12/24/22 11:07
Analyst: TMS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1727726-5					
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: 1487 FIRST AVENUE **Lab Number:** L2272250

Project Number: 100963701 **Report Date:** 01/10/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 12/24/22 11:07
Analyst: TMS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1727726-5					
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: 1487 FIRST AVENUE **Lab Number:** L2272250

Project Number: 100963701 **Report Date:** 01/10/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 12/24/22 11:07
Analyst: TMS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1727726-5					
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	118		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	119		70-130
Dibromofluoromethane	111		70-130

Project Name: 1487 FIRST AVENUE **Lab Number:** L2272250

Project Number: 100963701 **Report Date:** 01/10/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 01/02/23 16:47
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 04 Batch: WG1729936-5					
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: 1487 FIRST AVENUE **Lab Number:** L2272250

Project Number: 100963701 **Report Date:** 01/10/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 01/02/23 16:47
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 04 Batch: WG1729936-5					
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: 1487 FIRST AVENUE **Lab Number:** L2272250

Project Number: 100963701 **Report Date:** 01/10/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 01/02/23 16:47
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 04 Batch: WG1729936-5					
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	98		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	98		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272250
Report Date: 01/10/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1727726-3 WG1727726-4								
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	100		96		63-132	4		20
1,2-Dichloropropane	100		100		70-130	0		20
Dibromochloromethane	88		79		63-130	11		20
1,1,2-Trichloroethane	98		92		70-130	6		20
Tetrachloroethene	93		88		70-130	6		20
Chlorobenzene	97		96		75-130	1		20
Trichlorofluoromethane	110		110		62-150	0		20
1,2-Dichloroethane	110		100		70-130	10		20
1,1,1-Trichloroethane	100		100		67-130	0		20
Bromodichloromethane	100		96		67-130	4		20
trans-1,3-Dichloropropene	93		85		70-130	9		20
cis-1,3-Dichloropropene	95		88		70-130	8		20
1,1-Dichloropropene	110		110		70-130	0		20
Bromoform	75		71		54-136	5		20
1,1,2,2-Tetrachloroethane	97		93		67-130	4		20
Benzene	100		100		70-130	0		20
Toluene	100		100		70-130	0		20
Ethylbenzene	110		100		70-130	10		20
Chloromethane	110		110		64-130	0		20
Bromomethane	76		71		39-139	7		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272250
Report Date: 01/10/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1727726-3 WG1727726-4								
Vinyl chloride	120		120		55-140	0		20
Chloroethane	130		120		55-138	8		20
1,1-Dichloroethene	110		110		61-145	0		20
trans-1,2-Dichloroethene	110		110		70-130	0		20
Trichloroethene	100		100		70-130	0		20
1,2-Dichlorobenzene	97		96		70-130	1		20
1,3-Dichlorobenzene	100		98		70-130	2		20
1,4-Dichlorobenzene	100		97		70-130	3		20
Methyl tert butyl ether	100		90		63-130	11		20
p/m-Xylene	105		100		70-130	5		20
o-Xylene	100		100		70-130	0		20
cis-1,2-Dichloroethene	100		100		70-130	0		20
Dibromomethane	100		97		70-130	3		20
1,2,3-Trichloropropane	100		94		64-130	6		20
Acrylonitrile	110		88		70-130	**22**	Q	20
Styrene	105		100		70-130	5		20
Dichlorodifluoromethane	120		120		36-147	0		20
Acetone	130		120		58-148	8		20
Carbon disulfide	110		110		51-130	0		20
2-Butanone	93		75		63-138	**21**	Q	20
Vinyl acetate	100		87		70-130	14		20
4-Methyl-2-pentanone	92		74		59-130	**22**	Q	20
2-Hexanone	98		82		57-130	18		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272250
Report Date: 01/10/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1727726-3 WG1727726-4								
Bromochloromethane	100		94		70-130	6		20
2,2-Dichloropropane	100		100		63-133	0		20
1,2-Dibromoethane	92		82		70-130	11		20
1,3-Dichloropropane	100		95		70-130	5		20
1,1,1,2-Tetrachloroethane	82		79		64-130	4		20
Bromobenzene	97		94		70-130	3		20
n-Butylbenzene	110		110		53-136	0		20
sec-Butylbenzene	110		110		70-130	0		20
tert-Butylbenzene	110		100		70-130	10		20
o-Chlorotoluene	110		110		70-130	0		20
p-Chlorotoluene	110		110		70-130	0		20
1,2-Dibromo-3-chloropropane	86		82		41-144	5		20
Hexachlorobutadiene	90		86		63-130	5		20
Isopropylbenzene	110		110		70-130	0		20
p-Isopropyltoluene	100		100		70-130	0		20
Naphthalene	92		85		70-130	8		20
n-Propylbenzene	120		110		69-130	9		20
1,2,3-Trichlorobenzene	86		83		70-130	4		20
1,2,4-Trichlorobenzene	86		82		70-130	5		20
1,3,5-Trimethylbenzene	100		99		64-130	1		20
1,2,4-Trimethylbenzene	100		97		70-130	3		20
1,4-Dioxane	92		86		56-162	7		20
p-Diethylbenzene	97		95		70-130	2		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1487 FIRST AVENUE

Project Number: 100963701

Lab Number: L2272250

Report Date: 01/10/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1727726-3 WG1727726-4								
p-Ethyltoluene	110		100		70-130	10		20
1,2,4,5-Tetramethylbenzene	89		85		70-130	5		20
Ethyl ether	92		95		59-134	3		20
trans-1,4-Dichloro-2-butene	100		93		70-130	7		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	111		109		70-130
Toluene-d8	102		103		70-130
4-Bromofluorobenzene	111		111		70-130
Dibromofluoromethane	100		101		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272250
Report Date: 01/10/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 04 Batch: WG1729936-3 WG1729936-4								
Methylene chloride	100		100		70-130	0		20
1,1-Dichloroethane	96		97		70-130	1		20
Chloroform	94		96		70-130	2		20
Carbon tetrachloride	83		85		63-132	2		20
1,2-Dichloropropane	94		95		70-130	1		20
Dibromochloromethane	88		88		63-130	0		20
1,1,2-Trichloroethane	98		96		70-130	2		20
Tetrachloroethene	94		94		70-130	0		20
Chlorobenzene	99		98		75-130	1		20
Trichlorofluoromethane	70		72		62-150	3		20
1,2-Dichloroethane	87		89		70-130	2		20
1,1,1-Trichloroethane	91		92		67-130	1		20
Bromodichloromethane	87		88		67-130	1		20
trans-1,3-Dichloropropene	92		92		70-130	0		20
cis-1,3-Dichloropropene	88		88		70-130	0		20
1,1-Dichloropropene	94		94		70-130	0		20
Bromoform	83		86		54-136	4		20
1,1,2,2-Tetrachloroethane	100		100		67-130	0		20
Benzene	98		97		70-130	1		20
Toluene	100		100		70-130	0		20
Ethylbenzene	98		98		70-130	0		20
Chloromethane	98		98		64-130	0		20
Bromomethane	46		48		39-139	4		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272250
Report Date: 01/10/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 04 Batch: WG1729936-3 WG1729936-4								
Vinyl chloride	90		90		55-140	0		20
Chloroethane	79		84		55-138	6		20
1,1-Dichloroethene	100		100		61-145	0		20
trans-1,2-Dichloroethene	98		99		70-130	1		20
Trichloroethene	84		86		70-130	2		20
1,2-Dichlorobenzene	94		98		70-130	4		20
1,3-Dichlorobenzene	96		98		70-130	2		20
1,4-Dichlorobenzene	94		97		70-130	3		20
Methyl tert butyl ether	88		88		63-130	0		20
p/m-Xylene	95		95		70-130	0		20
o-Xylene	95		95		70-130	0		20
cis-1,2-Dichloroethene	95		95		70-130	0		20
Dibromomethane	82		84		70-130	2		20
1,2,3-Trichloropropane	96		97		64-130	1		20
Acrylonitrile	100		96		70-130	4		20
Styrene	95		95		70-130	0		20
Dichlorodifluoromethane	86		86		36-147	0		20
Acetone	97		120		58-148	**21**	Q	20
Carbon disulfide	100		100		51-130	0		20
2-Butanone	110		100		63-138	10		20
Vinyl acetate	110		110		70-130	0		20
4-Methyl-2-pentanone	92		91		59-130	1		20
2-Hexanone	110		120		57-130	9		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272250
Report Date: 01/10/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 04 Batch: WG1729936-3 WG1729936-4								
Bromochloromethane	92		93		70-130	1		20
2,2-Dichloropropane	91		92		63-133	1		20
1,2-Dibromoethane	96		94		70-130	2		20
1,3-Dichloropropane	98		96		70-130	2		20
1,1,1,2-Tetrachloroethane	91		90		64-130	1		20
Bromobenzene	95		96		70-130	1		20
n-Butylbenzene	100		110		53-136	10		20
sec-Butylbenzene	100		110		70-130	10		20
tert-Butylbenzene	100		110		70-130	10		20
o-Chlorotoluene	100		110		70-130	10		20
p-Chlorotoluene	100		110		70-130	10		20
1,2-Dibromo-3-chloropropane	80		86		41-144	7		20
Hexachlorobutadiene	98		100		63-130	2		20
Isopropylbenzene	100		100		70-130	0		20
p-Isopropyltoluene	100		110		70-130	10		20
Naphthalene	88		92		70-130	4		20
n-Propylbenzene	100		110		69-130	10		20
1,2,3-Trichlorobenzene	86		90		70-130	5		20
1,2,4-Trichlorobenzene	90		93		70-130	3		20
1,3,5-Trimethylbenzene	100		100		64-130	0		20
1,2,4-Trimethylbenzene	100		100		70-130	0		20
1,4-Dioxane	102		108		56-162	6		20
p-Diethylbenzene	100		100		70-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1487 FIRST AVENUE

Project Number: 100963701

Lab Number: L2272250

Report Date: 01/10/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 04 Batch: WG1729936-3 WG1729936-4								
p-Ethyltoluene	100		110		70-130	10		20
1,2,4,5-Tetramethylbenzene	98		100		70-130	2		20
Ethyl ether	66		71		59-134	7		20
trans-1,4-Dichloro-2-butene	98		110		70-130	12		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	97		99		70-130
Toluene-d8	106		105		70-130
4-Bromofluorobenzene	111		112		70-130
Dibromofluoromethane	94		95		70-130

METALS

Project Name: 1487 FIRST AVENUE
Lab Number: L2272250
Project Number: 100963701
Report Date: 01/10/23

SAMPLE RESULTS

Lab ID: L2272250-01
Client ID: LMW-7R-D_66
Sample Location: MANHATTAN, NY
Date Collected: 12/21/22 17:00
Date Received: 12/22/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Calcium, Total	146.		mg/l	0.100	0.0394	1	12/23/22 10:52	12/28/22 19:05	EPA 3005A	1,6020B	WKP
Iron, Total	25.6		mg/l	0.0500	0.0191	1	12/23/22 10:52	12/28/22 19:05	EPA 3005A	1,6020B	WKP
Magnesium, Total	44.2		mg/l	0.0700	0.0242	1	12/23/22 10:52	12/28/22 19:05	EPA 3005A	1,6020B	WKP
Manganese, Total	2.320		mg/l	0.00100	0.00044	1	12/23/22 10:52	12/28/22 19:05	EPA 3005A	1,6020B	WKP
Total Hardness (by calculation) - Mansfield Lab											
Hardness	547.9		mg/l	0.5400	NA	1	12/23/22 10:52	12/28/22 19:05	EPA 3005A	1,6020B	WKP

Project Name: 1487 FIRST AVENUE
Lab Number: L2272250
Project Number: 100963701
Report Date: 01/10/23

SAMPLE RESULTS

Lab ID: L2272250-02
Client ID: LMW-8R-S_14.5
Sample Location: MANHATTAN, NY
Date Collected: 12/22/22 10:40
Date Received: 12/22/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Calcium, Total	289.		mg/l	0.100	0.0394	1	12/23/22 10:52	12/28/22 19:10	EPA 3005A	1,6020B	WKP
Iron, Total	31.3		mg/l	0.0500	0.0191	1	12/23/22 10:52	12/28/22 19:10	EPA 3005A	1,6020B	WKP
Magnesium, Total	103.		mg/l	0.0700	0.0242	1	12/23/22 10:52	12/28/22 19:10	EPA 3005A	1,6020B	WKP
Manganese, Total	9.421		mg/l	0.01000	0.00440	10	12/23/22 10:52	12/28/22 20:17	EPA 3005A	1,6020B	WKP
Total Hardness (by calculation) - Mansfield Lab											
Hardness	1146.		mg/l	0.5400	NA	1	12/23/22 10:52	12/28/22 19:10	EPA 3005A	1,6020B	WKP

Project Name: 1487 FIRST AVENUE
Lab Number: L2272250
Project Number: 100963701
Report Date: 01/10/23

SAMPLE RESULTS

Lab ID: L2272250-03
Client ID: LMW-8R-S_24.75
Sample Location: MANHATTAN, NY
Date Collected: 12/22/22 12:30
Date Received: 12/22/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Calcium, Total	234.		mg/l	0.100	0.0394	1	12/23/22 10:52	12/28/22 20:12	EPA 3005A	1,6020B	WKP
Iron, Total	34.2		mg/l	0.0500	0.0191	1	12/23/22 10:52	12/28/22 20:12	EPA 3005A	1,6020B	WKP
Magnesium, Total	68.7		mg/l	0.0700	0.0242	1	12/23/22 10:52	12/28/22 20:12	EPA 3005A	1,6020B	WKP
Manganese, Total	6.069		mg/l	0.00100	0.00044	1	12/23/22 10:52	12/28/22 20:12	EPA 3005A	1,6020B	WKP
Total Hardness (by calculation) - Mansfield Lab											
Hardness	868.6		mg/l	0.5400	NA	1	12/23/22 10:52	12/28/22 20:12	EPA 3005A	1,6020B	WKP

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2272250
Report Date: 01/10/23

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-03 Batch: WG1726953-1										
Calcium, Total	ND		mg/l	0.100	0.0394	1	12/23/22 10:52	12/28/22 18:28	1,6020B	WKP
Iron, Total	ND		mg/l	0.0500	0.0191	1	12/23/22 10:52	12/28/22 18:28	1,6020B	WKP
Magnesium, Total	ND		mg/l	0.0700	0.0242	1	12/23/22 10:52	12/28/22 18:28	1,6020B	WKP
Manganese, Total	ND		mg/l	0.00100	0.00044	1	12/23/22 10:52	12/28/22 18:28	1,6020B	WKP

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness (by calculation) - Mansfield Lab for sample(s): 01-03 Batch: WG1726953-1										
Hardness	ND		mg/l	0.5400	NA	1	12/23/22 10:52	12/28/22 18:28	1,6020B	WKP

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1487 FIRST AVENUE

Project Number: 100963701

Lab Number: L2272250

Report Date: 01/10/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03 Batch: WG1726953-2								
Calcium, Total	93		-		80-120	-		
Iron, Total	94		-		80-120	-		
Magnesium, Total	97		-		80-120	-		
Manganese, Total	96		-		80-120	-		
Total Hardness (by calculation) - Mansfield Lab Associated sample(s): 01-03 Batch: WG1726953-2								
Hardness	95		-		80-120	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272250
Report Date: 01/10/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1726953-3 QC Sample: L2272276-01 Client ID: MS Sample												
Calcium, Total	59.0	10	67.6	86		-	-		75-125	-		20
Iron, Total	0.126	1	1.09	96		-	-		75-125	-		20
Magnesium, Total	13.1	10	22.9	98		-	-		75-125	-		20
Manganese, Total	0.00190	0.5	0.4640	92		-	-		75-125	-		20
Total Hardness (by calculation) - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1726953-3 QC Sample: L2272276-01 Client ID: MS Sample												
Hardness	201.2	66.2	263.0	93		-	-		75-125	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: 1487 FIRST AVENUE

Project Number: 100963701

Lab Number: L2272250

Report Date: 01/10/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1726953-4 QC Sample: L2272276-01 Client ID: DUP Sample						
Iron, Total	0.126	0.132	mg/l	5		20
Manganese, Total	0.00190	0.00203	mg/l	7		20

INORGANICS
&
MISCELLANEOUS

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272250
Report Date: 01/10/23

SAMPLE RESULTS

Lab ID: L2272250-01
Client ID: LMW-7R-D_66
Sample Location: MANHATTAN, NY

Date Collected: 12/21/22 17:00
Date Received: 12/22/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Total	187.		mg CaCO3/L	2.00	NA	1	-	12/29/22 03:46	121,2320B	MRM
Chloride	190		mg/l	10	8.9	10	-	12/27/22 23:39	121,4500CL-E	TLH
Nitrogen, Nitrate	0.089	J	mg/l	0.100	0.022	1	-	12/23/22 07:12	121,4500NO3-F	KAF
Sulfate	670		mg/l	500	68.	50	12/28/22 08:59	12/28/22 08:59	1,9038	MCU
Total Organic Carbon	9.2		mg/l	2.0	0.39	4	-	12/27/22 05:01	1,9060A	DEW
Dissolved Organic Carbon	8.9		mg/l	4.0	0.17	4	12/24/22 08:30	12/27/22 05:01	1,9060A	DEW

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272250
Report Date: 01/10/23

SAMPLE RESULTS

Lab ID: L2272250-02
Client ID: LMW-8R-S_14.5
Sample Location: MANHATTAN, NY

Date Collected: 12/22/22 10:40
Date Received: 12/22/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Total	163.		mg CaCO3/L	2.00	NA	1	-	12/29/22 03:46	121,2320B	MRM
Chloride	110		mg/l	10	8.9	10	-	12/27/22 23:43	121,4500CL-E	TLH
Nitrogen, Nitrate	0.120		mg/l	0.100	0.022	1	-	12/23/22 07:14	121,4500NO3-F	KAF
Sulfate	1100		mg/l	500	68.	50	12/28/22 08:59	12/28/22 08:59	1,9038	MCU
Total Organic Carbon	6.2		mg/l	2.0	0.39	4	-	12/27/22 05:01	1,9060A	DEW
Dissolved Organic Carbon	6.1		mg/l	4.0	0.17	4	12/24/22 08:30	12/27/22 05:01	1,9060A	DEW

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272250
Report Date: 01/10/23

SAMPLE RESULTS

Lab ID: L2272250-03
Client ID: LMW-8R-S_24.75
Sample Location: MANHATTAN, NY

Date Collected: 12/22/22 12:30
Date Received: 12/22/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Total	155.		mg CaCO3/L	2.00	NA	1	-	12/29/22 03:46	121,2320B	MRM
Chloride	340		mg/l	10	8.9	10	-	12/27/22 23:45	121,4500CL-E	TLH
Nitrogen, Nitrate	0.116		mg/l	0.100	0.022	1	-	12/23/22 07:15	121,4500NO3-F	KAF
Sulfate	600		mg/l	500	68.	50	12/28/22 08:59	12/28/22 08:59	1,9038	MCU
Total Organic Carbon	3.8		mg/l	1.0	0.19	2	-	12/27/22 05:01	1,9060A	DEW
Dissolved Organic Carbon	4.4		mg/l	2.0	0.08	2	12/24/22 08:30	12/27/22 05:01	1,9060A	DEW

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2272250
Report Date: 01/10/23

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1726893-1										
Nitrogen, Nitrate	ND		mg/l	0.100	0.022	1	-	12/23/22 02:38	121,4500NO3-F	KAF
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1727528-1										
Dissolved Organic Carbon	ND		mg/l	1.0	0.04	1	12/24/22 08:30	12/27/22 05:01	1,9060A	DEW
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1727529-1										
Total Organic Carbon	ND		mg/l	0.50	0.09	1	-	12/27/22 05:01	1,9060A	DEW
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1727810-1										
Chloride	ND		mg/l	1.0	0.89	1	-	12/27/22 21:03	121,4500CL-E	TLH
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1727928-1										
Sulfate	2.1	J	mg/l	10	1.4	1	12/28/22 08:59	12/28/22 08:59	1,9038	MCU
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1728434-1										
Alkalinity, Total	ND		mg CaCO3/L	2.00	NA	1	-	12/29/22 03:46	121,2320B	MRM

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1487 FIRST AVENUE

Project Number: 100963701

Lab Number: L2272250

Report Date: 01/10/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1726893-2								
Nitrogen, Nitrate	99		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1727528-2								
Dissolved Organic Carbon	97		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1727529-2								
Total Organic Carbon	97		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1727810-2								
Chloride	103		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1727928-2								
Sulfate	95		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1728434-2								
Alkalinity, Total	103		-		90-110	-		10

Matrix Spike Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272250
Report Date: 01/10/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1726893-4 QC Sample: L2272211-01 Client ID: MS Sample												
Nitrogen, Nitrate	3.47	4	7.40	98		-	-		83-113	-		17
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1727528-4 QC Sample: L2272250-01 Client ID: LMW-7R-D_66												
Dissolved Organic Carbon	8.9	40	54	112		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1727529-4 QC Sample: L2272250-01 Client ID: LMW-7R-D_66												
Total Organic Carbon	9.2	40	60	**127**	Q	-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1727810-4 QC Sample: L2272250-01 Client ID: LMW-7R-D_66												
Chloride	190	20	210	100		-	-		58-140	-		7
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1727928-4 QC Sample: L2270780-01 Client ID: MS Sample												
Sulfate	1.7J	40	41	102		-	-		55-147	-		14
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1728434-4 QC Sample: L2270848-01 Client ID: MS Sample												
Alkalinity, Total	223.	100	322	99		-	-		86-116	-		10

Lab Duplicate Analysis

Batch Quality Control

Project Name: 1487 FIRST AVENUE

Project Number: 100963701

Lab Number: L2272250

Report Date: 01/10/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1726893-3 QC Sample: L2272211-01 Client ID: DUP Sample						
Nitrogen, Nitrate	3.47	3.48	mg/l	0		17
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1727528-3 QC Sample: L2272250-01 Client ID: LMW-7R-D_66						
Dissolved Organic Carbon	8.9	9.0	mg/l	1		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1727529-3 QC Sample: L2272250-01 Client ID: LMW-7R-D_66						
Total Organic Carbon	9.2	9.0	mg/l	2		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1727810-3 QC Sample: L2272250-01 Client ID: LMW-7R-D_66						
Chloride	190	200	mg/l	5		7
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1727928-3 QC Sample: L2270780-01 Client ID: DUP Sample						
Sulfate	1.7J	1.8J	mg/l	NC		14
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1728434-3 QC Sample: L2270848-01 Client ID: DUP Sample						
Alkalinity, Total	223.	219	mg CaCO3/L	2		10

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272250
Report Date: 01/10/23

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(*)
L2272250-01A	Vial HCl preserved	A	NA		4.5	Y	Absent		NYTCL-8260(14)
L2272250-01B	Vial HCl preserved	A	NA		4.5	Y	Absent		NYTCL-8260(14)
L2272250-01C	Vial HCl preserved	A	NA		4.5	Y	Absent		NYTCL-8260(14)
L2272250-01D	Vial H2SO4 preserved	A	NA		4.5	Y	Absent		TOC-9060(28)
L2272250-01E	Vial H2SO4 preserved	A	NA		4.5	Y	Absent		TOC-9060(28)
L2272250-01F	Vial H2SO4 preserved	A	NA		4.5	Y	Absent		TOC-9060(28)
L2272250-01G	Vial unpreserved	A	N/A	N/A	4.5	Y	Absent		FILTER(1)
L2272250-01H	Vial unpreserved	A	N/A	N/A	4.5	Y	Absent		FILTER(1)
L2272250-01J	Vial unpreserved	A	N/A	N/A	4.5	Y	Absent		FILTER(1)
L2272250-01K	Plastic 250ml unpreserved/No Headspace	A	NA		4.5	Y	Absent		ALK-T-2320(14)
L2272250-01L	Plastic 250ml unpreserved	A	7	7	4.5	Y	Absent		CL-4500(28),SO4-9038(28),NO3-4500(2)
L2272250-01M	Plastic 250ml HNO3 preserved	A	<2	<2	4.5	Y	Absent		FE-6020T(180),CA-6020T(180),MN-6020T(180),MG-6020T(180),HARDT-6020(180)
L2272250-01X	Vial H2SO4 preserved Filtrates	A	NA		4.5	Y	Absent		DOC-9060(28)
L2272250-01Y	Vial H2SO4 preserved Filtrates	A	NA		4.5	Y	Absent		DOC-9060(28)
L2272250-01Z	Vial H2SO4 preserved Filtrates	A	NA		4.5	Y	Absent		DOC-9060(28)
L2272250-02A	Vial HCl preserved	A	NA		4.5	Y	Absent		NYTCL-8260(14)
L2272250-02B	Vial HCl preserved	A	NA		4.5	Y	Absent		NYTCL-8260(14)
L2272250-02C	Vial HCl preserved	A	NA		4.5	Y	Absent		NYTCL-8260(14)
L2272250-02D	Vial H2SO4 preserved	A	NA		4.5	Y	Absent		TOC-9060(28)
L2272250-02E	Vial H2SO4 preserved	A	NA		4.5	Y	Absent		TOC-9060(28)
L2272250-02F	Vial H2SO4 preserved	A	NA		4.5	Y	Absent		TOC-9060(28)
L2272250-02G	Vial unpreserved	A	N/A	N/A	4.5	Y	Absent		FILTER(1)
L2272250-02H	Vial unpreserved	A	N/A	N/A	4.5	Y	Absent		FILTER(1)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2272250-02J	Vial unpreserved	A	N/A	N/A	4.5	Y	Absent		FILTER(1)
L2272250-02K	Plastic 250ml unpreserved/No Headspace	A	NA		4.5	Y	Absent		ALK-T-2320(14)
L2272250-02L	Plastic 250ml unpreserved	A	7	7	4.5	Y	Absent		CL-4500(28),SO4-9038(28),NO3-4500(2)
L2272250-02M	Plastic 250ml HNO3 preserved	A	<2	<2	4.5	Y	Absent		FE-6020T(180),CA-6020T(180),MN-6020T(180),HARDT-6020(180),MG-6020T(180)
L2272250-02X	Vial H2SO4 preserved Filtrates	A	NA		4.5	Y	Absent		DOC-9060(28)
L2272250-02Y	Vial H2SO4 preserved Filtrates	A	NA		4.5	Y	Absent		DOC-9060(28)
L2272250-02Z	Vial H2SO4 preserved Filtrates	A	NA		4.5	Y	Absent		DOC-9060(28)
L2272250-03A	Vial HCl preserved	A	NA		4.5	Y	Absent		NYTCL-8260(14)
L2272250-03B	Vial HCl preserved	A	NA		4.5	Y	Absent		NYTCL-8260(14)
L2272250-03C	Vial HCl preserved	A	NA		4.5	Y	Absent		NYTCL-8260(14)
L2272250-03D	Vial H2SO4 preserved	A	NA		4.5	Y	Absent		TOC-9060(28)
L2272250-03E	Vial H2SO4 preserved	A	NA		4.5	Y	Absent		TOC-9060(28)
L2272250-03F	Vial H2SO4 preserved	A	NA		4.5	Y	Absent		TOC-9060(28)
L2272250-03G	Vial unpreserved	A	N/A	N/A	4.5	Y	Absent		FILTER(1)
L2272250-03H	Vial unpreserved	A	N/A	N/A	4.5	Y	Absent		FILTER(1)
L2272250-03J	Vial unpreserved	A	N/A	N/A	4.5	Y	Absent		FILTER(1)
L2272250-03K	Plastic 250ml unpreserved/No Headspace	A	NA		4.5	Y	Absent		ALK-T-2320(14)
L2272250-03L	Plastic 250ml unpreserved	A	7	7	4.5	Y	Absent		CL-4500(28),SO4-9038(28),NO3-4500(2)
L2272250-03M	Plastic 250ml HNO3 preserved	A	<2	<2	4.5	Y	Absent		FE-6020T(180),CA-6020T(180),MN-6020T(180),MG-6020T(180),HARDT-6020(180)
L2272250-03X	Vial H2SO4 preserved Filtrates	A	NA		4.5	Y	Absent		DOC-9060(28)
L2272250-03Y	Vial H2SO4 preserved Filtrates	A	NA		4.5	Y	Absent		DOC-9060(28)
L2272250-03Z	Vial H2SO4 preserved Filtrates	A	NA		4.5	Y	Absent		DOC-9060(28)
L2272250-04A	Vial HCl preserved	A	NA		4.5	Y	Absent		NYTCL-8260(14)
L2272250-04B	Vial HCl preserved	A	NA		4.5	Y	Absent		NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name:	1487 FIRST AVENUE	**Lab Number:**	L2272250
Project Number:	100963701	**Report Date:**	01/10/23

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:	1487 FIRST AVENUE	**Lab Number:**	L2272250
Project Number:	100963701	**Report Date:**	01/10/23

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:	1487 FIRST AVENUE	**Lab Number:**	L2272250
Project Number:	100963701	**Report Date:**	01/10/23

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:	1487 FIRST AVENUE	**Lab Number:**	L2272250
Project Number:	100963701	**Report Date:**	01/10/23

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, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

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

Mansfield Facility:

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

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

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

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

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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: 12/22/22

ALPHA Job #: L2272250

Client Information

Client: Langan
Address: 300 Kimball Drive
Parsippany, NJ
Phone: 973-560-4900
Fax: —
Email: asandve@langan.com

Project Information

Project Name: 1487 First Avenue
Project Location: Manhattan, NY
Project #: 100963701
(Use Project name as Project #) ☐
Project Manager: Ben Rao
ALPHAQuote #: 18601

Turn-Around Time

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

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

**samples for DHC and EBAC were directly shipped to Microbial Insights

Please specify Metals or TAL.

Deliverables

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

Regulatory Requirement

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

Billing Information

☑ Same as Client Info
PO # 100963701

Disposal Site Information

Please identify below location of applicable disposal facilities.

Disposal Facility:
☐ NJ ☐ NY
☐ Other:

Sample Filtration

☐ Done
☑ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs	Iron, Calcium, Manganese,	Chloride, Sulfate, Nitrate	TOC	DOC	Alkalinity, Hardness	DHC, EBAC**	Sample Specific Comments	Total Bottle
72250 -01	LMW-7R-D_66	12/22/22	1700	GW	SH	X	X	X	X	X	X	X		13
-02	LMW-3R-S_14.5	12/22/22	1040	GW	SH	X	X	X	X	X	X	X		13
-03	LMW-8R-S_24.75		1230	GW	SH	X	X	X	X	X	X	X		2
-04	Trip Blank_12.22.22	↓	—	AQ	SH	X								0
	0													0
	0													0

Container Type: V P P V V P P
Preservative: B C A D A A A

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

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

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

Relinquished By:	Date/Time	Received By:	Date/Time
(Langan)	12/22/22 1520	(AAL)	12/22/22 1520
(AAL)	12/22/22 1700		12/22/22 19:30
	12/22/22 2130		12/22/22 2130
	12/22/22 2325		12/22/22 23:25

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.

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

microbialinsights
10515 Research Drive
Knoxville, TN 37932
Phone: (865) 573-8188
Fax: (865) 573-8133

ilac-MRA
ANAB ANSI National Accreditation Board ACCREDITED ISO/IEC 17025 TESTING LABORATORY

Client: Ben Rao
Alpha Analytical, Inc.
8 Walkup Dr
Westborough, MA 01581

Phone: 201-812-2633

Fax:

Identifier: 129TL **Date Rec:** 12/22/2022 **Report Date:** 01/03/2023

Client Project #: 100963701 **Client Project Name:** 1487 First Avenue

Purchase Order #: L2272250

Test results provided for: CENSUS

Reviewed By:

Charles Slater

NOTICE: This report is intended only for the addressee shown above and may contain confidential or privileged information. If the recipient of this material is not the intended recipient or if you have received this in error, please notify Microbial Insights, Inc. immediately. The data and other information in this report represent only the sample(s) analyzed and are rendered upon condition that it is not to be reproduced without approval from Microbial Insights, Inc. Thank you for your cooperation.

Results relate only to the items tested and the sample(s) as received by the laboratory.

MICROBIAL INSIGHTS, INC.

10515 Research Dr., Knoxville, TN 37932
Tel. (865) 573-8188 Fax. (865) 573-8133

CENSUS

Client: **Alpha Analytical, Inc.**
Project: 1487 First Avenue

MI Project Number: **129TL**
Date Received: 12/22/2022

Sample Information

Client Sample ID:	**LMW-7R-D_66**
Sample Date:	12/21/2022
Units:	cells/mL
Analyst/Reviewer:	OR/CS

Dechlorinating Bacteria

Dehalococcoides	*DHC*	**3.10E+01**

Phylogenetic Group

Total Eubacteria	EBAC	**2.71E+07**

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

Quality Assurance/Quality Control Data

Samples Received **12/22/2022**

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control	Extraction Blank	Negative Control
DHC	12/22/2022	01/03/2023	0 °C	106%	non-detect	non-detect
EBAC	12/22/2022	01/03/2023	0 °C	105%	non-detect	non-detect

ANALYTICAL REPORT

Lab Number:	L2272462
Client:	Langan Engineering & Environmental 300 Kimball Drive 4th Floor Parsippany, NJ 07054
ATTN:	Ashley Sandve
Phone:	(973) 560-4871
Project Name:	1487 FIRST AVENUE
Project Number:	100963701
Report Date:	12/30/22

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: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272462
Report Date: 12/30/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2272462-01	LMW-10R-S_13	WATER	MANHATTAN, NY	12/22/22 15:30	12/23/22
L2272462-02	LMW-10R-S_18.25	WATER	MANHATTAN, NY	12/23/22 08:40	12/23/22
L2272462-03	LMW-10R-D_40.5	WATER	MANHATTAN, NY	12/23/22 11:30	12/23/22
L2272462-04	TRIP BLANK_20221223	WATER	MANHATTAN, NY	12/23/22 00:00	12/23/22

Project Name:	1487 FIRST AVENUE	**Lab Number:**	L2272462
Project Number:	100963701	**Report Date:**	12/30/22

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:	1487 FIRST AVENUE	**Lab Number:**	L2272462
Project Number:	100963701	**Report Date:**	12/30/22

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

L2272462-02: Headspace was noted in the sample container submitted for Total Alkalinity - SM 2320. The analysis was performed at the client's request.

L2272462-04: A sample identified as "TRIP BLANK_20221223" was listed on the Chain of Custody, but not received. This was verified by the client.

Total Organic Carbon

L2272462-02: The DOC result is greater than the TOC result due to the filtering procedure required by the DOC method.

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 Stenstrom

Title: Technical Director/Representative Date: 12/30/22

ORGANICS

VOLATILES

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2272462
Report Date: 12/30/22

SAMPLE RESULTS

Lab ID: L2272462-01
Client ID: LMW-10R-S_13
Sample Location: MANHATTAN, NY
Date Collected: 12/22/22 15:30
Date Received: 12/23/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 12/28/22 14:20
Analyst: AJK

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	10		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: 1487 FIRST AVENUE **Lab Number:** L2272462

Project Number: 100963701 **Report Date:** 12/30/22

SAMPLE RESULTS

Lab ID: L2272462-01 Date Collected: 12/22/22 15:30

Client ID: LMW-10R-S_13 Date Received: 12/23/22

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	8.8		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	16		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	16		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: 1487 FIRST AVENUE **Lab Number:** L2272462

Project Number: 100963701 **Report Date:** 12/30/22

SAMPLE RESULTS

Lab ID: L2272462-01 Date Collected: 12/22/22 15:30

Client ID: LMW-10R-S_13 Date Received: 12/23/22

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	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	102		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	110		70-130
Dibromofluoromethane	100		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2272462
Report Date: 12/30/22

SAMPLE RESULTS

Lab ID: L2272462-02
Client ID: LMW-10R-S_18.25
Sample Location: MANHATTAN, NY
Date Collected: 12/23/22 08:40
Date Received: 12/23/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 12/28/22 14:45
Analyst: AJK

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	26		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	0.25	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	0.37	J	ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	0.23	J	ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1

Project Name: 1487 FIRST AVENUE **Lab Number:** L2272462

Project Number: 100963701 **Report Date:** 12/30/22

SAMPLE RESULTS

Lab ID: L2272462-02 Date Collected: 12/23/22 08:40

Client ID: LMW-10R-S_18.25 Date Received: 12/23/22

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	33		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	140		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	140		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	2.1	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: 1487 FIRST AVENUE **Lab Number:** L2272462

Project Number: 100963701 **Report Date:** 12/30/22

SAMPLE RESULTS

Lab ID: L2272462-02 Date Collected: 12/23/22 08:40

Client ID: LMW-10R-S_18.25 Date Received: 12/23/22

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	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	102		70-130
4-Bromofluorobenzene	112		70-130
Dibromofluoromethane	98		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2272462
Report Date: 12/30/22

SAMPLE RESULTS

Lab ID: L2272462-03
Client ID: LMW-10R-D_40.5
Sample Location: MANHATTAN, NY
Date Collected: 12/23/22 11:30
Date Received: 12/23/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 12/28/22 15:11
Analyst: AJK

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	2.6		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	2.1		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	0.20	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	0.11	J	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: 1487 FIRST AVENUE **Lab Number:** L2272462

Project Number: 100963701 **Report Date:** 12/30/22

SAMPLE RESULTS

Lab ID: L2272462-03 Date Collected: 12/23/22 11:30

Client ID: LMW-10R-D_40.5 Date Received: 12/23/22

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	1.1		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	18		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	18		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	2.3	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: 1487 FIRST AVENUE **Lab Number:** L2272462

Project Number: 100963701 **Report Date:** 12/30/22

SAMPLE RESULTS

Lab ID: L2272462-03 Date Collected: 12/23/22 11:30

Client ID: LMW-10R-D_40.5 Date Received: 12/23/22

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	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	102		70-130
4-Bromofluorobenzene	112		70-130
Dibromofluoromethane	99		70-130

Project Name: 1487 FIRST AVENUE **Lab Number:** L2272462

Project Number: 100963701 **Report Date:** 12/30/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 12/28/22 08:43
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1728364-5					
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: 1487 FIRST AVENUE **Lab Number:** L2272462

Project Number: 100963701 **Report Date:** 12/30/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 12/28/22 08:43
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1728364-5					
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: 1487 FIRST AVENUE **Lab Number:** L2272462

Project Number: 100963701 **Report Date:** 12/30/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 12/28/22 08:43
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1728364-5					
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	99		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	113		70-130
Dibromofluoromethane	99		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272462
Report Date: 12/30/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1728364-3 WG1728364-4								
Methylene chloride	97		100		70-130	3		20
1,1-Dichloroethane	100		100		70-130	0		20
Chloroform	99		100		70-130	1		20
Carbon tetrachloride	110		110		63-132	0		20
1,2-Dichloropropane	100		100		70-130	0		20
Dibromochloromethane	94		100		63-130	6		20
1,1,2-Trichloroethane	91		96		70-130	5		20
Tetrachloroethene	96		100		70-130	4		20
Chlorobenzene	93		97		75-130	4		20
Trichlorofluoromethane	94		96		62-150	2		20
1,2-Dichloroethane	97		100		70-130	3		20
1,1,1-Trichloroethane	100		110		67-130	10		20
Bromodichloromethane	99		100		67-130	1		20
trans-1,3-Dichloropropene	92		97		70-130	5		20
cis-1,3-Dichloropropene	96		100		70-130	4		20
1,1-Dichloropropene	110		110		70-130	0		20
Bromoform	90		97		54-136	7		20
1,1,2,2-Tetrachloroethane	91		98		67-130	7		20
Benzene	94		96		70-130	2		20
Toluene	96		99		70-130	3		20
Ethylbenzene	95		98		70-130	3		20
Chloromethane	80		91		64-130	13		20
Bromomethane	47		50		39-139	6		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272462
Report Date: 12/30/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1728364-3 WG1728364-4								
Vinyl chloride	93		100		55-140	7		20
Chloroethane	96		100		55-138	4		20
1,1-Dichloroethene	92		94		61-145	2		20
trans-1,2-Dichloroethene	99		100		70-130	1		20
Trichloroethene	97		99		70-130	2		20
1,2-Dichlorobenzene	91		96		70-130	5		20
1,3-Dichlorobenzene	94		96		70-130	2		20
1,4-Dichlorobenzene	92		94		70-130	2		20
Methyl tert butyl ether	87		94		63-130	8		20
p/m-Xylene	95		100		70-130	5		20
o-Xylene	90		90		70-130	0		20
cis-1,2-Dichloroethene	100		100		70-130	0		20
Dibromomethane	95		99		70-130	4		20
1,2,3-Trichloropropane	88		94		64-130	7		20
Acrylonitrile	96		100		70-130	4		20
Styrene	80		85		70-130	6		20
Dichlorodifluoromethane	92		100		36-147	8		20
Acetone	84		100		58-148	17		20
Carbon disulfide	89		91		51-130	2		20
2-Butanone	96		110		63-138	14		20
Vinyl acetate	95		100		70-130	5		20
4-Methyl-2-pentanone	80		91		59-130	13		20
2-Hexanone	80		93		57-130	15		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272462
Report Date: 12/30/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1728364-3 WG1728364-4								
Bromochloromethane	96		98		70-130	2		20
2,2-Dichloropropane	100		110		63-133	10		20
1,2-Dibromoethane	91		98		70-130	7		20
1,3-Dichloropropane	93		100		70-130	7		20
1,1,1,2-Tetrachloroethane	94		99		64-130	5		20
Bromobenzene	94		97		70-130	3		20
n-Butylbenzene	100		100		53-136	0		20
sec-Butylbenzene	98		100		70-130	2		20
tert-Butylbenzene	97		100		70-130	3		20
o-Chlorotoluene	99		100		70-130	1		20
p-Chlorotoluene	98		100		70-130	2		20
1,2-Dibromo-3-chloropropane	79		87		41-144	10		20
Hexachlorobutadiene	100		100		63-130	0		20
Isopropylbenzene	98		100		70-130	2		20
p-Isopropyltoluene	97		100		70-130	3		20
Naphthalene	87		96		70-130	10		20
n-Propylbenzene	99		100		69-130	1		20
1,2,3-Trichlorobenzene	88		95		70-130	8		20
1,2,4-Trichlorobenzene	90		98		70-130	9		20
1,3,5-Trimethylbenzene	95		98		64-130	3		20
1,2,4-Trimethylbenzene	97		100		70-130	3		20
1,4-Dioxane	92		108		56-162	16		20
p-Diethylbenzene	98		100		70-130	2		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1487 FIRST AVENUE

Project Number: 100963701

Lab Number: L2272462

Report Date: 12/30/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1728364-3 WG1728364-4								
p-Ethyltoluene	99		100		70-130	1		20
1,2,4,5-Tetramethylbenzene	95		98		70-130	3		20
Ethyl ether	81		89		59-134	9		20
trans-1,4-Dichloro-2-butene	89		94		70-130	5		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	97		99		70-130
Toluene-d8	100		100		70-130
4-Bromofluorobenzene	108		108		70-130
Dibromofluoromethane	99		99		70-130

METALS

Project Name: 1487 FIRST AVENUE
Lab Number: L2272462
Project Number: 100963701
Report Date: 12/30/22

SAMPLE RESULTS

Lab ID: L2272462-01
Client ID: LMW-10R-S_13
Sample Location: MANHATTAN, NY
Date Collected: 12/22/22 15:30
Date Received: 12/23/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Calcium, Total	264.		mg/l	0.100	0.0394	1	12/27/22 09:44	12/29/22 12:26	EPA 3005A	1,6020B	SV
Iron, Total	17.5		mg/l	0.0500	0.0191	1	12/27/22 09:44	12/29/22 12:26	EPA 3005A	1,6020B	SV
Magnesium, Total	56.6		mg/l	0.0700	0.0242	1	12/27/22 09:44	12/29/22 12:26	EPA 3005A	1,6020B	SV
Manganese, Total	4.386		mg/l	0.00100	0.00044	1	12/27/22 09:44	12/29/22 12:26	EPA 3005A	1,6020B	SV
Total Hardness (by calculation) - Mansfield Lab											
Hardness	891.4		mg/l	0.5400	NA	1	12/27/22 09:44	12/29/22 12:26	EPA 3005A	1,6020B	SV

Project Name: 1487 FIRST AVENUE
Lab Number: L2272462
Project Number: 100963701
Report Date: 12/30/22

SAMPLE RESULTS

Lab ID: L2272462-02
Client ID: LMW-10R-S_18.25
Sample Location: MANHATTAN, NY
Date Collected: 12/23/22 08:40
Date Received: 12/23/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Calcium, Total	184.		mg/l	0.100	0.0394	1	12/27/22 09:44	12/29/22 12:31	EPA 3005A	1,6020B	SV
Iron, Total	33.0		mg/l	0.0500	0.0191	1	12/27/22 09:44	12/29/22 12:31	EPA 3005A	1,6020B	SV
Magnesium, Total	57.1		mg/l	0.0700	0.0242	1	12/27/22 09:44	12/29/22 12:31	EPA 3005A	1,6020B	SV
Manganese, Total	2.861		mg/l	0.00100	0.00044	1	12/27/22 09:44	12/29/22 12:31	EPA 3005A	1,6020B	SV
Total Hardness (by calculation) - Mansfield Lab											
Hardness	693.9		mg/l	0.5400	NA	1	12/27/22 09:44	12/29/22 12:31	EPA 3005A	1,6020B	SV

Project Name: 1487 FIRST AVENUE
Lab Number: L2272462
Project Number: 100963701
Report Date: 12/30/22

SAMPLE RESULTS

Lab ID: L2272462-03
Client ID: LMW-10R-D_40.5
Sample Location: MANHATTAN, NY
Date Collected: 12/23/22 11:30
Date Received: 12/23/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Calcium, Total	97.7		mg/l	0.100	0.0394	1	12/27/22 09:44	12/29/22 12:35	EPA 3005A	1,6020B	SV
Iron, Total	12.6		mg/l	0.0500	0.0191	1	12/27/22 09:44	12/29/22 12:35	EPA 3005A	1,6020B	SV
Magnesium, Total	28.8		mg/l	0.0700	0.0242	1	12/27/22 09:44	12/29/22 12:35	EPA 3005A	1,6020B	SV
Manganese, Total	1.638		mg/l	0.00100	0.00044	1	12/27/22 09:44	12/29/22 12:35	EPA 3005A	1,6020B	SV
Total Hardness (by calculation) - Mansfield Lab											
Hardness	362.8		mg/l	0.5400	NA	1	12/27/22 09:44	12/29/22 12:35	EPA 3005A	1,6020B	SV

Project Name: 1487 FIRST AVENUE **Lab Number:** L2272462

Project Number: 100963701 **Report Date:** 12/30/22

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-03 Batch: WG1727550-1										
Calcium, Total	ND		mg/l	0.100	0.0394	1	12/27/22 09:44	12/29/22 11:57	1,6020B	SV
Iron, Total	ND		mg/l	0.0500	0.0191	1	12/27/22 09:44	12/29/22 11:57	1,6020B	SV
Magnesium, Total	ND		mg/l	0.0700	0.0242	1	12/27/22 09:44	12/29/22 11:57	1,6020B	SV
Manganese, Total	ND		mg/l	0.00100	0.00044	1	12/27/22 09:44	12/29/22 11:57	1,6020B	SV

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness (by calculation) - Mansfield Lab for sample(s): 01-03 Batch: WG1727550-1										
Hardness	ND		mg/l	0.5400	NA	1	12/27/22 09:44	12/29/22 11:57	1,6020B	SV

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1487 FIRST AVENUE

Project Number: 100963701

Lab Number: L2272462

Report Date: 12/30/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03 Batch: WG1727550-2								
Calcium, Total	100		-		80-120	-		
Iron, Total	96		-		80-120	-		
Magnesium, Total	100		-		80-120	-		
Manganese, Total	97		-		80-120	-		
Total Hardness (by calculation) - Mansfield Lab Associated sample(s): 01-03 Batch: WG1727550-2								
Hardness	100		-		80-120	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272462
Report Date: 12/30/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1727550-3 QC Sample: L2272359-01 Client ID: MS Sample												
Calcium, Total	8.35	10	19.0	106		-	-		75-125	-		20
Iron, Total	0.420	1	1.30	88		-	-		75-125	-		20
Magnesium, Total	0.896	10	10.9	100		-	-		75-125	-		20
Manganese, Total	0.0400	0.5	0.5382	100		-	-		75-125	-		20
Total Hardness (by calculation) - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1727550-3 QC Sample: L2272359-01 Client ID: MS Sample												
Hardness	24.55	66.2	92.29	102		-	-		75-125	-		20

INORGANICS
&
MISCELLANEOUS

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272462
Report Date: 12/30/22

SAMPLE RESULTS

Lab ID: L2272462-01
Client ID: LMW-10R-S_13
Sample Location: MANHATTAN, NY

Date Collected: 12/22/22 15:30
Date Received: 12/23/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Total	220.		mg CaCO3/L	2.00	NA	1	-	12/30/22 05:27	121,2320B	MRM
Chloride	88.		mg/l	1.0	0.89	1	-	12/27/22 21:09	121,4500CL-E	TLH
Nitrogen, Nitrate	0.153		mg/l	0.100	0.022	1	-	12/24/22 05:27	121,4500NO3-F	KAF
Sulfate	630		mg/l	500	68.	50	12/29/22 11:04	12/29/22 11:04	1,9038	MCU
Total Organic Carbon	7.8		mg/l	2.0	0.39	4	-	12/27/22 05:01	1,9060A	DEW
Dissolved Organic Carbon	7.8		mg/l	4.0	0.17	4	12/24/22 08:30	12/27/22 05:01	1,9060A	DEW

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272462
Report Date: 12/30/22

SAMPLE RESULTS

Lab ID: L2272462-02
Client ID: LMW-10R-S_18.25
Sample Location: MANHATTAN, NY

Date Collected: 12/23/22 08:40
Date Received: 12/23/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Total	156.		mg CaCO3/L	2.00	NA	1	-	12/30/22 05:27	121,2320B	MRM
Chloride	97.		mg/l	10	8.9	10	-	12/27/22 23:53	121,4500CL-E	TLH
Nitrogen, Nitrate	0.079	J	mg/l	0.100	0.022	1	-	12/24/22 05:28	121,4500NO3-F	KAF
Sulfate	530		mg/l	500	68.	50	12/29/22 11:04	12/29/22 11:04	1,9038	MCU
Total Organic Carbon	5.5		mg/l	2.0	0.39	4	-	12/27/22 05:01	1,9060A	DEW
Dissolved Organic Carbon	5.6		mg/l	4.0	0.17	4	12/24/22 08:30	12/27/22 05:01	1,9060A	DEW

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272462
Report Date: 12/30/22

SAMPLE RESULTS

Lab ID: L2272462-03
Client ID: LMW-10R-D_40.5
Sample Location: MANHATTAN, NY

Date Collected: 12/23/22 11:30
Date Received: 12/23/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Total	177.		mg CaCO3/L	2.00	NA	1	-	12/30/22 05:27	121,2320B	MRM
Chloride	66.		mg/l	1.0	0.89	1	-	12/27/22 21:10	121,4500CL-E	TLH
Nitrogen, Nitrate	0.047	J	mg/l	0.100	0.022	1	-	12/24/22 05:30	121,4500NO3-F	KAF
Sulfate	190		mg/l	120	17.	12.5	12/29/22 11:04	12/29/22 11:04	1,9038	MCU
Total Organic Carbon	5.7		mg/l	2.0	0.39	4	-	12/27/22 05:01	1,9060A	DEW
Dissolved Organic Carbon	5.3		mg/l	4.0	0.17	4	12/24/22 08:30	12/27/22 05:01	1,9060A	DEW

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2272462
Report Date: 12/30/22

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1727289-1										
Nitrogen, Nitrate	ND		mg/l	0.100	0.022	1	-	12/24/22 04:50	121,4500NO3-F	KAF
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1727528-1										
Dissolved Organic Carbon	ND		mg/l	1.0	0.04	1	12/24/22 08:30	12/27/22 05:01	1,9060A	DEW
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1727529-1										
Total Organic Carbon	ND		mg/l	0.50	0.09	1	-	12/27/22 05:01	1,9060A	DEW
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1727801-1										
Chloride	ND		mg/l	1.0	0.89	1	-	12/27/22 20:42	121,4500CL-E	TLH
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1728359-1										
Sulfate	ND		mg/l	10	1.4	1	12/29/22 11:04	12/29/22 11:04	1,9038	MCU
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1728719-1										
Alkalinity, Total	ND		mg CaCO3/L	2.00	NA	1	-	12/30/22 05:27	121,2320B	MRM

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1487 FIRST AVENUE

Project Number: 100963701

Lab Number: L2272462

Report Date: 12/30/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1727289-2								
Nitrogen, Nitrate	96		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1727528-2								
Dissolved Organic Carbon	97		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1727529-2								
Total Organic Carbon	97		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1727801-2								
Chloride	103		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1728359-2								
Sulfate	90		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1728719-2								
Alkalinity, Total	100		-		90-110	-		10

Matrix Spike Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272462
Report Date: 12/30/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1727289-4 QC Sample: L2272409-01 Client ID: MS Sample												
Nitrogen, Nitrate	1.89	4	5.75	96		-	-		83-113	-		17
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1727528-4 QC Sample: L2272250-01 Client ID: MS Sample												
Dissolved Organic Carbon	8.9	40	54	112		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1727529-4 QC Sample: L2272250-01 Client ID: MS Sample												
Total Organic Carbon	9.2	40	60	**127**	Q	-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1727801-4 QC Sample: L2270771-01 Client ID: MS Sample												
Chloride	76.	20	90	70		-	-		58-140	-		7
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1728359-4 QC Sample: L2269430-02 Client ID: MS Sample												
Sulfate	280	1000	1400	113		-	-		55-147	-		14
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1728719-4 QC Sample: L2271058-10 Client ID: MS Sample												
Alkalinity, Total	53.0	100	150	97		-	-		86-116	-		10

Lab Duplicate Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272462
Report Date: 12/30/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1727289-3 QC Sample: L2272409-01 Client ID: DUP Sample						
Nitrogen, Nitrate	1.89	1.91	mg/l	1		17
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1727528-3 QC Sample: L2272250-01 Client ID: DUP Sample						
Dissolved Organic Carbon	8.9	9.0	mg/l	1		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1727529-3 QC Sample: L2272250-01 Client ID: DUP Sample						
Total Organic Carbon	9.2	9.0	mg/l	2		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1727801-3 QC Sample: L2270771-01 Client ID: DUP Sample						
Chloride	76.	76	mg/l	0		7
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1728359-3 QC Sample: L2269430-02 Client ID: DUP Sample						
Sulfate	280	290	mg/l	4		14
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1728719-3 QC Sample: L2271058-10 Client ID: DUP Sample						
Alkalinity, Total	53.0	53.6	mg CaCO3/L	1		10

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272462
Report Date: 12/30/22

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(*)
L2272462-01A	Vial HCl preserved	A	NA		2.0	Y	Absent		NYTCL-8260(14)
L2272462-01B	Vial HCl preserved	A	NA		2.0	Y	Absent		NYTCL-8260(14)
L2272462-01C	Vial HCl preserved	A	NA		2.0	Y	Absent		NYTCL-8260(14)
L2272462-01D	Vial H2SO4 preserved	A	NA		2.0	Y	Absent		TOC-9060(28)
L2272462-01E	Vial H2SO4 preserved	A	NA		2.0	Y	Absent		TOC-9060(28)
L2272462-01F	Vial H2SO4 preserved	A	NA		2.0	Y	Absent		TOC-9060(28)
L2272462-01G	Vial unpreserved	A	NA		2.0	Y	Absent		DOC-9060(28),FILTER(1)
L2272462-01H	Vial unpreserved	A	NA		2.0	Y	Absent		DOC-9060(28),FILTER(1)
L2272462-01I	Vial unpreserved	A	NA		2.0	Y	Absent		DOC-9060(28),FILTER(1)
L2272462-01J	Plastic 250ml unpreserved/No Headspace	A	NA		2.0	Y	Absent		ALK-T-2320(14)
L2272462-01K	Plastic 250ml unpreserved	A	7	7	2.0	Y	Absent		CL-4500(28),SO4-9038(28),NO3-4500(2)
L2272462-01L	Plastic 250ml HNO3 preserved	A	<2	<2	2.0	Y	Absent		FE-6020T(180),CA-6020T(180),MN-6020T(180),HARDT-6020(180),MG-6020T(180)
L2272462-01X	Vial H2SO4 preserved Filtrates	A	NA		2.0	Y	Absent		DOC-9060(28)
L2272462-01Y	Vial H2SO4 preserved Filtrates	A	NA		2.0	Y	Absent		DOC-9060(28)
L2272462-01Z	Vial H2SO4 preserved Filtrates	A	NA		2.0	Y	Absent		DOC-9060(28)
L2272462-02A	Vial HCl preserved	A	NA		2.0	Y	Absent		NYTCL-8260(14)
L2272462-02B	Vial HCl preserved	A	NA		2.0	Y	Absent		NYTCL-8260(14)
L2272462-02C	Vial HCl preserved	A	NA		2.0	Y	Absent		NYTCL-8260(14)
L2272462-02D	Vial H2SO4 preserved	A	NA		2.0	Y	Absent		TOC-9060(28)
L2272462-02E	Vial H2SO4 preserved	A	NA		2.0	Y	Absent		TOC-9060(28)
L2272462-02F	Vial H2SO4 preserved	A	NA		2.0	Y	Absent		TOC-9060(28)
L2272462-02G	Vial unpreserved	A	NA		2.0	Y	Absent		DOC-9060(28),FILTER(1)
L2272462-02H	Vial unpreserved	A	NA		2.0	Y	Absent		DOC-9060(28),FILTER(1)

*Values in parentheses indicate holding time in days

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272462
Report Date: 12/30/22

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2272462-02I	Vial unpreserved	A	NA		2.0	Y	Absent		DOC-9060(28),FILTER(1)
L2272462-02J	Plastic 250ml unpreserved/No Headspace	A	NA		2.0	Y	Absent		ALK-T-2320(14)
L2272462-02K	Plastic 250ml unpreserved	A	7	7	2.0	Y	Absent		CL-4500(28),SO4-9038(28),NO3-4500(2)
L2272462-02L	Plastic 250ml HNO3 preserved	A	<2	<2	2.0	Y	Absent		FE-6020T(180),CA-6020T(180),MN-6020T(180),HARDT-6020(180),MG-6020T(180)
L2272462-02X	Vial H2SO4 preserved Filtrates	A	NA		2.0	Y	Absent		DOC-9060(28)
L2272462-02Y	Vial H2SO4 preserved Filtrates	A	NA		2.0	Y	Absent		DOC-9060(28)
L2272462-02Z	Vial H2SO4 preserved Filtrates	A	NA		2.0	Y	Absent		DOC-9060(28)
L2272462-03A	Vial HCl preserved	A	NA		2.0	Y	Absent		NYTCL-8260(14)
L2272462-03B	Vial HCl preserved	A	NA		2.0	Y	Absent		NYTCL-8260(14)
L2272462-03C	Vial HCl preserved	A	NA		2.0	Y	Absent		NYTCL-8260(14)
L2272462-03D	Vial H2SO4 preserved	A	NA		2.0	Y	Absent		TOC-9060(28)
L2272462-03E	Vial H2SO4 preserved	A	NA		2.0	Y	Absent		TOC-9060(28)
L2272462-03F	Vial H2SO4 preserved	A	NA		2.0	Y	Absent		TOC-9060(28)
L2272462-03G	Vial unpreserved	A	NA		2.0	Y	Absent		DOC-9060(28),FILTER(1)
L2272462-03H	Vial unpreserved	A	NA		2.0	Y	Absent		DOC-9060(28),FILTER(1)
L2272462-03I	Vial unpreserved	A	NA		2.0	Y	Absent		DOC-9060(28),FILTER(1)
L2272462-03J	Plastic 250ml unpreserved/No Headspace	A	NA		2.0	Y	Absent		ALK-T-2320(14)
L2272462-03K	Plastic 250ml unpreserved	A	7	7	2.0	Y	Absent		CL-4500(28),SO4-9038(28),NO3-4500(2)
L2272462-03L	Plastic 250ml HNO3 preserved	A	<2	<2	2.0	Y	Absent		FE-6020T(180),CA-6020T(180),MN-6020T(180),HARDT-6020(180),MG-6020T(180)
L2272462-03X	Vial H2SO4 preserved Filtrates	A	NA		2.0	Y	Absent		DOC-9060(28)
L2272462-03Y	Vial H2SO4 preserved Filtrates	A	NA		2.0	Y	Absent		DOC-9060(28)
L2272462-03Z	Vial H2SO4 preserved Filtrates	A	NA		2.0	Y	Absent		DOC-9060(28)

*Values in parentheses indicate holding time in days

Project Name:	1487 FIRST AVENUE	**Lab Number:**	L2272462
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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:	1487 FIRST AVENUE	**Lab Number:**	L2272462
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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:	1487 FIRST AVENUE	**Lab Number:**	L2272462
Project Number:	100963701	**Report Date:**	12/30/22

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.)

Report Format: DU Report with 'J' Qualifiers

Project Name:	1487 FIRST AVENUE	**Lab Number:**	L2272462
Project Number:	100963701	**Report Date:**	12/30/22

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, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

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

Mansfield Facility:

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

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

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

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

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: 12/23/22

ALPHA Job #: L2272462

Client Information

Client: Langan
Address: 300 Kimball Drive
Parsippany, NJ
Phone: 973-560-4900
Fax:
Email: asandve@langan.com

Project Information

Project Name: 1487 First Avenue
Project Location: Manhattan, NY
Project #: 100963701
(Use Project name as Project #) ☐
Project Manager: Ben Rao
ALPHAQuote #: 18601

Turn-Around Time

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

Deliverables

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

Regulatory Requirement

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

Billing Information

☑ Same as Client Info
PO # 100963701

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:
**samples for DHC and EBAC were directly shipped to Microbial Insights

Please specify Metals or TAL.

ANALYSIS

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs	Iron, Calcium, Manganese,	Chloride, Sulfate, Nitrate Manganese	TOC	DOC	Alkalinity, Hardness	DHC, EBAC**	Sample Specific Comments	Total Bottle
2462-01	MW-10R-S_13	12/23/22	1530	GW	SH	X	X	X	X	X	X			12
-02	MW-10R-S_18.25	12/23/22	840	GW	SH	X	X	X	X	X	X			12
-03	MW-10R-D_40.5	12/23/22	1130	GW	SH	X	X	X	X	X	X			12
-04	Trip Blank-20221223	12/23/22	—	AQ	SH	X								2
														0
														0

Container Type: V P P V V P P
Preservative: B C A D A A A

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

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

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

Relinquished By:	Date/Time	Received By:	Date/Time
[illegible]	12/23/22 1420	[illegible]	12/23/22 14:20
Paul Mascelli	12/23/22 15:50	Paul Mascelli	12/23/22 1650
[illegible]	12/23/22	[illegible]	12/23/22 2145

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.

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

ANALYTICAL REPORT

Lab Number:	L2272580
Client:	Langan Engineering & Environmental 300 Kimball Drive 4th Floor Parsippany, NJ 07054
ATTN:	Ashley Sandve
Phone:	(973) 560-4871
Project Name:	1487 FIRST AVENUE
Project Number:	100963701
Report Date:	01/12/23

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).

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272580
Report Date: 01/12/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2272580-01	LMW-8R-D_47.25	WATER	MANHATTAN, NY	12/27/22 10:00	12/27/22
L2272580-02	LMW-8R-D_56.75	WATER	MANHATTAN, NY	12/27/22 12:30	12/27/22
L2272580-03	TRIP BLANK_2021227	WATER	MANHATTAN, NY	12/27/22 00:00	12/27/22

Project Name:	1487 FIRST AVENUE	**Lab Number:**	L2272580
Project Number:	100963701	**Report Date:**	01/12/23

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:	1487 FIRST AVENUE	**Lab Number:**	L2272580
Project Number:	100963701	**Report Date:**	01/12/23

Case Narrative (continued)

Report Submission

January 12, 2023: This final report includes the results of all requested analyses.

January 03, 2023: This is a preliminary report.

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

The analyses of DHC and EBAC were subcontracted. A copy of the laboratory report is included as an addendum. Please note: This data is only available in PDF format and is not available on Data Merger.

Nitrogen, Nitrate

WG1728283: A Matrix Spike and Laboratory Duplicate were prepared with the sample batch, however, the native sample was not available for reporting; therefore, the results could not be reported.

Alkalinity, Total

The WG1729072-4 MS recovery, performed on L2272580-01, is outside the acceptance criteria for alkalinity, total (81%); however, the associated LCS recovery is within criteria. No further action was taken.

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: 01/12/23

ORGANICS

VOLATILES

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2272580
Report Date: 01/12/23

SAMPLE RESULTS

Lab ID: L2272580-01
Client ID: LMW-8R-D_47.25
Sample Location: MANHATTAN, NY

Date Collected: 12/27/22 10:00
Date Received: 12/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 12/29/22 15:21
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	0.18	J	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	0.16	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	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: 1487 FIRST AVENUE **Lab Number:** L2272580

Project Number: 100963701 **Report Date:** 01/12/23

SAMPLE RESULTS

Lab ID: L2272580-01 Date Collected: 12/27/22 10:00

Client ID: LMW-8R-D_47.25 Date Received: 12/27/22

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	0.37	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	8.2		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	8.2		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	24		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	8.7		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	1.5	J	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: 1487 FIRST AVENUE **Lab Number:** L2272580

Project Number: 100963701 **Report Date:** 01/12/23

SAMPLE RESULTS

Lab ID: L2272580-01 Date Collected: 12/27/22 10:00

Client ID: LMW-8R-D_47.25 Date Received: 12/27/22

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	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	128		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	114		70-130
Dibromofluoromethane	109		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2272580
Report Date: 01/12/23

SAMPLE RESULTS

Lab ID: L2272580-02
Client ID: LMW-8R-D_56.75
Sample Location: MANHATTAN, NY

Date Collected: 12/27/22 12:30
Date Received: 12/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 12/29/22 15:41
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	0.54		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	2.0		ug/l	0.50	0.16	1
Toluene	9.0		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	1.0		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: 1487 FIRST AVENUE **Lab Number:** L2272580

Project Number: 100963701 **Report Date:** 01/12/23

SAMPLE RESULTS

Lab ID: L2272580-02 Date Collected: 12/27/22 12:30

Client ID: LMW-8R-D_56.75 Date Received: 12/27/22

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	0.24	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	7.7		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	7.7		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	29		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	4.6	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: 1487 FIRST AVENUE **Lab Number:** L2272580

Project Number: 100963701 **Report Date:** 01/12/23

SAMPLE RESULTS

Lab ID: L2272580-02 Date Collected: 12/27/22 12:30

Client ID: LMW-8R-D_56.75 Date Received: 12/27/22

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	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	120		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	106		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2272580
Report Date: 01/12/23

SAMPLE RESULTS

Lab ID: L2272580-03
Client ID: TRIP BLANK_2021227
Sample Location: MANHATTAN, NY

Date Collected: 12/27/22 00:00
Date Received: 12/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 12/30/22 09:14
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: 1487 FIRST AVENUE **Lab Number:** L2272580

Project Number: 100963701 **Report Date:** 01/12/23

SAMPLE RESULTS

Lab ID: L2272580-03 Date Collected: 12/27/22 00:00

Client ID: TRIP BLANK_2021227 Date Received: 12/27/22

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: 1487 FIRST AVENUE **Lab Number:** L2272580

Project Number: 100963701 **Report Date:** 01/12/23

SAMPLE RESULTS

Lab ID: L2272580-03 Date Collected: 12/27/22 00:00

Client ID: TRIP BLANK_2021227 Date Received: 12/27/22

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	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	99		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	98		70-130

Project Name: 1487 FIRST AVENUE **Lab Number:** L2272580

Project Number: 100963701 **Report Date:** 01/12/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 12/29/22 09:01
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1728803-5					
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: 1487 FIRST AVENUE **Lab Number:** L2272580

Project Number: 100963701 **Report Date:** 01/12/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 12/29/22 09:01
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1728803-5					
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: 1487 FIRST AVENUE **Lab Number:** L2272580

Project Number: 100963701 **Report Date:** 01/12/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 12/29/22 09:01
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1728803-5					
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	125		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	117		70-130
Dibromofluoromethane	109		70-130

Project Name: 1487 FIRST AVENUE **Lab Number:** L2272580

Project Number: 100963701 **Report Date:** 01/12/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 12/30/22 08:51
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG1729359-5					
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: 1487 FIRST AVENUE **Lab Number:** L2272580

Project Number: 100963701 **Report Date:** 01/12/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 12/30/22 08:51
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG1729359-5					
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: 1487 FIRST AVENUE **Lab Number:** L2272580

Project Number: 100963701 **Report Date:** 01/12/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 12/30/22 08:51
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG1729359-5					
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	102		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	110		70-130
Dibromofluoromethane	100		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272580
Report Date: 01/12/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1728803-3 WG1728803-4								
Methylene chloride	110		110		70-130	0		20
1,1-Dichloroethane	110		120		70-130	9		20
Chloroform	110		100		70-130	10		20
Carbon tetrachloride	92		91		63-132	1		20
1,2-Dichloropropane	110		110		70-130	0		20
Dibromochloromethane	83		84		63-130	1		20
1,1,2-Trichloroethane	100		100		70-130	0		20
Tetrachloroethene	86		90		70-130	5		20
Chlorobenzene	98		99		75-130	1		20
Trichlorofluoromethane	110		110		62-150	0		20
1,2-Dichloroethane	110		110		70-130	0		20
1,1,1-Trichloroethane	98		97		67-130	1		20
Bromodichloromethane	99		99		67-130	0		20
trans-1,3-Dichloropropene	85		83		70-130	2		20
cis-1,3-Dichloropropene	87		87		70-130	0		20
1,1-Dichloropropene	110		110		70-130	0		20
Bromoform	71		73		54-136	3		20
1,1,2,2-Tetrachloroethane	110		120		67-130	9		20
Benzene	100		100		70-130	0		20
Toluene	100		100		70-130	0		20
Ethylbenzene	110		110		70-130	0		20
Chloromethane	120		120		64-130	0		20
Bromomethane	78		77		39-139	1		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272580
Report Date: 01/12/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1728803-3 WG1728803-4								
Vinyl chloride	120		120		55-140	0		20
Chloroethane	120		120		55-138	0		20
1,1-Dichloroethene	110		110		61-145	0		20
trans-1,2-Dichloroethene	110		110		70-130	0		20
Trichloroethene	100		100		70-130	0		20
1,2-Dichlorobenzene	96		100		70-130	4		20
1,3-Dichlorobenzene	100		99		70-130	1		20
1,4-Dichlorobenzene	99		100		70-130	1		20
Methyl tert butyl ether	99		99		63-130	0		20
p/m-Xylene	100		105		70-130	5		20
o-Xylene	100		100		70-130	0		20
cis-1,2-Dichloroethene	99		100		70-130	1		20
Dibromomethane	98		97		70-130	1		20
1,2,3-Trichloropropane	110		110		64-130	0		20
Acrylonitrile	110		100		70-130	10		20
Styrene	100		105		70-130	5		20
Dichlorodifluoromethane	110		110		36-147	0		20
Acetone	**150**	Q	**160**	Q	58-148	6		20
Carbon disulfide	110		110		51-130	0		20
2-Butanone	110		110		63-138	0		20
Vinyl acetate	95		93		70-130	2		20
4-Methyl-2-pentanone	86		90		59-130	5		20
2-Hexanone	98		100		57-130	2		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272580
Report Date: 01/12/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1728803-3 WG1728803-4								
Bromochloromethane	94		93		70-130	1		20
2,2-Dichloropropane	85		83		63-133	2		20
1,2-Dibromoethane	88		92		70-130	4		20
1,3-Dichloropropane	100		110		70-130	10		20
1,1,1,2-Tetrachloroethane	78		81		64-130	4		20
Bromobenzene	91		98		70-130	7		20
n-Butylbenzene	110		120		53-136	9		20
sec-Butylbenzene	110		120		70-130	9		20
tert-Butylbenzene	100		110		70-130	10		20
o-Chlorotoluene	110		110		70-130	0		20
p-Chlorotoluene	110		120		70-130	9		20
1,2-Dibromo-3-chloropropane	70		90		41-144	**25**	Q	20
Hexachlorobutadiene	84		83		63-130	1		20
Isopropylbenzene	110		110		70-130	0		20
p-Isopropyltoluene	100		100		70-130	0		20
Naphthalene	96		100		70-130	4		20
n-Propylbenzene	120		120		69-130	0		20
1,2,3-Trichlorobenzene	93		91		70-130	2		20
1,2,4-Trichlorobenzene	89		89		70-130	0		20
1,3,5-Trimethylbenzene	100		100		64-130	0		20
1,2,4-Trimethylbenzene	98		100		70-130	2		20
1,4-Dioxane	92		92		56-162	0		20
p-Diethylbenzene	97		99		70-130	2		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1487 FIRST AVENUE

Project Number: 100963701

Lab Number: L2272580

Report Date: 01/12/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1728803-3 WG1728803-4								
p-Ethyltoluene	100		110		70-130	10		20
1,2,4,5-Tetramethylbenzene	95		98		70-130	3		20
Ethyl ether	110		110		59-134	0		20
trans-1,4-Dichloro-2-butene	100		100		70-130	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	113		115		70-130
Toluene-d8	105		105		70-130
4-Bromofluorobenzene	111		112		70-130
Dibromofluoromethane	101		99		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272580
Report Date: 01/12/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG1729359-3 WG1729359-4								
Methylene chloride	97		99		70-130	2		20
1,1-Dichloroethane	95		97		70-130	2		20
Chloroform	94		97		70-130	3		20
Carbon tetrachloride	86		89		63-132	3		20
1,2-Dichloropropane	91		94		70-130	3		20
Dibromochloromethane	87		90		63-130	3		20
1,1,2-Trichloroethane	94		96		70-130	2		20
Tetrachloroethene	96		96		70-130	0		20
Chlorobenzene	97		98		75-130	1		20
Trichlorofluoromethane	79		81		62-150	3		20
1,2-Dichloroethane	92		96		70-130	4		20
1,1,1-Trichloroethane	93		96		67-130	3		20
Bromodichloromethane	88		92		67-130	4		20
trans-1,3-Dichloropropene	89		92		70-130	3		20
cis-1,3-Dichloropropene	86		89		70-130	3		20
1,1-Dichloropropene	94		97		70-130	3		20
Bromoform	81		85		54-136	5		20
1,1,2,2-Tetrachloroethane	95		100		67-130	5		20
Benzene	94		97		70-130	3		20
Toluene	98		99		70-130	1		20
Ethylbenzene	97		98		70-130	1		20
Chloromethane	94		96		64-130	2		20
Bromomethane	47		50		39-139	6		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272580
Report Date: 01/12/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG1729359-3 WG1729359-4								
Vinyl chloride	87		87		55-140	0		20
Chloroethane	92		92		55-138	0		20
1,1-Dichloroethene	99		100		61-145	1		20
trans-1,2-Dichloroethene	97		99		70-130	2		20
Trichloroethene	84		87		70-130	4		20
1,2-Dichlorobenzene	92		96		70-130	4		20
1,3-Dichlorobenzene	95		96		70-130	1		20
1,4-Dichlorobenzene	94		94		70-130	0		20
Methyl tert butyl ether	86		92		63-130	7		20
p/m-Xylene	95		95		70-130	0		20
o-Xylene	95		95		70-130	0		20
cis-1,2-Dichloroethene	94		96		70-130	2		20
Dibromomethane	83		86		70-130	4		20
1,2,3-Trichloropropane	93		100		64-130	7		20
Acrylonitrile	95		100		70-130	5		20
Styrene	95		95		70-130	0		20
Dichlorodifluoromethane	92		94		36-147	2		20
Acetone	97		120		58-148	**21**	Q	20
Carbon disulfide	99		100		51-130	1		20
2-Butanone	110		110		63-138	0		20
Vinyl acetate	120		120		70-130	0		20
4-Methyl-2-pentanone	87		93		59-130	7		20
2-Hexanone	100		110		57-130	10		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272580
Report Date: 01/12/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG1729359-3 WG1729359-4								
Bromochloromethane	94		97		70-130	3		20
2,2-Dichloropropane	94		95		63-133	1		20
1,2-Dibromoethane	98		98		70-130	0		20
1,3-Dichloropropane	94		97		70-130	3		20
1,1,1,2-Tetrachloroethane	90		91		64-130	1		20
Bromobenzene	94		95		70-130	1		20
n-Butylbenzene	100		100		53-136	0		20
sec-Butylbenzene	100		100		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	76		83		41-144	9		20
Hexachlorobutadiene	99		99		63-130	0		20
Isopropylbenzene	100		100		70-130	0		20
p-Isopropyltoluene	100		100		70-130	0		20
Naphthalene	81		90		70-130	11		20
n-Propylbenzene	100		100		69-130	0		20
1,2,3-Trichlorobenzene	82		89		70-130	8		20
1,2,4-Trichlorobenzene	89		93		70-130	4		20
1,3,5-Trimethylbenzene	99		100		64-130	1		20
1,2,4-Trimethylbenzene	98		100		70-130	2		20
1,4-Dioxane	108		114		56-162	5		20
p-Diethylbenzene	100		100		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2272580
Report Date: 01/12/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG1729359-3 WG1729359-4								
p-Ethyltoluene	100		100		70-130	0		20
1,2,4,5-Tetramethylbenzene	96		97		70-130	1		20
Ethyl ether	78		82		59-134	5		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	103		106		70-130
Toluene-d8	106		105		70-130
4-Bromofluorobenzene	110		110		70-130
Dibromofluoromethane	96		98		70-130

METALS

Project Name: 1487 FIRST AVENUE
Lab Number: L2272580
Project Number: 100963701
Report Date: 01/12/23

SAMPLE RESULTS

Lab ID: L2272580-01
Client ID: LMW-8R-D_47.25
Sample Location: MANHATTAN, NY
Date Collected: 12/27/22 10:00
Date Received: 12/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Calcium, Total	54.4		mg/l	0.100	0.0394	1	12/28/22 12:20	12/30/22 15:26	EPA 3005A	1,6020B	NTB
Iron, Total	5.66		mg/l	0.0500	0.0191	1	12/28/22 12:20	12/30/22 15:26	EPA 3005A	1,6020B	NTB
Magnesium, Total	9.42		mg/l	0.0700	0.0242	1	12/28/22 12:20	12/30/22 15:26	EPA 3005A	1,6020B	NTB
Manganese, Total	0.2351		mg/l	0.00100	0.00044	1	12/28/22 12:20	12/30/22 15:26	EPA 3005A	1,6020B	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	174.6		mg/l	0.5400	NA	1	12/28/22 12:20	12/30/22 15:26	EPA 3005A	1,6020B	NTB

Project Name: 1487 FIRST AVENUE
Lab Number: L2272580
Project Number: 100963701
Report Date: 01/12/23

SAMPLE RESULTS

Lab ID: L2272580-02
Client ID: LMW-8R-D_56.75
Sample Location: MANHATTAN, NY
Date Collected: 12/27/22 12:30
Date Received: 12/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Calcium, Total	58.5		mg/l	0.100	0.0394	1	12/28/22 12:20	12/30/22 15:31	EPA 3005A	1,6020B	NTB
Iron, Total	9.48		mg/l	0.0500	0.0191	1	12/28/22 12:20	12/30/22 15:31	EPA 3005A	1,6020B	NTB
Magnesium, Total	9.45		mg/l	0.0700	0.0242	1	12/28/22 12:20	12/30/22 15:31	EPA 3005A	1,6020B	NTB
Manganese, Total	0.3638		mg/l	0.00100	0.00044	1	12/28/22 12:20	12/30/22 15:31	EPA 3005A	1,6020B	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	185.1		mg/l	0.5400	NA	1	12/28/22 12:20	12/30/22 15:31	EPA 3005A	1,6020B	NTB

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2272580
Report Date: 01/12/23

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-02 Batch: WG1728015-1										
Calcium, Total	ND		mg/l	0.100	0.0394	1	12/28/22 12:20	12/30/22 14:52	1,6020B	NTB
Iron, Total	ND		mg/l	0.0500	0.0191	1	12/28/22 12:20	12/30/22 14:52	1,6020B	NTB
Magnesium, Total	ND		mg/l	0.0700	0.0242	1	12/28/22 12:20	12/30/22 14:52	1,6020B	NTB
Manganese, Total	ND		mg/l	0.00100	0.00044	1	12/28/22 12:20	12/30/22 14:52	1,6020B	NTB

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness (by calculation) - Mansfield Lab for sample(s): 01-02 Batch: WG1728015-1										
Hardness	ND		mg/l	0.5400	NA	1	12/28/22 12:20	12/30/22 14:52	1,6020B	NTB

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1487 FIRST AVENUE

Project Number: 100963701

Lab Number: L2272580

Report Date: 01/12/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1728015-2								
Calcium, Total	102		-		80-120	-		
Iron, Total	108		-		80-120	-		
Magnesium, Total	103		-		80-120	-		
Manganese, Total	104		-		80-120	-		
Total Hardness (by calculation) - Mansfield Lab Associated sample(s): 01-02 Batch: WG1728015-2								
Hardness	102		-		80-120	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272580
Report Date: 01/12/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1728015-3 WG1728015-4 QC Sample: L2272612-01 Client ID: MS Sample												
Calcium, Total	32.5	10	41.6	91		41.3	88		75-125	1		20
Iron, Total	0.389	1	1.31	92		1.38	99		75-125	5		20
Magnesium, Total	9.79	10	19.4	96		19.3	95		75-125	1		20
Manganese, Total	0.09814	0.5	0.5832	97		0.6028	101		75-125	3		20
Total Hardness (by calculation) - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1728015-3 WG1728015-4 QC Sample: L2272612-01 Client ID: MS Sample												
Hardness	121.4	66.2	183.6	94		182.6	92		75-125	1		20

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Serial Dilution Analysis
Batch Quality Control

Lab Number: L2272580
Report Date: 01/12/23

Parameter	Native Sample	Serial Dilution	Units	% D	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1728015-6 QC Sample: L2272612-01 Client ID: DUP Sample						
Calcium, Total	32.5	32.6	mg/l	0		20
Magnesium, Total	9.79	9.75	mg/l	0		20
Manganese, Total	0.09814	0.09928	mg/l	1		20

INORGANICS
&
MISCELLANEOUS

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272580
Report Date: 01/12/23

SAMPLE RESULTS

Lab ID: L2272580-01
Client ID: LMW-8R-D_47.25
Sample Location: MANHATTAN, NY

Date Collected: 12/27/22 10:00
Date Received: 12/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Total	85.8		mg CaCO3/L	2.00	NA	1	-	01/02/23 03:29	121,2320B	MRM
Chloride	54.		mg/l	1.0	0.89	1	-	12/29/22 00:35	121,4500CL-E	TLH
Nitrogen, Nitrate	0.027	J	mg/l	0.100	0.022	1	-	12/29/22 07:05	121,4500NO3-F	MRM
Sulfate	140		mg/l	50	6.8	5	01/03/23 09:33	01/03/23 09:33	1,9038	MCU
Total Organic Carbon	7.1		mg/l	2.5	0.48	5	-	12/30/22 03:49	1,9060A	DEW
Dissolved Organic Carbon	6.9		mg/l	5.0	0.22	5	12/28/22 07:40	12/30/22 03:49	1,9060A	DEW

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272580
Report Date: 01/12/23

SAMPLE RESULTS

Lab ID: L2272580-02
Client ID: LMW-8R-D_56.75
Sample Location: MANHATTAN, NY

Date Collected: 12/27/22 12:30
Date Received: 12/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Total	116.		mg CaCO3/L	2.00	NA	1	-	01/02/23 03:29	121,2320B	MRM
Chloride	48.		mg/l	1.0	0.89	1	-	12/28/22 22:51	121,4500CL-E	TLH
Nitrogen, Nitrate	0.104		mg/l	0.100	0.022	1	-	12/29/22 07:06	121,4500NO3-F	MRM
Sulfate	130		mg/l	50	6.8	5	01/03/23 09:33	01/03/23 09:33	1,9038	MCU
Total Organic Carbon	8.5		mg/l	2.5	0.48	5	-	12/30/22 03:49	1,9060A	DEW
Dissolved Organic Carbon	8.7		mg/l	5.0	0.22	5	12/28/22 07:40	12/30/22 03:49	1,9060A	DEW

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2272580
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Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1728209-1										
Chloride	ND		mg/l	1.0	0.89	1	-	12/28/22 21:21	121,4500CL-E	TLH
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1728283-1										
Nitrogen, Nitrate	ND		mg/l	0.100	0.022	1	-	12/29/22 07:24	121,4500NO3-F	MRM
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1728699-1										
Dissolved Organic Carbon	ND		mg/l	1.0	0.04	1	12/28/22 07:40	12/30/22 03:49	1,9060A	DEW
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1728700-1										
Total Organic Carbon	ND		mg/l	0.50	0.09	1	-	12/30/22 03:49	1,9060A	DEW
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1729072-1										
Alkalinity, Total	ND		mg CaCO3/L	2.00	NA	1	-	01/02/23 03:29	121,2320B	MRM
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1729350-1										
Sulfate	1.7	J	mg/l	10	1.4	1	01/03/23 09:33	01/03/23 09:33	1,9038	MCU

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1487 FIRST AVENUE

Project Number: 100963701

Lab Number: L2272580

Report Date: 01/12/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1728209-2								
Chloride	103		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1728283-2								
Nitrogen, Nitrate	107		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1728699-2								
Dissolved Organic Carbon	99		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1728700-2								
Total Organic Carbon	99		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1729072-2								
Alkalinity, Total	104		-		90-110	-		10
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1729350-2								
Sulfate	95		-		90-110	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272580
Report Date: 01/12/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1728209-4 QC Sample: L2271014-01 Client ID: MS Sample												
Chloride	31000	20	30000	**0**	Q	-	-		58-140	-		7
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1728699-4 QC Sample: L2272580-01 Client ID: LMW-8R-D_47.25												
Dissolved Organic Carbon	6.9	40	53	114		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1728700-4 QC Sample: L2272580-01 Client ID: LMW-8R-D_47.25												
Total Organic Carbon	7.1	40	51	110		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1729072-4 QC Sample: L2272580-01 Client ID: LMW-8R-D_47.25												
Alkalinity, Total	85.8	100	167	**81**	Q	-	-		86-116	-		10
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1729350-4 QC Sample: L2269735-01 Client ID: MS Sample												
Sulfate	41.	40	79	95		-	-		55-147	-		14

Lab Duplicate Analysis

Batch Quality Control

Project Name: 1487 FIRST AVENUE

Project Number: 100963701

Lab Number: L2272580

Report Date: 01/12/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1728209-3 QC Sample: L2271014-01 Client ID: DUP Sample						
Chloride	31000	31000	mg/l	0		7
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1728699-3 QC Sample: L2272580-01 Client ID: LMW-8R-D_47.25						
Dissolved Organic Carbon	6.9	7.0	mg/l	1		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1728700-3 QC Sample: L2272580-01 Client ID: LMW-8R-D_47.25						
Total Organic Carbon	7.1	7.1	mg/l	0		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1729072-3 QC Sample: L2272580-01 Client ID: LMW-8R-D_47.25						
Alkalinity, Total	85.8	86.0	mg CaCO3/L	0		10
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1729350-3 QC Sample: L2269735-01 Client ID: DUP Sample						
Sulfate	41.	40	mg/l	2		14

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272580
Report Date: 01/12/23

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(*)
L2272580-01A	Vial HCl preserved	A	NA		3.9	Y	Absent		NYTCL-8260(14)
L2272580-01B	Vial HCl preserved	A	NA		3.9	Y	Absent		NYTCL-8260(14)
L2272580-01C	Vial HCl preserved	A	NA		3.9	Y	Absent		NYTCL-8260(14)
L2272580-01D	Vial H2SO4 preserved	A	NA		3.9	Y	Absent		TOC-9060(28)
L2272580-01E	Vial H2SO4 preserved	A	NA		3.9	Y	Absent		TOC-9060(28)
L2272580-01F	Vial H2SO4 preserved	A	NA		3.9	Y	Absent		TOC-9060(28)
L2272580-01G	Vial unpreserved	A	NA	NA	3.9	Y	Absent		FILTER(1)
L2272580-01H	Vial unpreserved	A	NA	NA	3.9	Y	Absent		FILTER(1)
L2272580-01I	Vial unpreserved	A	NA	NA	3.9	Y	Absent		FILTER(1)
L2272580-01J	Plastic 250ml unpreserved/No Headspace	A	NA		3.9	Y	Absent		ALK-T-2320(14)
L2272580-01K	Plastic 250ml unpreserved	A	7	7	3.9	Y	Absent		CL-4500(28),SO4-9038(28),NO3-4500(2)
L2272580-01L	Plastic 250ml HNO3 preserved	A	<2	<2	3.9	Y	Absent		FE-6020T(180),CA-6020T(180),MN-6020T(180),HARDT-6020(180),MG-6020T(180)
L2272580-01X	Vial H2SO4 preserved Filtrates	A	NA		3.9	Y	Absent		DOC-9060(28)
L2272580-01Y	Vial H2SO4 preserved Filtrates	A	NA		3.9	Y	Absent		DOC-9060(28)
L2272580-01Z	Vial H2SO4 preserved Filtrates	A	NA		3.9	Y	Absent		DOC-9060(28)
L2272580-02A	Vial HCl preserved	A	NA		3.9	Y	Absent		NYTCL-8260(14)
L2272580-02B	Vial HCl preserved	A	NA		3.9	Y	Absent		NYTCL-8260(14)
L2272580-02C	Vial HCl preserved	A	NA		3.9	Y	Absent		NYTCL-8260(14)
L2272580-02D	Vial H2SO4 preserved	A	NA		3.9	Y	Absent		TOC-9060(28)
L2272580-02E	Vial H2SO4 preserved	A	NA		3.9	Y	Absent		TOC-9060(28)
L2272580-02F	Vial H2SO4 preserved	A	NA		3.9	Y	Absent		TOC-9060(28)
L2272580-02G	Vial unpreserved	A	NA	NA	3.9	Y	Absent		FILTER(1)
L2272580-02H	Vial unpreserved	A	NA	NA	3.9	Y	Absent		FILTER(1)

*Values in parentheses indicate holding time in days

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272580
Report Date: 01/12/23

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2272580-02I	Vial unpreserved	A	NA	NA	3.9	Y	Absent		FILTER(1)
L2272580-02J	Plastic 250ml unpreserved/No Headspace	A	NA		3.9	Y	Absent		ALK-T-2320(14)
L2272580-02K	Plastic 250ml unpreserved	A	7	7	3.9	Y	Absent		SO4-9038(28),CL-4500(28),NO3-4500(2)
L2272580-02L	Plastic 250ml HNO3 preserved	A	<2	<2	3.9	Y	Absent		FE-6020T(180),CA-6020T(180),MN-6020T(180),MG-6020T(180),HARDT-6020(180)
L2272580-02X	Vial H2SO4 preserved Filtrates	A	NA		3.9	Y	Absent		DOC-9060(28)
L2272580-02Y	Vial H2SO4 preserved Filtrates	A	NA		3.9	Y	Absent		DOC-9060(28)
L2272580-02Z	Vial H2SO4 preserved Filtrates	A	NA		3.9	Y	Absent		DOC-9060(28)
L2272580-03A	Vial HCl preserved	A	NA		3.9	Y	Absent		NYTCL-8260(14)
L2272580-03B	Vial HCl preserved	A	NA		3.9	Y	Absent		NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name:	1487 FIRST AVENUE	**Lab Number:**	L2272580
Project Number:	100963701	**Report Date:**	01/12/23

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

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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

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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.)

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Project Number:	100963701	**Report Date:**	01/12/23

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, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

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

Mansfield Facility:

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

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

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

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

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: 12/27/22

ALPHA Job #: L2272580

Client Information

Client: Langan
Address: 300 Kimball Drive
Parsippany, NJ
Phone: 973-560-4900
Fax:
Email: asandve@langan.com

Project Information

Project Name: 1487 First Avenue
Project Location: Manhattan, NY
Project #: 100963701
(Use Project name as Project #) ☐
Project Manager: Ben Rao
ALPHAQuote #: 18601

Turn-Around Time

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

Deliverables

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

Regulatory Requirement

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

Billing Information

☑ Same as Client Info
PO # 100963701

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:

**samples for DHC and EBAC were directly shipped to Microbial Insights

Please specify Metals or TAL.

ANALYSIS

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs	Iron, Calcium, Manganese,	Chloride, Sulfate, Nitrate Manganese	TOC	DOC	Alkalinity, Hardness	DHC, EBAC**	Sample Specific Comments	Total Bottle
72580-01	LMW-8R-D_47.25	12/27/22	10:00	GW	SH	X	X	X	X	X	X	X		13
02	LMW-8R-D_56.75	12/27/22	12:20	GW	SH	X	X	X	X	X	X	X		13
03	Trip Blk_20221227	12/27/22	—	AQ	SH	X								2

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

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

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

Container Type	V	P	P	V	V	P	P		
Preservative	B	C	A	D	A	A	A		

Relinquished By:	Date/Time	Received By:	Date/Time
(Langan)	12/27/22 1500	MSMW (mw)	12/27 1500
MSMW (mw)	12/27 1737		12/27/22 19:37
	12/27/22 2130		12/27/22 2130
	12/27/22 2320		12/27/22 2320

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.

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

microbialinsights
10515 Research Drive
Knoxville, TN 37932
Phone: (865) 573-8188
Fax: (865) 573-8133

ANAB ANSI National Accreditation Board ACCREDITED ISO/IEC 17025 TESTING LABORATORY

Client: Ben Rao
Alpha Analytical, Inc.
8 Walkup Dr
Westborough, MA 01581

Phone: 201-812-2633

Fax:

Identifier: 122TL **Date Rec:** 12/30/2022 **Report Date:** 01/03/2023

Client Project #: 100963701 **Client Project Name:** 1487 First Avenue

Purchase Order #: L2272580

Test results provided for: CENSUS

Reviewed By:

Charles Slater

NOTICE: This report is intended only for the addressee shown above and may contain confidential or privileged information. If the recipient of this material is not the intended recipient or if you have received this in error, please notify Microbial Insights, Inc. immediately. The data and other information in this report represent only the sample(s) analyzed and are rendered upon condition that it is not to be reproduced without approval from Microbial Insights, Inc. Thank you for your cooperation.

Results relate only to the items tested and the sample(s) as received by the laboratory.

MICROBIAL INSIGHTS, INC.

10515 Research Dr., Knoxville, TN 37932
Tel. (865) 573-8188 Fax. (865) 573-8133

CENSUS

Client: **Alpha Analytical, Inc.**
Project: 1487 First Avenue

MI Project Number: **122TL**
Date Received: 12/30/2022

Sample Information

Client Sample ID:		**LMW-8R-D_47.25**	**LMW-8R-D_56.75**
Sample Date:		12/27/2022	12/27/2022
Units:		cells/mL	cells/mL
Analyst/Reviewer:		OR/CS	OR/CS
Dechlorinating Bacteria			
Dehalococcoides	*DHC*	**3.80E+00**	**3.30E+00**
Phylogenetic Group			
Total Eubacteria	EBAC	**9.39E+07**	**9.08E+07**

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

Quality Assurance/Quality Control Data

Samples Received **12/28/2022**

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control	Extraction Blank	Negative Control
DHC	12/28/2022	01/03/2023	0 °C	102%	non-detect	non-detect
EBAC	12/28/2022	01/03/2023	0 °C	108%	non-detect	non-detect

ANALYTICAL REPORT

Lab Number:	L2272729
Client:	Langan Engineering & Environmental 300 Kimball Drive 4th Floor Parsippany, NJ 07054
ATTN:	Ashley Sandve
Phone:	(973) 560-4871
Project Name:	1487 FIRST AVENUE
Project Number:	100963701
Report Date:	01/04/23

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: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272729
Report Date: 01/04/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2272729-01	LMW-8R-D_76	WATER	MANHATTAN, NY	12/27/22 16:10	12/28/22
L2272729-02	LMW-13R-S_25.75	WATER	MANHATTAN, NY	12/28/22 09:45	12/28/22
L2272729-03	LMW-13R-D_45.25	WATER	MANHATTAN, NY	12/28/22 12:00	12/28/22
L2272729-04	LMW-6R-S_20.5	WATER	MANHATTAN, NY	12/28/22 14:00	12/28/22
L2272729-05	TRIP BLANK_20221228	WATER	MANHATTAN, NY	12/28/22 00:00	12/28/22

Project Name:	1487 FIRST AVENUE	**Lab Number:**	L2272729
Project Number:	100963701	**Report Date:**	01/04/23

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:	1487 FIRST AVENUE	**Lab Number:**	L2272729
Project Number:	100963701	**Report Date:**	01/04/23

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.

The analyses of Dehalococcoides and Total Eubacteria were subcontracted. A copy of the laboratory report is included as an addendum. Please note: This data is only available in PDF format and is not available on Data Merger.

Nitrogen, Nitrate

The WG1728284-4 MS recovery, performed on L2272729-03, is outside the acceptance criteria for nitrogen, nitrate (118%); however, the associated LCS recovery is within criteria. No further action was taken.

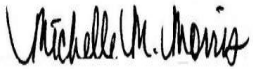
Dissolved Organic Carbon

L2272729-01: The sample was filtered with the method required holding time exceeded.

Total Organic Carbon

L2272729-01: The DOC result is greater than the TOC result due to the filtering procedure required by the DOC method.

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:  Michelle M. Morris

Title: Technical Director/Representative Date: 01/04/23

ORGANICS

VOLATILES

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2272729
Report Date: 01/04/23

SAMPLE RESULTS

Lab ID: L2272729-01
Client ID: LMW-8R-D_76
Sample Location: MANHATTAN, NY
Date Collected: 12/27/22 16:10
Date Received: 12/28/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 12/30/22 10:23
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	0.21	J	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	5.5		ug/l	0.50	0.16	1
Toluene	2.0	J	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	6.4		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: 1487 FIRST AVENUE **Lab Number:** L2272729

Project Number: 100963701 **Report Date:** 01/04/23

SAMPLE RESULTS

Lab ID: L2272729-01 Date Collected: 12/27/22 16:10

Client ID: LMW-8R-D_76 Date Received: 12/28/22

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	0.24	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	47		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	47		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	5.5		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: 1487 FIRST AVENUE **Lab Number:** L2272729

Project Number: 100963701 **Report Date:** 01/04/23

SAMPLE RESULTS

Lab ID: L2272729-01 Date Collected: 12/27/22 16:10

Client ID: LMW-8R-D_76 Date Received: 12/28/22

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	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	103		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	99		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2272729
Report Date: 01/04/23

SAMPLE RESULTS

Lab ID: L2272729-02
Client ID: LMW-13R-S_25.75
Sample Location: MANHATTAN, NY

Date Collected: 12/28/22 09:45
Date Received: 12/28/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 12/30/22 10:46
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	1.7	J	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	35		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	0.45	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	0.27	J	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: 1487 FIRST AVENUE **Lab Number:** L2272729

Project Number: 100963701 **Report Date:** 01/04/23

SAMPLE RESULTS

Lab ID: L2272729-02 Date Collected: 12/28/22 09:45

Client ID: LMW-13R-S_25.75 Date Received: 12/28/22

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	9.7		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	47		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	47		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	1.0	J	ug/l	5.0	1.0	1
Acetone	4.5	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: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2272729
Report Date: 01/04/23

SAMPLE RESULTS

Lab ID: L2272729-02
Client ID: LMW-13R-S_25.75
Sample Location: MANHATTAN, NY
Date Collected: 12/28/22 09:45
Date Received: 12/28/22
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	99		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	97		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2272729
Report Date: 01/04/23

SAMPLE RESULTS

Lab ID: L2272729-03
Client ID: LMW-13R-D_45.25
Sample Location: MANHATTAN, NY
Date Collected: 12/28/22 12:00
Date Received: 12/28/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 12/30/22 11:10
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	2.2	J	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	7.2		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	8.5		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	0.18	J	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: 1487 FIRST AVENUE **Lab Number:** L2272729

Project Number: 100963701 **Report Date:** 01/04/23

SAMPLE RESULTS

Lab ID: L2272729-03 Date Collected: 12/28/22 12:00

Client ID: LMW-13R-D_45.25 Date Received: 12/28/22

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	2.2		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	10		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	10		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	12		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: 1487 FIRST AVENUE **Lab Number:** L2272729

Project Number: 100963701 **Report Date:** 01/04/23

SAMPLE RESULTS

Lab ID: L2272729-03 Date Collected: 12/28/22 12:00

Client ID: LMW-13R-D_45.25 Date Received: 12/28/22

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	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	102		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	99		70-130

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2272729
Report Date: 01/04/23

SAMPLE RESULTS

Lab ID: L2272729-04
Client ID: LMW-6R-S_20.5
Sample Location: MANHATTAN, NY
Date Collected: 12/28/22 14:00
Date Received: 12/28/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 12/30/22 11:33
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	1.4	J	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	10		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	0.72		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: 1487 FIRST AVENUE **Lab Number:** L2272729

Project Number: 100963701 **Report Date:** 01/04/23

SAMPLE RESULTS

Lab ID: L2272729-04 Date Collected: 12/28/22 14:00
Client ID: LMW-6R-S_20.5 Date Received: 12/28/22
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	6.3		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	29		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	10		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: 1487 FIRST AVENUE **Lab Number:** L2272729

Project Number: 100963701 **Report Date:** 01/04/23

SAMPLE RESULTS

Lab ID: L2272729-04 Date Collected: 12/28/22 14:00

Client ID: LMW-6R-S_20.5 Date Received: 12/28/22

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	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	103		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	98		70-130

Project Name: 1487 FIRST AVENUE **Lab Number:** L2272729

Project Number: 100963701 **Report Date:** 01/04/23

SAMPLE RESULTS

Lab ID: L2272729-05 Date Collected: 12/28/22 00:00
Client ID: TRIP BLANK_20221228 Date Received: 12/28/22
Sample Location: MANHATTAN, NY Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 12/30/22 10:00
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: 1487 FIRST AVENUE **Lab Number:** L2272729

Project Number: 100963701 **Report Date:** 01/04/23

SAMPLE RESULTS

Lab ID: L2272729-05 Date Collected: 12/28/22 00:00

Client ID: TRIP BLANK_20221228 Date Received: 12/28/22

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: 1487 FIRST AVENUE **Lab Number:** L2272729

Project Number: 100963701 **Report Date:** 01/04/23

SAMPLE RESULTS

Lab ID: L2272729-05 Date Collected: 12/28/22 00:00

Client ID: TRIP BLANK_20221228 Date Received: 12/28/22

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	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	102		70-130
4-Bromofluorobenzene	110		70-130
Dibromofluoromethane	100		70-130

Project Name: 1487 FIRST AVENUE **Lab Number:** L2272729

Project Number: 100963701 **Report Date:** 01/04/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 12/30/22 08:51
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-05 Batch: WG1729359-5					
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: 1487 FIRST AVENUE **Lab Number:** L2272729

Project Number: 100963701 **Report Date:** 01/04/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 12/30/22 08:51
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-05 Batch: WG1729359-5					
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: 1487 FIRST AVENUE **Lab Number:** L2272729

Project Number: 100963701 **Report Date:** 01/04/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 12/30/22 08:51
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-05 Batch: WG1729359-5					
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	102		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	110		70-130
Dibromofluoromethane	100		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272729
Report Date: 01/04/23

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: WG1729359-3 WG1729359-4								
Methylene chloride	97		99		70-130	2		20
1,1-Dichloroethane	95		97		70-130	2		20
Chloroform	94		97		70-130	3		20
Carbon tetrachloride	86		89		63-132	3		20
1,2-Dichloropropane	91		94		70-130	3		20
Dibromochloromethane	87		90		63-130	3		20
1,1,2-Trichloroethane	94		96		70-130	2		20
Tetrachloroethene	96		96		70-130	0		20
Chlorobenzene	97		98		75-130	1		20
Trichlorofluoromethane	79		81		62-150	3		20
1,2-Dichloroethane	92		96		70-130	4		20
1,1,1-Trichloroethane	93		96		67-130	3		20
Bromodichloromethane	88		92		67-130	4		20
trans-1,3-Dichloropropene	89		92		70-130	3		20
cis-1,3-Dichloropropene	86		89		70-130	3		20
1,1-Dichloropropene	94		97		70-130	3		20
Bromoform	81		85		54-136	5		20
1,1,2,2-Tetrachloroethane	95		100		67-130	5		20
Benzene	94		97		70-130	3		20
Toluene	98		99		70-130	1		20
Ethylbenzene	97		98		70-130	1		20
Chloromethane	94		96		64-130	2		20
Bromomethane	47		50		39-139	6		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272729
Report Date: 01/04/23

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: WG1729359-3 WG1729359-4								
Vinyl chloride	87		87		55-140	0		20
Chloroethane	92		92		55-138	0		20
1,1-Dichloroethene	99		100		61-145	1		20
trans-1,2-Dichloroethene	97		99		70-130	2		20
Trichloroethene	84		87		70-130	4		20
1,2-Dichlorobenzene	92		96		70-130	4		20
1,3-Dichlorobenzene	95		96		70-130	1		20
1,4-Dichlorobenzene	94		94		70-130	0		20
Methyl tert butyl ether	86		92		63-130	7		20
p/m-Xylene	95		95		70-130	0		20
o-Xylene	95		95		70-130	0		20
cis-1,2-Dichloroethene	94		96		70-130	2		20
Dibromomethane	83		86		70-130	4		20
1,2,3-Trichloropropane	93		100		64-130	7		20
Acrylonitrile	95		100		70-130	5		20
Styrene	95		95		70-130	0		20
Dichlorodifluoromethane	92		94		36-147	2		20
Acetone	97		120		58-148	**21**	Q	20
Carbon disulfide	99		100		51-130	1		20
2-Butanone	110		110		63-138	0		20
Vinyl acetate	120		120		70-130	0		20
4-Methyl-2-pentanone	87		93		59-130	7		20
2-Hexanone	100		110		57-130	10		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272729
Report Date: 01/04/23

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: WG1729359-3 WG1729359-4								
Bromochloromethane	94		97		70-130	3		20
2,2-Dichloropropane	94		95		63-133	1		20
1,2-Dibromoethane	98		98		70-130	0		20
1,3-Dichloropropane	94		97		70-130	3		20
1,1,1,2-Tetrachloroethane	90		91		64-130	1		20
Bromobenzene	94		95		70-130	1		20
n-Butylbenzene	100		100		53-136	0		20
sec-Butylbenzene	100		100		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	76		83		41-144	9		20
Hexachlorobutadiene	99		99		63-130	0		20
Isopropylbenzene	100		100		70-130	0		20
p-Isopropyltoluene	100		100		70-130	0		20
Naphthalene	81		90		70-130	11		20
n-Propylbenzene	100		100		69-130	0		20
1,2,3-Trichlorobenzene	82		89		70-130	8		20
1,2,4-Trichlorobenzene	89		93		70-130	4		20
1,3,5-Trimethylbenzene	99		100		64-130	1		20
1,2,4-Trimethylbenzene	98		100		70-130	2		20
1,4-Dioxane	108		114		56-162	5		20
p-Diethylbenzene	100		100		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2272729
Report Date: 01/04/23

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: WG1729359-3 WG1729359-4								
p-Ethyltoluene	100		100		70-130	0		20
1,2,4,5-Tetramethylbenzene	96		97		70-130	1		20
Ethyl ether	78		82		59-134	5		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	103		106		70-130
Toluene-d8	106		105		70-130
4-Bromofluorobenzene	110		110		70-130
Dibromofluoromethane	96		98		70-130

METALS

Project Name: 1487 FIRST AVENUE
Lab Number: L2272729
Project Number: 100963701
Report Date: 01/04/23

SAMPLE RESULTS

Lab ID: L2272729-01
Client ID: LMW-8R-D_76
Sample Location: MANHATTAN, NY
Date Collected: 12/27/22 16:10
Date Received: 12/28/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Calcium, Total	95.0		mg/l	0.100	0.0394	1	12/29/22 10:06	12/30/22 16:24	EPA 3005A	1,6020B	NTB
Iron, Total	6.65		mg/l	0.0500	0.0191	1	12/29/22 10:06	12/30/22 16:24	EPA 3005A	1,6020B	NTB
Magnesium, Total	16.2		mg/l	0.0700	0.0242	1	12/29/22 10:06	12/30/22 16:24	EPA 3005A	1,6020B	NTB
Manganese, Total	0.4483		mg/l	0.00100	0.00044	1	12/29/22 10:06	12/30/22 16:24	EPA 3005A	1,6020B	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	303.8		mg/l	0.5400	NA	1	12/29/22 10:06	12/30/22 16:24	EPA 3005A	1,6020B	NTB

Project Name: 1487 FIRST AVENUE
Lab Number: L2272729
Project Number: 100963701
Report Date: 01/04/23

SAMPLE RESULTS

Lab ID: L2272729-02
Client ID: LMW-13R-S_25.75
Sample Location: MANHATTAN, NY
Date Collected: 12/28/22 09:45
Date Received: 12/28/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Calcium, Total	178.		mg/l	0.100	0.0394	1	12/29/22 10:06	12/30/22 16:29	EPA 3005A	1,6020B	NTB
Iron, Total	12.6		mg/l	0.0500	0.0191	1	12/29/22 10:06	12/30/22 16:29	EPA 3005A	1,6020B	NTB
Magnesium, Total	47.8		mg/l	0.0700	0.0242	1	12/29/22 10:06	12/30/22 16:29	EPA 3005A	1,6020B	NTB
Manganese, Total	2.307		mg/l	0.00100	0.00044	1	12/29/22 10:06	12/30/22 16:29	EPA 3005A	1,6020B	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	641.3		mg/l	0.5400	NA	1	12/29/22 10:06	12/30/22 16:29	EPA 3005A	1,6020B	NTB

Project Name: 1487 FIRST AVENUE
Lab Number: L2272729
Project Number: 100963701
Report Date: 01/04/23

SAMPLE RESULTS

Lab ID: L2272729-03
Client ID: LMW-13R-D_45.25
Sample Location: MANHATTAN, NY
Date Collected: 12/28/22 12:00
Date Received: 12/28/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Calcium, Total	136.		mg/l	0.100	0.0394	1	12/29/22 10:06	12/30/22 16:48	EPA 3005A	1,6020B	NTB
Iron, Total	17.5		mg/l	0.0500	0.0191	1	12/29/22 10:06	12/30/22 16:48	EPA 3005A	1,6020B	NTB
Magnesium, Total	40.8		mg/l	0.0700	0.0242	1	12/29/22 10:06	12/30/22 16:48	EPA 3005A	1,6020B	NTB
Manganese, Total	2.363		mg/l	0.00100	0.00044	1	12/29/22 10:06	12/30/22 16:48	EPA 3005A	1,6020B	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	508.6		mg/l	0.5400	NA	1	12/29/22 10:06	12/30/22 16:48	EPA 3005A	1,6020B	NTB

Project Name: 1487 FIRST AVENUE
Lab Number: L2272729
Project Number: 100963701
Report Date: 01/04/23

SAMPLE RESULTS

Lab ID: L2272729-04
Client ID: LMW-6R-S_20.5
Sample Location: MANHATTAN, NY
Date Collected: 12/28/22 14:00
Date Received: 12/28/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Calcium, Total	220.		mg/l	0.100	0.0394	1	12/29/22 10:06	12/30/22 16:53	EPA 3005A	1,6020B	NTB
Iron, Total	14.9		mg/l	0.0500	0.0191	1	12/29/22 10:06	12/30/22 16:53	EPA 3005A	1,6020B	NTB
Magnesium, Total	58.1		mg/l	0.0700	0.0242	1	12/29/22 10:06	12/30/22 16:53	EPA 3005A	1,6020B	NTB
Manganese, Total	2.978		mg/l	0.00100	0.00044	1	12/29/22 10:06	12/30/22 16:53	EPA 3005A	1,6020B	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	788.4		mg/l	0.5400	NA	1	12/29/22 10:06	12/30/22 16:53	EPA 3005A	1,6020B	NTB

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2272729
Report Date: 01/04/23

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-04 Batch: WG1728337-1										
Calcium, Total	ND		mg/l	0.100	0.0394	1	12/29/22 10:06	12/30/22 15:50	1,6020B	NTB
Iron, Total	ND		mg/l	0.0500	0.0191	1	12/29/22 10:06	12/30/22 15:50	1,6020B	NTB
Magnesium, Total	ND		mg/l	0.0700	0.0242	1	12/29/22 10:06	12/30/22 15:50	1,6020B	NTB
Manganese, Total	ND		mg/l	0.00100	0.00044	1	12/29/22 10:06	12/30/22 15:50	1,6020B	NTB

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness (by calculation) - Mansfield Lab for sample(s): 01-04 Batch: WG1728337-1										
Hardness	ND		mg/l	0.5400	NA	1	12/29/22 10:06	12/30/22 15:50	1,6020B	NTB

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1487 FIRST AVENUE

Project Number: 100963701

Lab Number: L2272729

Report Date: 01/04/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG1728337-2								
Calcium, Total	94		-		80-120	-		
Iron, Total	97		-		80-120	-		
Magnesium, Total	100		-		80-120	-		
Manganese, Total	98		-		80-120	-		
Total Hardness (by calculation) - Mansfield Lab Associated sample(s): 01-04 Batch: WG1728337-2								
Hardness	98		-		80-120	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272729
Report Date: 01/04/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1728337-3 QC Sample: L2272361-01 Client ID: MS Sample												
Calcium, Total	163	10	154	**0**	Q	-	-		75-125	-		20
Iron, Total	23.2	1	23.4	**20**	Q	-	-		75-125	-		20
Magnesium, Total	31.5	10	39.8	83		-	-		75-125	-		20
Manganese, Total	0.5092	0.5	0.9944	97		-	-		75-125	-		20
Total Hardness (by calculation) - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1728337-3 QC Sample: L2272361-01 Client ID: MS Sample												
Hardness	536.1	66.2	549.1	**20**	Q	-	-		75-125	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: 1487 FIRST AVENUE

Project Number: 100963701

Lab Number: L2272729

Report Date: 01/04/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1728337-4 QC Sample: L2272361-01 Client ID: DUP Sample						
Iron, Total	23.2	22.3	mg/l	4		20
Manganese, Total	0.5092	0.4846	mg/l	5		20

INORGANICS
&
MISCELLANEOUS

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272729
Report Date: 01/04/23

SAMPLE RESULTS

Lab ID: L2272729-01
Client ID: LMW-8R-D_76
Sample Location: MANHATTAN, NY

Date Collected: 12/27/22 16:10
Date Received: 12/28/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Total	141.		mg CaCO3/L	2.00	NA	1	-	01/03/23 07:43	121,2320B	MKT
Chloride	83.		mg/l	1.0	0.89	1	-	01/03/23 18:49	121,4500CL-E	TLH
Nitrogen, Nitrate	0.044	J	mg/l	0.100	0.022	1	-	12/29/22 07:13	121,4500NO3-F	MRM
Sulfate	130		mg/l	50	6.8	5	01/04/23 10:19	01/04/23 10:19	1,9038	MCU
Total Organic Carbon	3.5		mg/l	1.0	0.19	2	-	01/03/23 04:48	1,9060A	DEW
Dissolved Organic Carbon	4.0		mg/l	4.0	0.17	4	12/29/22 06:25	01/03/23 04:48	1,9060A	DEW

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272729
Report Date: 01/04/23

SAMPLE RESULTS

Lab ID: L2272729-02
Client ID: LMW-13R-S_25.75
Sample Location: MANHATTAN, NY

Date Collected: 12/28/22 09:45
Date Received: 12/28/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Total	185.		mg CaCO3/L	2.00	NA	1	-	01/03/23 07:43	121,2320B	MKT
Chloride	85.		mg/l	1.0	0.89	1	-	01/03/23 18:50	121,4500CL-E	TLH
Nitrogen, Nitrate	ND		mg/l	0.100	0.022	1	-	12/29/22 07:14	121,4500NO3-F	MRM
Sulfate	560		mg/l	500	68.	50	01/04/23 10:19	01/04/23 10:19	1,9038	MCU
Total Organic Carbon	7.1		mg/l	2.0	0.39	4	-	01/03/23 04:48	1,9060A	DEW
Dissolved Organic Carbon	7.0		mg/l	4.0	0.17	4	12/29/22 06:25	01/03/23 04:48	1,9060A	DEW

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272729
Report Date: 01/04/23

SAMPLE RESULTS

Lab ID: L2272729-03
Client ID: LMW-13R-D_45.25
Sample Location: MANHATTAN, NY

Date Collected: 12/28/22 12:00
Date Received: 12/28/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Total	220.		mg CaCO3/L	2.00	NA	1	-	01/03/23 07:43	121,2320B	MKT
Chloride	45.		mg/l	1.0	0.89	1	-	01/03/23 18:50	121,4500CL-E	TLH
Nitrogen, Nitrate	ND		mg/l	0.100	0.022	1	-	12/29/22 07:19	121,4500NO3-F	MRM
Sulfate	540		mg/l	500	68.	50	01/04/23 10:19	01/04/23 10:19	1,9038	MCU
Total Organic Carbon	14.		mg/l	2.0	0.39	4	-	01/03/23 04:48	1,9060A	DEW
Dissolved Organic Carbon	14.		mg/l	4.0	0.17	4	12/29/22 06:25	01/03/23 04:48	1,9060A	DEW

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272729
Report Date: 01/04/23

SAMPLE RESULTS

Lab ID: L2272729-04
Client ID: LMW-6R-S_20.5
Sample Location: MANHATTAN, NY

Date Collected: 12/28/22 14:00
Date Received: 12/28/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Total	158.		mg CaCO3/L	2.00	NA	1	-	01/03/23 07:43	121,2320B	MKT
Chloride	110		mg/l	10	8.9	10	-	01/03/23 20:51	121,4500CL-E	TLH
Nitrogen, Nitrate	0.093	J	mg/l	0.100	0.022	1	-	12/29/22 07:23	121,4500NO3-F	MRM
Sulfate	580		mg/l	500	68.	50	01/04/23 09:31	01/04/23 09:31	1,9038	MCU
Total Organic Carbon	8.4		mg/l	2.0	0.39	4	-	01/03/23 04:48	1,9060A	DEW
Dissolved Organic Carbon	8.2		mg/l	4.0	0.17	4	12/29/22 06:25	01/03/23 04:48	1,9060A	DEW

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2272729
Report Date: 01/04/23

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG1728284-1										
Nitrogen, Nitrate	ND		mg/l	0.100	0.022	1	-	12/29/22 06:35	121,4500NO3-F	MRM
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG1729308-1										
Dissolved Organic Carbon	ND		mg/l	1.0	0.04	1	-	01/03/23 04:48	1,9060A	DEW
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG1729309-1										
Total Organic Carbon	ND		mg/l	0.50	0.09	1	-	01/03/23 04:48	1,9060A	DEW
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG1729364-1										
Alkalinity, Total	ND		mg CaCO3/L	2.00	NA	1	-	01/03/23 07:43	121,2320B	MKT
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG1729580-1										
Chloride	ND		mg/l	1.0	0.89	1	-	01/03/23 18:16	121,4500CL-E	TLH
General Chemistry - Westborough Lab for sample(s): 04 Batch: WG1729767-1										
Sulfate	ND		mg/l	10	1.4	1	01/04/23 09:31	01/04/23 09:31	1,9038	MCU
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1729768-1										
Sulfate	ND		mg/l	10	1.4	1	01/04/23 10:19	01/04/23 10:19	1,9038	MCU

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272729
Report Date: 01/04/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG1728284-2								
Nitrogen, Nitrate	106		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG1729308-2								
Dissolved Organic Carbon	98		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG1729309-2								
Total Organic Carbon	98		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG1729364-2								
Alkalinity, Total	103		-		90-110	-		10
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG1729580-2								
Chloride	97		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 04 Batch: WG1729767-2								
Sulfate	95		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1729768-2								
Sulfate	95		-		90-110	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272729
Report Date: 01/04/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1728284-4 QC Sample: L2272729-03 Client ID: LMW-13R-D_45.25												
Nitrogen, Nitrate	ND	4	4.71	**118**	Q	-	-		83-113	-		17
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1729308-4 QC Sample: L2272729-03 Client ID: LMW-13R-D_45.25												
Dissolved Organic Carbon	14.	40	55	103		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1729309-4 QC Sample: L2272729-03 Client ID: LMW-13R-D_45.25												
Total Organic Carbon	14.	40	51	93		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1729364-4 QC Sample: L2272805-01 Client ID: MS Sample												
Alkalinity, Total	193.	100	251	**58**	Q	-	-		86-116	-		10
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1729580-4 QC Sample: L2272687-01 Client ID: MS Sample												
Chloride	44.	20	64	100		-	-		58-140	-		7
General Chemistry - Westborough Lab Associated sample(s): 04 QC Batch ID: WG1729767-4 QC Sample: L2271644-01 Client ID: MS Sample												
Sulfate	34.	40	80	115		-	-		55-147	-		14
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1729768-4 QC Sample: L2272805-01 Client ID: MS Sample												
Sulfate	55.	100	170	115		-	-		55-147	-		14

Lab Duplicate Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272729
Report Date: 01/04/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1728284-3 QC Sample: L2272729-03 Client ID: LMW-13R-D_45.25						
Nitrogen, Nitrate	ND	ND	mg/l	NC		17
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1729308-3 QC Sample: L2272729-03 Client ID: LMW-13R-D_45.25						
Dissolved Organic Carbon	14.	15	mg/l	7		20
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1729309-3 QC Sample: L2272729-03 Client ID: LMW-13R-D_45.25						
Total Organic Carbon	14.	14	mg/l	0		20
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1729364-3 QC Sample: L2272805-01 Client ID: DUP Sample						
Alkalinity, Total	193.	193	mg CaCO3/L	0		10
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1729580-3 QC Sample: L2272687-01 Client ID: DUP Sample						
Chloride	44.	40	mg/l	**10**	Q	7
General Chemistry - Westborough Lab Associated sample(s): 04 QC Batch ID: WG1729767-3 QC Sample: L2271644-01 Client ID: DUP Sample						
Sulfate	34.	37	mg/l	8		14
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1729768-3 QC Sample: L2272805-01 Client ID: DUP Sample						
Sulfate	55.	54	mg/l	2		14

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272729
Report Date: 01/04/23

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(*)
L2272729-01A	Vial HCl preserved	A	NA		2.6	Y	Absent		NYTCL-8260(14)
L2272729-01B	Vial HCl preserved	A	NA		2.6	Y	Absent		NYTCL-8260(14)
L2272729-01C	Vial HCl preserved	A	NA		2.6	Y	Absent		NYTCL-8260(14)
L2272729-01D	Vial H2SO4 preserved	A	NA		2.6	Y	Absent		TOC-9060(28)
L2272729-01E	Vial H2SO4 preserved	A	NA		2.6	Y	Absent		TOC-9060(28)
L2272729-01F	Vial H2SO4 preserved	A	NA		2.6	Y	Absent		TOC-9060(28)
L2272729-01G	Vial unpreserved	A	NA	NA	2.6	Y	Absent		FILTER(1)
L2272729-01H	Vial unpreserved	A	NA	NA	2.6	Y	Absent		FILTER(1)
L2272729-01I	Vial unpreserved	A	NA	NA	2.6	Y	Absent		FILTER(1)
L2272729-01J	Plastic 250ml unpreserved/No Headspace	A	NA		2.6	Y	Absent		ALK-T-2320(14)
L2272729-01K	Plastic 250ml unpreserved	A	7	7	2.6	Y	Absent		SO4-9038(28),CL-4500(28),NO3-4500(2)
L2272729-01L	Plastic 250ml HNO3 preserved	A	<2	<2	2.6	Y	Absent		FE-6020T(180),CA-6020T(180),MN-6020T(180),HARDT-6020(180),MG-6020T(180)
L2272729-01X	Vial H2SO4 preserved Filtrates	A	NA		2.6	Y	Absent		DOC-9060(28)
L2272729-01Y	Vial H2SO4 preserved Filtrates	A	NA		2.6	Y	Absent		DOC-9060(28)
L2272729-01Z	Vial H2SO4 preserved Filtrates	A	NA		2.6	Y	Absent		DOC-9060(28)
L2272729-02A	Vial HCl preserved	A	NA		2.6	Y	Absent		NYTCL-8260(14)
L2272729-02B	Vial HCl preserved	A	NA		2.6	Y	Absent		NYTCL-8260(14)
L2272729-02C	Vial HCl preserved	A	NA		2.6	Y	Absent		NYTCL-8260(14)
L2272729-02D	Vial H2SO4 preserved	A	NA		2.6	Y	Absent		TOC-9060(28)
L2272729-02E	Vial H2SO4 preserved	A	NA		2.6	Y	Absent		TOC-9060(28)
L2272729-02F	Vial H2SO4 preserved	A	NA		2.6	Y	Absent		TOC-9060(28)
L2272729-02G	Vial unpreserved	A	NA	NA	2.6	Y	Absent		FILTER(1)
L2272729-02H	Vial unpreserved	A	NA	NA	2.6	Y	Absent		FILTER(1)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2272729-02I	Vial unpreserved	A	NA	NA	2.6	Y	Absent		FILTER(1)
L2272729-02J	Plastic 250ml unpreserved/No Headspace	A	NA		2.6	Y	Absent		ALK-T-2320(14)
L2272729-02K	Plastic 250ml unpreserved	A	7	7	2.6	Y	Absent		SO4-9038(28),CL-4500(28),NO3-4500(2)
L2272729-02L	Plastic 250ml HNO3 preserved	A	<2	<2	2.6	Y	Absent		FE-6020T(180),CA-6020T(180),MN-6020T(180),HARDT-6020(180),MG-6020T(180)
L2272729-02X	Vial H2SO4 preserved Filtrates	A	NA		2.6	Y	Absent		DOC-9060(28)
L2272729-02Y	Vial H2SO4 preserved Filtrates	A	NA		2.6	Y	Absent		DOC-9060(28)
L2272729-02Z	Vial H2SO4 preserved Filtrates	A	NA		2.6	Y	Absent		DOC-9060(28)
L2272729-03A	Vial HCl preserved	A	NA		2.6	Y	Absent		NYTCL-8260(14)
L2272729-03B	Vial HCl preserved	A	NA		2.6	Y	Absent		NYTCL-8260(14)
L2272729-03C	Vial HCl preserved	A	NA		2.6	Y	Absent		NYTCL-8260(14)
L2272729-03D	Vial H2SO4 preserved	A	NA		2.6	Y	Absent		TOC-9060(28)
L2272729-03E	Vial H2SO4 preserved	A	NA		2.6	Y	Absent		TOC-9060(28)
L2272729-03F	Vial H2SO4 preserved	A	NA		2.6	Y	Absent		TOC-9060(28)
L2272729-03G	Vial unpreserved	A	NA	NA	2.6	Y	Absent		FILTER(1)
L2272729-03H	Vial unpreserved	A	NA	NA	2.6	Y	Absent		FILTER(1)
L2272729-03I	Vial unpreserved	A	NA	NA	2.6	Y	Absent		FILTER(1)
L2272729-03J	Plastic 250ml unpreserved/No Headspace	A	NA		2.6	Y	Absent		ALK-T-2320(14)
L2272729-03K	Plastic 250ml unpreserved	A	7	7	2.6	Y	Absent		CL-4500(28),SO4-9038(28),NO3-4500(2)
L2272729-03L	Plastic 250ml HNO3 preserved	A	<2	<2	2.6	Y	Absent		FE-6020T(180),CA-6020T(180),MN-6020T(180),HARDT-6020(180),MG-6020T(180)
L2272729-03X	Vial H2SO4 preserved Filtrates	A	NA		2.6	Y	Absent		DOC-9060(28)
L2272729-03Y	Vial H2SO4 preserved Filtrates	A	NA		2.6	Y	Absent		DOC-9060(28)
L2272729-03Z	Vial H2SO4 preserved Filtrates	A	NA		2.6	Y	Absent		DOC-9060(28)
L2272729-04A	Vial HCl preserved	A	NA		2.6	Y	Absent		NYTCL-8260(14)
L2272729-04B	Vial HCl preserved	A	NA		2.6	Y	Absent		NYTCL-8260(14)
L2272729-04C	Vial HCl preserved	A	NA		2.6	Y	Absent		NYTCL-8260(14)
L2272729-04D	Vial H2SO4 preserved	A	NA		2.6	Y	Absent		TOC-9060(28)
L2272729-04E	Vial H2SO4 preserved	A	NA		2.6	Y	Absent		TOC-9060(28)
L2272729-04F	Vial H2SO4 preserved	A	NA		2.6	Y	Absent		TOC-9060(28)

*Values in parentheses indicate holding time in days

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272729
Report Date: 01/04/23

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2272729-04G	Vial unpreserved	A	NA	NA	2.6	Y	Absent		FILTER(1)
L2272729-04H	Vial unpreserved	A	NA	NA	2.6	Y	Absent		FILTER(1)
L2272729-04I	Vial unpreserved	A	NA	NA	2.6	Y	Absent		FILTER(1)
L2272729-04J	Plastic 250ml unpreserved/No Headspace	A	NA		2.6	Y	Absent		ALK-T-2320(14)
L2272729-04K	Plastic 250ml unpreserved	A	7	7	2.6	Y	Absent		SO4-9038(28),CL-4500(28),NO3-4500(2)
L2272729-04L	Plastic 250ml HNO3 preserved	A	<2	<2	2.6	Y	Absent		FE-6020T(180),CA-6020T(180),MN-6020T(180),HARDT-6020(180),MG-6020T(180)
L2272729-04X	Vial H2SO4 preserved Filtrates	A	NA		2.6	Y	Absent		DOC-9060(28)
L2272729-04Y	Vial H2SO4 preserved Filtrates	A	NA		2.6	Y	Absent		DOC-9060(28)
L2272729-04Z	Vial H2SO4 preserved Filtrates	A	NA		2.6	Y	Absent		DOC-9060(28)
L2272729-05A	Vial HCl preserved	A	NA		2.6	Y	Absent		NYTCL-8260(14)
L2272729-05B	Vial HCl preserved	A	NA		2.6	Y	Absent		NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name:	1487 FIRST AVENUE	**Lab Number:**	L2272729
Project Number:	100963701	**Report Date:**	01/04/23

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:	1487 FIRST AVENUE	**Lab Number:**	L2272729
Project Number:	100963701	**Report Date:**	01/04/23

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:	1487 FIRST AVENUE	**Lab Number:**	L2272729
Project Number:	100963701	**Report Date:**	01/04/23

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: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2272729
Report Date: 01/04/23

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, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

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

Mansfield Facility:

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

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

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

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

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: 12/28/22

ALPHA Job #: L2272729

Client Information

Client: LANGAN ENGINEERING
Address: 300 KIMBALL DR
PARSIPPANY, NJ 07054
Phone: 973-560-4900
Fax: —
Email: asandvee@langan.com

Project Information

Project Name: 1487 FIRST AVE
Project Location: MANHATTAN, NY
Project #: 100963701
(Use Project name as Project #) ☐
Project Manager: BEN RAO
ALPHAQuote #:

Turn-Around Time

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

Deliverables

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

Billing Information

☑ Same as Client Info
PO # 10096370 1

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:

* Samples for DHC & EBAC were directly shipped to Microbial Insights

Please specify Metals or TAL.

ANALYSIS

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs	Iron, Calcium, Manganese	Magnesium, Chloride, Sulfate	Nitrate	TOC	DOC	Alk, Hardness	DHC, EBAC*	Sample Specific Comments	Total Bottle
72729-01	LMW-8R-D_76	12/27/22	1600	GW	SH	X	X	X	X	X	X	X	X		13
02	LMW-13R-S_25.75	12/28/22	945	GW	SH	X	X	X	X	X	X	X	X		13
03	LMW-13R-D_45.25	12/28/22	1200	GW	SH	X	X	X	X	X	X	X	X		13
04	LMW-6R-S_20.5	12/28/22	1400	GW	SH	X	X	X	X	X	X	X	X		13
05	Trip Blank_20221228	12/28/22	—	AQ	SH	X									2

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

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

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

Container Type	V	P	P	P	V	V	P	
Preservative	B	C	N/C	A	D	A	A	

Relinquished By:	Date/Time	Received By:	Date/Time
(Langan)	12/28/22 1530		12/28/22 1530
	12/28/22 1917		12/28/22 19:30
	12/28/22 2110		12/28/22 2110
	12/28/22 2300		12/28/22 23:00

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

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

10515 Research Drive
Knoxville, TN 37932
Phone: (865) 573-8188
Fax: (865) 573-8133

Client: Ben Rao
Alpha Analytical, Inc.
8 Walkup Dr
Westborough, MA 01581

Phone: 201-812-2633

Fax:

Identifier: 125TL **Date Rec:** 12/30/2022 **Report Date:** 01/03/2023

Client Project #: 100963701 **Client Project Name:** 1487 First Avenue

Purchase Order #: L2272729

Test results provided for: CENSUS

Reviewed By:



NOTICE: This report is intended only for the addressee shown above and may contain confidential or privileged information. If the recipient of this material is not the intended recipient or if you have received this in error, please notify Microbial Insights, Inc. immediately. The data and other information in this report represent only the sample(s) analyzed and are rendered upon condition that it is not to be reproduced without approval from Microbial Insights, Inc. Thank you for your cooperation.

Results relate only to the items tested and the sample(s) as received by the laboratory.

MICROBIAL INSIGHTS, INC.

10515 Research Dr., Knoxville, TN 37932
Tel. (865) 573-8188 Fax. (865) 573-8133

CENSUS

Client: **Alpha Analytical, Inc.**
Project: 1487 First Avenue

MI Project Number: **125TL**
Date Received: 12/30/2022

Sample Information

Client Sample ID:		**LMW-13R-S_25.75**	**LMW-13R-D_45.25**	**LMW-6R-S_20.5**	**LMW-8R-D_76**
Sample Date:		12/28/2022	12/28/2022	12/28/2022	12/27/2022
Units:		cells/mL	cells/mL	cells/mL	cells/mL
Analyst/Reviewer:		OR/CS	OR/CS	OR/CS	OR/CS
Dechlorinating Bacteria					
Dehalococcoides	*DHC*	**6.90E+00**	**3.70E+00**	**1.24E+01**	**2.99E+01**
Phylogenetic Group					
Total Eubacteria	EBAC	**4.52E+07**	**1.57E+07**	**4.25E+07**	**4.78E+07**

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

Quality Assurance/Quality Control Data

Samples Received **12/28/2022**

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control	Extraction Blank	Negative Control
DHC	12/28/2022	01/03/2023	0 °C	102%	non-detect	non-detect
EBAC	12/28/2022	01/03/2023	0 °C	108%	non-detect	non-detect

Samples Received **12/29/2022**

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control	Extraction Blank	Negative Control
DHC	12/29/2022	01/03/2023	0 °C	104%	non-detect	non-detect
EBAC	12/29/2022	01/03/2023	0 °C	112%	non-detect	non-detect

ANALYTICAL REPORT

Lab Number:	L2272805
Client:	Langan Engineering & Environmental 300 Kimball Drive 4th Floor Parsippany, NJ 07054
ATTN:	Ashley Sandve
Phone:	(973) 560-4871
Project Name:	1487 FIRST AVENUE
Project Number:	100963701
Report Date:	01/05/23

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: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272805
Report Date: 01/05/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2272805-01	LMW-6R-D_47.75	WATER	MANHATTAN NY	12/28/22 16:30	12/29/22

Project Name:	1487 FIRST AVENUE	**Lab Number:**	L2272805
Project Number:	100963701	**Report Date:**	01/05/23

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:	1487 FIRST AVENUE	**Lab Number:**	L2272805
Project Number:	100963701	**Report Date:**	01/05/23

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.

The analyses of DHC and EBAC were subcontracted. A copy of the laboratory report is included as an addendum. Please note: This data is only available in PDF format and is not available on Data Merger.

Sample Receipt

L2272805-01: A sample container for Alkalinity was received for the "LMW-6R-D_47.75" sample, but was not listed on the chain of custody. At the client's request, the analysis was performed.

L2272805-01: At the client's request, the analysis of Hardness was performed.

Dissolved Organic Carbon

L2272805-01: The sample was filtered with the method required holding time exceeded.

L2272805-01: The DOC result is greater than the TOC result due to the filtering procedure required by the DOC method.

Alkalinity, Total

The WG1729364-4 MS recovery, performed on L2272805-01, is outside the acceptance criteria for alkalinity, total (58%); however, the associated LCS recovery is within criteria. No further action was taken.

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 Stenstrom

Title: Technical Director/Representative Date: 01/05/23

ORGANICS

VOLATILES

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2272805
Report Date: 01/05/23

SAMPLE RESULTS

Lab ID: L2272805-01
Client ID: LMW-6R-D_47.75
Sample Location: MANHATTAN NY
Date Collected: 12/28/22 16:30
Date Received: 12/29/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 12/30/22 11:41
Analyst: MJV

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	1.6	J	ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	7.4		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	0.57		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	1.5	J	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: 1487 FIRST AVENUE **Lab Number:** L2272805

Project Number: 100963701 **Report Date:** 01/05/23

SAMPLE RESULTS

Lab ID: L2272805-01 Date Collected: 12/28/22 16:30

Client ID: LMW-6R-D_47.75 Date Received: 12/29/22

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	0.33	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	3.1		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	3.1		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	4.4	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: 1487 FIRST AVENUE **Lab Number:** L2272805

Project Number: 100963701 **Report Date:** 01/05/23

SAMPLE RESULTS

Lab ID: L2272805-01 Date Collected: 12/28/22 16:30

Client ID: LMW-6R-D_47.75 Date Received: 12/29/22

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	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	104		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	104		70-130

Project Name: 1487 FIRST AVENUE **Lab Number:** L2272805

Project Number: 100963701 **Report Date:** 01/05/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 12/30/22 09:56
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1729489-5					
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: 1487 FIRST AVENUE **Lab Number:** L2272805

Project Number: 100963701 **Report Date:** 01/05/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 12/30/22 09:56
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1729489-5					
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: 1487 FIRST AVENUE **Lab Number:** L2272805

Project Number: 100963701 **Report Date:** 01/05/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 12/30/22 09:56
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1729489-5					
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	100		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	102		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272805
Report Date: 01/05/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1729489-3 WG1729489-4								
Methylene chloride	110		100		70-130	10		20
1,1-Dichloroethane	110		98		70-130	12		20
Chloroform	100		110		70-130	10		20
Carbon tetrachloride	110		110		63-132	0		20
1,2-Dichloropropane	100		100		70-130	0		20
Dibromochloromethane	89		94		63-130	5		20
1,1,2-Trichloroethane	92		96		70-130	4		20
Tetrachloroethene	100		100		70-130	0		20
Chlorobenzene	100		99		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	98		96		67-130	2		20
trans-1,3-Dichloropropene	82		84		70-130	2		20
cis-1,3-Dichloropropene	98		98		70-130	0		20
1,1-Dichloropropene	110		100		70-130	10		20
Bromoform	93		94		54-136	1		20
1,1,2,2-Tetrachloroethane	94		98		67-130	4		20
Benzene	110		100		70-130	10		20
Toluene	100		99		70-130	1		20
Ethylbenzene	100		100		70-130	0		20
Chloromethane	110		100		64-130	10		20
Bromomethane	110		120		39-139	9		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272805
Report Date: 01/05/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1729489-3 WG1729489-4								
Vinyl chloride	110		110		55-140	0		20
Chloroethane	110		110		55-138	0		20
1,1-Dichloroethene	100		100		61-145	0		20
trans-1,2-Dichloroethene	110		110		70-130	0		20
Trichloroethene	100		100		70-130	0		20
1,2-Dichlorobenzene	100		100		70-130	0		20
1,3-Dichlorobenzene	100		100		70-130	0		20
1,4-Dichlorobenzene	98		100		70-130	2		20
Methyl tert butyl ether	97		98		63-130	1		20
p/m-Xylene	105		105		70-130	0		20
o-Xylene	105		105		70-130	0		20
cis-1,2-Dichloroethene	99		110		70-130	11		20
Dibromomethane	96		95		70-130	1		20
1,2,3-Trichloropropane	92		91		64-130	1		20
Acrylonitrile	85		94		70-130	10		20
Styrene	105		105		70-130	0		20
Dichlorodifluoromethane	100		100		36-147	0		20
Acetone	91		100		58-148	9		20
Carbon disulfide	110		110		51-130	0		20
2-Butanone	70		83		63-138	17		20
Vinyl acetate	84		93		70-130	10		20
4-Methyl-2-pentanone	80		95		59-130	17		20
2-Hexanone	91		96		57-130	5		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272805
Report Date: 01/05/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1729489-3 WG1729489-4								
Bromochloromethane	110		100		70-130	10		20
2,2-Dichloropropane	100		100		63-133	0		20
1,2-Dibromoethane	94		92		70-130	2		20
1,3-Dichloropropane	98		97		70-130	1		20
1,1,1,2-Tetrachloroethane	97		97		64-130	0		20
Bromobenzene	100		100		70-130	0		20
n-Butylbenzene	100		100		53-136	0		20
sec-Butylbenzene	100		100		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	87		92		41-144	6		20
Hexachlorobutadiene	97		100		63-130	3		20
Isopropylbenzene	100		100		70-130	0		20
p-Isopropyltoluene	100		100		70-130	0		20
Naphthalene	96		98		70-130	2		20
n-Propylbenzene	100		100		69-130	0		20
1,2,3-Trichlorobenzene	100		100		70-130	0		20
1,2,4-Trichlorobenzene	100		100		70-130	0		20
1,3,5-Trimethylbenzene	96		98		64-130	2		20
1,2,4-Trimethylbenzene	95		97		70-130	2		20
1,4-Dioxane	110		110		56-162	0		20
p-Diethylbenzene	96		98		70-130	2		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1487 FIRST AVENUE

Project Number: 100963701

Lab Number: L2272805

Report Date: 01/05/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1729489-3 WG1729489-4								
p-Ethyltoluene	100		100		70-130	0		20
1,2,4,5-Tetramethylbenzene	93		95		70-130	2		20
Ethyl ether	92		90		59-134	2		20
trans-1,4-Dichloro-2-butene	96		95		70-130	1		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	108		99		70-130
Toluene-d8	99		99		70-130
4-Bromofluorobenzene	104		102		70-130
Dibromofluoromethane	105		100		70-130

METALS

Project Name: 1487 FIRST AVENUE
Lab Number: L2272805
Project Number: 100963701
Report Date: 01/05/23

SAMPLE RESULTS

Lab ID: L2272805-01
Client ID: LMW-6R-D_47.75
Sample Location: MANHATTAN NY
Date Collected: 12/28/22 16:30
Date Received: 12/29/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Calcium, Total	90.8		mg/l	0.100	0.0394	1	12/30/22 20:20	01/04/23 18:23	EPA 3005A	1,6020B	NTB
Iron, Total	7.23		mg/l	0.0500	0.0191	1	12/30/22 20:20	01/04/23 18:23	EPA 3005A	1,6020B	NTB
Magnesium, Total	2.14		mg/l	0.0700	0.0242	1	12/30/22 20:20	01/04/23 18:23	EPA 3005A	1,6020B	NTB
Manganese, Total	0.1080		mg/l	0.00100	0.00044	1	12/30/22 20:20	01/04/23 18:23	EPA 3005A	1,6020B	NTB
Total Hardness (by calculation) - Mansfield Lab											
Hardness	235.4		mg/l	0.5400	NA	1	12/30/22 20:20	01/04/23 18:23	EPA 3005A	1,6020B	NTB

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2272805
Report Date: 01/05/23

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1728965-1										
Calcium, Total	ND		mg/l	0.100	0.0394	1	12/30/22 20:20	01/04/23 18:42	1,6020B	NTB
Iron, Total	ND		mg/l	0.0500	0.0191	1	12/30/22 20:20	01/04/23 18:42	1,6020B	NTB
Magnesium, Total	ND		mg/l	0.0700	0.0242	1	12/30/22 20:20	01/04/23 18:42	1,6020B	NTB
Manganese, Total	ND		mg/l	0.00100	0.00044	1	12/30/22 20:20	01/04/23 18:42	1,6020B	NTB

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness (by calculation) - Mansfield Lab for sample(s): 01 Batch: WG1728965-1										
Hardness	ND		mg/l	0.5400	NA	1	12/30/22 20:20	01/04/23 18:42	1,6020B	NTB

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1487 FIRST AVENUE

Project Number: 100963701

Lab Number: L2272805

Report Date: 01/05/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1728965-2								
Calcium, Total	90		-		80-120	-		
Iron, Total	98		-		80-120	-		
Magnesium, Total	101		-		80-120	-		
Manganese, Total	99		-		80-120	-		
Total Hardness (by calculation) - Mansfield Lab Associated sample(s): 01 Batch: WG1728965-2								
Hardness	97		-		80-120	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272805
Report Date: 01/05/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1728965-3 QC Sample: L2272899-01 Client ID: MS Sample												
Calcium, Total	30.4	10	40.2	98		-	-		75-125	-		20
Iron, Total	0.207	1	1.20	99		-	-		75-125	-		20
Magnesium, Total	6.62	10	16.5	99		-	-		75-125	-		20
Manganese, Total	0.7236	0.5	1.284	112		-	-		75-125	-		20
Total Hardness (by calculation) - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1728965-3 QC Sample: L2272899-01 Client ID: MS Sample												
Hardness	103.1	66.2	168.4	99		-	-		75-125	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: 1487 FIRST AVENUE

Project Number: 100963701

Lab Number: L2272805

Report Date: 01/05/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1728965-4 QC Sample: L2272899-01 Client ID: DUP Sample						
Iron, Total	0.207	0.187	mg/l	10		20
Manganese, Total	0.7236	0.7408	mg/l	2		20

INORGANICS
&
MISCELLANEOUS

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272805
Report Date: 01/05/23

SAMPLE RESULTS

Lab ID: L2272805-01
Client ID: LMW-6R-D_47.75
Sample Location: MANHATTAN NY

Date Collected: 12/28/22 16:30
Date Received: 12/29/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Total	193.		mg CaCO3/L	2.00	NA	1	-	01/03/23 07:43	121,2320B	MKT
Chloride	25.		mg/l	1.0	0.89	1	-	01/03/23 20:55	121,4500CL-E	TLH
Nitrogen, Nitrate	ND		mg/l	0.100	0.022	1	-	12/30/22 05:06	121,4500NO3-F	KAF
Sulfate	55.		mg/l	20	2.7	2	01/04/23 10:19	01/04/23 10:19	1,9038	MCU
Total Organic Carbon	7.6		mg/l	2.0	0.39	4	-	01/03/23 04:48	1,9060A	DEW
Dissolved Organic Carbon	8.0		mg/l	4.0	0.17	4	12/30/22 06:35	01/03/23 04:48	1,9060A	DEW

Project Name: 1487 FIRST AVENUE
Project Number: 100963701
Lab Number: L2272805
Report Date: 01/05/23

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1728692-1										
Nitrogen, Nitrate	ND		mg/l	0.100	0.022	1	-	12/30/22 02:48	121,4500NO3-F	KAF
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1729308-1										
Dissolved Organic Carbon	ND		mg/l	1.0	0.04	1	-	01/03/23 04:48	1,9060A	DEW
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1729309-1										
Total Organic Carbon	ND		mg/l	0.50	0.09	1	-	01/03/23 04:48	1,9060A	DEW
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1729364-1										
Alkalinity, Total	ND		mg CaCO3/L	2.00	NA	1	-	01/03/23 07:43	121,2320B	MKT
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1729580-1										
Chloride	ND		mg/l	1.0	0.89	1	-	01/03/23 18:16	121,4500CL-E	TLH
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1729768-1										
Sulfate	ND		mg/l	10	1.4	1	01/04/23 10:19	01/04/23 10:19	1,9038	MCU

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1487 FIRST AVENUE

Project Number: 100963701

Lab Number: L2272805

Report Date: 01/05/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1728692-2								
Nitrogen, Nitrate	103		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1729308-2								
Dissolved Organic Carbon	98		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1729309-2								
Total Organic Carbon	98		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1729364-2								
Alkalinity, Total	103		-		90-110	-		10
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1729580-2								
Chloride	97		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1729768-2								
Sulfate	95		-		90-110	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272805
Report Date: 01/05/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1728692-4 QC Sample: L2272856-01 Client ID: MS Sample												
Nitrogen, Nitrate	0.055J	4	4.31	108		-	-		83-113	-		17
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1729308-4 QC Sample: L2272729-03 Client ID: MS Sample												
Dissolved Organic Carbon	14.	40	55	103		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1729309-4 QC Sample: L2272729-03 Client ID: MS Sample												
Total Organic Carbon	14.	40	51	93		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1729364-4 QC Sample: L2272805-01 Client ID: LMW-6R-D_47.75												
Alkalinity, Total	193.	100	251	**58**	Q	-	-		86-116	-		10
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1729580-4 QC Sample: L2272687-01 Client ID: MS Sample												
Chloride	44.	20	64	100		-	-		58-140	-		7
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1729768-4 QC Sample: L2272805-01 Client ID: LMW-6R-D_47.75												
Sulfate	55.	100	170	115		-	-		55-147	-		14

Lab Duplicate Analysis
Batch Quality Control

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272805
Report Date: 01/05/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1728692-3 QC Sample: L2272856-01 Client ID: DUP Sample						
Nitrogen, Nitrate	0.055J	0.044J	mg/l	NC		17
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1729308-3 QC Sample: L2272729-03 Client ID: DUP Sample						
Dissolved Organic Carbon	14.	15	mg/l	7		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1729309-3 QC Sample: L2272729-03 Client ID: DUP Sample						
Total Organic Carbon	14.	14	mg/l	0		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1729364-3 QC Sample: L2272805-01 Client ID: LMW-6R-D_47.75						
Alkalinity, Total	193.	193	mg CaCO3/L	0		10
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1729580-3 QC Sample: L2272687-01 Client ID: DUP Sample						
Chloride	44.	40	mg/l	**10**	Q	7
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1729768-3 QC Sample: L2272805-01 Client ID: LMW-6R-D_47.75						
Sulfate	55.	54	mg/l	2		14

Project Name: 1487 FIRST AVENUE
Project Number: 100963701

Lab Number: L2272805
Report Date: 01/05/23

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2272805-01A	Vial HCl preserved	B	NA		3.2	Y	Absent		NYTCL-8260(14)
L2272805-01B	Vial HCl preserved	B	NA		3.2	Y	Absent		NYTCL-8260(14)
L2272805-01C	Vial HCl preserved	B	NA		3.2	Y	Absent		NYTCL-8260(14)
L2272805-01D	Vial H2SO4 preserved	B	NA		3.2	Y	Absent		TOC-9060(28)
L2272805-01E	Vial H2SO4 preserved	B	NA		3.2	Y	Absent		TOC-9060(28)
L2272805-01F	Vial H2SO4 preserved	B	NA		3.2	Y	Absent		TOC-9060(28)
L2272805-01G	Vial unpreserved	B	NA		3.2	Y	Absent		DOC-9060(28),FILTER(1)
L2272805-01H	Vial unpreserved	B	NA		3.2	Y	Absent		DOC-9060(28),FILTER(1)
L2272805-01I	Vial unpreserved	B	NA		3.2	Y	Absent		DOC-9060(28),FILTER(1)
L2272805-01J	Plastic 250ml unpreserved/No Headspace	B	NA	NA	3.2	Y	Absent		ALK-T-2320(14)
L2272805-01K	Plastic 250ml unpreserved	B	12	12	3.2	Y	Absent		SO4-9038(28),CL-4500(28),NO3-4500(2)
L2272805-01L	Plastic 250ml HNO3 preserved	B	<2	<2	3.2	Y	Absent		FE-6020T(180),CA-6020T(180),MN-6020T(180),HARDT-6020(180),MG-6020T(180)
L2272805-01X	Vial H2SO4 preserved Filtrates	B	NA		3.2	Y	Absent		DOC-9060(28)
L2272805-01Y	Vial H2SO4 preserved Filtrates	B	NA		3.2	Y	Absent		DOC-9060(28)
L2272805-01Z	Vial H2SO4 preserved Filtrates	B	NA		3.2	Y	Absent		DOC-9060(28)

Container Comments

L2272805-01K High PH reading

*Values in parentheses indicate holding time in days

Project Name:	1487 FIRST AVENUE	**Lab Number:**	L2272805
Project Number:	100963701	**Report Date:**	01/05/23

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

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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

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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.)

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Project Number:	100963701	**Report Date:**	01/05/23

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, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

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

Mansfield Facility:

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

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

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

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

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: 12/29/22

ALPHA Job #: L2272805

Client Information

Client: LANGAN ENGINEERING
Address: 300 KIMBALL DR
PARSIPPANY NJ 07054
Phone: 973-560-4900
Fax: —
Email: asandvea@langan.com

Project Information

Project Name: 1437 First Ave
Project Location: MANHATTANNY
Project #: 100963701
(Use Project name as Project #): ☐
Project Manager: BEN RAO
ALPHAQuote #:

Turn-Around Time

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

Deliverables

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

Regulatory Requirement

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

Billing Information

☑ Same as Client Info
PO #

Disposal Site Information

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

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

* Samples for DHC & EBAC were shipped directly to Microbial Insights.

Please specify Metals or TAL.

ANALYSIS

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs	Fe, Ca, Mn, Mg	Chloride, Sulfate	Nitrate,	Dox, TOC	DHC, EBAC			Sample Specific Comments	Total Bottle
72805-01	LMW-6R-D_47.75	12/21/22	1630	GW	SH	X	X	X	X	X	X				13

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

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

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

Container Type	V	P	P	P	V	P		
Preservative	B	C	A	A	B	A		

Relinquished By:	Date/Time	Received By:	Date/Time
	12/29/22 1200		12/29/22 1118
	12/29/22 1254		12/29/22 1639
	12/29/22 2200		12/29/22 2200

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

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

10515 Research Drive
Knoxville, TN 37932
Phone: (865) 573-8188
Fax: (865) 573-8133

Client: Ben Rao
Alpha Analytical, Inc.
8 Walkup Dr
Westborough, MA 01581

Phone: 201-812-2633

Fax:

Identifier: 130TL **Date Rec:** 12/29/2022 **Report Date:** 01/03/2023

Client Project #: 100963701 **Client Project Name:** 1487 First Avenue

Purchase Order #: L2272805

Test results provided for: CENSUS

Reviewed By:



NOTICE: This report is intended only for the addressee shown above and may contain confidential or privileged information. If the recipient of this material is not the intended recipient or if you have received this in error, please notify Microbial Insights, Inc. immediately. The data and other information in this report represent only the sample(s) analyzed and are rendered upon condition that it is not to be reproduced without approval from Microbial Insights, Inc. Thank you for your cooperation.

Results relate only to the items tested and the sample(s) as received by the laboratory.

MICROBIAL INSIGHTS, INC.

10515 Research Dr., Knoxville, TN 37932
Tel. (865) 573-8188 Fax. (865) 573-8133

CENSUS

Client: **Alpha Analytical, Inc.**
Project: 1487 First Avenue

MI Project Number: **130TL**
Date Received: 12/29/2022

Sample Information

Client Sample ID:	**LMW-6R-D_47.75**
Sample Date:	12/28/2022
Units:	cells/mL
Analyst/Reviewer:	OR/CS

Dechlorinating Bacteria

Dehalococcoides	*DHC*	**3.00E-01 (J)**

Phylogenetic Group

Total Eubacteria	EBAC	**9.45E+06**

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

Quality Assurance/Quality Control Data

Samples Received **12/29/2022**

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control	Extraction Blank	Negative Control
DHC	12/29/2022	01/03/2023	0 °C	104%	non-detect	non-detect
EBAC	12/29/2022	01/03/2023	0 °C	112%	non-detect	non-detect

APPENDIX B

DATA USABILITY REPORTS

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

Technical Memorandum

1 University Square Drive Princeton, NJ 08540 T: 609.282.8000
Mailing Address: 1 University Square Drive Princeton, NJ 08540

To: Ashley Sandve, Langan Project Engineer

From: Joe Conboy, Langan Senior Staff Chemist

Date: January 24, 2023

Re: Data Usability Summary Report
For 1487 First Avenue Treatability Study
September – December 2022 Groundwater Samples
Langan Project No.: 100963701

This memorandum presents the findings of an analytical data validation from the analysis of groundwater samples collected in September through December 2022 by Langan Engineering and Environmental Services at the 1487 First Avenue site. The samples were analyzed by Alpha Analytical Laboratories, Inc. (NYSDOH NELAP registration # 11148) for volatile organic compounds (VOCs), metals, hardness, sulfide, dissolved organic carbon (DOC), total organic carbon (TOC), alkalinity, nitrate, chloride, and sulfate by the methods specified below.

- VOCs by SW-846 Method 8260D
- Metals by SW-846 Methods 6020B
- Hardness (calculated)
- Sulfide by USEPA Method 7196A
- DOC and TOC by USEPA Method 9060
- Alkalinity by Method 2320B
- Nitrate by Method 4500 NO3-F
- Sulfate by USEPA Method 9038
- Chloride by Method 4500 Cl-E

Microbial parameters, Dehalococcoides and total Eubacteria, were analyzed by Microbial Insights and were not included in the data validation. Table 1, attached, summarizes the laboratory and client sample identification numbers, sample collection dates, level of data validation, and analytical parameters subject to review.

Validation Overview

This data validation was performed in accordance with the following guidelines, where applicable:

- USEPA Region II Standard Operating Procedures (SOPs) for Data Validation

- USEPA Contract Laboratory Program "National Functional Guidelines for Organic Superfund Methods Data Review" (EPA 540- R-20-005, November 2020)
- USEPA Contract Laboratory Program "National Functional Guidelines for Inorganic Superfund Methods Data Review" (EPA 540- R-20-005, November 2020), and
- published analytical methodologies.

The following acronyms may be used in the discussion of data-quality issues:

%D	Percent Difference	MB	Method Blank
CCV	Continuing Calibration Verification	MDL	Method Detection Limit
FB	Field Blank	MS	Matrix Spike
FD	Field Duplicate	MSD	Matrix Spike Duplicate
ICAL	Initial Calibration	RF	Response Factor
ICV	Initial Calibration Verification	RL	Reporting Limit
ISTD	Internal Standard	RPD	Relative Percent Difference
LCL	Lower Control Limit	RSD	Relative Standard Deviation
LCS	Laboratory Control Sample	TB	Trip Blank
LCSD	Laboratory Control Sample Duplicate	UCL	Upper Control Limit

Tier 1 data validation is based on completeness and compliance checks of sample-related QC results including: sample receipt documentation; analytical holding times; sample preservation; blank results (method, field, and trip); surrogate recoveries; MS/MSD recoveries and RPDs values; field duplicate RPDs, laboratory duplicate RPDs, and LCS/LCSD recoveries and RPDs. All SDGs underwent Tier 1 validation review.

As a result of the review process, the following qualifiers may be assigned to the data in accordance with the USEPA guidelines and our best professional judgment:

R – The sample results are unusable because certain criteria were not met when generating the data. The analyte may or may not be present in the sample.

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

UJ – The analyte was not detected at a level greater than or equal to the reporting limit; however, the reported reporting limit is approximate and may be inaccurate or imprecise.

U – The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.

NJ – The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

If any validation qualifiers are assigned, these qualifiers should supersede any laboratory-applied qualifiers. Data that is not qualified as a result of this data validation is considered acceptable on the basis of the items specified for review. Data that is qualified as "R" are considered invalid and are not technically usable for data interpretation. Data that is otherwise qualified because of minor data-quality anomalies are usable, as qualified in Table 2 (attached).

MAJOR DEFICIENCIES:

Major deficiencies include those that grossly impact data quality and necessitate the rejection of results. No major deficiencies were identified.

MINOR DEFICIENCIES:

Minor deficiencies include anomalies that directly impact data quality and necessitate qualification, but do not result in unusable data. The section below describes the minor deficiencies that were identified.

VOCs by SW-846 Method 8260D

L2254047

The LCS for batch WG1695132 exhibited a percent recovery below the LCL for 2-butanone (61%) and exhibited an RPD above control limits for 1,4-dioxane (22%). The associated results in samples LMW-6R-S_31, LMW-6R-D_70, LMW-7R-S_27, LMW-7R-D_68.5, LMW-8R-S_17.5, LMW-8R-S_27, LMW-8R-D_58, LMW-9R-S_22, LMW-9R-S_30.5, LMW-9R-D_63.5, LMW-10R-S_26.5, LMW-10R-D_49, LMW-11R-S_26.5, LMW-11R-D_57.5, LMW-12R-S_28.5, LMW-12R-D_53, LMW-13R-S_26, LMW-13R-D_55.5, and LMW-13R-D_75 are qualified as J or UJ because of potential bias.

The LCS/LCSD for batch WG1695994 exhibited a RPD above the control limit for 1,2-dibromo-3-chloropropane (25%). The associated results in samples LMW-10R-S_28.5, LMW-10R-S_34, LMW-10R-S_36, LMW-10R-D_63, LMW-11R-S_20.5, LMW-11R-S_23, LMW-11R-S_29.5, LMW-11R-S_40.5, LMW-11R-D_76, LMW-12R-S_24.5, LMW-12R-S_36, LMW-12R-D_67, LMW-12R-S_17, and LMW-12R-S_20.5 are qualified as UJ because of potential indeterminate bias.

L2271355

The LCS/LCSD for batch WG1726668 exhibited a RPD above the control limit for 2-hexanone (21%). The associated result in sample LMW-7R-S_20 is qualified as UJ because of potential indeterminate bias.

L2272250

The LCS/LCSD for batch WG1727726 exhibited RPDs above the control limit for acrylonitrile (22%), 2-butanone (21%), and 4-methyl-2-pentanone (22%). The associated results in samples LMW-7R-D_66, LMW-8R-S_14.5, and LMW-8R-S_24.75 are qualified as J or UJ because of potential indeterminate bias.

L2272580

The LCS/LCSD for batch WG1728803 exhibited a percent recovery above the UCL for acetone (150%, 160%) and also exhibited an RPD above the control limit for 1,2-dibromo-3-chloropropane (25%). The associated results in samples LMW-8R-D_47.25 and LMW-8R-D_56.75 are qualified as J because of potential bias.

L2272729

The LCS/LCSD for batch WG1729359 exhibited a RPD above the control limit for acetone (21%). The associated results in samples LMW-8R-D_76, LMW-13R-S_25.75, LMW-13R-D_45.25, and LMW-6R-S_20.5 are qualified as J because of potential indeterminate bias.

DOC and TOC by USEPA Method 9060

L2271355

The FB (Field Blank_20221219) exhibited detections of dissolved organic carbon (0.58 mg/L) and total organic carbon (0.13 mg/L). The associated dissolved organic carbon result in sample LMW-7R-S_20 is qualified as J because of potential blank contamination. The other associated results are >10x the blank contamination so no qualification is required.

L2272250

The MS performed on sample LMW-7R-D_66 exhibited a percent recovery above the UCL for total organic carbon (127%). The associated result in sample LMW-7R-D_66 is qualified as J because of potential high bias.

Samples LMW-7R-D_66, LMW-8R-S_14,5, and LMW-8R-S_24.75 were filtered for DOC outside of the required holding time. The associated results are qualified as J because of potential low bias.

L2272729

Sample LMW-8R-D_76 was filtered for DOC outside of the required holding time. The associated result is qualified as J because of potential low bias.

L2272805

Sample LMW-6R-D_47.75 was filtered for DOC outside of the required holding time. The associated result is qualified as J because of potential low bias.

Alkalinity by Method 2320B

L2272580

The MS performed on sample LMW-8R-D_47.25 exhibited a percent recovery below the LCL for alkalinity (81%). The associated result in sample LMW-8R-D_47.25 is qualified as J because of potential low bias.

L2272805

The MS performed on sample LMW-6R-D_47.75 exhibited a percent recovery below the LCL for alkalinity (58%). The associated result in sample LMW-6R-D_47.75 is qualified as J because of potential low bias.

OTHER DEFICIENCIES:

Other deficiencies include anomalies that do not directly impact data quality and do not necessitate qualification. The section below describes the other deficiencies that were identified.

VOCs by SW-846 Method 8260D

L2254047

The LCS/LCSD for batch WG1695834 exhibited percent recoveries above the UCL for chloromethane (140%) and 2,2-dichloropropane (140%, 140%). The associated results are non-detect. No qualification is necessary.

The LCS/LCSD for batch WG1695994 exhibited percent recoveries above the UCL for chloroethane (140%, 160%) and ethyl ether (140%, 150%). The associated results are non-detect. No qualification is necessary.

L2271355

The TB (Trip Blank_20221219) exhibited a detection of acrylonitrile (5 ug/L). The associated results are non-detect. No qualification is necessary.

Metals by SW-846 Methods 6020B

L2271355

The MS performed on sample LMW-7R-S_20 exhibited percent recoveries outside of control limits for iron (160%), magnesium (65%), and manganese (0%). The associated results in the parent sample are >4X the spiked amount. No qualification is necessary.

L2271946

The MB for batch WG1726516 exhibited a detection of manganese (0.00066 mg/L). The associated results are >10X the contamination. No qualification is necessary.

L2271946

The MB for batch WG1726516 exhibited a detection of manganese (0.00066 mg/L). The associated results are >10X the contamination. No qualification is necessary.

Sulfide by USEPA Method 7196A

L2271355

The FB (Field Blank_20221219) exhibited a detection of sulfate (8.6 mg/L). The other associated results are >10x the blank contamination so no qualification is required.

L2271946

The MB for batch WG1727562 exhibited a detection of sulfate (1.5 mg/L). The associated results are >10X the contamination. No qualification is necessary.

Alkalinity by Method 2320B

L2271355

The FB (Field Blank_20221219) exhibited a detection of alkalinity (2.2 mg/L). The other associated results are >10x the blank contamination so no qualification is required.

Nitrate by Method 4500 NO3-F

L2272729

The MS performed on sample LMW-13R-D_45.25 exhibited a percent recovery above the UCL for nitrate (118%). The associated results are non-detect. No qualification is necessary.

Sulfate by USEPA Method 9038

L2271355

The MB for batch WG1726135 exhibited a detection of sulfate (2.2 mg/L). The associated results are >10X the contamination. No qualification is necessary.

L2272250

The MB for batch WG1727928 exhibited a detection of sulfate (2.1 mg/L). The associated results are >10X the contamination. No qualification is necessary.

L2272580

The MB for batch WG1729350 exhibited a detection of sulfate (1.7 mg/L). The associated results are >10X the contamination. No qualification is necessary.

CONCLUSION:

On the basis of this evaluation, the laboratory appears to have followed the specified analytical methods with the exception of errors discussed above. If a given fraction is not mentioned above, that means that all specified criteria were met for that parameter. All of the data packages met ASP Category B requirements.

All data are considered usable, as qualified. In addition, completeness, defined as the percentage of analytical results that are judged to be valid, is 100%.

Signed:



Joe Conboy
Senior Staff Chemist

Data Usability Summary Report
For 1487 First Avenue Treatability Study
September - December 2022 Groundwater Samples
Table 1: Sample Summary

SDG	Lab Sample ID	Client Sample ID	Sample Date	Validation Level	Analytical Parameters
L2254047	L2254047-01	LMW-6R-S_21.5	9/29/2022	Tier 1	VOCs
L2254047	L2254047-02	LMW-6R-S_31	9/29/2022	Tier 1	VOCs
L2254047	L2254047-03	LMW-6R-D_46	9/29/2022	Tier 1	VOCs
L2254047	L2254047-04	LMW-6R-D_70	9/29/2022	Tier 1	VOCs
L2254047	L2254047-05	LMW-6R-D_75	9/29/2022	Tier 1	VOCs
L2254047	L2254047-06	LMW-7R-S_21.5	9/29/2022	Tier 1	VOCs
L2254047	L2254047-07	LMW-7R-S_27	9/29/2022	Tier 1	VOCs
L2254047	L2254047-08	LMW-7R-S_39	9/29/2022	Tier 1	VOCs
L2254047	L2254047-09	LMW-7R-S_42.5	9/29/2022	Tier 1	VOCs
L2254047	L2254047-10	LMW-7R-D_48	9/29/2022	Tier 1	VOCs
L2254047	L2254047-11	LMW-7R-D_68.5	9/29/2022	Tier 1	VOCs
L2254047	L2254047-12	LMW-7R-D_75	9/29/2022	Tier 1	VOCs
L2254047	L2254047-13	LMW-8R-S_15	9/29/2022	Tier 1	VOCs
L2254047	L2254047-14	LMW-8R-S_17.5	9/29/2022	Tier 1	VOCs
L2254047	L2254047-15	LMW-8R-S_22.5	9/29/2022	Tier 1	VOCs
L2254047	L2254047-16	LMW-8R-S_27	9/29/2022	Tier 1	VOCs
L2254047	L2254047-17	LMW-8R-D_46.5	9/29/2022	Tier 1	VOCs
L2254047	L2254047-18	LMW-8R-D_48.5	9/29/2022	Tier 1	VOCs
L2254047	L2254047-19	LMW-8R-D_58	9/29/2022	Tier 1	VOCs
L2254047	L2254047-20	LMW-8R-D_73	9/29/2022	Tier 1	VOCs
L2254047	L2254047-21	LMW-8R-D_77	9/29/2022	Tier 1	VOCs
L2254047	L2254047-22	LMW-9R-S_15	9/29/2022	Tier 1	VOCs
L2254047	L2254047-23	LMW-9R-S_22	9/29/2022	Tier 1	VOCs
L2254047	L2254047-24	LMW-9R-S_30.5	9/29/2022	Tier 1	VOCs
L2254047	L2254047-25	LMW-9R-D_43.5	9/29/2022	Tier 1	VOCs
L2254047	L2254047-26	LMW-9R-D_46.5	9/29/2022	Tier 1	VOCs
L2254047	L2254047-27	LMW-9R-D_60.5	9/29/2022	Tier 1	VOCs
L2254047	L2254047-28	LMW-9R-D_63.5	9/29/2022	Tier 1	VOCs
L2254047	L2254047-29	LMW-9R-D_76	9/29/2022	Tier 1	VOCs
L2254047	L2254047-30	LMW-10R-S_21.5	9/29/2022	Tier 1	VOCs
L2254047	L2254047-31	LMW-10R-S_28.5	9/29/2022	Tier 1	VOCs
L2254047	L2254047-32	LMW-10R-S_26.5	9/29/2022	Tier 1	VOCs
L2254047	L2254047-33	LMW-10R-S_34	9/29/2022	Tier 1	VOCs
L2254047	L2254047-34	LMW-10R-S_36	9/29/2022	Tier 1	VOCs
L2254047	L2254047-35	LMW-10R-D_49	9/29/2022	Tier 1	VOCs
L2254047	L2254047-36	LMW-10R-D_63	9/29/2022	Tier 1	VOCs
L2254047	L2254047-37	LMW-11R-S_20.5	9/29/2022	Tier 1	VOCs
L2254047	L2254047-38	LMW-11R-S_23	9/29/2022	Tier 1	VOCs
L2254047	L2254047-39	LMW-11R-S_26.5	9/29/2022	Tier 1	VOCs
L2254047	L2254047-40	LMW-11R-S_29.5	9/29/2022	Tier 1	VOCs
L2254047	L2254047-41	LMW-11R-S_40.5	9/29/2022	Tier 1	VOCs
L2254047	L2254047-42	LMW-11R-D_57.5	9/29/2022	Tier 1	VOCs
L2254047	L2254047-43	LMW-11R-D_76	9/29/2022	Tier 1	VOCs
L2254047	L2254047-44	LMW-12R-S_24.5	9/29/2022	Tier 1	VOCs
L2254047	L2254047-45	LMW-12R-S_28.5	9/29/2022	Tier 1	VOCs
L2254047	L2254047-46	LMW-12R-S_36	9/29/2022	Tier 1	VOCs

Data Usability Summary Report
For 1487 First Avenue Treatability Study
September - December 2022 Groundwater Samples
Table 1: Sample Summary

SDG	Lab Sample ID	Client Sample ID	Sample Date	Validation Level	Analytical Parameters
L2254047	L2254047-47	LMW-12R-D_53	9/29/2022	Tier 1	VOCs
L2254047	L2254047-48	LMW-12R-D_67	9/29/2022	Tier 1	VOCs
L2254047	L2254047-49	LMW-12R-S_17	9/29/2022	Tier 1	VOCs
L2254047	L2254047-50	LMW-12R-S_20.5	9/29/2022	Tier 1	VOCs
L2254047	L2254047-51	LMW-13R-S_26	9/29/2022	Tier 1	VOCs
L2254047	L2254047-52	LMW-13R-D_55.5	9/29/2022	Tier 1	VOCs
L2254047	L2254047-53	LMW-13R-D_75	9/29/2022	Tier 1	VOCs
L2254047	L2254047-54	TRIP BLANK-09292022	9/29/2022	Tier 1	VOCs
L2271355	L2271355-01	LMW-7R-S_20	12/19/2022	Tier 1	VOCs, Metals, Hardness, Sulfide, Dissolved Organic Carbon, Total Organic Carbon, Alkalnity, Nitrate, Chloride, Sulfate
L2271355	L2271355-02	FIELD BLANK_20221219	12/19/2022	Tier 1	VOCs, Metals, Hardness, Sulfide, Dissolved Organic Carbon, Total Organic Carbon, Alkalnity, Nitrate, Chloride, Sulfate
L2271355	L2271355-03	TRIP BLANK_20221219	12/19/2022	Tier 1	VOCs
L2271606	L2271606-01	LMW-7R-S_25.5	12/20/2022	Tier 1	VOCs, Metals, Hardness, Sulfide, Dissolved Organic Carbon, Total Organic Carbon, Alkalnity, Nitrate, Chloride, Sulfate
L2271606	L2271606-02	TRIP BLANK_20221220	12/20/2022	Tier 1	VOCs
L2271946	L2271946-01	LMW-7R-S_38	12/21/2022	Tier 1	VOCs, Metals, Hardness, Sulfide, Dissolved Organic Carbon, Total Organic Carbon, Alkalnity, Nitrate, Chloride, Sulfate
L2271946	L2271946-02	LMW-7R-D_42	12/21/2022	Tier 1	VOCs, Metals, Hardness, Sulfide, Dissolved Organic Carbon, Total Organic Carbon, Alkalnity, Nitrate, Chloride, Sulfate
L2272250	L2272250-01	LMW-7R-D_66	12/21/2022	Tier 1	VOCs, Metals, Hardness, Sulfide, Dissolved Organic Carbon, Total Organic Carbon, Alkalnity, Nitrate, Chloride, Sulfate
L2272250	L2272250-02	LMW-8R-S_14.5	12/22/2022	Tier 1	VOCs, Metals, Hardness, Sulfide, Dissolved Organic Carbon, Total Organic Carbon, Alkalnity, Nitrate, Chloride, Sulfate

Data Usability Summary Report
For 1487 First Avenue Treatability Study
September - December 2022 Groundwater Samples
Table 1: Sample Summary

SDG	Lab Sample ID	Client Sample ID	Sample Date	Validation Level	Analytical Parameters
L2272250	L2272250-03	LMW-8R-S_24.75	12/22/2022	Tier 1	VOCs, Metals, Hardness, Sulfide, Dissolved Organic Carbon, Total Organic Carbon, Alkalnity, Nitrate, Chloride, Sulfate
L2272250	L2272250-04	TRIP BLANK_20221222	12/22/2022	Tier 1	VOCs, Metals, Hardness, Sulfide, Dissolved Organic Carbon, Total Organic Carbon, Alkalnity, Nitrate, Chloride, Sulfate
L2272462	L2272462-01	LMW-10R-S_13	12/22/2022	Tier 1	VOCs, Metals, Hardness, Sulfide, Dissolved Organic Carbon, Total Organic Carbon, Alkalnity, Nitrate, Chloride, Sulfate
L2272462	L2272462-02	LMW-10R-S_18.25	12/23/2022	Tier 1	VOCs, Metals, Hardness, Sulfide, Dissolved Organic Carbon, Total Organic Carbon, Alkalnity, Nitrate, Chloride, Sulfate
L2272462	L2272462-03	LMW-10R-D_40.5	12/23/2022	Tier 1	VOCs, Metals, Hardness, Sulfide, Dissolved Organic Carbon, Total Organic Carbon, Alkalnity, Nitrate, Chloride, Sulfate
L2272462	L2272462-04	TRIP BLANK_20221223	12/23/2022	Tier 1	VOCs, Metals, Hardness, Sulfide, Dissolved Organic Carbon, Total Organic Carbon, Alkalnity, Nitrate, Chloride, Sulfate
L2272580	L2272580-01	LMW-8R-D_47.25	12/27/2022	Tier 1	VOCs, Metals, Hardness, Sulfide, Dissolved Organic Carbon, Total Organic Carbon, Alkalnity, Nitrate, Chloride, Sulfate
L2272580	L2272580-02	LMW-8R-D_56.75	12/27/2022	Tier 1	VOCs, Metals, Hardness, Sulfide, Dissolved Organic Carbon, Total Organic Carbon, Alkalnity, Nitrate, Chloride, Sulfate
L2272580	L2272580-03	TRIP BLANK_20221227	12/27/2022	Tier 1	VOCs
L2272729	L2272729-01	LMW-8R-D_76	12/27/2022	Tier 1	VOCs, Metals, Hardness, Sulfide, Dissolved Organic Carbon, Total Organic Carbon, Alkalnity, Nitrate, Chloride, Sulfate

Data Usability Summary Report
For 1487 First Avenue Treatability Study
September - December 2022 Groundwater Samples
Table 1: Sample Summary

SDG	Lab Sample ID	Client Sample ID	Sample Date	Validation Level	Analytical Parameters
L2272729	L2272729-02	LMW-13R-S_25.75	12/28/2022	Tier 1	VOCs, Metals, Hardness, Sulfide, Dissolved Organic Carbon, Total Organic Carbon, Alkalnity, Nitrate, Chloride, Sulfate
L2272729	L2272729-03	LMW-13R-D_45.25	12/28/2022	Tier 1	VOCs, Metals, Hardness, Sulfide, Dissolved Organic Carbon, Total Organic Carbon, Alkalnity, Nitrate, Chloride, Sulfate
L2272729	L2272729-04	LMW-6R-S_20.5	12/28/2022	Tier 1	VOCs, Metals, Hardness, Sulfide, Dissolved Organic Carbon, Total Organic Carbon, Alkalnity, Nitrate, Chloride, Sulfate
L2272729	L2272729-05	TRIP BLANK_202212128	12/28/2022	Tier 1	VOCs
L2272805	L2272805-01	LMW-6R-D_47.75	12/28/2022	Tier 1	VOCs, Metals, Hardness, Sulfide, Dissolved Organic Carbon, Total Organic Carbon, Alkalnity, Nitrate, Chloride, Sulfate

Data Usability Summary Report
For 1487 First Avenue Treatability Study
September - December 2022 Groundwater Samples
Table 2: Validator-Applied Qualification

SDG	Client Sample ID	Analysis	CAS #	Analyte	Validator Qualifier
L2254047	LMW-6R-S_31	SW8260C	123-91-1	1,4-Dioxane	UJ
L2254047	LMW-6R-S_31	SW8260C	78-93-3	2-Butanone	UJ
L2254047	LMW-6R-D_70	SW8260C	123-91-1	1,4-Dioxane	UJ
L2254047	LMW-6R-D_70	SW8260C	78-93-3	2-Butanone	UJ
L2254047	LMW-7R-S_27	SW8260C	123-91-1	1,4-Dioxane	UJ
L2254047	LMW-7R-S_27	SW8260C	78-93-3	2-Butanone	UJ
L2254047	LMW-7R-D_68.5	SW8260C	123-91-1	1,4-Dioxane	UJ
L2254047	LMW-7R-D_68.5	SW8260C	78-93-3	2-Butanone	UJ
L2254047	LMW-8R-S_17.5	SW8260C	123-91-1	1,4-Dioxane	UJ
L2254047	LMW-8R-S_17.5	SW8260C	78-93-3	2-Butanone	UJ
L2254047	LMW-8R-S_27	SW8260C	123-91-1	1,4-Dioxane	UJ
L2254047	LMW-8R-S_27	SW8260C	78-93-3	2-Butanone	UJ
L2254047	LMW-8R-D_58	SW8260C	123-91-1	1,4-Dioxane	UJ
L2254047	LMW-8R-D_58	SW8260C	78-93-3	2-Butanone	UJ
L2254047	LMW-9R-S_22	SW8260C	123-91-1	1,4-Dioxane	UJ
L2254047	LMW-9R-S_22	SW8260C	78-93-3	2-Butanone	UJ
L2254047	LMW-9R-S_30.5	SW8260C	123-91-1	1,4-Dioxane	UJ
L2254047	LMW-9R-S_30.5	SW8260C	78-93-3	2-Butanone	UJ
L2254047	LMW-9R-D_63.5	SW8260C	123-91-1	1,4-Dioxane	UJ
L2254047	LMW-9R-D_63.5	SW8260C	78-93-3	2-Butanone	UJ
L2254047	LMW-10R-S_28.5	SW8260C	96-12-8	1,2-Dibromo-3-Chloropropane	UJ
L2254047	LMW-10R-S_26.5	SW8260C	123-91-1	1,4-Dioxane	UJ
L2254047	LMW-10R-S_26.5	SW8260C	78-93-3	2-Butanone	J
L2254047	LMW-10R-S_34	SW8260C	96-12-8	1,2-Dibromo-3-Chloropropane	UJ
L2254047	LMW-10R-S_36	SW8260C	96-12-8	1,2-Dibromo-3-Chloropropane	UJ
L2254047	LMW-10R-D_49	SW8260C	123-91-1	1,4-Dioxane	UJ
L2254047	LMW-10R-D_49	SW8260C	78-93-3	2-Butanone	J
L2254047	LMW-10R-D_63	SW8260C	96-12-8	1,2-Dibromo-3-Chloropropane	UJ
L2254047	LMW-11R-S_20.5	SW8260C	96-12-8	1,2-Dibromo-3-Chloropropane	UJ
L2254047	LMW-11R-S_23	SW8260C	96-12-8	1,2-Dibromo-3-Chloropropane	UJ
L2254047	LMW-11R-S_26.5	SW8260C	123-91-1	1,4-Dioxane	UJ
L2254047	LMW-11R-S_26.5	SW8260C	78-93-3	2-Butanone	UJ
L2254047	LMW-11R-S_29.5	SW8260C	96-12-8	1,2-Dibromo-3-Chloropropane	UJ
L2254047	LMW-11R-S_40.5	SW8260C	96-12-8	1,2-Dibromo-3-Chloropropane	UJ
L2254047	LMW-11R-D_57.5	SW8260C	123-91-1	1,4-Dioxane	UJ
L2254047	LMW-11R-D_57.5	SW8260C	78-93-3	2-Butanone	UJ
L2254047	LMW-11R-D_76	SW8260C	96-12-8	1,2-Dibromo-3-Chloropropane	UJ
L2254047	LMW-12R-S_24.5	SW8260C	96-12-8	1,2-Dibromo-3-Chloropropane	UJ
L2254047	LMW-12R-S_28.5	SW8260C	123-91-1	1,4-Dioxane	UJ
L2254047	LMW-12R-S_28.5	SW8260C	78-93-3	2-Butanone	UJ
L2254047	LMW-12R-S_36	SW8260C	96-12-8	1,2-Dibromo-3-Chloropropane	UJ
L2254047	LMW-12R-D_53	SW8260C	123-91-1	1,4-Dioxane	UJ
L2254047	LMW-12R-D_53	SW8260C	78-93-3	2-Butanone	UJ
L2254047	LMW-12R-D_67	SW8260C	96-12-8	1,2-Dibromo-3-Chloropropane	UJ
L2254047	LMW-12R-S_17	SW8260C	96-12-8	1,2-Dibromo-3-Chloropropane	UJ
L2254047	LMW-12R-S_20.5	SW8260C	96-12-8	1,2-Dibromo-3-Chloropropane	UJ

Data Usability Summary Report
For 1487 First Avenue Treatability Study
September - December 2022 Groundwater Samples
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SDG	Client Sample ID	Analysis	CAS #	Analyte	Validator Qualifier
L2254047	LMW-13R-S_26	SW8260C	123-91-1	1,4-Dioxane	UJ
L2254047	LMW-13R-S_26	SW8260C	78-93-3	2-Butanone	UJ
L2254047	LMW-13R-D_55.5	SW8260C	123-91-1	1,4-Dioxane	UJ
L2254047	LMW-13R-D_55.5	SW8260C	78-93-3	2-Butanone	UJ
L2254047	LMW-13R-D_75	SW8260C	123-91-1	1,4-Dioxane	UJ
L2254047	LMW-13R-D_75	SW8260C	78-93-3	2-Butanone	UJ
L2271355	LMW-7R-S_20	SW8260D	591-78-6	2-Hexanone	UJ
L2271355	LMW-7R-S_20	SW9060	DOC	Dissolved Organic Carbon	J
L2272250	LMW-7R-D_66	SW8260D	78-93-3	2-Butanone	J
L2272250	LMW-7R-D_66	SW8260D	108-10-1	4-Methyl-2-Pentanone	UJ
L2272250	LMW-7R-D_66	SW8260D	107-13-1	Acrylonitrile	UJ
L2272250	LMW-7R-D_66	SW9060	TOC	Total Organic Carbon	J
L2272250	LMW-8R-S_14.5	SW8260D	78-93-3	2-Butanone	UJ
L2272250	LMW-8R-S_14.5	SW8260D	108-10-1	4-Methyl-2-Pentanone	UJ
L2272250	LMW-8R-S_14.5	SW8260D	107-13-1	Acrylonitrile	UJ
L2272250	LMW-8R-S_24.75	SW8260D	78-93-3	2-Butanone	UJ
L2272250	LMW-8R-S_24.75	SW8260D	108-10-1	4-Methyl-2-Pentanone	UJ
L2272250	LMW-8R-S_24.75	SW8260D	107-13-1	Acrylonitrile	UJ
L2272250	LMW-7R-D_66	SW9060	DOC	Dissolved Organic Carbon	J
L2272250	LMW-8R-S_14.5	SW9060	DOC	Dissolved Organic Carbon	J
L2272250	LMW-8R-S_24.75	SW9060	DOC	Dissolved Organic Carbon	J
L2272580	LMW-8R-D_47.25	SW8260D	96-12-8	1,2-Dibromo-3-Chloropropane	UJ
L2272580	LMW-8R-D_47.25	SW8260D	67-64-1	Acetone	J
L2272580	LMW-8R-D_47.25	A2320B	ALK	Alkalinity	J
L2272580	LMW-8R-D_56.75	SW8260D	96-12-8	1,2-Dibromo-3-Chloropropane	UJ
L2272580	LMW-8R-D_56.75	SW8260D	67-64-1	Acetone	J
L2272729	LMW-8R-D_76	SW8260D	67-64-1	Acetone	J
L2272729	LMW-13R-S_25.75	SW8260D	67-64-1	Acetone	J
L2272729	LMW-13R-D_45.25	SW8260D	67-64-1	Acetone	J
L2272729	LMW-6R-S_20.5	SW8260D	67-64-1	Acetone	J
L2272729	LMW-8R-D_76	SW9060	DOC	Dissolved Organic Carbon	J
L2272805	LMW-6R-D_47.75	SW9060	DOC	Dissolved Organic Carbon	J
L2272805	LMW-6R-D_47.75	A2320B	ALK	Alkalinity	J

APPENDIX C

PRODUCT SPECIFICATIONS AND SAFETY DATA SHEETS

TSI DC *Dehalococcoides mccartyi* Bioaugmentation Culture®

Containing >1 x 10^{11} Dehalococcoides cells/L

Terra Systems TSI DC *Dehalococcoides mccartyi* Bioaugmentation Culture® is added to the groundwater at sites where the native microorganisms of Dehalococcoides are not present, are not in sufficient quantity, where the native population does not express all of the required functional genes for TCE and vinyl chloride reduction, or when the client wants to decrease the remediation time frame for the biodegradation of chlorinated solvents such as tetrachloroethene (PCE) and trichloroethene (TCE) to innocuous end products including ethene and ethane.

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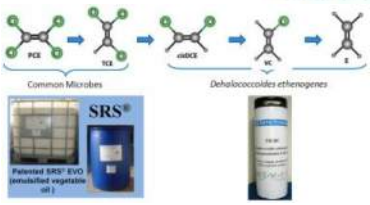
Key Communication Points

- TSI DC *Dehalococcoides mccartyi* Bioaugmentation Culture® is an enriched natural bacteria culture that contains *Dehalococcoides* species for bioaugmentation.
- TSI DC® contains >1 x 10^{11} *Dehalococcoides* cells/L
- This culture dechlorinates tetrachloroethene (PCE) and trichloroethene (TCE) to the non-toxic product ethene.
- The culture also biodegrades 1,1,1-trichloroethane to 1,1-dichloroethene, 1,1-dichloroethane, and chloroethane.
- It also can biodegrade carbon tetrachloride and chloroform to methylene chloride and innocuous products.
- It can be used at sites where bacteria capable of complete reductive dechlorination are not present or there is a need to decrease the remediation time frame. It is estimated that *Dehalococcoides* are not present in 10 to 40 percent of chlorinated solvent contaminated sites.

- **Key Benefits of TSI DC *Dehalococcoides mccartyi* Bioaugmentation Culture®**

- The TSI-DC® Bioaugmentation Culture has been proven to be effective with a growing body of laboratory and field data demonstrating that the *Dehalococcoides* group of microorganisms is primarily responsible for the complete dechlorination of PCE and TCE to ethene. Some *Dehalogenimonas* species can also biodegrade PCE and TCE.
- At sites where *Dehalococcoides* microorganisms are not present or are found at low numbers, the process will often "**stall**" at cis-1,2-dichloroethene (cDCE). Low pH or insufficient substrate can also contribute to the cDCE stall.

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- The TSI-DC® Bioaugmentation Culture will promote the complete dechlorination of PCE or TCE.
- The TSI-DC® Bioaugmentation Culture contains greater than **1 x 10^{11}** *Dehalococcoides*/L.

Terra Systems QA/QC

Terra Systems owns and operates a state-of-the-art US based "*just-in-time*" manufacturing plant with an in-house quality control laboratory for strict quality assurance of our products. With every shipment, we include a QA/QC sheet for the actual batch that the customer receives. Included are the date manufactured, batch#, DHC concentration (cells/L), PCE dechlorination activity and cDCE dechlorination activity.

Manufacturing Quality Control Checklist for TSI DC
***Dehalococcoides mccartyi* Bioaugmentation Culture®**

I. Product Information

Parameter	Value
Product manufactured	TSI DC *Dehalococcoides mccartyii* Bioaugmentation Culture®
Date manufactured	07/16/2019
Batch#	805-19
Customer packaging	Two (2) 19 L Kegs
Customer	Navarro Research and Engineering, Inc.
Volume of Culture	76 L concentrated 2X to fit into (2) 19 L Kegs
Date shipped	8/19/2019
Date delivered	8/21/2019
Site location	Largo, FL.

II. Ingredients Information

Test	Results	Acceptable Range	Date	Method
DHC content of Pre-concentrated culture (copies/L)	>1E11	1E11	07/25/2019	qPCR
PCE dechlorination activity, mg/h per gram of dry weight	98	50	08/13/2019	Bottle Assay
cDCE declorination activity, mg/h per gram of dry weight	61	50	08/13/2019	Bottle Assay

Michael D Lee, PhD.

August 19th, 2019

Michael D. Lee, Ph.D.
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Date

SRS®-Z_{VI} (4 µm)
Combined Emulsified Vegetable Oil Substrate and 4 µm Zero Valent Iron
for DNAPL, Freon 113, and Biobarrier Applications

Terra Systems "*injection ready*" **SRS®-Z_{VI}** combines Terra Systems patented SRS® Emulsified Vegetable Oil Substrate with 4 µm zero valent iron (ZVI) and is added to the groundwater at complex and challenging remediation sites to rapidly generate reducing conditions. SRS®-Z_{VI} provides the necessary carbon and hydrogen to support native or introduced microorganisms (*Dehalococcoides*) for the biodegradation of dense non-aqueous phase liquids (DNAPLs) like tetrachloroethene (PCE) and trichloroethene (TCE) and to support abiotic degradation by the ZVI.

Key Communication Points

- The 4 µm ZVI should be injected via DPT for optimal distribution and because of the smaller particle size provides very good distribution and contact with the contaminants of concern (COC), easier injectability for the driller and fewer injection points for the consultant, thereby lowering costs.
- Provides both abiotic and biotic reductive dechlorination processes.
- SRS®-Z_{VI} is a combination of ZVI, biodegradable soybean oil, surfactants, sodium lactate, nutrients, and water that form a stable emulsion.
- SRS®-Z_{VI} contains a proprietary shear thinning agent, which under pressure thins the SRS®-Z_{VI} out for ease of injection and improved radius of influence.
- The exterior oil layer has similar hydrophobic properties as chlorinated compounds. Therefore, the emulsion attracts the contaminants for abiotic degradation.
- Terra Systems, Inc.'s manufacturing facility is configured to allow us to provide our customers with custom blended EVO/ZVI combinations without a cost premium.
- Includes sodium or potassium lactate to kick-start the anaerobic degradation process, nutrients and Vitamin B_{12}, a micronutrient, which *He et al. 2007* demonstrated is an important micronutrient to enhance dechlorination activity.
- It arrives at the site as a homogenous ***injection ready substrate*** and does not require mixing, which results in lower field labor costs from inefficient field mixing.
- Proven effective with high concentrations of chlorinated solvents, DNAPL, Biobarriers to prevent migration across property boundaries and Freon 113 treatment. Zero Valent Iron can promote the abiotic dechlorination of solvents including tetrachloroethene (PCE), trichloroethene (TCE), 1,1,1-trichloroethane (1,1,1-TCA), and Freon 113 (1,1,2-trichloro-1,2,2-trifluoroethane).
- Proven effective at military installations, dry cleaners, semiconductor manufacturers, fabricators and manufacturing firms that use and clean metal parts (air conditioners, dishwashers, etc.).

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Table I: SRS®- Z_{VI} Emulsified Vegetable Oil with 10-12.5% 4 µm zero valent iron (ZVI) Substrate Specifications

Ingredient	Percent by Weight/ Attributes	Description
Food Grade U.S. Grown Soybean Oil	52-54%	Terra Systems operates its own state-of-the-art manufacturing facility for SRS® production and can custom blend substrate packages as site conditions require.
Zero Valent Iron in suspension	10-12.5%	Microscale Iron (4 µm)
Sodium Lactate	4-5%	Quick Release Substrate
Proprietary Food Grade Emulsifiers and Nutrient Package Containing Nitrogen, Phosphorus and Vitamin B_{12}	6-7%	Food grade emulsifiers and nutrients are used.
pH	6.0 – 7.5	Neutral pH
Specific Gravity	8.81-9.03 pounds/ gallon	Denser than water
Viscosity	440 - 1,942 centipoises	Highly viscous

How it Works

ZVI is a strong reductant that reacts rapidly with a variety of constituents including chlorinated compounds, nitrate, and oxidized metals such as hexavalent chromium. ZVI reacts directly with the chlorinated compounds and typically generates little daughter products like cis-1,2-dichloroethene or vinyl chloride. In groundwater, iron metal (Fe^0) will consume oxygen and subsequently corrode to form dissolved hydrogen gas (H_2) and dissolved ferrous iron (Fe^{2+}). The hydrogen generated from the corrosion of ZVI has been shown to serve as an electron donor that stimulates biological reductive dechlorination of chlorinated solvents. The soybean oil is also biodegraded to generate hydrogen to support reductive dechlorination. SRS®-Z_{VI} supports both biological and abiotic degradation for the best of both worlds.

Terra Systems Flexible Manufacturing Capability

Terra Systems, Inc.'s manufacturing facility is configured to allow us to provide our customers with custom blended SRS®-Z_{VI} packages without a cost premium. In general, the smaller the average ZVI particle, the more expensive the product.



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Terra Systems
INCORPORATED

Because of our manufacturing capability, Terra Systems has the broadest EVO/ZVI product line in the industry, which allows our customers to specify the percent and particle size of the ZVI based on their remediation goals.

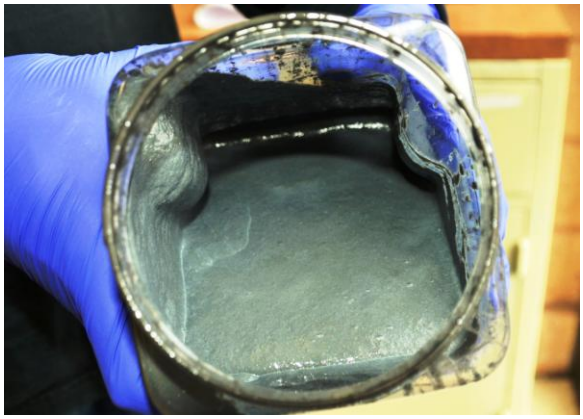
ZVI %/ZVI Average Particle Size	SRS®-Z_{VI} 2 µm	SRS®-Z_{VI} 4 µm	SRS®-Z_{VI} <44 µm	SRS®-Z_{VI} <125 µm
5 % ↓ 40%				
Customer Specified				

2 µm ZVI: Can be injected via wells or DPT. Easiest to inject with improved radius of influence.

4 µm ZVI: Can be injected via DPT.

<44 µm ZVI: Can be injected via DPT. Can incorporate higher percentage of ZVI with less impact on cost.

<125 µm ZVI: Can be injected via DPT. Can incorporate higher percentage of ZVI with less impact on cost.



Packaging: Terra Systems patented SRS® - Z_{VI} is shipped in 330-gallon IBC totes with 250 gallons in each tote.

Delivered Injection Ready: Terra Systems patented SRS® - Z_{VI} is shipped ready-to-inject.



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The TSI-DC® Bioaugmentation Culture is cost effective and is typically a minor component of the total remediation project cost. At sites where the *Dehalococcoides* is present, but at low numbers or poorly distributed, bioaugmentation can be used to reduce the treatment time. Bioaugmentation can also reduce the time required to grow the *Dehalococcoides* population to effective cell densities. Therefore, future costs can be reduced.

- The TSI-DC® Bioaugmentation Culture works with all commonly used electron donors.
- The TSI-DC® Bioaugmentation Culture is not genetically modified or engineered.
- The TSI-DC® Bioaugmentation Culture is certified to be free of known human pathogens.
- Each purchase comes with free technical phone support from an experienced Terra Systems microbiologist.
- The TSI-DC® Bioaugmentation Culture has rigorous quality control procedures in place to ensure that each shipment is of the highest quality, stable, safe, effective and free of chlorinated volatile organic compounds.
- The TSI-DC® Bioaugmentation Culture is shipped overnight in specially designed stainless-steel containers that prevent exposure to air and are safe & easy to handle.
- A senior level microbiologist is also available to be on-site to support the successful application at $1,200 per day plus travel expenses



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Safety Data Sheet

Lactic Acid, 85% ACS

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Lactic Acid, 85%, ACS

Synonyms/Generic Names: DL-Lactic acid; 2-Hydroxypropanoic Acid; 2-Hydroxypropionic acid; Racemic lactic acid; Ordinary lactic acid; Propanoic acid, 2-hydroxy-

Product Number: 2905

Product Use: Industrial, Manufacturing or Laboratory use

Manufacturer: Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI. 53925

For More Information: 920-623-2140 (Monday-Friday 8:00-4:30)
www.columbuschemical.com

In Case of Emergency Call: CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

Hazard Not Otherwise Classified (HNOC): None

Signal Words: Danger

Pictograms:



GHS Classification

Skin irritation	Category 2
Serious eye damage	Category 1

GHS Label Elements, including precautionary statements:

Hazard Statements:

H315	Causes skin irritation.
H318	Causes serious eye damage.

Precautionary Statements:

P264	Wash hands thoroughly after handling.
P280	Wear protective gloves/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor/physician.
P332+P313	If skin irritation occurs: Get medical advice/attention.

P362+P364	Take off contaminated clothing and wash it before reuse.

Potential Health Effects

Eyes	Causes eye burns.
Inhalation	Causes respiratory tract irritation.
Skin	Causes skin irritation.
Ingestion	May be harmful if swallowed.

NFPA Ratings

Health	2
Flammability	1
Reactivity	0
Specific hazard	Not Available

HMIS Ratings

Health	2
Fire	1
Reactivity	0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Lactic Acid	85	50-21-5	200-018-0	$C_3H_6O_3$	90.08 g/mol
Water	Balance	7732-18-5	231-791-2	H_2O	18.00 g/mol

4. FIRST-AID MEASURES

Eyes	Rinse with plenty of water for at least 15 minutes and seek medical attention immediately.
Inhalation	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.
Skin	Flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention immediately.
Ingestion	**Do Not Induce Vomiting!** Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.

5. FIREFIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	Product is flammable. Use water, dry chemical, foam, or carbon dioxide on fires involving this product. Use appropriate media for adjacent fire. Cool containers with water, keep away from common metals.
Special protective equipment and precautions for firefighters	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
Specific hazards arising from the chemical	Emits toxic fumes (carbon oxides) under fire conditions. (See also Stability and Reactivity section)

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	See section 8 for recommendations on the use of personal protective equipment.
Environmental precautions	Prevent spillage from entering drains. Any release to the environment may be subject to a federal/national or local reporting requirements.

Methods and materials for containment and cleaning up	Neutralize spill with sodium bicarbonate or lime. Absorb spill with noncombustible absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

7. HANDLING AND STORAGE

Precautions for safe handling
See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use.

Conditions for safe storage, including any incompatibilities
Store in cool, dry well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls: Contains no substances with occupational exposure limit values.

Personal Protection

Eyes	Wear chemical safety glasses or goggles, and face shield.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Skin	Wear nitrile or rubber gloves, and full body covering. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Other	Not Available

Other Recommendations
Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling. Have supplies and equipment for neutralization and running water available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	White to slightly yellow liquid.
Odor	Acrid (Slight.)
Odor threshold	Not Available
pH	2
Melting point/freezing point	17 °C (63 °F)
Initial boiling point and boiling range	122 °C (252 °F) at 20 hPa (15 mmHg) - lit.
Flash point	113 °C (235 °F) - closed cup
Evaporation rate	Not Available
Flammability (solid, gas)	Class II Combustible liquid.
Upper/lower flammability or explosive limit	Not Explosive
Vapor pressure	0 kPa (@ 20°C)
Vapor density	>1 (air=1)
Density	1.209 g/cm^3 at 25 °C (77 °F)
Solubility (ies)	Soluble in cold water, hot water. Partially soluble in diethyl ether. Soluble in Furfurol, alcohol. Practically insoluble in chloroform, petroleum ether, carbon disulfide.
Partition coefficient: n-octanol/water	Log Pow: -0.7
Auto-ignition temperature	Not Available

Decomposition temperature	Not Available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	Extremes of temperature, open flames, sparks, sources of ignition.
Incompatible Materials	Moisture, bases, organic materials, metals, carbides, cyanides, chlorates, nitrates, picrates, permanganate, peroxides, zinc iodide, azides, perchlorates, phosphorus.
Hazardous Decomposition Products	Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Lactic Acid

Skin	LD50 Dermal- rabbit- >2,000 mg/kg
Eyes	Eyes- rabbit- Severe eye irritation- Draize test
Respiratory	Not Available
Ingestion	LD50 Oral – rat- 3,543 mg/kg

Carcinogenicity

IARC	No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP	No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs & Symptoms of Exposure

Skin	Burning, itching, redness, inflammation and/or swelling of exposed tissues.
Eyes	Eye burns, watering eyes.
Respiratory	Burning, choking, coughing, wheezing, laryngitis, shortness of breath, headache or nausea.
Ingestion	Burning, choking, nausea, vomiting and severe pain.

Chronic Toxicity	Not Available
Teratogenicity	Not Available
Mutagenicity	Not Available
Embryotoxicity	Not Available
Target Organ(s)	Not Available
Reproductive Toxicity	Not Available
Respiratory/Skin Sensitization	Not Available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Lactic Acid

Aquatic Vertebrate	Not Available
Aquatic Invertebrate	EC50 Daphnia magna (Water flea)- 180-320 mg/l – 48 h

Terrestrial	Mortality NOEC- Pseudokirchneriella subcapitata- 320 mg/l -96 h EC50- Pseudokirchneriella subcapitata (green algae)- >2,800 mg/l- 84 h

Persistence and Degradability	Readily biodegradable
Bioaccumulative Potential	Not Available
Mobility in Soil	Completely soluble
PBT and vPvB Assessment	Not Available
Other Adverse Effects	Not Available

13. DISPOSAL CONSIDERATIONS

Waste Product or Residues	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product or residue.
Product Containers	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

US DOT	UN3265, Corrosive liquid, acidic, organic, n.o.s., (lactic acid), 8, pg III
TDG	UN3265, CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S., (LATIC ACID), 8, pg III
IMDG	UN3265, CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S., (LATIC ACID), 8, pg III
Marine Pollutant	No
IATA/ICAO	UN3265, Corrosive liquid, acidic, organic, n.o.s., (lactic acid), 8, pg III

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA Active inventory.
DSL / NDSL	All ingredients are listed on the DSL inventory.
California Proposition 65	Not Listed
Rhode Island: Hazardous Substance List	Not Listed
Massachusetts: Toxic or Hazardous Substance List, Right to Know	Not Listed
Pennsylvania: Hazardous Substance List	Not Listed
New Jersey: Right to Know Hazardous Substance List	Not Listed
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	Acute Health Hazard
SARA 312	Acute Health Hazard
SARA 313	Not Listed
WHMIS Canada	Class D2B: Poisonous and infectious material – Other effects – Toxic. Class E: Corrosive material

16. OTHER INFORMATION

Revision	Date
Original	03/21/2013
Revision 1	08/27/2015
Revision 2	10/18/2021

Disclaimer: The information provided in this Safety Data Sheet (“SDS”) is correct to the best of our knowledge, information, and belief at the date of publication. The information in this SDS relates only to the specific Product identified under Section 1, and does not relate to its use in combination with other materials or products, or its use as to any particular process. Those handling, storing, or using the Product should satisfy themselves that they have current information regarding the particular way the Product is handled, stored or used and that the same is done in accordance with federal, state and local law. WE DO NOT MAKE ANY WARRANTY, EXPRESS OR IMPLIED, INCLUDING (WITHOUT LIMITATION) WARRANTIES WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN OR WITH RESPECT TO FITNESS FOR ANY PARTICULAR USE. WE DO NOT ASSUME RESPOSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, INJURY, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT.

TSI-Ferrous Sulfide Activator
SAFETY DATA SHEET

SECTION 1: Identification

1.1. Identification

Product form:	Mixture
Trade name:	TSI -FSA
CAS No:	1317-37-9
Formula:	FeS
Synonyms:	Ferrous sulfide / Iron sulfide / Iron sulphide / Iron(II) sulfide / Ferrous sulfide / Iron sulfide / Iron sulphide / Iron(II) sulfide

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture: Chemical used for the activation of persulfate.

1.3. Details of the supplier of the safety data sheet

Terra Systems, Inc.
130 Hickman Road, Suite 1
Claymont, DE 19703

Company Contact: Michael D. Lee, Ph.D.
Telephone Number: (302)798-9553

1.4. Emergency telephone number

CHEMTREC: (800) 424-9300

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin corrosion/irritation Category 2	H315
Serious eye damage/eye irritation Category 2A	H319
Full text of H statements:	see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US):



GHS07

Signal word (GHS-US): Warning

Hazard statements (GHS-US):	H315 - Causes skin irritation H319 - Causes serious eye irritation
Precautionary statements (GHS-US):	P264 - Wash hands thoroughly after handling P280 - Wear eye protection, protective clothing, protective gloves P302+P352 - If on skin: Wash with plenty of water P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P321 - Specific treatment (see Consult a doctor/medical service if you feel unwell on this label) P332+P313 - If skin irritation occurs: Get medical advice/attention P337+P313 - If eye irritation persists: Get medical advice/attention P362+P364 - Take off contaminated clothing and wash it before reuse

2.3. Other hazards

HMIS Classification:

Health hazard: 0
Flammability: 0
Physical hazards: 0

NFPA Rating:

Health hazard: 1
Fire: 0
Reactivity Hazard: 0

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.
Skin May be harmful if absorbed through skin. May cause skin irritation.
Eyes May cause eye irritation.
Ingestion May be harmful if swallowed.
Other Hazards not contributing to the classification: Generates toxic gas in contact with acid.

2.4. Unknown acute toxicity (GHSUS)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product Identifier	%	GHS-US classification
Iron sulfide (FeS)	(CAS No) 1317-37-9	7 -11	Not classified
Sodium Sulfide	(CAS No) 1313-82-2	0.1 - 1	Acute Tox. 3 (Oral), H301

Full text of hazard classes and H-statements : see section 16

SECTION 4: First aid measures

4.1. Descriptionoffirstaidmeasures

First-aid measures general: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.

First-aid measures after skin contact: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a doctor/physician. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion: Rinse mouth. Do NOT induce vomiting. Immediately call a poison center or doctor/physician. Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries: Causes skin and eye irritation.

Symptoms/injuries after skin contact : Irritation.

Symptoms/injuries after eye contact: Causes serious eye damage. Eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Reactivity:	Corrosive vapors.

5.3. Advice for firefighters

Firefighting instructions:	Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protection during firefighting:	Do not enter fire area without proper protective equipment, including respiratory protection. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures:	Ventilate spillage area. Evacuate unnecessary personnel. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment:	Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures:	Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and materials for containment and cleaning up

Methods for cleaning up:	Take up liquid spill into absorbent material. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.
Other information:	Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling:	Ensure good ventilation of the work station. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent

	formation of vapor. Do not breathe dust, fume, gas, mist, spray, vapors. Avoid contact during pregnancy/while nursing. Avoid contact with skin and eyes. Wear personal protective equipment.
Hygiene measures:	Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures:	Comply with applicable regulations.
Storage conditions:	Keep only in the original container in a cool, well ventilated place away from : Ignition sources, Incompatible materials. Keep container closed when not in use. Store in a well-ventilated place. Keep cool.
Incompatible products:	Strong bases. Strong acids.
Incompatible materials:	Sources of ignition. Direct sunlight.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

TSI-FSA (1317-37-9)

ACGIH	ACGIH TWA (mg/m³)	1.4 mg/m³
ACGIH	ACGIH TWA (ppm)	1 ppm
ACGIH	ACGIH STEL (mg/m³)	7 mg/m³
ACGIH	ACGIH STEL (ppm)	5 ppm

Iron sulfide (FeS) (1317-37-9)

Not applicable

Sodium sulfide (1313-82-2)

Not applicable

8.2. Exposure controls

Appropriate engineering controls:	Ensure good ventilation of the work station.
Personal protective equipment:	Avoid all unnecessary exposure.
Hand protection:	Wear protective gloves.
Eye protection:	Chemical goggles or face shield. Safety glasses.
Skin and body protection:	Wear suitable protective clothing.
Respiratory protection:	Wear appropriate mask.
Environmental exposure controls:	Avoid release to the environment.
Other information:	Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Appearance:	Black liquid with visible suspended solids.
Color:	Black
Odor:	Rotten eggs
Odor threshold:	No data available
pH:	11.5 - 12.8
Melting point:	Not applicable
Freezing point:	No data available
Boiling point:	No data available
Flash point:	No data available
Relative evaporation rate (butyl acetate=1):	No data available
Flammability (solid, gas):	Non-flammable
Vapor pressure:	No data available
Relative vapor density at 20 °C:	No data available
Relative density:	1.15 - 1.22
Solubility:	Minimally soluble in water.
Log Pow:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity, kinematic:	No data available
Viscosity, dynamic:	No data available
Explosion limits:	No data available
Explosive properties:	No data available
Oxidizing properties:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Acidic vapors.

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Contact with acids liberates toxic gas.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Acids will cause the release of highly toxic Hydrogen Sulfide. Reacts violently with diazonium salts. Ferrous sulfide(s) solution is not compatible with copper, zinc, aluminum or their **alloys** (i.e. bronze, brass, galvanized metals, etc.). Corrosive to steel above 150º F (65.5º C). These materials of construction should not be used in handling systems or storage containers for this product.

10.6. Hazardous decomposition products

Hazardous decomposition products formed under fire may include sulfur oxides, iron oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity: Not classified

Sodium Sulfide (113-82-2)	
LD50 oral rat	208 mg/kg
ATE US (oral)	208.000 mg/kg body weight
LD50 dermal rabbit	< 340 mg/kg
ATE US (dermal)	300.000 mg/kg body weight

Skin corrosion/irritation: Causes skin irritation. pH: 11.5 - 12.8

Serious eye damage/irritation: Causes eye irritation. pH: 11.5 - 12.8

Respiratory or skin sensitization: Not classified

Germ cell mutagenicity: Not classified

Carcinogenicity: Not classified

Reproductive toxicity: Not classified

Specific target organ toxicity (single exposure): Not classified

Specific target organ toxicity (repeated exposure): Not classified

Aspiration hazard: Not classified

Potential Adverse human health effects and symptoms: Based on available data, the classification criteria are not met

Symptoms/injuries after skin contact : Irritation.

Symptoms/injuries after eye contact: Causes eye irritation.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

TSI-FSA (1317-37-9)

LC50 fish 1 > 10000 mg/l Mosquito fish

Sodium Sulfide (1313-82-2)	
LC50 fish 1	7.7 - 29.1 mg/l (Exposure time: 96 h - Species: Poecilia reticulata)
EC50 Daphnia 1	2.1 mg/l (Exposure time: 48 h - Species: Daphnia magna)

12.2. Persistence and degradability TSI-FSA (1317-37-9)

Persistence and degradability	Not established.

12.3. Bioaccumulative potential TSI-FSA (1317-37-9)

Bioaccumulative potential	Not established.
Sodium Sulfide (16721-80-5)	
Log Pow	-3.5 (at 25 °C)

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming: No known effects from this product.

GWPmix comment: No known effects from this product.

Other information: Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods: Dispose of contents/container in accordance with licensed collector's sorting instructions.

Waste disposal recommendations: Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Ecology - waste materials: Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT Not Regulated

Transport by sea

Not Regulated

Air transport

Not Regulated

SECTION 15: Regulatory information

15.1.US Federal regulations

Iron sulfide (FeS) (1317-37-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Sodium Sulfide (1313-82-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2.International regulations

CANADA

Iron sulfide (FeS) (1317-37-9)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification | Uncontrolled product according to WHMIS classification criteria

Sodium Sulfide (1313-82-2)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

Iron sulfide (FeS) (1317-37-9)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Sodium Sulfide (1313-82-2)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

Iron sulfide (FeS) (1317-37-9)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Sodium Sulfide (1313-82-2)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on CICR (Turkish Inventory and Control of Chemicals)

15.3.US State Regulations

Sodium Sulfide (1313-82-2)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

Revision date: 06/14/2016

Other information: None.

Full text of H-phrases:

H301	Toxic if swallowed
H315	Causes skin irritation
H319	Causes serious eye irritation
H400	Very toxic to aquatic life

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

SRS®-Z_{VI} (4 µm)
Combined Emulsified Vegetable Oil Substrate and 4 µm Zero Valent Iron
SAFETY DATA SHEET

January 1st, 2020

1. Product Identification

Synonyms: Combined Emulsified Vegetable Oil Substrate and 4 µm Zero Valent Iron [SRS®-Z_{VI} (4 µm)]; Emulsified Vegetable Oil (EVO) and Zero Valent Iron (ZVI)

Recommended Use: Treatment of groundwater contaminated with DNAPL level concentrations of chlorinated solvents and other anaerobically degradable compounds.

Supplier:
Terra Systems, Inc.
130 Hickman Road, Suite 1
Claymont, Delaware 19703
Telephone (302) 798-9553
Fax (302) 798-9554
www.terrasystems.net

2. Hazards Identification

Emergency Overview

Caution: May cause eye irritation.
Health Rating: 1 - Slight
Flammability Rating: 1 - Slight
Reactivity Rating: 1 - Slight
Contact Rating: 1 - Slight
Protective Equipment: Goggles; Proper Gloves
Storage Color Code: Green (General Storage)

Potential Health Effects

Inhalation: Not expected to be a health hazard. May irritate lungs and mucous membranes and cause irritation, dizziness, and nausea. Remove to fresh air.

Ingestion: Not expected to be a health hazard via ingestion. Large doses may produce abdominal spasms, diarrhea.

Skin Contact: No adverse effects expected. May cause irritation or sensitization in sensitive individuals.

Eye Contact: May cause irritation, watering, and possible reddening.

Chronic Exposure: No information found.

Aggravation of Pre-existing Conditions: No information found.

3. Composition/Information on Ingredients

Ingredient	Synonyms	CAS #	Percent	Hazardous
Soybean oil	Soya oil	8001-22-7	52-54%	No
Iron suspension	ZVI	7439-89-6	10-12.5%	No
60% Sodium Lactate	2-hydroxpropionic acid sodium salt	72-17-3	4-5%	No
Emulsifiers and proprietary nutrient package containing nitrogen, phosphorus and vitamin B_{12}		Mixture	6-7%	No

The emulsifiers are a trade secret and consists of ingredients of unknown acute toxicity.

4. First Aid Measures

Inhalation: Not expected to require first aid measures. Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion: If large amounts were swallowed, give water to drink and get medical advice.

Skin Contact: Not expected to require first aid measures. Wash exposed area with soap and water. Get medical advice if irritation develops.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.

5. Fire Fighting Measures

Fire: The zero valent iron powder, when dry, may self-combust and has the potential to catch paper towels, rags, etc. on fire. Avoid airborne dispersion of fine powder in an enclosed area to reduce potential dust ignition. Keep SRS®-EZVI wet and avoid contact with combustible materials.

Explosion: May generate hydrogen gas vapors that can cause explosion when exposed to a spark or flame. Closed containers may explode if exposed to extreme heat.

Fire Extinguishing Media: Dry chemical, sand, foam, graphite, or carbon dioxide. Water spray may be ineffective on fire but can protect fire-fighters and cool closed containers. Use fog nozzles if water is used.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Clean-up personnel may require protective clothing. Absorb in sand, paper towels, “Oil Dry”, or other inert material. Scoop up and containerize for disposal. Flush trace residues to sewer with soap and water. Containerized waste may be sent to an approved waste disposal facility.

7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Containers of this material are not hazardous when empty since they do not contain vapors or harmful substances; observe all warnings and precautions listed for the product. Do not store above 49 C (120 F). Keep container tightly closed and upright when not in use to prevent leakage.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:	None established.
Ventilation System:	Not expected to require any special ventilation.
Personal Respirators (NIOSH Approved):	Not expected to require personal respirator usage.
Skin Protection:	Wear protective gloves and clean body-covering clothing.
Eye Protection:	Use chemical safety goggles and/or a full-face shield where splashing is possible. Provide readily accessible eye wash stations and safety showers.
Slips, Trips, and Falls:	Material is slippery when spilled. Clean up with sand, paper towels, “Oil Dry”, or other inert material.

9. Physical and Chemical Properties

Appearance:	Gray viscous liquid.
Odor:	Vegetable oil.
Solubility:	Not soluble in water.
Specific Gravity (water=1):	1.07 (8.93 pounds per gallon)
pH:	6-8
% Volatiles by volume @ 21C (70F):	Negligible.
Boiling Point:	≥ 100C (≥ 212F)
Melting Point:	No information found.
Flash Point (F):	No information found.
Autoignition Temperature:	No information found.
Decomposition Temperature:	No information found.
Vapor Density (Air=1):	No information found.
Vapor Pressure (mm Hg):	< 1.0 @ 20C (68F).
Evaporation Rate (BuAc=1):	No information found.
Viscosity @23 C (73 F):	440-1,942 centipoises
Partition Coefficient (octanol/water):	No information found.

10. Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage. May generate hydrogen gas.

Reactivity: Not reactive under ordinary conditions.

Hazardous Decomposition Products: Carbon dioxide and carbon monoxide may form when heated to decomposition.

Hazardous Polymerization: Will not occur.

Incompatibilities: Strong oxidizers, acids.

Conditions to Avoid: Incompatibles. Isolate from heat and open flame.

11. Toxicological Information

Soybean Oil: No information found on toxicology. It is not a carcinogen listed by IARC, NTP, NIOSH, OSHA, or ACGIH.

Emulsifier/Nutrient Mixture: No information found on toxicology. It is not a carcinogen listed by IARC, NTP, NIOSH, OSHA, or ACGIH.

Sodium Lactate: Oral rat LD50: 2000 mg/kg. Irritation for sodium lactate: standard Draize 100 mg - mild. This compound is not listed as a carcinogen by IARC, NRP, NIOSH, OSHA, or ACGIM.

Zero Valent Iron: No information found on toxicology. It is not a carcinogen listed by IARC, NTP, NIOSH, OSHA, or ACGIH.

Glycerol: Practically non-toxic.

SRS-EZVI: The toxicity of the mixture has not been measured.

12. Ecological Information

Environmental Fate: No information found.

Environmental Toxicity: No information found.

Degradability: SRS is completely biodegradable under both aerobic and anaerobic conditions.

Soil Mobility: SRS will move with groundwater until the adsorbed onto the soil. Degradation products may be mobile. The ZVI portion will not be mobile.

Bioaccumulation Potential: No information found.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use, or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Not regulated.

15. Regulatory Information

OSHA STATUS: This product is not hazardous under the criteria of the Federal OSHA hazard Communication Standard 29 CFR 1910.1200. However, thermal processing and decomposition fumes from this product may be hazardous as noted in Section 10.

TSCA STATUS: No component of this product is listed on the TSCA inventory.

CERCLA (Comprehensive Response Compensation, and Liability Act): Not reportable.

SARA TITLE III (Superfund Amendments and Reauthorization Act)
Section 312 Extremely Hazardous Substances: None
Section 311/312 Hazard Categories: Non-hazardous Under Section 311/312
Section 313 Toxic Chemicals: None

RCRA STATUS: If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California safe Drinking Water and Toxic Enforcement Act of 1986. The product contains no chemicals known to the State of California to cause cancer.

16. Other Information

NFPA Ratings:	Health: **1** Flammability: **1** Reactivity: **1**
Date Revised:	January 1, 2018
Revision Information:	SDS Section(s) changed since last revision of document include: Added glycerol as component.
Disclaimer:	Terra Systems, Inc. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. TERRA SYSTEMS, INC. MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR

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Prepared by: Terra Systems, Inc.
Phone Number: (302) 798-9553 (U.S.A.)

CALCIUM CARBONATE
SAFETY DATA SHEET

1. Product Identification

Synonyms: Precipitated chalk; powdered limestone

Recommended Use: Buffering of groundwater contaminated with chlorinated solvents and other anaerobically degradable compounds.

Supplier:
Terra Systems, Inc.
130 Hickman Road, Suite 1
Claymont, Delaware 19703
Telephone (302) 798-9553
Fax (302) 798-9554
www.terrasystems.net

2. Hazards Identification

Emergency Overview

Danger	May causes irritation to skin, eyes, and respiratory tract
Health Rating:	1 - Slight
Flammability Rating:	0 - None
Reactivity Rating:	0 - None
Contact Rating:	1 - Slight
Lab Protective Equipment:	Goggles; Lab Coat; Vent Hood; Proper Gloves
Storage Color Code:	Orange (General Storage)
Potential Health Effects	
Inhalation:	May cause respiratory irritation.
Ingestion:	No information found...
Skin Contact:	Causes skin irritation.
Eye Contact:	Causes eye irritation.
Chronic Exposure:	No information found.
Aggravation of Pre-existing Conditions:	No information found.

3. Composition

Ingredient	Synonym	CAS #	Percent	Hazardous
Calcium Carbonate $CaCO_3$	Carbonic acid, calcium salt; powdered limestone	471-34-1	100	No

4. First Aid Measures

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion: If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention if adverse symptoms occur.

Skin Contact: Causes mechanical irritation. Wash affected area with plenty of soap and water. If irritation persists, seek medical attention.

Eye Contact: Immediately flush eyes with plenty of water for at least 5 minutes, lifting lower and upper eyelids occasionally. Get medical attention.

5. Fire Fighting Measures

Fire: Not considered to be a fire hazard.

Explosion: Not considered an explosion hazard.

Fire Extinguishing Media: Use any means suitable for extinguishing surrounding fire including foam, dry powder, carbon dioxide, water spray, or sand. .

Special Information: Use protective clothing and breathing equipment appropriate for the surrounding fire.

6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Avoid breathing dust. Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal. Wash the area clean with water and detergent.

7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances including strong acids or oxidizers.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits: USA OSHA PEL (TWA) 5 mg/m^3.

Ventilation System: A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document,

	Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.
Personal Respirators (NIOSH Approved):	For conditions of use where exposure to the dust or mist is apparent, a half-face dust/mist respirator may be worn. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.
Skin Protection:	Wear protective gloves and clean body-covering clothing.
Eye Protection:	Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance:	White powder or granules.
Molecular Weight:	100.09 g/mole
Odor:	Odorless.
Solubility:	Insoluble in water. Soluble in acids.
Specific Gravity:	2.7-2.9
pH:	No information found.
% Volatiles by volume @ 21C (70F):	0
Boiling Point:	825 C (1517 F)
Melting Point:	520 C (968 F)
Flash Point	No information found
Autoignition Temperature	No information found
Decomposition Temperature	No information found
Vapor Density (Air=1):	No information found
Vapor Pressure (mm Hg):	No information found
Evaporation Rate (BuAc=1):	No information found.

10. Stability and Reactivity

Stability:	Stable under ordinary conditions of use and storage.
Reactivity:	Slight
Hazardous Decomposition Products:	Carbon dioxide (CO_2)
Hazardous Polymerization:	Will not occur.
Incompatibilities:	Acids
Conditions to Avoid:	Direct sunlight, extremely high or low temperatures. Strong acids or strong oxidizers...

11. Toxicological Information

Calcium Carbonate	Oral rat LD50: 6450 mg/kg. Causes skin and eye irritation.		
Cancer Lists:	Not classified.		
Calcium Carbonate (471-34-1)	No	No	None

12. Ecological Information

Environmental Fate:	No information found.
Environmental Toxicity:	No information found.
Degradability	No information found
Soil Mobility	No information found
Bioaccumulation Potential	No information found

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Not regulated.

15. Regulatory Information

Listed on the United States TSCA (Toxic Substances Control Act) inventory.
Listed on the Canadian DSL (Domestic Substances List) inventory).
WHMIS Classification: Class D Davison 2 Subdivision B Toxic material causing other toxic effects.

16. Other Information

NFPA Ratings:	Health: **1** Flammability: **0** Reactivity: **0**
Label Hazard Warning:	Exposure could cause irritation, but only minor residual injury even if no treatment is given...
Label Precautions:	Eye, skin, and respiratory irritant
Label First Aid:	In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. If inhaled, remove to

	fresh air. Get medical attention for any breathing difficulty. In all cases, get medical attention.
Product Use:	Laboratory Reagent.
Revision Information:	SDS Section(s) changed since last revision of document includes: None
Disclaimer:	Terra Systems provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. TERRA SYSTEMS MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS. ACCORDINGLY, MALLINCKRODT BAKER, INC. WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION
Prepared by:	Terra Systems, Inc.
Phone Number:	(302) 798--9553 (U.S.A.)

SODIUM ASCORBATE
SAFETY DATA SHEET

1. Product Identification

Synonyms: Sodium Salt of Vitamin C

Recommended Use: Additive for treatment of water to remove dissolved oxygen.

CAS#: 134-03-2

Supplier:
Terra Systems, Inc.
130 Hickman Road, Suite 1
Claymont, Delaware 19703
Telephone (302) 798-9553
Fax (302) 798-9554
www.terrasystems.net

2. Hazards Identification

Emergency Overview

Caution: May cause eye or skin irritation.

Health Rating: 2 - Moderate

Flammability Rating: 1 - Slight

Reactivity Rating: 0 - None

Contact Rating: 1 - Slight

Protective Equipment: Goggles; Proper Gloves

Storage Color Code: Green (General Storage)

Potential Health Effects

Inhalation: Not expected to be a health hazard.

Ingestion: Hazard via ingestion.

Skin Contact: May cause irritation or sensitization in sensitive individuals.

Eye Contact: May cause mild irritation.

Chronic Exposure: No information found.

Aggravation of Pre-existing Conditions: No information found.

3. Composition/Information on Ingredients

Ingredient	Synonyms	CAS #	Percent	Hazardous
Sodium Ascorbate	Sodium Salt of Vitamin C	134-03-2	100	No



4. First Aid Measures

Inhalation: Not expected to require first aid measures. Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion: If large amounts were swallowed, give water to drink and get medical advice.

Skin Contact: Not expected to require first aid measures. Wash exposed area with soap and water. Get medical advice if irritation develops.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.

5. Fire Fighting Measures

Fire: Flash point and auto ignition: not available. May be combustible at high temperature. Isolate from heat and open flame.

Explosion: Slightly explosive in presence of open flames and sparks. Non-flammable in presence of shocks.

Fire Extinguishing Media: Dry chemical powder for small fires. Water spray, fog, or foam may be effective for large fires. Do not use water jet. .

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode. Fine dust dispersed in air at sufficient concentrations with an ignition source is a potential dust explosion hazard.

6. Accidental Release Measures

Clean-up personnel may require protective clothing. Scoop up and containerize for disposal. Flush trace residues to sewer with soap and water. Containerized waste may be sent to an approved waste disposal facility.

7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area away from sources of heat or ignition. Protect against physical damage. Containers of this material may pose a fire risk due to dusts. Keep container tightly closed and upright when not in use to prevent leakage. Sensitive to light. Store in light-resistant containers.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits: None established.

Ventilation System: Use ventilation to keep exposure below exposure limits.

Personal Respirators (NIOSH



Approved):	Use dust respirator usage.
Skin Protection:	Wear protective gloves and clean body-covering clothing.
Eye Protection:	Use chemical safety goggles and/or a full face shield where splashing is possible. Provide readily accessible eye wash stations and safety showers.

9. Physical and Chemical Properties

Appearance:	White to yellowish granular or crystalline solid
Molecular Weight:	198.11 g/mole
Odor:	Odorless.
Solubility:	620 g/L solubility in water at 25 C.
Specific Gravity (water=1):	1.66 (water = 1).
pH:	Not available
% Volatiles by volume @ 21C (70F):	Negligible.
Boiling Point:	No information found.
Melting Point:	No information found.
Flash Point (F):	No information found.
Autoignition Temperature:	No information found.
Decomposition Temperature:	Decomposition temperature 200 C (392 F)
Vapor Density (Air=1):	No information found.
Vapor Pressure (mm Hg):	Not applicable.
Evaporation Rate (BuAc=1):	Not applicable.
Partition Coefficient (octanol/water):	No information found.

10. Stability and Reactivity

Stability:	Stable under ordinary conditions of use and storage.
Reactivity:	Not reactive under ordinary conditions.
Hazardous Decomposition Products:	Carbon dioxide and carbon monoxide may form when heated to decomposition.
Hazardous Polymerization:	Will not occur.
Incompatibilities:	Strong oxidizers, reducing agents, acids, alkalis.
Conditions to Avoid:	Incompatibles. Isolate from heat and open flame.

11. Toxicological Information

Routes of Entry	Inhalation and ingestion.
Toxicity to Animals:	Acute oral toxicity (LD50): 16300 mg/kg Rat.
Chronic Effects on Humans:	Carcinogenic effects – classified 4 (no evidence) by NTP and none by OSHA. Mutagenic effects – mutagenic to mammalian somatic cells. May cause damage to kidneys, gastrointestinal tract, and upper respiratory tract. May affect genetic material (mutagenic) based on animal test data. No human data found



(Registry of Toxic Effects of Chemicals). May cause cancer based on animal test data. No human data found (Registry of Toxic Effects of Chemicals).

Other Toxic Effects: Hazardous in case of ingestion. Slightly hazardous in case of skin contact (irritant) or inhalation.

12. Ecological Information

Environmental Fate: No information found.
Environmental Toxicity: No information found.
Degradability: This product is inherently biodegradable under both aerobic and anaerobic conditions.
Soil Mobility: No information found.
Bioaccumulation Potential: Does not bioaccumulate.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Not regulated.

15. Regulatory Information

OSHA STATUS: This product is not hazardous under the criteria of the Federal OSHA hazard Communication Standard 29 CFR 1910.1200. However, thermal processing and decomposition fumes from this product may be hazardous as noted in Section 10.

TSCA STATUS: No component of this product is listed on the TSCA inventory.

CERCLA (Comprehensive Response Compensation, and Liability Act): Not reportable.

SARA TITLE III (Superfund Amendments and Reauthorization Act)
Section 312 Extremely Hazardous Substances: None
Section 311/312 Hazard Categories: Non-hazardous Under Section 311/312
Section 313 Toxic Chemicals: None

RCRA STATUS: If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

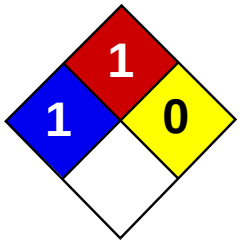


CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California safe Drinking Water and Toxic Enforcement Act of 1986. The product contains no chemicals known to the State of California to cause cancer.

16. Other Information

NFPA Ratings:	Health: **2** Flammability: **1** Reactivity: **0**
Date Prepared:	February 3, 2015
Revision Information:	SDS Section(s) changed since last revision of document include: None.
Disclaimer:	Terra Systems, Inc. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. TERRA SYSTEMS, INC. MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS. ACCORDINGLY, TERRA SYSTEMS, INC. WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION.
Prepared by:	Terra Systems, Inc.
Phone Number:	(302) 798-9553 (U.S.A.)





Health	1
Fire	1
Reactivity	0
Personal Protection	E

Material Safety Data Sheet
Yeast extract MSDS

Section 1: Chemical Product and Company Identification

Product Name: Yeast extract

Catalog Codes: SLY1108

CAS#: 8013-01-2

RTECS: ZF6610000

TSCA: TSCA 8(b) inventory: Yeast extract

CI#: Not available.

Synonym:

Chemical Name: Not available.

Chemical Formula: Not available.

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Yeast extract	8013-01-2	100

Toxicological Data on Ingredients: Not applicable.

Section 3: Hazards Identification

Potential Acute Health Effects: Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects:
Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available.

Section 4: First Aid Measures

Eye Contact: Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used.

Skin Contact:

After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cold water may be used. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact: Not available.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation: Not available.

Ingestion:
Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: Not available.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill:
Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:
Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Section 7: Handling and Storage

Precautions:
Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not breathe dust.

Storage:
Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Combustible materials should be stored away from extreme heat and away from strong oxidizing agents.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Granular solid.)

Odor: Characteristic.

Taste: Not available.

Molecular Weight: Not available.

Color: Yellowish.

pH (1% soln/water): Not available.

Boiling Point: Not available.

Melting Point: Decomposes.

Critical Temperature: Not available.

Specific Gravity: Not available.

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water.

Solubility: Easily soluble in cold water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Not available.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: No.

Section 11: Toxicological Information

Routes of Entry: Not available.

Toxicity to Animals:
LD50: Not available. LC50: Not available.

Chronic Effects on Humans: Not available.

Other Toxic Effects on Humans: Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Nuisance dust.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations: TSCA 8(b) inventory: Yeast extract

Other Regulations: Not available..

Other Classifications:

WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC):

This product is not classified according to the EU regulations.

HMIS (U.S.A.):

Health Hazard: 1

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 1

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Safety glasses.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/10/2005 08:33 PM

Last Updated: 05/21/2013 12:00 PM

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Diammonium Phosphate
SAFETY DATA SHEET

Effective Date: 01-01-2018

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1. Product Identification

Synonyms:	Diammonium Phosphate, Ammonium Phosphate Dibasic
Recommended Use:	Treatment of groundwater contaminated with chlorinated solvents and other anaerobically degradable compounds.
Supplier:	Terra Systems, Inc. 130 Hickman Road, Suite 1 Claymont, Delaware 19703 Telephone (302) 798-9553 Fax (302) 798-9554 www.terrasystems.net

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2. Hazards Identification

Emergency Overview	
Caution:	May cause eye and skin irritation. Acute aquatic toxicity.
Health Rating:	2 - Moderate
Flammability Rating:	0 - None
Reactivity Rating:	0 - None
Contact Rating:	2 - Moderate
Protective Equipment:	Goggles; Proper Gloves
Storage Color Code:	Orange (General Storage)
Potential Health Effects	
Inhalation:	May be harmful if inhaled. Causes respiratory tract irritation.
Ingestion:	May be harmful if swallowed.
Skin Contact:	Causes skin irritation.
Eye Contact:	Causes eye irritation.
Chronic Exposure:	No information found No adverse effects expected
Aggravation of Pre-existing Conditions:	No information found

3. Composition/Information on Ingredients

Ingredient	CAS#	Percent	Hazardous
Diammonium Phosphate	7783-28-0	100	Yes

Molecular Weight: 132.1
Chemical Formula: $(NH_4)_2PO_4$

4. First Aid Measures

Inhalation: Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion: If swallowed, give water to rinse mouth and get medical advice.

Skin Contact: Wash exposed area with soap and water. Get medical advice if irritation develops.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.

5. Fire Fighting Measures

Fire: Not considered to be a fire hazard.

Explosion: Not considered to be an explosion hazard.

Fire Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

Hazardous Combustion Products: Hazardous decomposition products formed under fire conditions – nitrogen oxides and phosphorus oxides.

6. Accidental Release Measures

Clean-up personnel should wear protective clothing and gloves. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Scoop up and containerize for disposal. Discharge into environment should be avoided. Containerized waste may be sent to an approved waste disposal facility.

7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Avoid long storage times. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide adequate exhaust ventilation where dust is formed. Containers of this material may be hazardous when empty since they do retain product residues (vapors, liquid). Observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:	None established.
Ventilation System:	Not expected to require any special ventilation.
Personal Respirators (NIOSH Approved):	For nuisance exposures, use type P95 particle respirator. For higher level protection use type OV/AG/P99 respirator cartridges.
Skin Protection:	Wear protective nitrile rubber gloves (at least 0.11 mm thick) and clean impervious body-covering clothing.
Eye Protection:	Use chemical safety goggles and/or a full face shield where splashing is possible. Provide readily accessible eye wash stations and safety showers.

9. Physical and Chemical Properties

Appearance:	White crystalline.
Odor:	Ammonia.
Solubility:	About 132 g/L at 20 C (68 F)
Specific Gravity (water=1):	1.62 g/cm^3
pH:	7.5-9.0 at 132 g/L at 25 C (77 F)
% Volatiles by volume @ 21C (70F):	No information found.
Boiling Point:	No data available
Melting Point:	155 C (311 F)
Flash Point (F):	No information found.
Autoignition Temperature:	No information found
Decomposition Temperature:	No information found.
Vapor Density (Air=1):	No information found.
Vapor Pressure (mm Hg):	No information found.
Evaporation Rate (BuAc=1):	No information found.
Viscosity @23 C (73 F):	No information found.
Partition Coefficient (octanol/water):	No information found

Terra Systems, Inc.
130 Hickman Road, Suite 1, Claymont, Delaware 19703
Contact: Michael Free, VP, Sales and Marketing
Office: 302-798-9553; Cell: 484-889-2214 Email: mfree@terrasystems.net

10. Stability and Reactivity

Stability:	Stable under ordinary conditions of use and storage.
Reactivity:	Not reactive under ordinary conditions.
Hazardous Decomposition Products:	Nitrogen oxides and oxides of phosphorus may form when heated to decomposition.
Hazardous Polymerization:	Will not occur.
Incompatibilities:	Avoid strong oxidizing agents, strong acids, strong bases, and magnesium.
Conditions to Avoid:	Incompatibles. Isolate from heat and open flame.

11. Toxicological Information

Acute Toxicity:	Oral LD50 rat 6,500 mg/lg Inhalation LC50 – no data available Dermal LD50 – rabbit 7,950 mg/kg
Chronic Toxicity:	Carcinogenicity – no component of this product present at levels greater than 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC, ACGIH, NTP, or OSHA. Reproductive toxicity – no data available. Teratogenicity – no data available.

12. Ecological Information

Environmental Fate:	Mobile with water and biodegradable.
Environmental Toxicity:	Toxic to fish. LC50 *Oncorhynhus mykiss* (rainbow trout) 26.5 mg/L – 96 hr. LC50 *Pimephales promelas* (fathead minnow) 33 mg/L -96 hr.
Degradability:	No information is available.
Soil Mobility:	No information is available.
Bioaccumulation Potential:	No information found.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use, or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

Terra Systems, Inc.
130 Hickman Road, Suite 1, Claymont, Delaware 19703
Contact: Michael Free, VP, Sales and Marketing
Office: 302-798-9553; Cell: 484-889-2214 Email: mfree@terrasystems.net

14. Transport Information

Non-hazardous - not regulated.

15. Regulatory Information

This product is considered an irritant by the U. S. Occupational Safety and Health Administration's Hazard Communication Standard.

16. Other Information

NFPA Ratings:	Health: **2** Flammability: **0** Reactivity: **0**
Date Prepared:	January 1, 2018
Revision Information:	SDS Section(s) changed since last revision of document include: None.
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Prepared by:	Terra Systems, Inc.
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TERRA SYSTEMS, INC DECHLORINATING BIOAUGMENTATION CULTURE (TSI-DC) SAFETY DATA SHEET

1. Product Identification

Synonyms: *Dehalococcoides* or DHC Microbial Consortium (TSI-DC)

Recommended Use: Bioremediation of groundwater and soil contaminated with chlorinated solvents such as tetrachloroethene and trichloroethene.

Supplier:
Terra Systems, Inc.
130 Hickman Road, Suite 1
Claymont, Delaware 19703
Telephone (302) 798-9553
Fax (302) 798-9554
www.terrasystems.net

2. Hazards Identification

The available data indicates no known hazards associated with exposure to this product. Nevertheless, individuals who are allergic to enzymes or other related proteins should avoid exposure and handling. Health effects associated with exposure to similar organisms are listed below.

Emergency Overview

Caution: May cause eye irritation or discomfort if ingested or inhaled or allergic reaction to sensitive individuals.

Health Rating: 1 - Slight

Flammability Rating: 0 - None

Reactivity Rating: 0 - None

Contact Rating: 1 - Slight

Protective Equipment: Goggles; Proper Gloves

Storage Color Code: Green (General Storage)

Potential Health Effects

Inhalation: Not expected to be a health hazard. Hypersensitive individuals may experience breathing difficulties after inhalation of aerosols.

Ingestion: Not expected to be a health hazard via ingestion. Ingestion of large quantities may result in abdominal discomfort including nausea, vomiting, cramps, diarrhea, and fever.

Skin Contact: No adverse effects expected. May cause irritation or sensitization in sensitive individuals upon prolonged contact.

Eye Contact: May cause mild irritation, possible reddening unless immediately rinsed.

Chronic Exposure: No information found.

Aggravation of Pre-existing Conditions: No information found.

3. Composition/Information on Ingredients

Ingredient	Synonyms	CAS #	Percent	Hazardous
Non-hazardous ingredients	DHC	Not applicable	100%	No

4. First Aid Measures

Inhalation: Not expected to require first aid measures. Remove to fresh air. Get medical attention for any breathing difficulty or if allergic symptoms develop.

Ingestion: Thoroughly rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Get immediate medical attention. Never give anything by mouth to an unconscious or convulsing person.

Skin Contact: Not expected to require first aid measures. Wash exposed area with soap and water. Get medical advice if irritation develops.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.

Note to Physicians: All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this material may have occurred.

5. Fire Fighting Measures

Fire: Non-flammable. Flash point and flammable limits are not available.

Explosion: Not considered to be an explosion hazard.

Fire Extinguishing Media: Dry chemical, foam, carbon dioxide, or water.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Clean-up personnel may require protective clothing and avoid skin contact. Absorb in sand, paper towels, or other inert material. Scoop up and containerize for disposal. Flush trace residues to sewer with soap and water. Containerized waste may be sent to an approved waste disposal facility. After clean-up, disinfect all cleaning materials and storage containers that come in contact with the spilled liquid.

7. Handling and Storage

Avoid breathing breathe aerosol. Avoid contact with skin. Use personal protective equipment recommended in Section 8. Keep containers tightly closed in a cool, well-ventilated area. The DHC microbial consortium (TSI-DC) can be supplied in stainless steel kegs designed for maximum working pressure of 130 psi and equipped with pressure relief valves. The kegs are pressurized with nitrogen gas up to the pressure of 15 psi. Do not exceed pressure of 15 psi during transfer of DHC microbial consortium (TSI-DC) from kegs. Don't open keg if content of the keg is under pressure. DHC microbial consortium (TSI-DC) may be stored for up to 3 weeks at temperature 2-4°C without aeration. Avoid freezing.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:	None established.
Ventilation System:	Not expected to require any special ventilation. Provide adequate ventilation to remove odors.
Personal Respirators (NIOSH Approved):	Not expected to require personal respirator usage. If aerosols might be generated, use N95 respirator.
Skin Protection:	Wear protective rubber, nitrile, or vinyl gloves and clean body-covering clothing.
Eye Protection:	Use chemical safety goggles and/or a full face shield where splashing is possible. Provide readily accessible eye wash stations and safety showers.

9. Physical and Chemical Properties

Appearance:	Light greenish, murky liquid.
Odor:	Musty.
Solubility:	Soluble in water.
Specific Gravity (water=1):	1.0. 8.34 pounds per gallon.
pH:	6-8
% Volatiles by volume @ 21C (70F):	Negligible.
Boiling Point:	100C (212F)
Melting Point:	0C (32F)
Flash Point (F):	No information found.
Autoignition Temperature:	No information found.
Decomposition Temperature:	No information found.
Vapor Density (Air=1):	No information found.
Vapor Pressure (mm Hg):	24 mm @ 25C (77F).
Evaporation Rate (BuAc=1):	No information found.
Viscosity @23 C (73 F):	1 centipoises

Partition Coefficient (octanol/water): No information found.

10. Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage.
Reactivity: Not reactive under ordinary conditions.
Hazardous Decomposition Products: None.
Hazardous Polymerization: Will not occur.
Incompatibilities: Strong oxidizers, acids, water reactive materials.
Conditions to Avoid: Incompatibles. Isolate from heat and open flame.

11. Toxicological Information

TSI-DC No information found on toxicology. It is not a carcinogen listed by IARC, NTP, NIOSH, OSHA, or ACGIH. It has tested negative for pathogenic microorganisms such as *Bacillus cereus, Listeria monocytogens, Salmonella* sp., *Pseudomonas* sp., fecal coliform, total coliform, yeast, and mold.

12. Ecological Information

Environmental Fate: No information found.
Environmental Toxicity: No information found.
Degradability: This product is completely biodegradable under both aerobic and anaerobic conditions.
Soil Mobility: This compound will move with groundwater until the adsorbed onto the soil.
Bioaccumulation Potential: No information found.

13. Disposal Considerations

Waste Disposal Method: No special disposal methods are required. The material is compatible with all known biological treatment methods. To reduce odors and permanently inactivate microorganisms, mix 100 parts (by volume) of TSI-DC consortium with 1 part (by volume) of bleach. Dispose of in accordance with local, state and federal regulations.

14. Transport Information

DOT Classification: N/A
Labeling: NA
Shipping Name: Not regulated

15. Regulatory Information

OSHA STATUS: This product is not hazardous under the criteria of the Federal OSHA hazard Communication Standard 29 CFR 1910.1200.

Patented *Injection Ready* 60% SRS®-SD Small Droplet Emulsified Vegetable Oil (EVO) Substrate for Maximum Radius of Influence

United States Patent #RE40,448

SAFETY DATA SHEET

1. Product Identification

Synonyms:	60% Small Droplet Slow Release Substrate (SRS®-SD) Emulsified Vegetable Oil Substrate (EVO)
Recommended Use:	Treatment of groundwater contaminated with chlorinated solvents and other anaerobically degradable compounds.
Supplier:	Terra Systems, Inc. 130 Hickman Road, Suite 1 Claymont, Delaware 19703 Telephone (302) 798-9553 Fax (302) 798-9554 www.terrasystems.net

2. Hazards Identification

Emergency Overview	
Caution:	May cause eye irritation.
Health Rating:	1 - Slight
Flammability Rating:	1 - Slight
Reactivity Rating:	1 - Slight
Contact Rating:	1 - Slight
Protective Equipment:	Goggles; Proper Gloves
Storage Color Code:	Green (General Storage)
Potential Health Effects	
Inhalation:	Not expected to be a health hazard. If heated, may produce vapors or mists that irritate the mucous membranes and cause irritation, dizziness, and nausea. Remove to fresh air.
Ingestion:	Not expected to be a health hazard via ingestion. Large doses may produce abdominal spasms or diarrhea.
Skin Contact:	No adverse effects expected. May cause irritation or sensitization in sensitive individuals.
Eye Contact:	May cause mild irritation, possible reddening.
Chronic Exposure:	No information found.
Aggravation of Pre-existing Conditions:	No information found.

3. Composition/Information on Ingredients

Ingredient	Synonyms	CAS #	Percent	Hazardous
Soy bean oil	Soya oil	8001-22-7	60%	No
Emulsifiers and proprietary nutrient package containing nitrogen, phosphorus and vitamin B_{12}		Mixture	7.5 - 10%	No
Sodium lactate	2-hydroxpropionic acid sodium salt	72-17-3	5.5%	Yes
Water		7732-18-5	Difference	No

The emulsifiers and nutrient package mixture is a trade secret and consists of ingredients of unknown acute toxicity.

4. First Aid Measures

Inhalation: Not expected to require first aid measures. Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion: If large amounts were swallowed, give water to drink and get medical advice.

Skin Contact: Not expected to require first aid measures. Wash exposed area with soap and water. Get medical advice if irritation develops.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.

5. Fire Fighting Measures

Fire: Flash point: >200 C (>392 F). Not considered to be a fire hazard. Isolate from heat and open flame.

Explosion: Not considered to be an explosion hazard. Closed containers may explode if exposed to extreme heat.

Fire Extinguishing Media: Dry chemical, foam, or carbon dioxide. Water spray may be ineffective on fire but can protect fire-fighters and cool closed containers. Use fog nozzles if water is used.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Clean-up personnel may require protective clothing. Absorb in sand, paper towels, “Oil Dry”, or other inert material. Scoop up and containerize for disposal. Flush trace residues to sewer with soap and water. Containerized waste may be sent to an approved waste disposal facility.

7. Handling and Storage

Store in a cool, dry, ventilated area. Do not store in sunlight or above 32 C (90 F). Keep container tightly closed and upright when not in use to prevent leakage. Observe all warnings and precautions listed for the product. Protect against physical damage.

If container begins to bulge, open cap slowly to release carbon dioxide from biological activity on the SRS-SD and call TSI.

Containers of this material are not hazardous when empty since they do not contain vapors or harmful substances; if drum or tote is observed to bulge, keep cap off as pressurization can occur on empty container with caps in place unless container is thoroughly rinsed.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:	None established.
Ventilation System:	Not expected to require any special ventilation.
Personal Respirators (NIOSH Approved):	Not expected to require personal respirator usage.
Skin Protection:	Wear protective gloves and clean body-covering clothing.
Eye Protection:	Use chemical safety goggles and/or a full-face shield where splashing is possible. Provide readily accessible eye wash stations and safety showers.
Slips, Trips, and Falls:	Material is slippery when spilled. Clean up with sand, paper towels, “Oil Dry”, or other inert material.

9. Physical and Chemical Properties

Appearance:	White liquid.
Odor:	Vegetable oil.
Solubility:	Miscible in water.
Specific Gravity (water=1):	0.95-0.98. 8.09 pounds per gallon.
pH:	6-7 (40% aqueous solution)
% Volatiles by volume @ 21C (70F):	Negligible.
Boiling Point:	≥ 100C (≥ 212F)
Melting Point:	No information found.
Flash Point (F):	No information found.
Autoignition Temperature:	No information found.
Decomposition Temperature:	No information found.
Vapor Density (Air=1):	No information found.
Vapor Pressure (mm Hg):	< 1.0 @ 20C (68F).
Evaporation Rate (BuAc=1):	No information found.
Viscosity @23 C (73 F):	213 centipoises (1.2 centipoises diluted 1:10)
Partition Coefficient (octanol/water):	No information found.

10. Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage.
Reactivity: Not reactive under ordinary conditions.
Hazardous Decomposition Products: Carbon dioxide and carbon monoxide may form when heated to decomposition.
Hazardous Polymerization: Will not occur.
Incompatibilities: Strong oxidizers, acids.
Conditions to Avoid: Incompatibles. Isolate from heat and open flame.

11. Toxicological Information

Soybean Oil: No information found on toxicology. It is not a carcinogen listed by IARC, NTP, NIOSH, OSHA, or ACGIH.
Emulsifier/Nutrient Mixture: No information found on toxicology. It is not a carcinogen listed by IARC, NTP, NIOSH, OSHA, or ACGIH.
Sodium Lactate: Oral rat LD50: 2,000 mg/kg. 100 mg caused mild irritation to rabbit eye in Draize test. This compound is not listed as a carcinogen by IARC, NRP, NIOSH, OSHA, or ACGIM.
SRS-SD: The toxicity of the mixture has not been measured.

12. Ecological Information

Environmental Fate: No information found.
Environmental Toxicity: No information found.
Degradability: This product is completely biodegradable under both aerobic and anaerobic conditions.
Soil Mobility: This compound will move with groundwater until the adsorbed onto the soil. Degradation products may be mobile.
Bioaccumulation Potential: No information found.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Not regulated.

15. Regulatory Information

OSHA STATUS: This product is not hazardous under the criteria of the Federal OSHA hazard Communication Standard 29 CFR 1910.1200. However, thermal processing and decomposition fumes from this product may be hazardous as noted in Section 10.

TSCA STATUS: No component of this product is listed on the TSCA inventory.

CERCLA (Comprehensive Response Compensation, and Liability Act): Not reportable.

SARA TITLE III (Superfund Amendments and Reauthorization Act)
Section 312 Extremely Hazardous Substances: None
Section 311/312 Hazard Categories: Non-hazardous Under Section 311/312
Section 313 Toxic Chemicals: None

RCRA STATUS: If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California safe Drinking Water and Toxic Enforcement Act of 1986. The product contains no chemicals known to the State of California to cause cancer.

16. Other Information

NFPA Ratings:	Health: **1** Flammability: **1** Reactivity: **1**
Date Prepared:	September 11, 2019
Revision Information:	SDS Section(s) changed since last revision of document include: Updated Section 3 Composition/Information on Ingredients.
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DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION.

Prepared by: Terra Systems, Inc.
Phone Number: (302) 798-9553 (U.S.A.)

TSCA STATUS: No component of this product is listed on the TSCA inventory.
CERCLA (Comprehensive Response Compensation, and Liability Act): Not reportable.

SARA TITLE III (Superfund Amendments and Reauthorization Act)
Section 312 Extremely Hazardous Substances: None
Section 311/312 Hazard Categories: Non-hazardous Under Section 311/312
Section 313 Toxic Chemicals: None

RCRA STATUS: If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California safe Drinking Water and Toxic Enforcement Act of 1986. The product contains no chemicals known to the State of California to cause cancer.

16. Other Information

NFPA Ratings:	Health: **1** Flammability: **0** Reactivity: **0**
Date Prepared:	March 26, 2014
Revision Information:	SDS Section(s) changed since last revision of document include: None.
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Prepared by:	Terra Systems, Inc.
Phone Number:	(302) 798-9553 (U.S.A.)

EOS Remediation, LLC

CoBupH$_{Mg}$

SAFETY DATA SHEET

Section 1: Identification	
Product Name:	**CoBupH$_{Mg}$**
Chemical Description:	Mixture; colloidal buffer
Manufacturer:	EOS Remediation PO Box 14266 Reseacrh Triangle Park NC, 27709 (P): 919-873-2204
Recommended Use:	Groundwater pH adjustment (environmental applications)
Restricted Use:	Not for human consumption.
24-Hour Emergency Contact:	ChemTel: United States (P): 800-255-3924 ChemTel: International (P): 813-248-0585

Section 2: Hazard(s) Identification	
Hazard Classification:	Potential Respiratory Tract Irritant; irritant (skin and eye)
Signal Word:	Warning
Hazard Statement(s):	Potential eye and skin irritant; Inhalation may aggravate any preexisting respiratory disease.
Pictograms:	
Precautionary Statement(s):	Prolonged/frequent skin contact may lead to dermatitis; Ingestion generally causes purging of the bowels. Keep from freezing. Keep below 100 F to avoid evaporation of free water, which could lead to increased viscosity.

Section 3: Composition/Information on Ingredients		
Common Name(s)	**CAS NO.**	**% by Weight**
Alkaline Buffer Patent Pending Trade Secret[1]	Proprietary	45-50
Dispersant Trade Secret[1]	Proprietary	1-2
Stabilizer Trade Secret[1]	Proprietary	0.5-1
Water	7732-18-5	47-53.5

1 – The precise composition of this product is proprietary information. A more complete disclosure will be provided to a physician in the event of a medical emergency.

Section 4: First-Aid Measures	
Routes of Exposure	**Emergency First-Aid Procedures**
Inhalation	Remove to fresh air; as with exposure to any environment without adequate personal protection, inhalation may aggravate any preexisting respiratory disease.
Eye Contact	Flush with water for 15 minutes; if irritation persists see a physician.
Dermal	Wash with mild soap and water; prolonged/frequent skin contact may lead to dermatitis.
Ingestion	Product is non-toxic. If nausea occurs, induce vomiting and seek medical attention.

Section 5: Fire-Fighting Measures	
Extinguishing Media:	Use media appropriate to primary source of fire. Otherwise, use CO_2, foam, dry chemical. Note: Water, fog and foam may cause frothing and spattering.
Special Fire Fighting Procedures:	Wear self-contained breathing apparatus and chemical resistant clothing. Use water spray to cool fire exposed containers.
Fire Hazard(s):	None known.

Section 6: Accidental Release Measures	
Personal Precautions:	Avoid contact with eyes and skin. Do not consume.
Emergency Procedures:	N/A
Methods & Materials used for Containment:	Compatible granular absorbent
Cleanup Procedures:	Spread compatible granular absorbent over spill area and sweep using broom and pan; dispose in appropriate receptacle. Clean area with water.

Section 7: Handling and Storage	
Safe Handling & Storage:	Keep container closed when not in use. Avoid contact with eyes. Keep from freezing. Keep below 100 F to avoid evaporation of free water, which could lead to increased viscosity.
Other Precautions:	Consumption of food and beverages should be prevented in work area where product is being used. After handling product, always wash hands and face thoroughly with soap and water before eating, drinking, or smoking.

Section 8: Exposure Controls/Personal Protection		
Exposure Limits		
OSHA PEL:	NE	
ACGIH TLV:	NE	
NIOSH REL:	NE	

Personal Protective Measures	
Respiratory Protection:	Not normally required. N95 respirator if aerosols might be generated.
Hand Protection:	Protective gloves are recommended
Eye Protection:	Recommended
Engineering Measures:	Local exhaust ventilation if aerosols are generated
Hygiene Measures:	Wash promptly with soap & water following skin contact. After handling product, always wash hands and face thoroughly with soap and water before eating, drinking or smoking.
Other Protection:	Wear appropriate clothing to prevent skin contact

Section 9: Physical and Chemical Properties			
Appearance:	Milky white aqueous suspension	Explosive Limits:	NE
Odor:	None	Vapor Pressure:	NE
Odor Threshold:	NE	Vapor Density:	N/A
pH:	10.5-11.5	Relative Density:	1.6
Melting Point/Freezing Point:	32° F (0°C)	Solubility:	Slightly Soluble
Boiling Point:	N/A	Partition coefficient:	NE
Flash Point:	Not flammable or combustible	Auto-ignition Temperature:	N/A
Evaporation Rate:	NE	Decomposition Temperature:	100-110°F (38°-43° C) (water will evaporate)
Flammability (solid, gas):	NE	Viscosity:	100-200 cP

NE – Not Established
N/A - Not Applicable

Section 10: Stability and Reactivity	
Stability:	Stable
Incompatibility:	ACID (Strong) - vigorous reaction, heat generated; MALEIC ANHYDRIDE - Alkali and other alkaline earth compounds, including magnesium compounds will cause explosive decomposition. PHOSPHORUS - when boiled with alkaline hydroxides yields mixed phosphine that may ignite spontaneously in air.
Hazardous Decomposition Products:	If container is left open at 100-110 F, water will evaporate causing product to become extremely viscous.
Hazardous Reactions/Polymerization:	Will not occur
Conditions to Avoid:	None known

Section 11: Toxicological Information		
Likely Routes of Exposure:		Ingestion, dermal and eye contact
Signs and Symptoms of Exposure:		Eye Contact: redness, tearing, conjunctivitis Skin Contact: drying, chapping, dermatitis
Health Hazards		
	Acute:	Ingestion generally causes purging of the bowels; Swallowing large amounts may lead to bowel obstruction. Potential eye and skin irritant.
	Chronic:	None known
Carcinogenicity		
	NTP:	No
	IARC:	No
	OSHA:	No

Section 12: Ecological Information (non-mandatory)
There is no data on the ecotoxicity of this product.

Section 13: Disposal Considerations (non-mandatory)	
Waste Disposal Methods:	Dispose of according to Federal and local regulations for non-hazardous waste.

Section 14: Transport Information (non-mandatory)
The product is not covered by international regulation on the transport of dangerous goods.
No transport warning required.

Section 15: Regulatory Information (non-mandatory)
N/A

Section 16: Other Information	
Date of Preparation:	29 May 2014
Last Modified Date:	12 August 2019
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APPENDIX D

TREATABILITY STUDY

LANGAN

TREATABILITY TESTING REPORT

for

1487 1st Avenue Redevelopment Site

New York, New York

NYSDEC BCP Site No. C231152

Prepared For:

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February 2023
Langan Project No. 100963701

LANGAN

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1.0 TREATABILITY TESTING OVERVIEW

Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. (Langan) performed the treatability testing for the proposed redevelopment of 1487 First Avenue located in New York, NY (the Site), consistent with the Interim Remedial Measures Work Plan, dated March 2022 . The goal of the treatability testing was to evaluate the performance of three iron based remedial options for the reduction of Contaminants of Concern (COC) using Site groundwater and rock. The following three remedial options were tested during the treatability testing:

- Low dose Zero Valent Iron (ZVI) – A low dosage of emulsified vegetable oil and ZVI (proprietary product SRS® ZVI (Appendix A) manufactured by Terra Systems Inc., Claymont, DE).
- High dose of ZVI - A high dosage of emulsified vegetable oil and ZVI (SRS® ZVI); and
- Provect - A proprietary product, Provect-ERD-CH4™+DVI (Appendix A), with fermentable carbon sources plus water soluble dual-valent iron (DVI) and antimethanogenic reagents (AMR) manufactured by Provectus Environmental Products™, Freeport, IL.

The treatability study was performed by Langan personnel at Langan's treatability facility at the New Jersey Institute of Technology (NJIT).

2.0 FIELD SAMPLING AND BENCH SCALE TESTING METHODS

The treatability testing involved field sample collection and bench scale testing. The methods of field sampling and bench testing are described in this section below:

2.1 Field Sample Collection and Analytical Sampling

Rock and groundwater samples were collected from the site on August 16, 2022. Rock samples were collected from cores C-1 and C-2 of boring LMW-8R-S. Boring log is provided in Appendix B. Groundwater samples were collected from LMW-7R-S using low-flow purging and sampling methods. The low-flow sampling sheet with groundwater quality parameters is provided in Appendix B. Groundwater samples were sent to SGS of Dayton, New Jersey (SGS) for analysis of volatile organic compounds (VOCs). The groundwater analytical results are provided in Appendix C.

2.2 Treatability Testing

The treatability testing involved test setup, baseline sampling, pH titration, reagent addition, and treatability sampling as described below.

2.2.1 Test Setup

Treatability jars were set up in the field after collecting rock and groundwater samples, on August 16, 2022 to quickly establish contact between rock and groundwater and thus minimize exposure of rock cores to ambient air. Assembled jars were transported to the Treatability Facility at NJIT for addition of remedial reagents and treatability testing.

2.2.2 Baseline Sampling

At Treatability Facility, baseline samples were collected from four treatability jars on August 18, 2022 and sent to SGS for analysis of VOCs. The baseline analytical results are provided in Appendix C.

2.2.3 pH Titration

Site groundwater and the rock sample were used to perform pH titration tests using a dry powder of calcium carbonate. Titrations were performed to determine the required dosage of calcium carbonate to increase the pH of the rock and groundwater to 7.4 standard units. Titration data is provided in Appendix D.

2.2.4 Reagent Addition

On August 26, 2022, treatability jars were spiked with 726 micrograms per liter (µg/L) of Tetrachloroethene (PCE). The treatability test consisted of four scenarios (one control and three treatment options), each in triplicate, using 12 jars in total. After spiking with PCE, remedial reagents were added to the treatability jars as per test setup summarized in Table 1. The safety data sheets of all reagents used in this study are summarized in Appendix A.

2.2.5 Treatability Sampling

Aqueous samples were collected from each of the treatability jars after adding remedial reagent at Day 0 on August 26, 2022 and Day 15 on September 9, 2022. The aqueous samples were sent to SGS for VOCs analysis. On September 30, 2022, all treatability jars were re-spiked with PCE to achieve concentration of approximately 1800 µg/L. After re-spiking, aqueous samples were collected from all treatability jars on September 30, 2022

(Day 35 after adding remedial reagents) and October 21, 2022 (Day 56 after adding remedial reagents) and sent to SGS for VOCs analysis. On November 21, 2022 (Day 87 after adding remedial reagents), aqueous sample from Control, ZVI Low dosage, and ZVI high dose treatment jar was collected and sent to SGS for VOC analysis. The pH and ORP were measured in all treatability jars on September 9, 2022, September 14, 2022 and September 29, 2022. The pH and ORP measurements are provided in Table 2.

3.0 RESULTS AND DISCUSSION

The results of field sampling, measurements collected at the treatability facility, and analytical laboratory data are summarized below.

3.1 Field Data

Analytical groundwater data for sample collected in the field are provided in Appendix C. The groundwater laboratory analytical results indicate concentrations of chloroform, PCE, and Trichloroethene (TCE) exceeding the New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values (SGVs) for Class GA Water (herein referred to as NYSDEC SGVs).

3.2 Treatability Testing Data

The pH titration data is provided in Appendix D. The pH and ORP measurements are in Table 2. The groundwater analytical results are provided in Appendix C and summary of results is provided in Table 3 through 7.

3.3 Baseline Analytical Data

Groundwater analytical results for the baseline samples are provided in Appendix C. The groundwater laboratory analytical results indicate concentrations of acetone, chloroform, PCE, and TCE exceeding NYSDEC SGVs.

3.3.1 Alkaline Reagent Demand

Titration tests were performed to determine the dosage of calcium carbonate required to increase the pH of the rock and groundwater to 7.4, which is the optimum pH for microorganism growth. Titration data is provided in Appendix D. Calcium carbonate dosage of 66 gram (g) per liter (L) of groundwater is required to raise the pH to 7.4.

3.3.2 pH and ORP Results

The pH and ORP were measured in all treatability jars at Day 14, Day 19, and Day 34 of reagents addition to the jars. The pH and ORP measurements are summarized in Table 2. The pH in the treatability jars ranged between 6.2 and 7.1 and was similar in the control jars and the jars with the remedial reagents. The ORP levels in the control jars was higher than the ORP levels in the jars with remedial reagents. ORP levels in the control jars ranged between +69 mV and +88 mV, while the ORP in the SRS ZVI Low Dose jars ranged between -588 mV and -243 mV; SRS ZVI high Dose jars ranged between -262 mV and -182 mV; and Provectus jars ranged between -103 mV and -81 mV (Table 2).

3.3.3 Effectiveness Results

Remedial reagent effectiveness was determined by calculating COC mass in each jar at the end of the specific time period (Day 0, Day 14, Day 35, Day 56, and Day 87) and comparing it to COC mass in control without remedial reagents. Average groundwater COC concentrations and mass at Day 0, Day 14, Day 35, Day 56, and Day 87 are provided in Table 3, Table 4, Table 5, Table 6 and Table 7, respectively. Summary of COC mass is provided in Table 8.

Decrease in groundwater PCE mass was observed in the jars with remedial reagents at Day 0, Day 14, Day 35, Day 56, and Day 87 as shown in the Graphs 1, 2, 3, 4, and 5, respectively. At Day 87, the PCE mass decreased by 100% (Table 9) both with SRS ZVI low dose and SRS ZVI high dose and 40% with Provect, as compared to the control. The data shows that SRS ZVI was more effective compared to Provect in degrading the PCE mass in groundwater and low dose of SRS ZVI are as effective as the high dose of SRS ZVI.

Increase in 2-butanone was observed in the ZVI treated jars. Increase in 2-butanone was more pronounced in the High Dose ZVI treatment, as compared to Low Dose ZVI and Provect treatment.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The treatability study results showed that among the remedial reagent tested, SRS ZVI was most effective in removing PCE mass. Both the low and high dosage of SRS ZVI removed 100% of PCE mass from groundwater. An increase in dosage is not necessarily needed, unless warranted by heterogeneity in site conditions (geochemical and hydraulic

characteristics, which will affect reagent demand in flow-through conditions). Therefore, SRS ZVI is recommended for field implementation. Although an increase in 2-butanone was observed in this particular study, the levels of 2-butanone are expected to attenuate with time and should be monitored as part of the performance monitoring program.

TABLES

Table 1
Treatability Testing
Test Setup
1487 First Ave, New York
Langan Project No. 100963701
February 2023

Target Reagent Dosages											
Reagent	**Initial PCE**	**Sodium Azide**	**Calcium Carbonate**	**TSC DC®**	**SRS®**	**10 micron ZVI**	**Ferrous Sulfide**	**DAP**	**Yeast Extract**	**Provect ERD-CH_4™+DVI**	**Additional PCE***
Unit	*µg/L*	*mg/L*	*g/L*	*Cells/mL*	*g/L*	*g/L*	*g/L*	*mg/L*	*mg/L*	*w/w*	*µg/L*
Control	726	3000									1800
SRS ZVI Low Dose	726		74	1.E+08	8	2	0.2	250	250		1800
SRS ZVI High Dose	726		74	1.E+08	16	4	0.4	250	250		1800
Provect	726		74	1.E+08						0.25%	1800

Reagent Volume and Quantities Added to Treatment Jars																
					Reagents											
Treatment Jar ID	**Treatment Jar Description**	**Size of Jar**	**Rock Mass**	**GW**	**Saturated PCE Solution**	**Sodium Azide**	**Calcium Carbonate**	**TSC DC®**	**SRS® Solution**	**10 micron ZVI**	**10% Ferrous Sulfide Solution**	**DAP**	**Yeast Extract**	**Provect ERD-CH_4™+DVI**	**Saturated PCE Solution***
Unit		*L*	*g*	*mL*	*mL*	*g*	*g*	*mL*	*mL*	*g*	*mL*	*g*	*g*	*mL*	*mL*
C-1	Control	1	264	420	2	1.26									5
C-2		1	264	420	2	1.26									5
C-3		1	264	420	2	1.26									5
Z-1	SRS ZVI Low Dose	1	264	420	2		31	0.40	3.5	0.84	0.70	0.11	0.09		5
Z-2		1	264	420	2		31	0.40	3.5	0.84	0.70	0.11	0.09		5
Z-3		1	264	420	2		31	0.40	3.5	0.84	0.70	0.11	0.09		5
Z-4	SRS ZVI High Dose	1	264	420	2		31	0.40	6.9	1.68	1.40	0.11	0.09		5
Z-5		1	264	420	2		31	0.40	6.9	1.68	1.40	0.11	0.09		5
Z-6		1	264	420	2		31	0.40	6.9	1.68	1.40	0.11	0.09		5
P-1	Provect	1	264	420	2		31	0.40						1.10	5
P-2		1	264	420	2		31	0.40						1.10	5
P-3		1	264	420	2		31	0.40						1.10	5

Notes:
GW - groundwater
ZVI - zero valent iron
PCE - tetrachloroethene
DAP - diammonium phosphate
Not Applicable
g - gram
mL - milliliter
µg/L - micrograms per liter
mg/L - milligrams per liter
w/w - weight percentage
SRS® is a emulsified vegetable oil substrate manufactured by Terra Systems Inc. (Claymont, DE).
Rock from boring LMW-8R-S and groundwater from LMW-7R-S were collected on August 16,2022 and added to treatability jars on site to minimize exposure of rock cores to ambient air.
Treatability jars were transported to the Langan Treatability Facility for addition of remedial reagents.
Treatability jars were spiked with PCE and remedial reagents were added on August 26, 2022.
All control bottles were dosed with 3 g/L of sodium azide to prevent native microbial activity.
TSI DC® is a bioaugmentation culture for reductive dechlorination of chlorinated ethenes manufactured by Terra Systems Inc. (Claymont, DE).
SRS® is a emulsified vegetable oil substrate manufactured by Terra Systems Inc. (Claymont, DE).
10 micron ZVI, Ferrous sulfide, DAP and yeast extract were provided by Terra Systems Inc. (Claymont, DE).
Provect-ERD-CH_4™+DVI is a proprietary product with fermentable carbon sources plus water soluble dual-valent iron (DVI) and antimethanogenic reagents (AMR) manufactured by Provectus Environmental Products™, Freeport, IL.
*All treatability test jars were re-spiked with saturated PCE on September 30, 2022 to achieve PCE concentration of 1800 µg/L.
Yeast extract and DAP were added to reach target concentrations as noted. However yeast extract and DAP supplied by the SRS formulation were also accounted for in the target concentration.

Table 2
Treatability Testing
pH and ORP
1487 First Ave, New York
Langan Project No. 100963701
February 2023

Treatment Jar ID	Treatment Jar Description	pH			ORP		
Unit		S.U.			mV		
Date		9/9/2022	9/14/2022	9/29/2022	9/9/2022	9/14/2022	9/29/2022
Days		14	19	34	14	19	34
C-1	Control	6.47	6.67	6.69	75	72	77
C-2		6.52	6.78	6.79	72	69	70
C-3		6.37	6.47	6.55	87	88	88
Z-1	SRS ZVI Low Dose	6.84	7.03	6.99	-243	-254	-255
Z-2		6.92	6.94	6.94	-273	-267	-268
Z-3		6.82	6.74	6.79	-562	-588	-560
Z-4	SRS ZVI High Dose	6.85	6.56	6.60	-255	-262	-260
Z-5		6.79	6.93	6.89	-182	-185	-184
Z-6		6.84	7.09	7.04	-202	-201	-202
P-1	Provect	6.53	6.21	6.30	-81	-83	-83
P-2		6.74	6.45	6.41	-91	-95	-94
P-3		6.76	7.06	6.99	-103	-99	-102

Notes:
ORP - oxidation reduction potential
S.U. - standard units
mV - millivolts
Treatability reagents were added to the jars on 8/26/2022.
pH and ORP were measured with Myron Ultrameter II™.

Table 3
Treatability Testing
Groundwater Contaminant Mass Reduction Calculations - Day 0
1487 First Ave, New York
Langan Project No. 100963701
February 2023

Treatment Type	Contaminants of Concern (COC)	Day 0 - Average Groundwater Concentration (µg/L)	Average Groundwater Mass (mg)	Average Groundwater Mass Reduction (%)	Total Groundwater Mass Reduction (%)
Control	Benzene	0.8	0.0003	-	-
	Toluene	1.9	0.0008	-	
	Ethylbenzene	0.9	0.0004	-	
	Xylene (total)	13.7	0.0058	-	
	Tetrachloroethene	**58.6**	**0.0246**	**-**	-
	Trichloroethene	17.9	0.0075	-	
	cis-1,2-Dichloroethene	126	0.0528	-	
	trans-1,2-Dichloroethene	1	0.0002	-	
	Vinyl chloride	0.8	0.0003	-	
	Acetone	116	0.0486	-	-
	2-Butanone (MEK)	7	0.0029	-	
SRS ZVI Low Dose	Benzene	0.8	0.0003	2%	75%
	Toluene	1.1	0.0004	45%	
	Ethylbenzene	1.0	0.0004	-8%	
	Xylene (total)	1.4	0.0006	90%	
	Tetrachloroethene	**9.1**	**0.0038**	**84%**	-40%
	Trichloroethene	5.7	0.0024	68%	
	cis-1,2-Dichloroethene	81	0.0340	36%	
	trans-1,2-Dichloroethene	1	0.0004	-68%	
	Vinyl chloride	1.3	0.0006	-68%	
	Acetone	105	0.0440	10%	-735%
	2-Butanone (MEK)	920	0.3863	-13229%	
SRS ZVI High Dose	Benzene	1.1	0.0005	-34%	69%
	Toluene	1.3	0.0005	33%	
	Ethylbenzene	1.5	0.0006	-62%	
	Xylene (total)	1.5	0.0006	89%	
	Tetrachloroethene	**6.4**	**0.0027**	**89%**	-36%
	Trichloroethene	4.8	0.0020	73%	
	cis-1,2-Dichloroethene	73	0.0307	42%	
	trans-1,2-Dichloroethene	1	0.0005	-139%	
	Vinyl chloride	5.1	0.0021	-546%	
	Acetone	142	0.0597	-23%	-835%
	2-Butanone (MEK)	1,004	0.4217	-14451%	
Provect	Benzene	0.5	0.0002	39%	83%
	Toluene	0.6	0.0003	67%	
	Ethylbenzene	0.6	0.0003	35%	
	Xylene (total)	1.2	0.0005	91%	
	Tetrachloroethene	**27.5**	**0.0115**	**53%**	-877%
	Trichloroethene	11.8	0.0050	34%	
	cis-1,2-Dichloroethene	112	0.0470	11%	
	trans-1,2-Dichloroethene	1	0.0002	1%	
	Vinyl chloride	0.8	0.0003	0%	
	Acetone	298	0.1252	-157%	-150%
	2-Butanone (MEK)	8	0.0034	-18%	

Notes:
µg/L - microgram per liter
mg - milligram
% - percentage
Mass reduction with treatment is calculated in comparison to mass in control.
Groundwater samples were collected for contaminant analysis on Day 0 (8/26/2022) of remedial reagents addition.

Table 4
Treatability Testing
Groundwater Contaminant Mass Reduction Calculations - Day 14
1487 First Ave, New York
Langan Project No. 100963701
February 2023

Treatment Type	Contaminants of Concern (COC)	Day 14 - Average Groundwater Concentration (µg/L)	Average Groundwater Mass (mg)	Average Groundwater Mass Reduction (%)	Total Groundwater Mass Reduction (%)
Control	Benzene	0.7	0.0003	-	-
	Toluene	1.9	0.0008	-	
	Ethylbenzene	1.2	0.0005	-	
	Xylene (total)	13.0	0.0055	-	
	Tetrachloroethene	**46.1**	**0.0194**	**-**	-
	Trichloroethene	15.3	0.0064	-	
	cis-1,2-Dichloroethene	104	0.0435	-	
	trans-1,2-Dichloroethene	1	0.0003	-	
	Vinyl chloride	1.2	0.0005	-	
	Acetone	278	0.1168	-	-
	2-Butanone (MEK)	10	0.0043	-	
SRS ZVI Low Dose	Benzene	0.7	0.0003	6%	58%
	Toluene	1.4	0.0006	26%	
	Ethylbenzene	0.6	0.0003	46%	
	Xylene (total)	4.3	0.0018	67%	
	Tetrachloroethene	**16.5**	**0.0069**	**64%**	-51%
	Trichloroethene	7.2	0.0030	53%	
	cis-1,2-Dichloroethene	60	0.0252	42%	
	trans-1,2-Dichloroethene	1	0.0002	32%	
	Vinyl chloride	12.3	0.0052	-931%	
	Acetone	116	0.0488	58%	-192%
	2-Butanone (MEK)	726	0.3049	-6971%	
SRS ZVI High Dose	Benzene	0.5	0.0002	26%	79%
	Toluene	0.8	0.0004	57%	
	Ethylbenzene	0.6	0.0003	50%	
	Xylene (total)	1.6	0.0007	88%	
	Tetrachloroethene	**5.5**	**0.0023**	**88%**	-50%
	Trichloroethene	4.4	0.0019	71%	
	cis-1,2-Dichloroethene	81	0.0339	22%	
	trans-1,2-Dichloroethene	1	0.0002	32%	
	Vinyl chloride	4.5	0.0019	-277%	
	Acetone	64	0.0270	77%	-220%
	2-Butanone (MEK)	859	0.3608	-8267%	
Provect	Benzene	0.7	0.0003	99%	81%
	Toluene	0.5	0.0002	31%	
	Ethylbenzene	0.6	0.0003	50%	
	Xylene (total)	1.3	0.0005	90%	
	Tetrachloroethene	**22.1**	**0.0093**	**52%**	-72%
	Trichloroethene	10.2	0.0043	33%	
	cis-1,2-Dichloroethene	98	0.0411	6%	
	trans-1,2-Dichloroethene	1	0.0002	32%	
	Vinyl chloride	0.8	0.0003	34%	
	Acetone	172	0.0724	38%	37%
	2-Butanone (MEK)	10	0.0041	6%	

Notes:
µg/L - microgram per liter
mg - milligram
% - percentage
Mass reduction with treatment is calculated in comparison to mass in control.
Groundwater samples were collected for contaminant analysis on Day 14 (9/9/2022) of remedial reagents addition.

Table 5
Treatability Testing
Groundwater Contaminant Mass Reduction Calculations - Day 35
1487 First Ave, New York
Langan Project No. 100963701
February 2023

Treatment Type	Contaminants of Concern (COC)	Average Groundwater Concentration (µg/L)	Average Groundwater Mass (mg)	Average Groundwater Mass Reduction (%)	Total Groundwater Mass Reduction (%)
Control	Benzene	0.6	0.0003	-	-
	Toluene	1.6	0.0007	-	
	Ethylbenzene	0.9	0.0004	-	
	Xylene (total)	9.5	0.0040	-	
	Tetrachloroethene	**1,946.7**	**0.8176**	**-**	-
	Trichloroethene	9.1	0.0038	-	
	cis-1,2-Dichloroethene	83	0.0349	-	
	trans-1,2-Dichloroethene	1	0.0002	-	
	Vinyl chloride	0.5	0.0002	-	
	Acetone	324	0.1362	-	-
	2-Butanone (MEK)	3	0.0013	-	
SRS ZVI Low Dose	Benzene	0.5	0.0002	11%	42%
	Toluene	1.2	0.0005	25%	
	Ethylbenzene	1.1	0.0005	-19%	
	Xylene (total)	4.5	0.0019	52%	
	Tetrachloroethene	**1,072.0**	**0.4502**	**45%**	32%
	Trichloroethene	2.4	0.0010	74%	
	cis-1,2-Dichloroethene	20	0.0084	76%	
	trans-1,2-Dichloroethene	1	0.0002	0%	
	Vinyl chloride	9.1	0.0038	-1656%	
	Acetone	195	0.0819	40%	-86%
	2-Butanone (MEK)	414	0.1740	-13710%	
SRS ZVI High Dose	Benzene	0.9	0.0004	-54%	50%
	Toluene	1.4	0.0006	15%	
	Ethylbenzene	1.2	0.0005	-30%	
	Xylene (total)	2.8	0.0012	71%	
	Tetrachloroethene	**870.3**	**0.3655**	**55%**	40%
	Trichloroethene	4.4	0.0019	51%	
	cis-1,2-Dichloroethene	24	0.0100	71%	
	trans-1,2-Dichloroethene	1	0.0004	-96%	
	Vinyl chloride	27.2	0.0114	-5137%	
	Acetone	208	0.0875	36%	-181%
	2-Butanone (MEK)	711	0.2986	-23600%	
Provect	Benzene	1.0	0.0004	-59%	63%
	Toluene	0.8	0.0003	52%	
	Ethylbenzene	0.6	0.0003	36%	
	Xylene (total)	2.4	0.0010	75%	
	Tetrachloroethene	**758.0**	**0.3184**	**61%**	44%
	Trichloroethene	8.8	0.0037	3%	
	cis-1,2-Dichloroethene	80	0.0337	3%	
	trans-1,2-Dichloroethene	1	0.0002	0%	
	Vinyl chloride	0.5	0.0002	-3%	
	Acetone	209	0.0877	36%	34%
	2-Butanone (MEK)	7	0.0031	-144%	

Notes:
µg/L - microgram per liter
mg - milligram
% - percentage
Mass reduction with treatment is calculated in comparison to mass in control.
Groundwater samples were collected for contaminant analysis on Day 35 (9/30/2022) of remedial reagents addition.

Table 6
Treatability Testing
Groundwater Contaminant Mass Reduction Calculations - Day 56
1487 First Ave, New York
Langan Project No. 100963701
February 2023

Treatment Type	Contaminants of Concern (COC)	Average Groundwater Concentration (µg/L)	Average Groundwater Mass (mg)	Average Groundwater Mass Reduction (%)	Total Groundwater Mass Reduction (%)
Control	Benzene	0.6	0.0002	-	-
	Toluene	1.2	0.0005	-	
	Ethylbenzene	0.8	0.0003	-	
	Xylene (total)	7.1	0.0030	-	
	Tetrachloroethene	**644.0**	**0.2705**	**-**	-
	Trichloroethene	5.6	0.0023	-	
	cis-1,2-Dichloroethene	63	0.0264	-	
	trans-1,2-Dichloroethene	1	0.0003	-	
	Vinyl chloride	0.7	0.0003	-	
	Acetone	241	0.1010	-	-
	2-Butanone (MEK)	4	0.0017	-	
SRS ZVI Low Dose	Benzene	0.5	0.0002	14%	43%
	Toluene	1.0	0.0004	18%	
	Ethylbenzene	0.9	0.0004	-4%	
	Xylene (total)	3.2	0.0013	55%	
	Tetrachloroethene	**2.1**	**0.0009**	**100%**	29%
	Trichloroethene	0.5	0.0002	90%	
	cis-1,2-Dichloroethene	1	0.0003	99%	
	trans-1,2-Dichloroethene	1	0.0002	26%	
	Vinyl chloride	1.0	0.0004	-41%	
	Acetone	130	0.0546	46%	-127%
	2-Butanone (MEK)	427	0.1791	-10219%	
SRS ZVI High Dose	Benzene	0.7	0.0003	-18%	31%
	Toluene	1.6	0.0007	-32%	
	Ethylbenzene	0.6	0.0003	24%	
	Xylene (total)	3.8	0.0016	47%	
	Tetrachloroethene	**1.8**	**0.0008**	**100%**	28%
	Trichloroethene	0.6	0.0002	90%	
	cis-1,2-Dichloroethene	3	0.0012	95%	
	trans-1,2-Dichloroethene	1	0.0003	12%	
	Vinyl chloride	6.6	0.0028	-871%	
	Acetone	168	0.0704	30%	-394%
	2-Butanone (MEK)	1,040	0.4367	-25053%	
Provect	Benzene	1.2	0.0005	-102%	46%
	Toluene	0.9	0.0004	22%	
	Ethylbenzene	0.8	0.0003	2%	
	Xylene (total)	2.4	0.0010	67%	
	Tetrachloroethene	**386.3**	**0.1623**	**40%**	-36%
	Trichloroethene	8.2	0.0035	-48%	
	cis-1,2-Dichloroethene	75	0.0315	-19%	
	trans-1,2-Dichloroethene	1	0.0003	0%	
	Vinyl chloride	0.7	0.0003	0%	
	Acetone	155	0.0651	36%	34%
	2-Butanone (MEK)	8	0.0032	-85%	

Notes:
µg/L - microgram per liter
mg - milligram
% - percentage
Mass reduction with treatment is calculated in comparison to mass in control.
Groundwater samples were collected for contaminant analysis on Day 56 (10/21/2022) of remedial reagents addition.

Table 7
Treatability Testing
Groundwater Contaminant Mass Reduction Calculations - Day 87
1487 First Ave, New York
Langan Project No. 100963701
February 2023

Treatment Type	Contaminants of Concern (COC)	Average Groundwater Concentration (µg/L)	Average Groundwater Mass (mg)	Average Groundwater Mass Reduction (%)	Total Groundwater Mass Reduction (%)
Control	Benzene	1.3	0.0005	-	-
	Toluene	1.7	0.0007	-	
	Ethylbenzene	1.8	0.0008	-	
	Xylene (total)	6.6	0.0028	-	
	Tetrachloroethene	**667.7**	**0.2804**	**-**	-
	Trichloroethene	5.6	0.0023	-	
	cis-1,2-Dichloroethene	55	0.0233	-	
	trans-1,2-Dichloroethene	2	0.0007	-	
	Vinyl chloride	1.6	0.0007	-	
	Acetone	299	0.1256	-	-
	2-Butanone (MEK)	9	0.0039	-	
SRS ZVI Low Dose	Benzene	0.5	0.0002	61%	20%
	Toluene	1.5	0.0006	13%	
	Ethylbenzene	1.3	0.0005	28%	
	Xylene (total)	5.8	0.0024	12%	
	Tetrachloroethene	**1.2**	**0.0005**	**100%**	30%
	Trichloroethene	0.5	0.0002	90%	
	cis-1,2-Dichloroethene	1	0.0002	99%	
	trans-1,2-Dichloroethene	1	0.0002	66%	
	Vinyl chloride	0.5	0.0002	67%	
	Acetone	129	0.0542	57%	-117%
	2-Butanone (MEK)	540	0.2268	-5686%	
SRS ZVI High Dose	Benzene	0.6	0.0003	50%	33%
	Toluene	1.7	0.0007	4%	
	Ethylbenzene	0.7	0.0003	62%	
	Xylene (total)	4.6	0.0019	30%	
	Tetrachloroethene	**0.7**	**0.0003**	**100%**	30%
	Trichloroethene	0.5	0.0002	90%	
	cis-1,2-Dichloroethene	1	0.0002	99%	
	trans-1,2-Dichloroethene	1	0.0002	66%	
	Vinyl chloride	0.5	0.0002	65%	
	Acetone	120	0.0504	60%	-210%
	2-Butanone (MEK)	834	0.3504	-8839%	
Provect	Benzene	NA	NA	NA	-
	Toluene	NA	NA	NA	
	Ethylbenzene	NA	NA	NA	
	Xylene (total)	NA	NA	NA	
	Tetrachloroethene	NA	NA	NA	-
	Trichloroethene	NA	NA	NA	
	cis-1,2-Dichloroethene	NA	NA	NA	
	trans-1,2-Dichloroethene	NA	NA	NA	
	Vinyl chloride	NA	NA	NA	
	Acetone	NA	NA	NA	-
	2-Butanone (MEK)	NA	NA	NA	

Notes:
µg/L - microgram per liter
mg - milligram
% - percentage
NA - not analyzed
Mass reduction with treatment is calculated in comparison to mass in control.
Groundwater samples were collected for contaminant analysis on Day 87 (11/21/2022) of remedial reagents addition

Table 8
Treatability Testing
Groundwater Contaminant Mass Summary
1487 First Ave, New York
Langan Project No. 100963701
February 2023

Treatment Type	Contaminants of Concern (COC)	Average Groundwater Mass (mg)					Mass Reduction between Day 0 and Day 56 or Day 87 (%)*	Mass Reduction between Day 35 and Day 56 or Day 87 (%)*
		Day 0	Day 14	Day 35	Day 56	Day 87		
		8/26/2022	9/9/2022	9/30/2022	10/21/2022	11/21/2022		
Control	Benzene	0.0003	0.0003	0.0003	0.0002	0.0005	-55%	-112%
	Toluene	0.0008	0.0008	0.0007	0.0005	0.0007	11%	-8%
	Ethylbenzene	0.0004	0.0005	0.0004	0.0003	0.0008	-95%	-91%
	Xylene (total)	0.0058	0.0055	0.0040	0.0030	0.0028	52%	31%
	Tetrachloroethene	0.0246	0.0194	0.8176	0.2705	0.2804	-1039%	66%
	Trichloroethene	0.0075	0.0064	0.0038	0.0023	0.0023	69%	39%
	cis-1,2-Dichloroethene	0.0528	0.0435	0.0349	0.0264	0.0233	56%	33%
	trans-1,2-Dichloroethene	0.0002	0.0003	0.0002	0.0003	0.0007	-191%	-193%
	Vinyl chloride	0.0003	0.0005	0.0002	0.0003	0.0007	-99%	-203%
	Acetone	0.0486	0.1168	0.1362	0.1010	0.1256	-158%	8%
	2-Butanone (MEK)	0.0029	0.0043	0.0013	0.0017	0.0039	-35%	-211%
SRS ZVI Low Dose	Benzene	0.0003	0.0003	0.0002	0.0002	0.0002	40%	9%
	Toluene	0.0004	0.0006	0.0005	0.0004	0.0006	7%	17%
	Ethylbenzene	0.0004	0.0003	0.0005	0.0004	0.0005	15%	24%
	Xylene (total)	0.0006	0.0018	0.0019	0.0013	0.0024	-123%	30%
	Tetrachloroethene	0.0038	0.0069	0.4502	0.0009	0.0005	77%	100%
	Trichloroethene	0.0024	0.0030	0.0010	0.0002	0.0002	91%	78%
	cis-1,2-Dichloroethene	0.0340	0.0252	0.0084	0.0003	0.0002	99%	96%
	trans-1,2-Dichloroethene	0.0004	0.0002	0.0002	0.0002	0.0002	41%	0%
	Vinyl chloride	0.0006	0.0052	0.0038	0.0004	0.0002	28%	89%
	Acetone	0.0440	0.0488	0.0819	0.0546	0.0542	-24%	33%
	2-Butanone (MEK)	0.3863	0.3049	0.1740	0.1791	0.2268	54%	-3%
SRS ZVI High Dose	Benzene	0.0005	0.0002	0.0004	0.0003	0.0003	42%	31%
	Toluene	0.0005	0.0004	0.0006	0.0007	0.0007	-28%	-22%
	Ethylbenzene	0.0006	0.0003	0.0005	0.0003	0.0003	54%	44%
	Xylene (total)	0.0006	0.0007	0.0012	0.0016	0.0019	-207%	-64%
	Tetrachloroethene	0.0027	0.0023	0.3655	0.0008	0.0003	89%	100%
	Trichloroethene	0.0020	0.0019	0.0019	0.0002	0.0002	89%	88%
	cis-1,2-Dichloroethene	0.0307	0.0339	0.0100	0.0012	0.0002	99%	98%
	trans-1,2-Dichloroethene	0.0005	0.0002	0.0004	0.0003	0.0002	58%	49%
	Vinyl chloride	0.0021	0.0019	0.0114	0.0028	0.0002	89%	98%
	Acetone	0.0597	0.0270	0.0875	0.0704	0.0504	16%	42%
	2-Butanone (MEK)	0.4217	0.3608	0.2986	0.4367	0.3504	17%	-17%
Provect	Benzene	0.0002	0.0003	0.0004	0.0005	NA	-128%	-20%
	Toluene	0.0003	0.0002	0.0003	0.0004	NA	-47%	-23%
	Ethylbenzene	0.0003	0.0003	0.0003	0.0003	NA	-33%	-33%
	Xylene (total)	0.0005	0.0005	0.0010	0.0010	NA	-92%	0%
	Tetrachloroethene	0.0115	0.0093	0.3184	0.1623	NA	-1307%	49%
	Trichloroethene	0.0050	0.0043	0.0037	0.0035	NA	30%	6%
	cis-1,2-Dichloroethene	0.0470	0.0411	0.0337	0.0315	NA	33%	7%
	trans-1,2-Dichloroethene	0.0002	0.0002	0.0002	0.0003	NA	-35%	-35%
	Vinyl chloride	0.0003	0.0003	0.0002	0.0003	NA	14%	-28%
	Acetone	0.1252	0.0724	0.0877	0.0651	NA	48%	26%
	2-Butanone (MEK)	0.0034	0.0041	0.0031	0.0032	NA	7%	-4%

Notes:
mg - milligram
% - percentage
NA - not analyzed
Groundwater samples were collected for contaminant analysis on Day 0, Day 14, Day 35, Day 56, and Day 87 of remedial reagents addition.
*Mass reduction in ZVI Low Dose and Provect treatments is based on Day 56 data. Only one treatment jar of ZVI Low Dose was sampled on Day 87 and none of the Provect treatment jars were sampled on Day 87. Two of the ZVI Low Dose treatment jars had developed cracks due to pressure buildup and were therefore compromised and were not sampled. Provect treatment was not considered effective and therefore the sampling was discontinued. Mass reduction in Control and ZVI high dose is based on Day 87 data.

Table 9
Treatability Testing
Groundwater PCE Mass Reduction
1487 First Ave, New York
Langan Project No. 100963701
February 2023

Treatment Type	Contaminants of Concern (COC)	Day 0 - Average Groundwater Concentration (µg/L)	Average Groundwater Mass (mg)	Average Groundwater Mass Reduction (%)
Contol	Tetrachloroethene	58.6	0.0246	-
SRS ZVI low Dose	Tetrachloroethene	9.1	0.0038	84%
SRS ZVI High Dose	Tetrachloroethene	6.4	0.0027	89%
Provect	Tetrachloroethene	27.5	0.0115	53%
Treatment Type	**Contaminants of Concern (COC)**	**Day 14 - Average Groundwater Concentration (µg/L)**	**Average Groundwater Mass (mg)**	**Average Groundwater Mass Reduction (%)**
Contol	Tetrachloroethene	46.1	0.0194	-
SRS ZVI low Dose	Tetrachloroethene	16.5	0.0069	64%
SRS ZVI High Dose	Tetrachloroethene	5.5	0.0023	88%
Provect	Tetrachloroethene	22.1	0.0093	52%
Treatment Type	**Contaminants of Concern (COC)**	**Day 35 - Average Groundwater Concentration (µg/L)**	**Average Groundwater Mass (mg)**	**Average Groundwater Mass Reduction (%)**
Contol	Tetrachloroethene	1,946.7	0.8176	-
SRS ZVI low Dose	Tetrachloroethene	1,072.0	0.4502	45%
SRS ZVI High Dose	Tetrachloroethene	870.3	0.3655	55%
Provect	Tetrachloroethene	758.0	0.3184	61%
Treatment Type	**Contaminants of Concern (COC)**	**Day 56 - Average Groundwater Concentration (µg/L)**	**Average Groundwater Mass (mg)**	**Average Groundwater Mass Reduction (%)**
Contol	Tetrachloroethene	644.0	0.2705	-
SRS ZVI low Dose	Tetrachloroethene	2.1	0.0009	100%
SRS ZVI High Dose	Tetrachloroethene	1.8	0.0008	100%
Provect	Tetrachloroethene	386.3	0.1623	40%
Treatment Type	**Contaminants of Concern (COC)**	**Day 87 - Average Groundwater Concentration (µg/L)**	**Average Groundwater Mass (mg)**	**Average Groundwater Mass Reduction (%)**
Contol	Tetrachloroethene	667.7	0.2804	-
SRS ZVI low Dose	Tetrachloroethene	1.2	0.0005	100%
SRS ZVI High Dose	Tetrachloroethene	0.7	0.0003	100%
Provect	Tetrachloroethene	NA	NA	NA

Notes:
µg/L - microgram per liter
mg - milligram
% - percentage
NA - not analyzed
Mass reduction with treatment is calculated in comparison to mass in control.
Groundwater samples were collected for contaminant analysis on Day 0 (8/26/2022) of remedial reagents addition.

Table 10
Treatability Testing
Groundwater Acetone Mass Reduction
1487 First Ave, New York
Langan Project No. 100963701
February 2023

Treatment Type	Contaminants of Concern (COC)	Day 0 - Average Groundwater Concentration (µg/L)	Average Groundwater Mass (mg)	Average Groundwater Mass Reduction (%)
Contol	Acetone	116	0.0486	-
SRS ZVI low Dose	Acetone	105	0.0440	10%
SRS ZVI High Dose	Acetone	142	0.0597	-23%
Provect	Acetone	298	0.1252	-157%
Treatment Type	**Contaminants of Concern (COC)**	**Day 14 - Average Groundwater Concentration (µg/L)**	**Average Groundwater Mass (mg)**	**Average Groundwater Mass Reduction (%)**
Contol	Acetone	278	0.1168	-
SRS ZVI low Dose	Acetone	116	0.0488	58%
SRS ZVI High Dose	Acetone	64.4	0.0270	77%
Provect	Acetone	172.3	0.0724	38%
Treatment Type	**Contaminants of Concern (COC)**	**Day 35 - Average Groundwater Concentration (µg/L)**	**Average Groundwater Mass (mg)**	**Average Groundwater Mass Reduction (%)**
Contol	Acetone	324.3	0.1362	-
SRS ZVI low Dose	Acetone	195.0	0.0819	40%
SRS ZVI High Dose	Acetone	208.3	0.0875	36%
Provect	Acetone	208.9	0.0877	36%
Treatment Type	**Contaminants of Concern (COC)**	**Day 56 - Average Groundwater Concentration (µg/L)**	**Average Groundwater Mass (mg)**	**Average Groundwater Mass Reduction (%)**
Contol	Acetone	240.5	0.1010	-
SRS ZVI low Dose	Acetone	129.9	0.0546	46%
SRS ZVI High Dose	Acetone	167.7	0.0704	30%
Provect	Acetone	154.9	0.0651	36%
Treatment Type	**Contaminants of Concern (COC)**	**Day 87 - Average Groundwater Concentration (µg/L)**	**Average Groundwater Mass (mg)**	**Average Groundwater Mass Reduction (%)**
Contol	Acetone	299.0	0.1256	-
SRS ZVI low Dose	Acetone	129.0	0.0542	57%
SRS ZVI High Dose	Acetone	120.0	0.0504	60%
Provect	Acetone	NA	NA	NA

Notes:
µg/L - microgram per liter
mg - milligram
% - percentage
NA - not analyzed
Mass reduction with treatment is calculated in comparison to mass in control.
Groundwater samples were collected for contaminant analysis on Day 0 (8/26/2022) of remedial reagents addition.

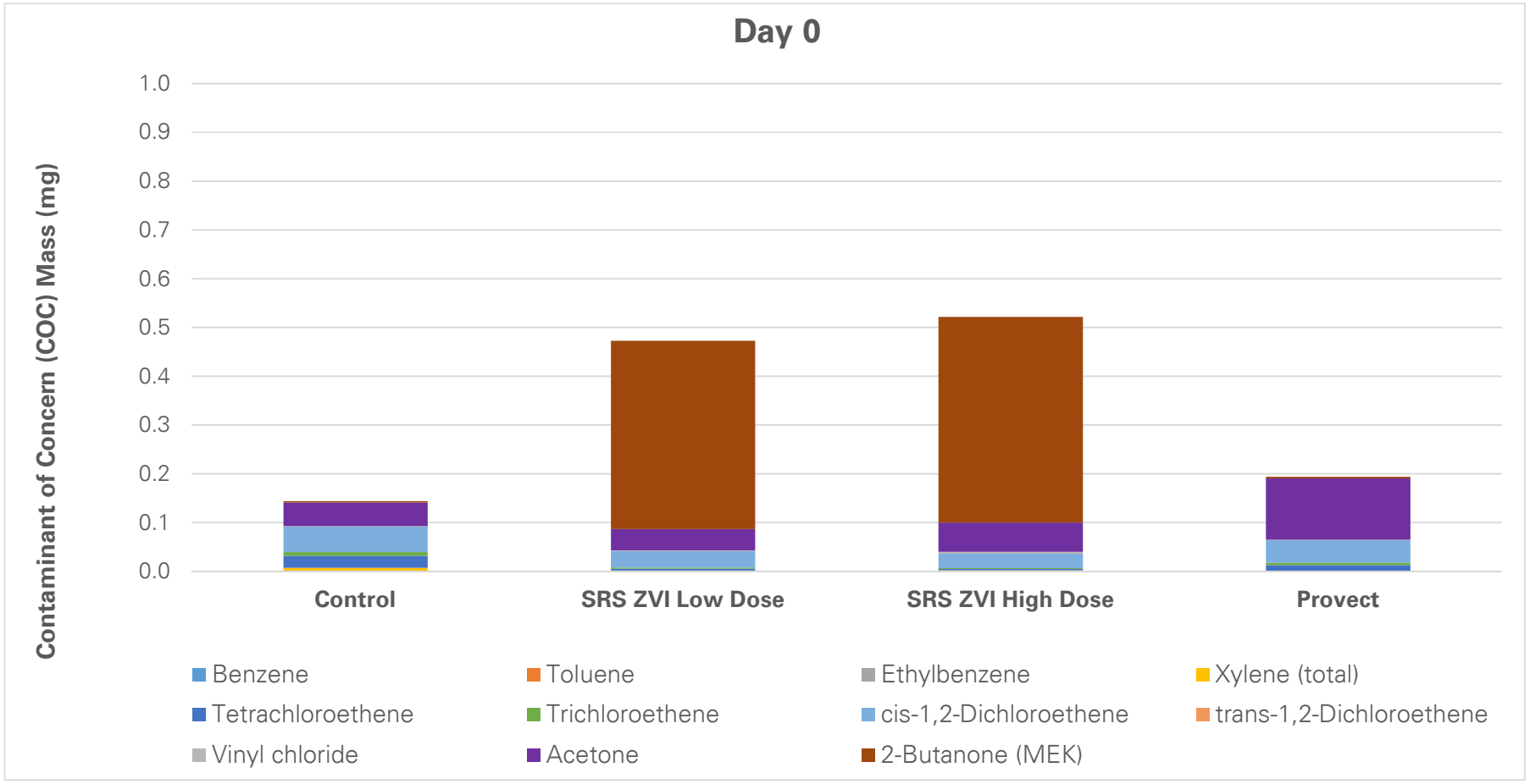
Table 11
Treatability Testing
Groundwater Acetone Mass
1487 First Ave, New York
Langan Project No. 100963701
February 2023

Treatment Type	Contaminants of Concern (COC)	Day 0 - Average Groundwater Concentration (µg/L)	Average Groundwater Mass (mg)	Average Groundwater Mass Reduction (%)
Contol	2-Butanone (MEK)	7	0.0029	-
SRS ZVI low Dose	2-Butanone (MEK)	920	0.3863	-13229%
SRS ZVI High Dose	2-Butanone (MEK)	1,004	0.4217	-14451%
Provect	2-Butanone (MEK)	8	0.0034	-18%
Treatment Type	**Contaminants of Concern (COC)**	**Day 14 - Average Groundwater Concentration (µg/L)**	**Average Groundwater Mass (mg)**	**Average Groundwater Mass Reduction (%)**
Contol	2-Butanone (MEK)	10	0.0043	-
SRS ZVI low Dose	2-Butanone (MEK)	726	0.3049	-6971%
SRS ZVI High Dose	2-Butanone (MEK)	859	0.3608	-8267%
Provect	2-Butanone (MEK)	10	0.0041	6%
Treatment Type	**Contaminants of Concern (COC)**	**Day 35 - Average Groundwater Concentration (µg/L)**	**Average Groundwater Mass (mg)**	**Average Groundwater Mass Reduction (%)**
Contol	2-Butanone (MEK)	3	0.0013	-
SRS ZVI low Dose	2-Butanone (MEK)	414	0.1740	-13710%
SRS ZVI High Dose	2-Butanone (MEK)	711	0.2986	-23600%
Provect	2-Butanone (MEK)	7	0.0031	-1
Treatment Type	**Contaminants of Concern (COC)**	**Day 56 - Average Groundwater Concentration (µg/L)**	**Average Groundwater Mass (mg)**	**Average Groundwater Mass Reduction (%)**
Contol	2-Butanone (MEK)	4	0.0017	-
SRS ZVI low Dose	2-Butanone (MEK)	427	0.1791	-10219%
SRS ZVI High Dose	2-Butanone (MEK)	1,040	0.4367	-25053%
Provect	2-Butanone (MEK)	8	0.0032	-85%
Treatment Type	**Contaminants of Concern (COC)**	**Day 87 - Average Groundwater Concentration (µg/L)**	**Average Groundwater Mass (mg)**	**Average Groundwater Mass Reduction (%)**
Contol	2-Butanone (MEK)	9	0.0039	-
SRS ZVI low Dose	2-Butanone (MEK)	540	0.2268	-5686%
SRS ZVI High Dose	2-Butanone (MEK)	834	0.3504	-8839%
Provect	2-Butanone (MEK)	NA	NA	NA

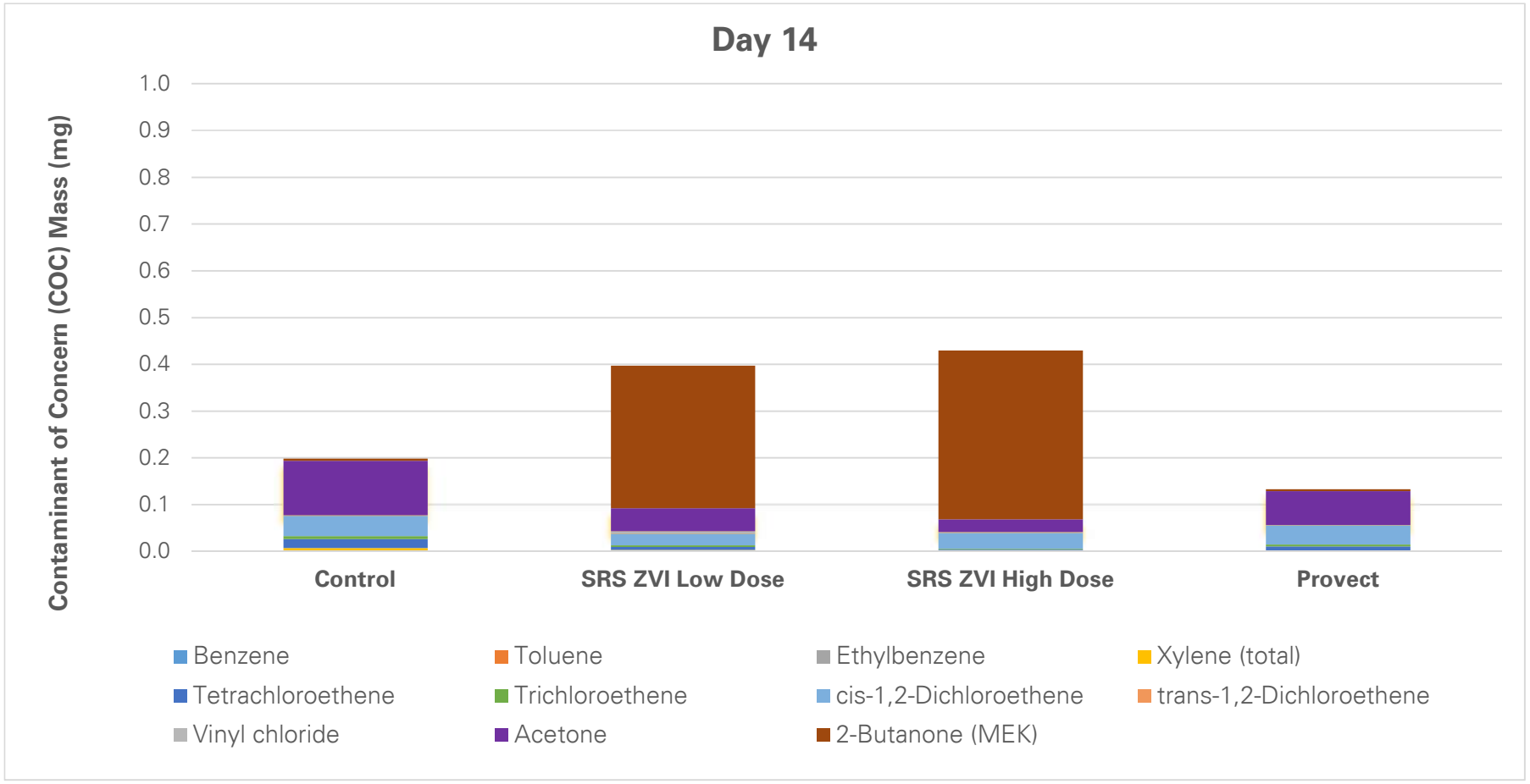
Notes:
µg/L - microgram per liter
mg - milligram
% - percentage
NA - not analyzed
Mass reduction with treatment is calculated in comparison to mass in control.
Groundwater samples were collected for contaminant analysis on Day 0 (8/26/2022) of remedial reagents addition.

GRAPHS

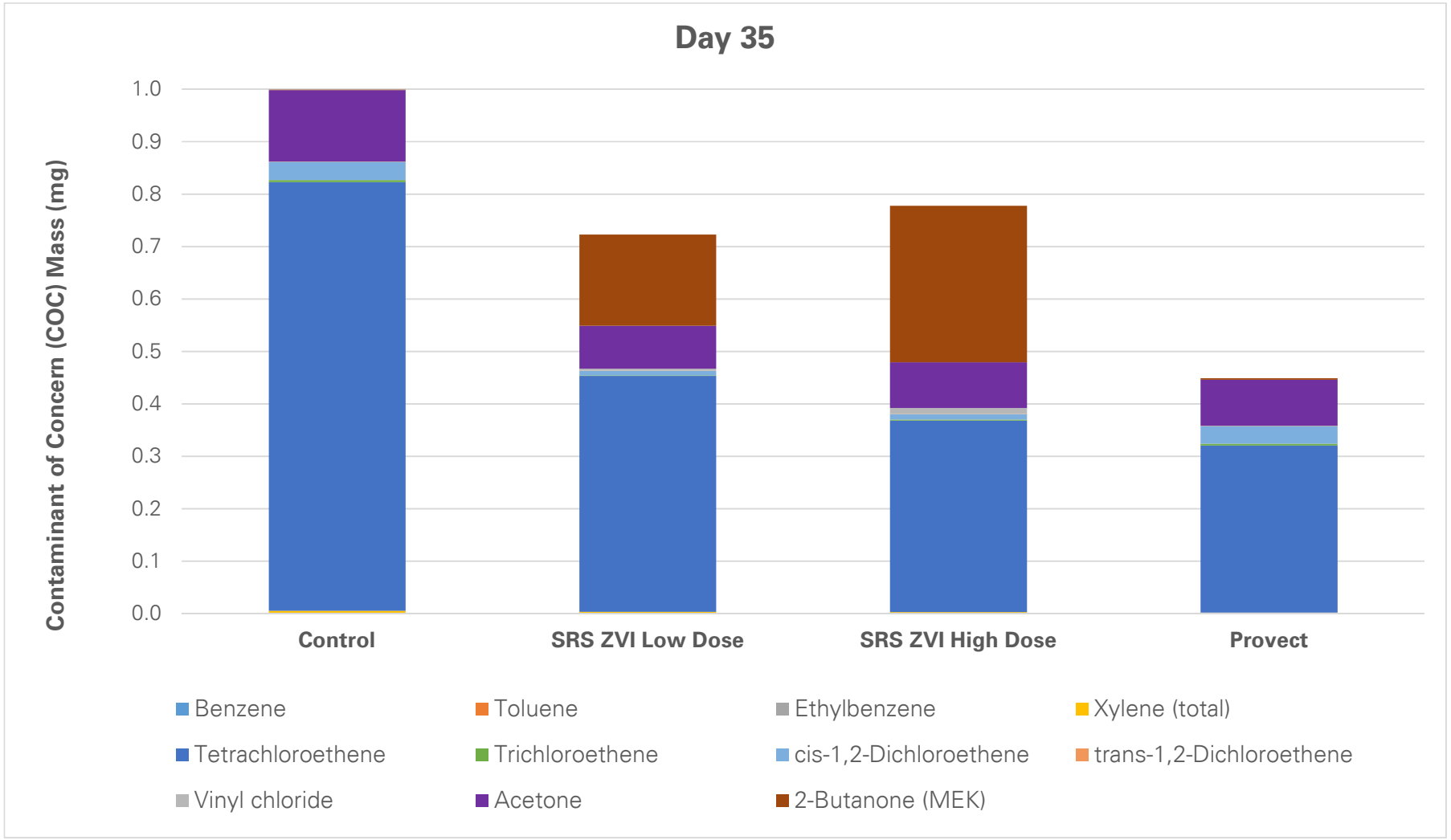
Graph 1
Treatability Testing
Groundwater Contaminant Mass - Day 0
1487 First Ave, New York
Langan Project No. 100963701
February 2023



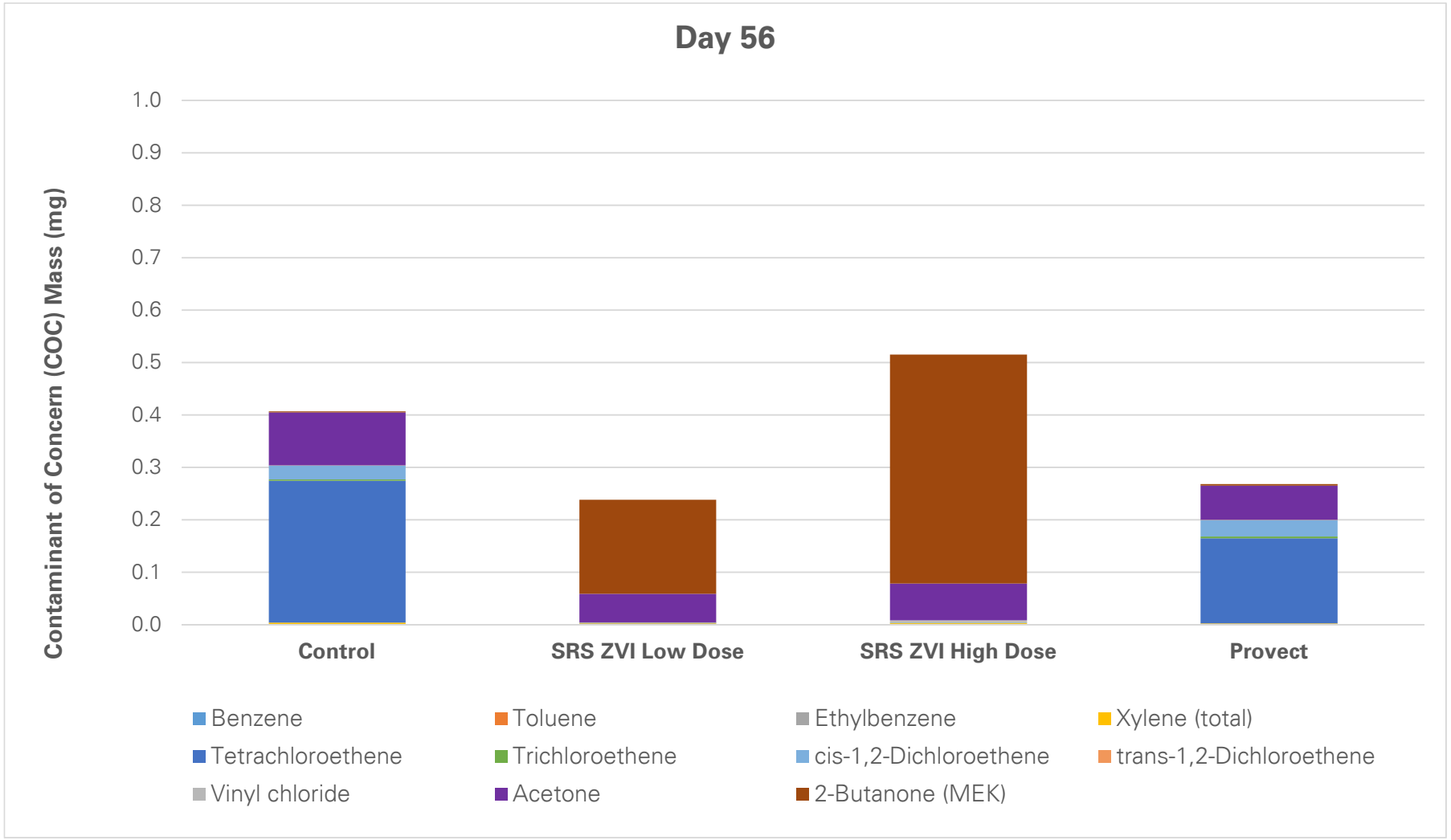
Graph 2
Treatability Testing
Groundwater Contaminant Mass - Day 14
1487 First Ave, New York
Langan Project No. 100963701
February 2023



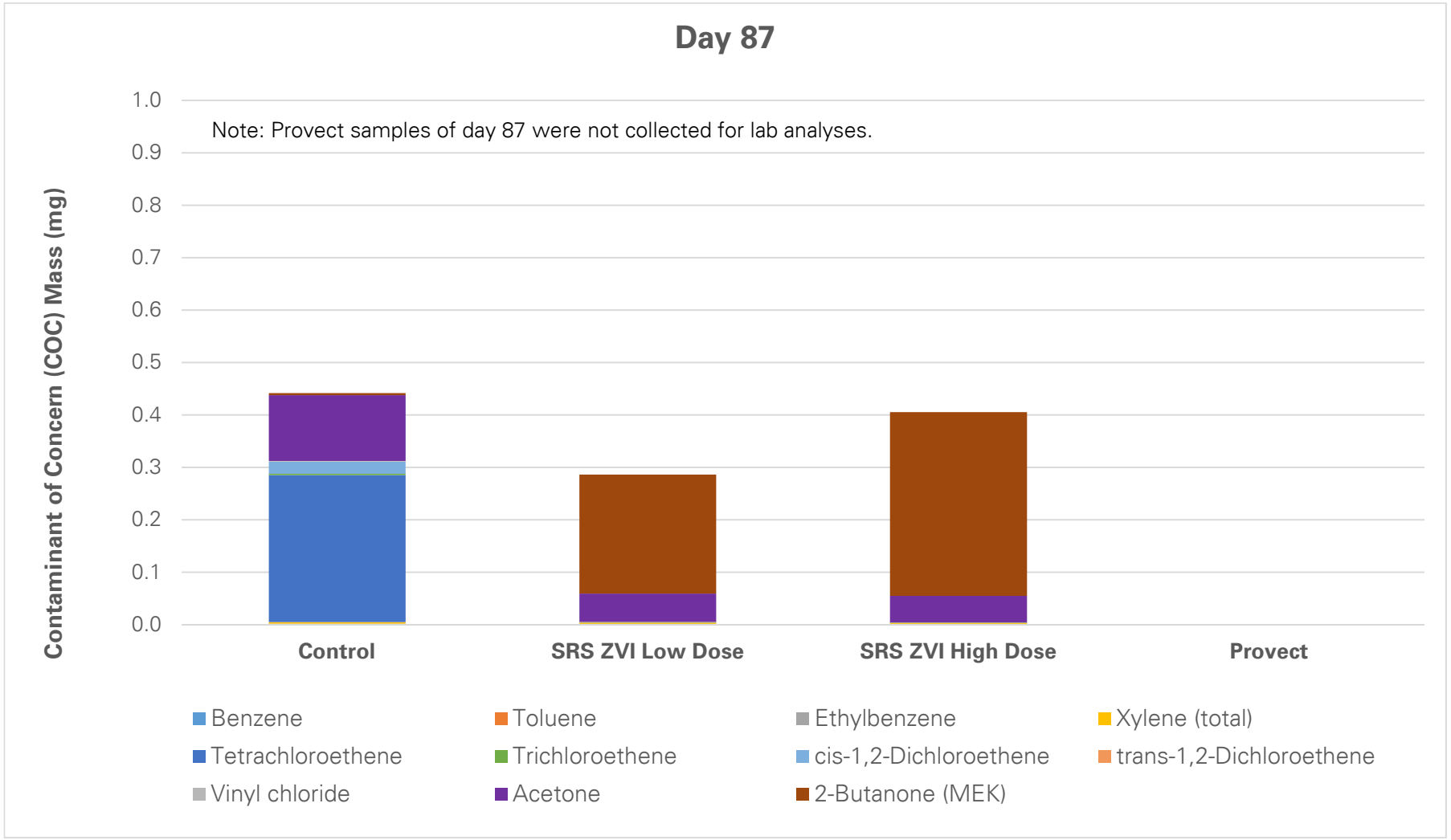
Graph 3
Treatability Testing
Groundwater Contaminant Mass - Day 35
1487 First Ave, New York
Langan Project No. 100963701
February 2023



Graph 4
Treatability Testing
Groundwater Contaminant Mass - Day 56
1487 First Ave, New York
Langan Project No. 100963701
February 2023



Graph 5
Treatability Testing
Groundwater Contaminant Mass - Day 87
1487 First Ave, New York
Langan Project No. 100963701
February 2023



APPENDIX

APPENDIX A

SAFETY DATA SHEETS

Patented *Injection Ready* 60% SRS®-FRL Large Droplet Emulsified Vegetable Oil (EVO) Substrate for Maximum Retention

SAFETY DATA SHEET

1. Product Identification

Synonyms:	60% Large Droplet Slow Release Substrate (SRS®-FRL) Emulsified Vegetable Oil Substrate (EVO)
Recommended Use:	Treatment of groundwater contaminated with chlorinated solvents and other anaerobically degradable compounds.
Supplier:	Terra Systems, Inc. 130 Hickman Road, Suite 1 Claymont, Delaware 19703 Telephone (302) 798-9553 Fax (302) 798-9554 www.terrasystems.net

2. Hazards Identification

Emergency Overview	
Caution:	May cause eye irritation.
Health Rating:	1 - Slight
Flammability Rating:	1 - Slight
Reactivity Rating:	1 - Slight
Contact Rating:	1 - Slight
Protective Equipment:	Goggles; Proper Gloves
Storage Color Code:	Green (General Storage)
Potential Health Effects	
Inhalation:	Not expected to be a health hazard. If heated, may produce vapors or mists that irritate the mucous membranes and cause irritation, dizziness, and nausea. Remove to fresh air.
Ingestion:	Not expected to be a health hazard via ingestion. Large doses may produce abdominal spasms or diarrhea.
Skin Contact:	No adverse effects expected. May cause irritation or sensitization in sensitive individuals.
Eye Contact:	May cause mild irritation, possible reddening.
Chronic Exposure:	No information found.
Aggravation of Pre-existing Conditions:	No information found.

3. Composition/Information on Ingredients

Ingredient	Synonyms	CAS #	Percent	Hazardous
Soy bean oil	Soya oil	8001-22-7	60%	No
Emulsifiers and proprietary nutrient package containing nitrogen, phosphorus and vitamin B_{12}		Mixture	7.5 - 10%	No
Sodium lactate	2-hydroxpropionic acid sodium salt	72-17-3	5.5%	Yes
Water		7732-18-5	Difference	No

The emulsifiers and nutrient package mixture is a trade secret and consists of ingredients of unknown acute toxicity.

4. First Aid Measures

Inhalation: Not expected to require first aid measures. Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion: If large amounts were swallowed, give water to drink and get medical advice.

Skin Contact: Not expected to require first aid measures. Wash exposed area with soap and water. Get medical advice if irritation develops.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.

5. Fire Fighting Measures

Fire: Flash point: >200 C (>392 F). Not considered to be a fire hazard. Isolate from heat and open flame.

Explosion: Not considered to be an explosion hazard. Closed containers may explode if exposed to extreme heat.

Fire Extinguishing Media: Dry chemical, foam, or carbon dioxide. Water spray may be ineffective on fire but can protect fire-fighters and cool closed containers. Use fog nozzles if water is used.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Clean-up personnel may require protective clothing. Absorb in sand, paper towels, “Oil Dry”, or other inert material. Scoop up and containerize for disposal. Flush trace residues to sewer with soap and water. Containerized waste may be sent to an approved waste disposal facility.

7. Handling and Storage

Store in a cool, dry, ventilated area. Do not store in sunlight or above 32 C (90 F). Keep container tightly closed and upright when not in use to prevent leakage. Observe all warnings and precautions listed for the product. Protect against physical damage.

If container begins to bulge, open cap slowly to release carbon dioxide from biological activity on the SRS-SD and call TSI.

Containers of this material are not hazardous when empty since they do not contain vapors or harmful substances; if drum or tote is observed to bulge, keep cap off as pressurization can occur on empty container with caps in place unless container is thoroughly rinsed.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:	None established.
Ventilation System:	Not expected to require any special ventilation.
Personal Respirators (NIOSH Approved):	Not expected to require personal respirator usage.
Skin Protection:	Wear protective gloves and clean body-covering clothing.
Eye Protection:	Use chemical safety goggles and/or a full-face shield where splashing is possible. Provide readily accessible eye wash stations and safety showers.
Slips, Trips, and Falls:	Material is slippery when spilled. Clean up with sand, paper towels, “Oil Dry”, or other inert material.

9. Physical and Chemical Properties

Appearance:	White liquid.
Odor:	Vegetable oil.
Solubility:	Miscible in water.
Specific Gravity (water=1):	0.95-0.98. 8.09 pounds per gallon.
pH:	6-7 (40% aqueous solution)
% Volatiles by volume @ 21C (70F):	Negligible.
Boiling Point:	≥ 100C (≥ 212F)
Melting Point:	No information found.
Flash Point (F):	No information found.
Autoignition Temperature:	No information found.
Decomposition Temperature:	No information found.
Vapor Density (Air=1):	No information found.
Vapor Pressure (mm Hg):	< 1.0 @ 20C (68F).
Evaporation Rate (BuAc=1):	No information found.
Viscosity @23 C (73 F):	213 centipoises (1.2 centipoises diluted 1:10)
Partition Coefficient (octanol/water):	No information found.

10. Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage.
Reactivity: Not reactive under ordinary conditions.
Hazardous Decomposition Products: Carbon dioxide and carbon monoxide may form when heated to decomposition.
Hazardous Polymerization: Will not occur.
Incompatibilities: Strong oxidizers, acids.
Conditions to Avoid: Incompatibles. Isolate from heat and open flame.

11. Toxicological Information

Soybean Oil: No information found on toxicology. It is not a carcinogen listed by IARC, NTP, NIOSH, OSHA, or ACGIH.
Emulsifier/Nutrient Mixture: No information found on toxicology. It is not a carcinogen listed by IARC, NTP, NIOSH, OSHA, or ACGIH.
Sodium Lactate: Oral rat LD50: 2,000 mg/kg. 100 mg caused mild irritation to rabbit eye in Draize test. This compound is not listed as a carcinogen by IARC, NRP, NIOSH, OSHA, or ACGIM.
SRS-SD: The toxicity of the mixture has not been measured.

12. Ecological Information

Environmental Fate: No information found.
Environmental Toxicity: No information found.
Degradability: This product is completely biodegradable under both aerobic and anaerobic conditions.
Soil Mobility: This compound will move with groundwater until the adsorbed onto the soil. Degradation products may be mobile.
Bioaccumulation Potential: No information found.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Not regulated.

15. Regulatory Information

OSHA STATUS: This product is not hazardous under the criteria of the Federal OSHA hazard Communication Standard 29 CFR 1910.1200. However, thermal processing and decomposition fumes from this product may be hazardous as noted in Section 10.

TSCA STATUS: No component of this product is listed on the TSCA inventory.

CERCLA (Comprehensive Response Compensation, and Liability Act): Not reportable.

SARA TITLE III (Superfund Amendments and Reauthorization Act)
Section 312 Extremely Hazardous Substances: None
Section 311/312 Hazard Categories: Non-hazardous Under Section 311/312
Section 313 Toxic Chemicals: None

RCRA STATUS: If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California safe Drinking Water and Toxic Enforcement Act of 1986. The product contains no chemicals known to the State of California to cause cancer.

16. Other Information

NFPA Ratings:	Health: **1** Flammability: **1** Reactivity: **1**
Date Prepared:	September 11, 2019
Revision Information:	SDS Section(s) changed since last revision of document include: Updated Section 3 Composition/Information on Ingredients.
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Prepared by: Terra Systems, Inc.
Phone Number: (302) 798-9553 (U.S.A.)

SAFETY DATA SHEET

Version 6.11
Revision Date 10/19/2022
Print Date 01/22/2023

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name : Sodium azide

Product Number : S2002
Brand : Sigma-Aldrich
Index-No. : 011-004-00-7
CAS-No. : 26628-22-8

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich Inc.
3050 SPRUCE ST
ST. LOUIS MO 63103
UNITED STATES

Telephone : +1 314 771-5765
Fax : +1 800 325-5052

1.4 Emergency telephone

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Oral (Category 2), H300
Acute toxicity, Inhalation (Category 2), H330
Acute toxicity, Dermal (Category 1), H310
Specific target organ toxicity - repeated exposure, Oral (Category 2), Brain, H373
Short-term (acute) aquatic hazard (Category 1), H400
Long-term (chronic) aquatic hazard (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram



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Signal Word	Danger
Hazard statement(s)	
H300 + H310 + H330	Fatal if swallowed, in contact with skin or if inhaled.
H373	May cause damage to organs (Brain) through prolonged or repeated exposure if swallowed.
H410	Very toxic to aquatic life with long lasting effects.
Precautionary statement(s)	
P260	Do not breathe dust.
P262	Do not get in eyes, on skin, or on clothing.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing.
P284	Wear respiratory protection.
P301 + P310 + P330	IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth.
P302 + P350 + P310	IF ON SKIN: Gently wash with plenty of soap and water. Immediately call a POISON CENTER or doctor/ physician.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P314	Get medical advice/ attention if you feel unwell.
P362	Take off contaminated clothing and wash before reuse.
P391	Collect spillage.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Contact with acids liberates very toxic gas.
Sodium Azide may react with lead and copper plumbing to form highly explosive metal azides., Rapidly absorbed through skin.

SECTION 3: Composition/information on ingredients

3.1 Substances

Formula	:	N_3Na
Molecular weight	:	65.01 g/mol
CAS-No.	:	26628-22-8
EC-No.	:	247-852-1
Index-No.	:	011-004-00-7

Component	Classification	Concentration
sodium azide		
	Acute Tox. 2; Acute Tox. 1; STOT RE 2; Aquatic Acute 1; Aquatic Chronic 1; H300, H330, H310, H373, H400, H410 M-Factor - Aquatic Acute: 1	<= 100 %

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	M-Factor - Aquatic Chronic: 1	

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice
First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled
After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

In case of skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

In case of eye contact
After eye contact: rinse out with plenty of water. Remove contact lenses.

If swallowed
If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Sand Special powder against metal fire Cement

Unsuitable extinguishing media
Foam Water

5.2 Special hazards arising from the substance or mixture
Sodium oxides
Not combustible.
Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters
Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

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5.4 Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid generation and inhalation of dusts in all circumstances. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling
Work under hood. Do not inhale substance/mixture.

Hygiene measures
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions
Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.
Do not store near acids.

Storage class
Storage class (TRGS 510): 6.1B: Non-combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

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Component	CAS-No.	Value	Control parameters	Basis
sodium azide	26628-22-8	C	0.29 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Not classifiable as a human carcinogen		
		C	0.11 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Not classifiable as a human carcinogen		
		C	0.1 ppm	USA. NIOSH Recommended Exposure Limits
		Potential for dermal absorption		
		C	0.3 mg/m3	USA. NIOSH Recommended Exposure Limits
		Potential for dermal absorption		
		C	0.1 ppm 0.3 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		Skin		

8.2 Exposure controls

Appropriate engineering controls
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

Personal protective equipment

Eye/face protection
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection
This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).
Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:KCL 741 Dermatril® L

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).
Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:KCL 741 Dermatril® L

Body Protection
protective clothing

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Respiratory protection
required when dusts are generated.
Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Control of environmental exposure
Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a)	Appearance	Form: crystalline Color: white
b)	Odor	odorless
c)	Odor Threshold	No data available
d)	pH	10 at 65 g/l at 25 °C (77 °F)
e)	Melting point/freezing point	Melting point/range: 370 - 425 °C (698 - 797 °F) - ASTM E 537-76 - Decomposition
f)	Initial boiling point and boiling range	No data available
g)	Flash point	()Not applicable
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	The product is not flammable. - Flammability (solids)
j)	Upper/lower flammability or explosive limits	No data available
k)	Vapor pressure	No data available
l)	Vapor density	No data available
m)	Density	1.850 g/cm3 at 20 °C (68 °F)
	Relative density	No data available
n)	Water solubility	65 g/l at 20 °C (68 °F) - completely soluble
o)	Partition coefficient: n-octanol/water	Not applicable for inorganic substances
p)	Autoignition temperature	309 °C (588 °F) at 1,013 hPa - Relative self-ignition temperature for solids
q)	Decomposition temperature	370 - 425 °C (698 - 797 °F), 0.8 kJ/kg -
r)	Viscosity	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	none

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9.2 Other safety information
No data available

SECTION 10: Stability and reactivity

10.1 Reactivity
highly reactive
Risk of dust explosion.
Contact with acids liberates very toxic gas.

10.2 Chemical stability
The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions
A risk of explosion and/or of toxic gas formation exists with the following substances:
Heavy metals
Bromine
dimethylsulfate
Acid
dichloromethane
carbon disulfide
sulfuric acid
Halogenated hydrocarbon
Copper
Lead
chromyl chloride
Generates dangerous gases or fumes in contact with:
Acids
Water
with
Heat.
Violent reactions possible with:
nitrates
benzoyl chloride
Generates dangerous gases or fumes in contact with:
Acids

10.4 Conditions to avoid
An explosion occurred when a mixture of sodium azide, methylene chloride, dimethyl sulfoxide, and sulfuric acid were being concentrated on a rotary evaporator.
Strong heating (decomposition).
Exposure to moisture.
no information available

10.5 Incompatible materials
Aluminum, Heavy metals

10.6 Hazardous decomposition products
In the event of fire: see section 5

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - Rat - 27 mg/kg
Remarks: (RTECS)
LC50 Inhalation - Rat - male and female - 4 h - 0.054 - 0.52 mg/l - dust/mist

(US-EPA)
LD50 Dermal - Rabbit - 20 mg/kg
Remarks: (RTECS)
No data available

Skin corrosion/irritation
Skin - In vitro study
Result: No skin irritation
(OECD Test Guideline 439)

Serious eye damage/eye irritation
Eyes - Bovine cornea
Result: No eye irritation - 4 h
(OECD Test Guideline 437)

Respiratory or skin sensitization
Local lymph node assay (LLNA) - Mouse
Result: negative
(OECD Test Guideline 429)

Germ cell mutagenicity
Test Type: Mutagenicity (mammal cell test): chromosome aberration.
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
Test Type: unscheduled DNA synthesis assay
Test system: Chinese hamster lung cells
Metabolic activation: without metabolic activation
Method: OECD Test Guideline 482
Result: negative
Test Type: sister chromatid exchange assay
Test system: Chinese hamster ovary cells
Metabolic activation: without metabolic activation
Method: OECD Test Guideline 479
Result: negative

Carcinogenicity

IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

Reproductive toxicity
No data available

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Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
Oral - May cause damage to organs through prolonged or repeated exposure.
- Brain

Aspiration hazard
No data available

11.2 Additional Information

RTECS: VY8050000
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Nausea, Headache, Vomiting, Laboratory experiments in animals have shown sodium azide to produce a profound hypotensive effect, demyelination of myelinated nerve fibers in the central nervous system, testicular damage, blindness, attacks of rigidity, and hepatic and cerebral effects., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish	flow-through test LC50 - Oncorhynchus mykiss (rainbow trout) - 2.75 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata - 0.35 mg/l - 96 h (OECD Test Guideline 201)
Toxicity to bacteria	

12.2 Persistence and degradability
The methods for determining the biological degradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Endocrine disrupting properties
No data available

12.7 Other adverse effects
No data available

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SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product
Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

SECTION 14: Transport information

DOT (US)
UN number: 1687 Class: 6.1 Packing group: II
Proper shipping name: Sodium azide
Reportable Quantity (RQ): 1000 lbs
Poison Inhalation Hazard: No

IMDG
UN number: 1687 Class: 6.1 Packing group: II EMS-No: F-A, S-A
Proper shipping name: SODIUM AZIDE
Marine pollutant : yes

IATA
UN number: 1687 Class: 6.1 Packing group: II
Proper shipping name: Sodium azide

SECTION 15: Regulatory information

SARA 302 Components

	CAS-No.	Revision Date
sodium azide	26628-22-8	2007-07-01

SARA 313 Components
The following components are subject to reporting levels established by SARA Title III, Section 313:

	CAS-No.	Revision Date
sodium azide	26628-22-8	2007-07-01

SARA 311/312 Hazards
Acute Health Hazard

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

SECTION 16: Other information

Further information
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the

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present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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Version: 6.11 Revision Date: 10/19/2022 Print Date: 01/22/2023

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TERRA SYSTEMS, INC DECHLORINATING BIOAUGMENTATION CULTURE (TSI-DC) SAFETY DATA SHEET

1. Product Identification

Synonyms: *Dehalococcoides* or DHC Microbial Consortium (TSI-DC)

Recommended Use: Bioremediation of groundwater contaminated with chlorinated solvents such as tetrachloroethene and trichloroethene.

Supplier:
Terra Systems, Inc.
130 Hickman Road, Suite 1
Claymont, Delaware 19703
Telephone (302) 798-9553
Fax (302) 798-9554
www.terrasystems.net

2. Hazards Identification

The available data indicates no known hazards associated with exposure to this product. Nevertheless, individuals who are allergic to enzymes or other related proteins should avoid exposure and handling. Health effects associated with exposure to similar organisms are listed below.

Emergency Overview

Caution: May cause eye irritation or discomfort if ingested or inhaled or allergic reaction to sensitive individuals.

Health Rating: 1 - Slight

Flammability Rating: 0 - None

Reactivity Rating: 0 - None

Contact Rating: 1 - Slight

Protective Equipment: Goggles; Proper Gloves

Storage Color Code: Green (General Storage)

Potential Health Effects

Inhalation: Not expected to be a health hazard. Hypersensitive individuals may experience breathing difficulties after inhalation of aerosols.

Ingestion: Not expected to be a health hazard via ingestion. Ingestion of large quantities may result in abdominal discomfort including nausea, vomiting, cramps, diarrhea, and fever.

Skin Contact: No adverse effects expected. May cause irritation or sensitization in sensitive individuals upon prolonged contact.

Eye Contact: May cause mild irritation, possible reddening unless immediately rinsed.

Chronic Exposure: No information found.
Aggravation of Pre-existing Conditions: No information found.

3. Composition/Information on Ingredients

Ingredient	Synonyms	CAS #	Percent	Hazardous
Non-hazardous ingredients	DHC	Not applicable	100%	No

4. First Aid Measures

Inhalation: Not expected to require first aid measures. Remove to fresh air. Get medical attention for any breathing difficulty or if allergic symptoms develop.

Ingestion: Thoroughly rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Get immediate medical attention. Never give anything by mouth to an unconscious or convulsing person.

Skin Contact: Not expected to require first aid measures. Wash exposed area with soap and water. Get medical advice if irritation develops.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.

Note to Physicians: All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this material may have occurred.

5. Fire Fighting Measures

Fire: Non-flammable. Flash point and flammable limits are not available.

Explosion: Not considered to be an explosion hazard.

Fire Extinguishing Media: Dry chemical, foam, carbon dioxide, or water.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Clean-up personnel may require protective clothing and avoid skin contact. Absorb in sand, paper towels, or other inert material. Scoop up and containerize for disposal. Flush trace residues to sewer with soap and water. Containerized waste may be sent to an approved waste disposal facility. After clean-up, disinfect all cleaning materials and storage containers that come in contact with the spilled liquid.

7. Handling and Storage

Avoid breathing breathe aerosol. Avoid contact with skin. Use personal protective equipment recommended in Section 8. Keep containers tightly closed in a cool, well-ventilated area. The DHC microbial consortium (TSI-DC) can be supplied in stainless steel kegs designed for maximum working pressure of 130 psi and equipped with pressure relief valves. The kegs are pressurized with nitrogen gas up to the pressure of 15 psi. Do not exceed pressure of 15 psi during transfer of DHC microbial consortium (TSI-DC) from kegs. Don't open keg if content of the keg is under pressure. DHC microbial consortium (TSI-DC) may be stored for up to 3 weeks at temperature 2-4°C without aeration. Avoid freezing.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:	None established.
Ventilation System:	Not expected to require any special ventilation. Provide adequate ventilation to remove odors.
Personal Respirators (NIOSH Approved):	Not expected to require personal respirator usage. If aerosols might be generated, use N95 respirator.
Skin Protection:	Wear protective rubber, nitrile, or vinyl gloves and clean body-covering clothing.
Eye Protection:	Use chemical safety goggles and/or a full face shield where splashing is possible. Provide readily accessible eye wash stations and safety showers.

9. Physical and Chemical Properties

Appearance:	Light greenish, murky liquid.
Odor:	Musty.
Solubility:	Soluble in water.
Specific Gravity (water=1):	1.0. 8.34 pounds per gallon.
pH:	6-8
% Volatiles by volume @ 21C (70F):	Negligible.
Boiling Point:	100C (212F)
Melting Point:	0C (32F)
Flash Point (F):	No information found.
Autoignition Temperature:	No information found.
Decomposition Temperature:	No information found.
Vapor Density (Air=1):	No information found.
Vapor Pressure (mm Hg):	24 mm @ 25C (77F).
Evaporation Rate (BuAc=1):	No information found.
Viscosity @23 C (73 F):	1 centipoises

Partition Coefficient (octanol/water): No information found.

10. Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage.
Reactivity: Not reactive under ordinary conditions.
Hazardous Decomposition Products: None.
Hazardous Polymerization: Will not occur.
Incompatibilities: Strong oxidizers, acids, water reactive materials.
Conditions to Avoid: Incompatibles. Isolate from heat and open flame.

11. Toxicological Information

TSI-DC No information found on toxicology. It is not a carcinogen listed by IARC, NTP, NIOSH, OSHA, or ACGIH. It has tested negative for pathogenic microorganisms such as *Bacillus cereus, Listeria monocytogens, Salmonella* sp., *Pseudomonas* sp., fecal coliform, total coliform, yeast, and mold.

12. Ecological Information

Environmental Fate: No information found.
Environmental Toxicity: No information found.
Degradability: This product is completely biodegradable under both aerobic and anaerobic conditions.
Soil Mobility: This compound will move with groundwater until the adsorbed onto the soil.
Bioaccumulation Potential: No information found.

13. Disposal Considerations

Waste Disposal Method: No special disposal methods are required. The material is compatible with all known biological treatment methods. To reduce odors and permanently inactivate microorganisms, mix 100 parts (by volume) of TSI-DC consortium with 1 part (by volume) of bleach. Dispose of in accordance with local, state and federal regulations.

14. Transport Information

DOT Classification: N/A
Labeling: NA
Shipping Name: Not regulated

15. Regulatory Information

OSHA STATUS: This product is not hazardous under the criteria of the Federal OSHA hazard Communication Standard 29 CFR 1910.1200.

TSCA STATUS: No component of this product is listed on the TSCA inventory.
CERCLA (Comprehensive Response Compensation, and Liability Act): Not reportable.

SARA TITLE III (Superfund Amendments and Reauthorization Act)
Section 312 Extremely Hazardous Substances: None
Section 311/312 Hazard Categories: Non-hazardous Under Section 311/312
Section 313 Toxic Chemicals: None

RCRA STATUS: If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California safe Drinking Water and Toxic Enforcement Act of 1986. The product contains no chemicals known to the State of California to cause cancer.

16. Other Information

NFPA Ratings:	Health: **1** Flammability: **0** Reactivity: **0**
Date Prepared:	March 26, 2014
Revision Information:	SDS Section(s) changed since last revision of document include: None.
Disclaimer:	Terra Systems, Inc. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. TERRA SYSTEMS, INC. MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS. ACCORDINGLY, TERRA SYSTEMS, INC. WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION.
Prepared by:	Terra Systems, Inc.
Phone Number:	(302) 798-9553 (U.S.A.)

TSI-Zero Valent Iron Powder (10 µm)
SAFETY DATA SHEET

Effective Date: 09-23-22

1. Product Identification

Synonyms: ZVI
Recommended Use: Environmental remediation, water treatment
Supplier: Terra Systems, Inc.
130 Hickman Road, Suite 1
Claymont, Delaware 19703
Telephone (302) 798-9553
Fax (302) 798-9554
www.terrasystems.net

2. Hazards Identification

2.1 Classification of the substance

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Not classified as hazardous

2.2 GHS Label elements, including precautionary statements

Signal Word:: not applicable
Hazard Statements: not applicable
Precautionary Statements: not applicable

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS – none

3. Composition/Information on Ingredients

3.1 Substances

Formula: Fe
Molecular Weight: 55.85 g/mol
CAS-No: 7439-89-8
EC No: 231-095-4

Carbon	1.5 to 2%
Sulfur	0.1%
Silicon	1 to 1.5%
Phosphorus	0.1%
Iron	Balance

4. First Aid Measures

Inhalation:	Remove to fresh air. Get medical attention for any breathing difficulty.
Ingestion:	Rinse mouth thoroughly. Do not induce vomiting. Seek medical attention if irritation, discomfort, or vomiting persists.
Skin Contact:	Wash exposed area with soap and water. Get medical advice if irritation develops.
Eye Contact:	Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.
Most important symptoms:	No Data Available

5. Fire Fighting Measures

Fire:	Flash point closed cup: 160 C (320 F). Not considered to be a fire hazard.
Explosion:	Not considered to be an explosion hazard.
Fire Extinguishing Media:	Use Class D or other metal extinguishing agent.
Special Information:	These materials, as coarse particles, are non-flammable and do not react with water or other materials used for extinguishing fire. Fine metal may pose a risk of fire or explosion if accumulated, mixed and confined with an ignition source. When handling fine particles generated from this material, avoid creating dust clouds and ignition sources. May release iron oxide fume if involved in a fire. In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode. Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Avoid contact with skin, eyes, and clothing.
Further information	Use water spray to cool unopened containers.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas.
For personal protection see Section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel. Contain spillage and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see Section 13). Keep in suitable closed containers for disposal.

7. Handling and Storage

7.1 Precautions for sage handling

Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition. No smoking. Take measures to prevent the buildup of electrostatic charge.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Keep in a dry place.

7.3 Specific end uses

Apart from the uses mentioned in section 1, no other specific uses are stipulated.

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8. Exposure Controls/Personal Protection

8.1 Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the workday.

Personal Respirators (NIOSH Approved):	Where risk assessment shows air-purifying respirators are appropriate, use a full-face particle respirator type N100 respirator cartridge as backup to engineering controls. When necessary, use NIOSH approved breathing equipment. .
Skin Protection:	Wear protective gloves appropriate for rates of diffusion and degradation and clean body-covering clothing.
Eye Protection:	Use chemical safety goggles and/or a full-face shield where splashing is possible. Provide readily accessible eye wash stations and safety showers.
General hygienic measures:	Perform routine housekeeping. Wash hands before breaks and at end of work. Avoid contact with skin, eyes, and clothing. Wash contaminated clothing before wearing again.
Slips, Trips, and Falls:	Material can be slippery when spilled. Clean up as described in Section 6.3.

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9. Physical and Chemical Properties

Appearance:	Powder
Odor:	No data available
Solubility:	No data available

Specific Gravity (water=1):	55.85 g/mL
pH:	no data available
Explosive limit lower:	no data available
Explosive limit upper:	no data available.
Boiling Point:	2,750º C
Melting Point:	1,535 ºC – lit.
Flash Point (closed cup):	no data available
Autoignition Temperature:	No information found
Decomposition Temperature:	No information found.
Vapor Density (Air=1):	Not determined
Vapor Pressure (mm Hg):	No information found
Evaporation Rate (BuAc=1):	No information found
Viscosity @20 C 6(8 F):	No information found
Partition Coefficient (octanol/water):	No information found

10. Stability and Reactivity

Stability:	No data available
Reactivity:	Stable under recommended storage conditions
Hazardous Decomposition Products:	No data available
Hazardous Polymerization:	Will not occur.
Incompatibilities:	Acids, Oxygen, Strong oxidizing agents , Halogens, Phosphorus
Conditions to Avoid:	Incompatibles. Isolate from heat and open flame.

11. Toxicological Information

11.1 Acute toxicity

Oral rat LD50: 30,000 mg/Kg.

Remarks: Nutritional and Gross Metabolic: Weight loss or decreased weight gain. Inhalation: no data available

Dermal: No data available

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: no data available

Respiratory or skin sensitization: no data available

Germ cell mutagenicity: no data available

Carcinogenicity

IARC: No component of this product present at levels than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH

NTP: No component of this product present at levels than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP

OSHA: No component of this product present at levels than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

Reproductive toxicity: No data available

Specific target organ toxicity – single exposure: No data available

Specific target organ toxicity – repeated exposure: No data available

Aspiration hazard: No data available

Additional information

RETCS: NO4565500

Overdose of iron components may have a corrosive effect on the gastrointestinal mucosa and be followed by necrosis, perforation and stricture formation. Several hours may elapse before symptoms that can include epigastric pain, diarrhea, vomiting, nausea and hematemesis occur. After apparent recovery, a person may experience metabolic acidosis, convulsions, and coma hours or days later. Further complications may develop leading to acute liver necrosis that can result in death due to hepatic coma. Long term inhalation exposure to iron (oxide fume or dust) can cause siderosis. Siderosis is considered to be a benign pneumoconiosis and does not normally cause significant physiologic impairment. Siderosis can be observed on x-rays with the lungs having a mottled appearance.

12. Ecological Information

Non-hazardous

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Not regulated.

15. Regulatory Information

United States (USA)

SARA Section 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302

SARA Section 313 (specific toxic chemical listings): None of ingredients is listed.

RCRA (hazardous waste code)L None of the ingredients is listed.

TSCA (Toxic Substances Control Act): All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act): None of the ingredients is listed

Proposition 65 (California)

Chemical known to cause cancer. None of the ingredients is listed

Chemicals known to cause reproductive toxicity for females: None of the ingredients is listed

Chemicals known to cause reproductive toxicity for males: None of the ingredients is listed.

Chemicals known to cause developmental toxicity: None of the ingredients is listed.

16. Other Information

Date Prepared:	September 23, 2022
Revision Information:	SDS Section(s) changed since last revision of document include: None.
Disclaimer:	Terra Systems, Inc. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. TERRA SYSTEMS, INC. MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS. ACCORDINGLY, TERRA

SYSTEMS, INC. WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION.

Prepared by: Terra Systems, Inc.
Phone Number: (302) 798-9553 (U.S.A.)

SAFETY DATA SHEET

Revision Date 24-Dec-2021 **Revision Number** 5

1. Identification

Product Name **Iron(II)sulfide**

Cat No. : **AC233300000; AC233300010; AC233300050**

CAS No 1317-37-9
Synonyms Ferrous sulfide

Recommended Use Laboratory chemicals.
Uses advised against Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company
Fisher Scientific Company
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Emergency Telephone Number For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11
Emergency Number **US:**001-201-796-7100 / **Europe:** +32 14 57 52 99
CHEMTREC Tel. No.**US:**001-800-424-9300 / **Europe:**001-703-527-3887

2. Hazard(s) identification

Classification
Classification under 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label Elements
None required

Hazards not otherwise classified (HNOC)
None identified

3. Composition/Information on Ingredients

Component	CAS No	Weight %
Iron sulfide (FeS)	1317-37-9	100

4. First-aid measures

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention.

Inhalation Remove from exposure, lie down. Remove to fresh air. If not breathing, give artificial respiration. Get medical attention.

Ingestion Do NOT induce vomiting. Get medical attention.

Most important symptoms and effects No information available.

Notes to Physician Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media Water spray. Carbon dioxide (CO_2). Dry chemical. Alcohol resistant foam.

Unsuitable Extinguishing Media No information available

Flash Point No information available
Method - No information available

Autoignition Temperature No information available

Explosion Limits
Upper No data available
Lower No data available
Sensitivity to Mechanical Impact No information available
Sensitivity to Static Discharge No information available

Specific Hazards Arising from the Chemical
Keep product and empty container away from heat and sources of ignition. Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Combustion Products
Sulfur oxides. Sulfides.
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.

NFPA

Health	Flammability	Instability	Physical hazards
1	0	0	N/A

6. Accidental release measures

Personal Precautions Use personal protective equipment as required. Ensure adequate ventilation. Avoid dust formation.

Environmental Precautions See Section 12 for additional Ecological Information.

Methods for Containment and Clean Up Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

7. Handling and storage

Handling Avoid contact with skin and eyes. Do not breathe dust. Ensure adequate ventilation. Wear personal protective equipment/face protection. Avoid dust formation.

Storage. Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Incompatible Materials. Strong oxidizing agents. Strong acids.

8. Exposure controls / personal protection

Exposure Guidelines

Legend

ACGIH - American Conference of Governmental Industrial Hygienists
OSHA - Occupational Safety and Health Administration
NIOSH IDLH: NIOSH - National Institute for Occupational Safety and Health

Engineering Measures None under normal use conditions.

Personal Protective Equipment

Eye/face Protection Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection No protective equipment is needed under normal use conditions.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State	Solid
Appearance	Grey
Odor	Rotten-egg like
Odor Threshold	No information available
pH	No information available
Melting Point/Range	1195 °C / 2183 °F
Boiling Point/Range	No information available
Flash Point	No information available
Evaporation Rate	Not applicable
Flammability (solid,gas)	No information available
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	Not applicable
Specific Gravity	4.840
Solubility	No information available
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available
Decomposition Temperature	No information available
Viscosity	Not applicable
Molecular Formula	Fe S
Molecular Weight	87.92

10. Stability and reactivity

Reactive Hazard None known, based on information available

Stability Moisture sensitive.

Conditions to Avoid Incompatible products. Exposure to moist air or water.

Incompatible Materials Strong oxidizing agents, Strong acids

Hazardous Decomposition Products Sulfur oxides, Sulfides

Hazardous Polymerization No information available.

Hazardous Reactions None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information No acute toxicity information is available for this product

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Iron sulfide (FeS)	Not listed	LD50 > 2000 mg/kg (Rat)	Not listed

Toxicologically Synergistic Products No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation No information available

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS No	IARC	NTP	ACGIH	OSHA	Mexico
Iron sulfide (FeS)	1317-37-9	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure None known

STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects,both acute and delayed No information available

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

Do not empty into drains.

Persistence and Degradability Soluble in water Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation No information available.

Mobility Will likely be mobile in the environment due to its water solubility.

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT Not regulated
TDG Not regulated
IATA Not regulated
IMDG/IMO Not regulated

15. Regulatory information

United States of America Inventory

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	TSCA - EPA Regulatory Flags
Iron sulfide (FeS)	1317-37-9	X	ACTIVE	-

Legend:
TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)
X - Listed
'-' - Not Listed

TSCA 12(b) - Notices of Export Not applicable

International Inventories
Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

Component	CAS No	DSL	NDSL	EINECS	PICCS	ENCS	ISHL	AICS	IECSC	KECL
Iron sulfide (FeS)	1317-37-9	X	-	215-268-6	X	X	X	X	X	KE-21125

KECL - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

U.S. Federal Regulations

SARA 313 Not applicable

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA - Occupational Safety and Health Administration Not applicable

CERCLA Not applicable

California Proposition 65 This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Iron sulfide (FeS)	-	-	-	-	X

U.S. Department of Transportation

Reportable Quantity (RQ): N
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

Authorisation/Restrictions according to EU REACH

Safety, health and environmental regulations/legislation specific for the substance or mixture

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
Iron sulfide (FeS)	1317-37-9	Not applicable	Not applicable	Not applicable	Not applicable

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Iron sulfide (FeS)	1317-37-9	Not applicable	Not applicable	Not applicable	Not applicable

16. Other information

Prepared By Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Revision Date 24-Dec-2021
Print Date 24-Dec-2021
Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS

Diammonium Phosphate
SAFETY DATA SHEET

Effective Date: 01-01-2018

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1. Product Identification

Synonyms:	Diammonium Phosphate, Ammonium Phosphate Dibasic
Recommended Use:	Treatment of groundwater contaminated with chlorinated solvents and other anaerobically degradable compounds.
Supplier:	Terra Systems, Inc. 130 Hickman Road, Suite 1 Claymont, Delaware 19703 Telephone (302) 798-9553 Fax (302) 798-9554 www.terrasystems.net

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2. Hazards Identification

Emergency Overview	
Caution:	May cause eye and skin irritation. Acute aquatic toxicity.
Health Rating:	2 - Moderate
Flammability Rating:	0 - None
Reactivity Rating:	0 - None
Contact Rating:	2 - Moderate
Protective Equipment:	Goggles; Proper Gloves
Storage Color Code:	Orange (General Storage)
Potential Health Effects	
Inhalation:	May be harmful if inhaled. Causes respiratory tract irritation.
Ingestion:	May be harmful if swallowed.
Skin Contact:	Causes skin irritation.
Eye Contact:	Causes eye irritation.
Chronic Exposure:	No information found No adverse effects expected
Aggravation of Pre-existing Conditions:	No information found

3. Composition/Information on Ingredients

Ingredient	CAS#	Percent	Hazardous
Diammonium Phosphate	7783-28-0	100	Yes

Molecular Weight: 132.1
Chemical Formula: $(NH_4)_2PO_4$

4. First Aid Measures

Inhalation: Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion: If swallowed, give water to rinse mouth and get medical advice.

Skin Contact: Wash exposed area with soap and water. Get medical advice if irritation develops.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.

5. Fire Fighting Measures

Fire: Not considered to be a fire hazard.

Explosion: Not considered to be an explosion hazard.

Fire Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

Hazardous Combustion Products: Hazardous decomposition products formed under fire conditions – nitrogen oxides and phosphorus oxides.

6. Accidental Release Measures

Clean-up personnel should wear protective clothing and gloves. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Scoop up and containerize for disposal. Discharge into environment should be avoided. Containerized waste may be sent to an approved waste disposal facility.

7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Avoid long storage times. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide adequate exhaust ventilation where dust is formed. Containers of this material may be hazardous when empty since they do retain product residues (vapors, liquid). Observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:	None established.
Ventilation System:	Not expected to require any special ventilation.
Personal Respirators (NIOSH Approved):	For nuisance exposures, use type P95 particle respirator. For higher level protection use type OV/AG/P99 respirator cartridges.
Skin Protection:	Wear protective nitrile rubber gloves (at least 0.11 mm thick) and clean impervious body-covering clothing.
Eye Protection:	Use chemical safety goggles and/or a full face shield where splashing is possible. Provide readily accessible eye wash stations and safety showers.

9. Physical and Chemical Properties

Appearance:	White crystalline.
Odor:	Ammonia.
Solubility:	About 132 g/L at 20 C (68 F)
Specific Gravity (water=1):	1.62 g/cm^3
pH:	7.5-9.0 at 132 g/L at 25 C (77 F)
% Volatiles by volume @ 21C (70F):	No information found.
Boiling Point:	No data available
Melting Point:	155 C (311 F)
Flash Point (F):	No information found.
Autoignition Temperature:	No information found
Decomposition Temperature:	No information found.
Vapor Density (Air=1):	No information found.
Vapor Pressure (mm Hg):	No information found.
Evaporation Rate (BuAc=1):	No information found.
Viscosity @23 C (73 F):	No information found.
Partition Coefficient (octanol/water):	No information found

Terra Systems, Inc.
130 Hickman Road, Suite 1, Claymont, Delaware 19703
Contact: Michael Free, VP, Sales and Marketing
Office: 302-798-9553; Cell: 484-889-2214 Email: mfree@terrasystems.net

10. Stability and Reactivity

Stability:	Stable under ordinary conditions of use and storage.
Reactivity:	Not reactive under ordinary conditions.
Hazardous Decomposition Products:	Nitrogen oxides and oxides of phosphorus may form when heated to decomposition.
Hazardous Polymerization:	Will not occur.
Incompatibilities:	Avoid strong oxidizing agents, strong acids, strong bases, and magnesium.
Conditions to Avoid:	Incompatibles. Isolate from heat and open flame.

11. Toxicological Information

Acute Toxicity:	Oral LD50 rat 6,500 mg/lg Inhalation LC50 – no data available Dermal LD50 – rabbit 7,950 mg/kg
Chronic Toxicity:	Carcinogenicity – no component of this product present at levels greater than 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC, ACGIH, NTP, or OSHA. Reproductive toxicity – no data available. Teratogenicity – no data available.

12. Ecological Information

Environmental Fate:	Mobile with water and biodegradable.
Environmental Toxicity:	Toxic to fish. LC50 *Oncorhynhus mykiss* (rainbow trout) 26.5 mg/L – 96 hr. LC50 *Pimephales promelas* (fathead minnow) 33 mg/L -96 hr.
Degradability:	No information is available.
Soil Mobility:	No information is available.
Bioaccumulation Potential:	No information found.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use, or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Non-hazardous - not regulated.

15. Regulatory Information

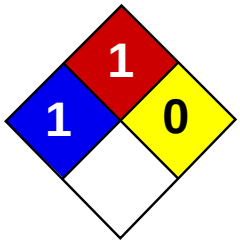
This product is considered an irritant by the U. S. Occupational Safety and Health Administration's Hazard Communication Standard.

16. Other Information

NFPA Ratings:	Health: **2** Flammability: **0** Reactivity: **0**
Date Prepared:	January 1, 2018
Revision Information:	SDS Section(s) changed since last revision of document include: None.
Disclaimer:	Terra Systems, Inc. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. TERRA SYSTEMS, INC. MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS. ACCORDINGLY, TERRA SYSTEMS, INC. WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION.
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Health	1
Fire	1
Reactivity	0
Personal Protection	E

Material Safety Data Sheet
Yeast extract MSDS

Section 1: Chemical Product and Company Identification

Product Name: Yeast extract

Catalog Codes: SLY1108

CAS#: 8013-01-2

RTECS: ZF6610000

TSCA: TSCA 8(b) inventory: Yeast extract

CI#: Not available.

Synonym:

Chemical Name: Not available.

Chemical Formula: Not available.

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Yeast extract	8013-01-2	100

Toxicological Data on Ingredients: Not applicable.

Section 3: Hazards Identification

Potential Acute Health Effects: Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects:
Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available.

Section 4: First Aid Measures

Eye Contact: Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used.

Skin Contact:

After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cold water may be used. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact: Not available.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation: Not available.

Ingestion:
Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: Not available.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill:
Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:
Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Section 7: Handling and Storage

Precautions:
Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not breathe dust.

Storage:
Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Combustible materials should be stored away from extreme heat and away from strong oxidizing agents.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Granular solid.)

Odor: Characteristic.

Taste: Not available.

Molecular Weight: Not available.

Color: Yellowish.

pH (1% soln/water): Not available.

Boiling Point: Not available.

Melting Point: Decomposes.

Critical Temperature: Not available.

Specific Gravity: Not available.

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water.

Solubility: Easily soluble in cold water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Not available.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: No.

Section 11: Toxicological Information

Routes of Entry: Not available.

Toxicity to Animals:
LD50: Not available. LC50: Not available.

Chronic Effects on Humans: Not available.

Other Toxic Effects on Humans: Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Nuisance dust.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations: TSCA 8(b) inventory: Yeast extract

Other Regulations: Not available..

Other Classifications:

WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC):

This product is not classified according to the EU regulations.

HMIS (U.S.A.):

Health Hazard: 1

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 1

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Safety glasses.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/10/2005 08:33 PM

Last Updated: 05/21/2013 12:00 PM

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Safety Data Sheet (SDS)

OSHA HazCom 2012 Standard 29 CFR 1910.1200. Prepared to GHS Rev03.

Printing date 06/05/2016 Reviewed on 09/11/2018

* 1 Identification

Trade name: Provect-CH4® and Provect-CH4 Advanced Methanogen Inhibitor (AMR)

· **Product description**
Remediation product supplement for use in controlling methane production and reducing methane concentrations in ground water, soil gas/vapor and indoor air. Can be used in landfill management and in various environmental applications associated with the treatment of soil, sediment and groundwater. Not for use in potable water sources.

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Provectus Environmental Products
2871 W. Forest Road
Suite 2
Freeport, IL 61032
Phone: 815-650-2230
Fax: 815-650-2232
www.provectusenvironmental.com
· **Emergency telephone number:** 815-650-2230

* 2 Hazard(s) identification

· **Classification of the substance or mixture**
The substance is not classified according to the Globally Harmonized System (GHS).

· **Label elements**
· **GHS label elements** Non-Regulated Material
· **Hazard pictograms** Non-Regulated Material
· **Signal word** Non-Regulated Material
· **Hazard statements** Non-Regulated Material
· **Classification system:**
· **NFPA ratings (scale 0 - 4)**



Health = 0
Fire = 0
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 0
Fire = 0
Reactivity = 0

* 3 Composition/information on ingredients

Proprietary Red Yeast Rice Extract (CAS 8013-01-2)	0-50%
Proprietary Natural Garlic Oil Juice (CAS 539-86-6)	50-100%

· **Chemical characterization:** Dry powder or liquid
· **Description:** Individual or mixture of the substances listed above with nonhazardous additions.

* 4 First-aid measures

· **Description of first aid measures**
· **General information:** Flush well with water; fresh air.

(Contd. on page 2)

Safety Data Sheet (SDS)

OSHA HazCom 2012 Standard 29 CFR 1910.1200. Prepared to GHS Rev03.

Printing date 06/05/2016 Reviewed on 09/11/2018

(Contd. of page 1)

Provect-CH4® and Provect-CH4 Advanced Methanogen Inhibitor (AMR))

· ***After inhalation:*** Supply fresh air; consult doctor in case of complaints.
· ***After skin contact:*** Generally the product does not irritate the skin.
· ***After eye contact:*** Rinse opened eye for several minutes under running water.
· ***After swallowing:*** Give large amounts of water. If symptoms persist consult doctor.

· ***Most important symptoms and effects, both acute and delayed*** No further relevant information available.
· ***Indication of any immediate medical attention and special treatment needed***
No further relevant information available.

5 Fire-fighting measures

· ***Extinguishing media***
· ***Suitable extinguishing agents:***
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· ***Special hazards arising from the substance or mixture*** No further relevant information available.
· ***Advice for firefighters***
· ***Protective equipment:*** No special measures required.

* 6 Accidental release measures

· ***Personal precautions, protective equipment and emergency procedures*** Not required.
· ***Environmental precautions:*** Do not allow to enter sewers/ surface or ground water.
· ***Methods and material for containment and cleaning up:*** Pick up mechanically. Rinse with water
· ***Reference to other sections***
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

* 7 Handling and storage

· ***Precautions for safe handling*** No special measures required; garlic odor
· ***Information about protection against explosions and fires:*** No special measures required.
· ***Conditions for safe storage, including any incompatibilities Storage:*** Cool, dry conditions
· ***Requirements to be met by storerooms and receptacles:*** No special requirements.
· ***Information about storage in one common storage facility:*** Not required.
· ***Further information about storage conditions:*** Keep dry.
· ***Specific end use(s)*** No further relevant information available.

* 8 Exposure controls/personal protection

· ***Additional information about design of technical systems:*** No further data; see section 7.

· ***Control parameters***

· ***Components with occupational exposure limits:***

PEL	None
REL	None
TLV	None

· ***Additional information:*** The lists that were valid during the creation were used as basis.

(Contd. on page 3)

Safety Data Sheet (SDS)

OSHA HazCom 2012 Standard 29 CFR 1910.1200. Prepared to GHS Rev03.

Printing date 06/05/2016 Reviewed on 09/11/2018

(Contd. of page 2)

Provect-CH4® and Provect-CH4 Advanced Methanogen Inhibitor (AMR))

· **Exposure controls**
· **Personal protective equipment:** Avoid contact with clothing
· **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
· **Breathing equipment:** very strong odor.
· **Protection of hands:** latex or other gloves.
· **Eye protection:** required.

* 9 Physical and chemical properties

· **Information on basic physical and chemical properties**
· **General Information**
· **Appearance:**
Form: Oily liquid
Color: Dark red to brown
· **Odor:** Garlic
· **Odor threshold:** Not determined.

· **pH-value:** Not applicable.

· **Change in condition**
Melting point/Melting range: Not determined.
Boiling point/Boiling range: Undetermined.

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not determined.

· **Ignition temperature:**

Decomposition temperature: Not determined.

· **Auto igniting:** Product is not self igniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**
Lower: Not determined.
Upper: Not determined.

· **Vapor pressure:** Not applicable.

· **Density:** Not determined.
· **Relative density** Not determined.
· **Vapor density** Not applicable.
· **Evaporation rate** Not applicable.

· **Solubility in / Miscibility with**
Water: Water Soluble.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**
Dynamic: Not applicable.
Kinematic: Not applicable.

· **Solvent content:**
Organic solvents: 0.0 %

Solids content: up to 50 %

(Contd. on page 4)

Safety Data Sheet (SDS)

OSHA HazCom 2012 Standard 29 CFR 1910.1200. Prepared to GHS Rev03.

Printing date 06/05/2016 Reviewed on 09/11/2018

Trade name: Provect-CH4® and Provect-CH4 Advanced Methanogen Inhibitor (AMR)

(Contd. of page 3)

* 10 Stability and reactivity

· **Reactivity** No further relevant information available.
· **Chemical stability** Product is stable under normal conditions.

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Possibility of hazardous reactions** No dangerous reactions known.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:** No dangerous decomposition products known.

* 11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**
· **Primary irritant effect:**
· **on the skin:** No irritant effect.
· **on the eye:** No irritating effect.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**
The product is not subject to classification according to internally approved calculation methods for preparations:
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**
None of the ingredients is listed.
· **NTP (National Toxicology Program)**
None of the ingredients is listed.
· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:** Water hazard class 1 (Self-assessment): slightly hazardous for potable water
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

* 13 Disposal considerations

· **Waste treatment methods:** flush with water
· **Recommendation:** Smaller quantities can be disposed of with household waste.

(Contd. on page 5)

Safety Data Sheet (SDS)

OSHA HazCom 2012 Standard 29 CFR 1910.1200. Prepared to GHS Rev03.

Printing date 06/05/2016 Reviewed on 09/11/2018

Provect-CH4® and Provect-CH4 Advanced Methanogen Inhibitor (AMR))

(Contd. of page 4)

· **Unclean or Used Packaging:** Disposal must be made according to local regulations: odor may be present.

14 Transport information

· **UN-Number**	
· **DOT, ADR, ADN, IMDG, IATA**	Non-Regulated Material
· **UN proper shipping name**	
· **DOT, ADR, ADN, IMDG, IATA**	Non-Regulated Material
· **Transport hazard class(es)**	
· **DOT, ADR, ADN, IMDG, IATA**	
· **Class**	Non-Regulated Material
· **Packing group**	
· **DOT, ADR, IMDG, IATA**	Non-Regulated Material
· **Environmental hazards:**	
· **Marine pollutant:**	No
· **Special precautions for user**	Not applicable.
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **UN "Model Regulation":**	-

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

None of the ingredients is listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

(Contd. on page 6)

Safety Data Sheet (SDS)

OSHA HazCom 2012 Standard 29 CFR 1910.1200. Prepared to GHS Rev03.

Printing date 06/05/2016 *Reviewed on 09/11/2018*

Trade name: Provect-CH4® and Provect-CH4 Advanced Methanogen Inhibitor (AMR)

(Contd. of page 5)

· ***NIOSH-Ca (National Institute for Occupational Safety and Health)***

None of the ingredients listed.

· ***GHS label elements*** Non-Regulated Material
· ***Hazard pictograms*** Non-Regulated Material
· ***Signal word*** Non-Regulated Material
· ***Hazard statements*** Non-Regulated Material

· ***National regulations:***

The product is subject to be labeled according with the prevailing version of the regulations on hazardous substances.

· ***State Right to Know***

8013-01-2	Proprietary Red Yeast Rice Extract	0-50%
539-86-6	Proprietary Garlic Oil Juice	50-100%

All ingredients are listed.

· ***Chemical safety assessment:*** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· ***Date of preparation / last revision*** 09/11/2018
· ***Abbreviations and acronyms:***
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)

SAFETY DATA SHEET

Creation Date 10-December-2009 **Revision Date** 24-December-2021 **Revision Number** 6

1. Identification

Product Name **Tetrachloroethylene**

Cat No. : **C182-20; C182-4**

CAS-No 127-18-4
Synonyms Perchloroethylene

Recommended Use Laboratory chemicals.
Uses advised against Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company
Importer/Distributor
Fisher Scientific
112 Colonnade Road,
Ottawa, ON K2E 7L6,
Canada
Tel: 1-800-234-7437

Manufacturer
Fisher Scientific Company
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 001-703-527-3887

2. Hazard(s) identification

Classification

WHMIS 2015 Classification Classified as hazardous under the Hazardous Products Regulations (SOR/2015-17)

Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Skin Sensitization	Category 1
Carcinogenicity	Category 1B
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Central nervous system (CNS).	
Specific target organ toxicity - (repeated exposure)	Category 2
Target Organs - Kidney, Liver, Blood.	

Label Elements

Signal Word
Danger

Hazard Statements

Causes skin irritation
May cause an allergic skin reaction
Causes serious eye irritation
May cause drowsiness and dizziness
May cause cancer
May cause damage to organs through prolonged or repeated exposure



Precautionary Statements
Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wear protective gloves/protective clothing/eye protection/face protection
Do not breathe dust/fumes/gas/mist/vapours/spray
Wash face, hands and any exposed skin thoroughly after handling
Use only outdoors or in a well-ventilated area
Contaminated work clothing should not be allowed out of the workplace
Response
IF exposed or concerned: Get medical advice/attention
IF ON SKIN: Wash with plenty of soap and water
IF INHALED: Remove person to fresh air and keep comfortable for breathing
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Take off contaminated clothing
Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed
Disposal
Dispose of contents/container to an approved waste disposal plant

Other Hazards
Toxic to aquatic life with long lasting effects

3. Composition/Information on Ingredients

Component	CAS-No	Weight %
Tetrachloroethylene	127-18-4	>95

4. First-aid measures

General Advice If symptoms persist, call a physician.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

Inhalation Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

Ingestion Clean mouth with water and drink afterwards plenty of water.

Most important symptoms/effects None reasonably foreseeable. May cause allergic skin reaction. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting: Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

Notes to Physician Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam.

Unsuitable Extinguishing Media No information available

Flash Point No information available
Method - No information available

Autoignition Temperature No information available
Explosion Limits
Upper No data available
Lower No data available
Sensitivity to Mechanical Impact No information available
Sensitivity to Static Discharge No information available

Specific Hazards Arising from the Chemical
Thermal decomposition can lead to release of irritating gases and vapors. Containers may explode when heated.

Hazardous Combustion Products
Chlorine. Phosgene. Hydrogen chloride gas.
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.

NFPA

Health	Flammability	Instability	Physical hazards
2	0	0	N/A

6. Accidental release measures

Personal Precautions Use personal protective equipment as required. Ensure adequate ventilation.
Environmental Precautions Do not flush into surface water or sanitary sewer system.

Methods for Containment and Clean Up Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

7. Handling and storage

Handling Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Ensure adequate ventilation. Avoid ingestion and inhalation.

Storage. Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from sunlight. Incompatible Materials. Strong acids. Strong oxidizing agents. Strong bases. Metals. Zinc. Amines. Aluminium.

8. Exposure controls / personal protection

Exposure Guidelines

Component	Alberta	British Columbia	Ontario TWAEV	Quebec	ACGIH TLV	OSHA PEL	NIOSH IDLH
Tetrachloroethylene	TWA: 25 ppm	TWA: 25 ppm	TWA: 25 ppm	TWA: 25 ppm	TWA: 25 ppm	(Vacated) TWA:	IDLH: 150 ppm

	TWA: 170 mg/m³ STEL: 100 ppm STEL: 678 mg/m³	STEL: 100 ppm	STEL: 100 ppm	TWA: 170 mg/m³ STEL: 100 ppm STEL: 685 mg/m³	STEL: 100 ppm	25 ppm (Vacated) TWA: 170 mg/m³ Ceiling: 200 ppm TWA: 100 ppm	

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: NIOSH - National Institute for Occupational Safety and Health

Engineering Measures

Use only under a chemical fume hood. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

Eye Protection Goggles

Hand Protection Wear appropriate protective gloves and clothing to prevent skin exposure.

Glove material	Breakthrough time	Glove thickness	Glove comments
Nitrile rubber	> 480 minutes	0.38 mm	As tested under EN374-3
Viton (R)	> 480 minutes	0.3 mm	Determination of Resistance to Permeation by Chemicals

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

Recommended Filter type: Organic gases and vapours filter Type A Brown conforming to EN14387

When RPE is used a face piece Fit Test should be conducted

Environmental exposure controls

Prevent product from entering drains. Do not allow material to contaminate ground water system.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

9. Physical and chemical properties

Physical State	Liquid
Appearance	Colorless
Odor	Characteristic, sweet
Odor Threshold	No information available
pH	No information available
Melting Point/Range	-22 °C / -7.6 °F
Boiling Point/Range	120 - 122 °C / 248 - 251.6 °F @ 760 mmHg
Flash Point	No information available
Evaporation Rate	6.0 (Ether = 1.0)

Flammability (solid,gas)	Not applicable
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	18 mbar @ 20 °C
Vapor Density	No information available
Density	1.619
Specific Gravity	1.625
Solubility	0.15 g/L water (20°C)
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available
Decomposition Temperature	> 150°C
Viscosity	0.89 mPa s at 20 °C
Molecular Formula	C2 Cl4
Molecular Weight	165.83

10. Stability and reactivity

Reactive Hazard None known, based on information available

Stability Stable under normal conditions.

Conditions to Avoid Incompatible products. Excess heat. Exposure to moist air or water.

Incompatible Materials Strong acids, Strong oxidizing agents, Strong bases, Metals, Zinc, Amines, Aluminium

Hazardous Decomposition Products Chlorine, Phosgene, Hydrogen chloride gas

Hazardous Polymerization Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Tetrachloroethylene	LD50 = 2629 mg/kg (Rat)	LD50 > 10000 mg/kg (Rat)	LC50 = 27.8 mg/L (Rat) 4 h

Toxicologically Synergistic Products No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation Irritating to eyes and skin

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Tetrachloroethylene	127-18-4	Group 2A	Reasonably Anticipated	A3	X	A3

IARC (International Agency for Research on Cancer)

NTP: (National Toxicity Program)

IARC (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
Group 2A - Probably Carcinogenic to Humans
Group 2B - Possibly Carcinogenic to Humans
NTP: (National Toxicity Program)
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

ACGIH: (American Conference of Governmental Industrial Hygienists)	*A1 - Known Human Carcinogen* *A2 - Suspected Human Carcinogen* *A3 - Animal Carcinogen*
Mexico - Occupational Exposure Limits - Carcinogens	*ACGIH: (American Conference of Governmental Industrial Hygienists)* *Mexico - Occupational Exposure Limits - Carcinogens* *A1 - Confirmed Human Carcinogen* *A2 - Suspected Human Carcinogen* *A3 - Confirmed Animal Carcinogen* *A4 - Not Classifiable as a Human Carcinogen* *A5 - Not Suspected as a Human Carcinogen*

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure Central nervous system (CNS)
STOT - repeated exposure Kidney Liver Blood

Aspiration hazard No information available

Symptoms / effects,both acute and delayed Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting: Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

Endocrine Disruptor Information

Component	EU - Endocrine Disrupters Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
Tetrachloroethylene	Group II Chemical	Not applicable	Not applicable

Other Adverse Effects Tumorigenic effects have been reported in experimental animals.

12. Ecological information

Ecotoxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Tetrachloroethylene	EC50: > 500 mg/L, 96h (Pseudokirchneriella subcapitata)	LC50: 12.4 - 14.4 mg/L, 96h flow-through (Pimephales promelas) LC50: 8.6 - 13.5 mg/L, 96h static (Pimephales promelas) LC50: 11.0 - 15.0 mg/L, 96h static (Lepomis macrochirus) LC50: 4.73 - 5.27 mg/L, 96h flow-through (Oncorhynchus mykiss)	EC50 = 100 mg/L 24 h EC50 = 112 mg/L 24 h EC50 = 120.0 mg/L 30 min	EC50: 6.1 - 9.0 mg/L, 48h Static (Daphnia magna)

Persistence and Degradability Insoluble in water Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation No information available.

Mobility . Is not likely mobile in the environment due its low water solubility. Will likely be mobile in the environment due to its volatility.

Component	log Pow
Tetrachloroethylene	2.88

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

Component	RCRA - U Series Wastes	RCRA - P Series Wastes
Tetrachloroethylene - 127-18-4	U210	-

14. Transport information

DOT

UN-No UN1897
Proper Shipping Name TETRACHLOROETHYLENE
Hazard Class 6.1
Packing Group III

TDG

UN-No UN1897
Proper Shipping Name TETRACHLOROETHYLENE
Hazard Class 6.1
Packing Group III

IATA

UN-No UN1897
Proper Shipping Name TETRACHLOROETHYLENE
Hazard Class 6.1
Packing Group III

IMDG/IMO

UN-No UN1897
Proper Shipping Name TETRACHLOROETHYLENE
Hazard Class 6.1
Packing Group III

15. Regulatory information

International Inventories

Component	CAS-No	DSL	NDSL	TSCA	TSCA Inventory notification - Active-Inactive	EINECS	ELINCS	NLP
Tetrachloroethylene	127-18-4	X	-	X	ACTIVE	204-825-9	-	-

Component	CAS-No	IECSC	KECL	ENCS	ISHL	TCSI	AICS	NZIoC	PICCS
Tetrachloroethylene	127-18-4	X	KE-33294	X	X	X	X	X	X

Legend:
X - Listed '-' - Not Listed
KECL - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
IECSC - Chinese Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
ENCS - Japanese Existing and New Chemical Substances
AICS - Australian Inventory of Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances

Canada

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and meets the requirements of the HPR (Paragraph 13(1)(a) of the Hazardous Products Act (HPA)).

Component	Canada - National Pollutant Release Inventory (NPRI)	Canadian Environmental Protection Agency (CEPA)	Canada's Chemicals Management Plan (CEPA)

		- List of Toxic Substances	
Tetrachloroethylene	Part 1, Group A Substance Part 4 Substance	Schedule I	

Other International Regulations

Authorisation/Restrictions according to EU REACH

Component	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Tetrachloroethylene	-	Use restricted. See item 75. (see link for restriction details)	-

https://echa.europa.eu/substances-restricted-under-reach

Safety, health and environmental regulations/legislation specific for the substance or mixture

Component	CAS-No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
Tetrachloroethylene	127-18-4	Listed	Not applicable	Not applicable	Not applicable

Component	CAS-No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Tetrachloroethylene	127-18-4	Not applicable	Not applicable	Not applicable	Annex I - Y45

16. Other information

Prepared By
Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Creation Date 10-December-2009
Revision Date 24-December-2021
Print Date 24-December-2021
Revision Summary This document has been updated to comply with the requirements of WHMIS 2015 to align with the Globally Harmonised System (GHS) for the Classification and Labelling of Chemicals.

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS

APPENDIX B

FIELD BORING LOG AND LOW FLOW SHEETS

LANGAN

Log of Boring **LMW-8R-S** Sheet 1 of 3

Project: 1487 First Avenue Development	Project No.: 100963701
Location: 1487 First Avenue, New York, NY	Elevation and Datum: Approximate el. 37 NAVD88
Drilling Company: AARCO Environmental Services Corp.	Date Started: 08/16/2022 / Date Finished: 08/18/2022
Drilling Equipment: Geoprobe 8140 LC / Geoprobe 7822 DT	Completion Depth: 49.7 ft / Rock Depth: 17 ft
Size and Type of Bit: 2-7/8in Tricone Roller Bit	Number of Samples: Disturbed -- / Undisturbed -- / Core 6
Casing Diameter (in): 4" I.D. Steel / Casing Depth (ft): 19	Water Level (ft.): First -- / Completion -- / 24 HR. --
Casing Hammer: -- / Weight (lbs): -- / Drop (in): --	Drilling Foreman: Jose Garcia
Sampler: --	Field Engineer: Connor Zingale
Sampler Hammer: -- / Weight (lbs): -- / Drop (in): --	

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Coring (min)	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist BL/6in	N-Value (Blows/ft) 10 20 30 40	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	+31.2	Four-inch steel casing was driven to a depth of 13 feet below ground surface (approximately 19 feet below sidewalk level [bsl]) to accomodate rock coring.		0						Started driving casing at 6 feet bsl due to the grade of the site.
	+12.2	Gray SCHIST; close to moderate fracture spacing; rock quality fair; [BEDROCK]		19	C-1	NX Core				Begin rock coring at 13 feet below ground surface (appriximately 19 feet below sidewalk level).

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LANGAN

Log of Boring **LMW-8R-S** Sheet 2 of 3

Project	Project No.
1487 First Avenue Development	100963701
Location	**Elevation and Datum**
1487 First Avenue, New York, NY	Approximate el. 37 NAVD88

Material Symbol	Elev. (ft)	Sample Description	Coring (min)	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist BL/6in	N-Value (Blows/ft)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	+11.2			20					10 20 30 40	
				21						
				22	C-1	NX Core	REC=45.6"/60" =76%	RQD=16"/60" =27%		
				23						
	+7.2	Gray SCHIST; close to moderate fracture spacing; rock quality excellent; [BEDROCK]		24						
				25						
				26	C-2	NX Core	REC=54"/60" =90%	RQD=45"/60" =75%		
				27						
				28						
	+2.2	Gray SCHIST; extremely close to close fracture spacing; rock quality fair; [BEDROCK]	5:05	29						
			4:33	30						
			4:11	31	C-3	NX Core	REC=32"/60" =53%	RQD=18"/60" =30%		
			4:08	32						
			10:59	33						
	-2.8	Gray SCHIST; close to moderate fracture spacing; rock quality excellent; [BEDROCK]	7:56	34						
			5:22	35						
			3:07	36	C-4	NX Core	REC=58"/60" =97%	RQD=55"/60" =92%		
			4:20	37						
			3:21	38						
	-7.8	Gray SCHIST; extremely close to close fracture spacing; rock quality poor; [BEDROCK]	3:08	39						
			2:55	40						
			3:01	41	C-5	NX Core	REC=60"/60" =100%	RQD=9"/60" =15%		
			3:47	42						
			4:02	43						
	-12.8	Gray SCHIST; close to moderate fracture spacing; rock quality fair; [BEDROCK]	3:03	44	C-6	NX Core				
				45						

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LANGAN

Log of Boring **LMW-8R-S** Sheet 3 of 3

Project	Project No.
1487 First Avenue Development	100963701
Location	**Elevation and Datum**
1487 First Avenue, New York, NY	Approximate el. 37 NAVD88

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Coring (min)	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist BL/6in	N-Value (Blows/ft)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	-13.8		4:47	45	C-6	NX Core	REC=60"/60" =100%	RQD=23"/60" =38%	10 20 30 40	
			3:54	46						
			4:50	47						
			3:24	48						
	-17.8			49						Bottom of boring at 43 feet below ground surface (approximately 49 feet below sidewalk level).
				50						
				51						
				52						
				53						
				54						
				55						
				56						
				57						
				58						
				59						
				60						
				61						
				62						
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				67						
				68						
				69						
				70						

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Project Information		Well Information		Equipment Information		Sampling Conditions		Sampling Information	
Project Name:	1487 First Ave Development	**Well No:**	LMW-7R-S	**Water Quality Device Model:**		**Weather:**		**Sample(s):**	BASELINE_GW
Project Number:	100963701	**Well Depth:**		**Pine Number:**		**Background PID (ppm):**			
Site Location:	1487 First Ave, NY	**Well Diameter:**	4-inch	**Pump Make and Model:**		**PID Beneath Inner Cap (ppm):**			
Sampling Personnel:	Paul Tozzi	**Open Hole Depth (feet below**		**Pine Number:**		**Pump Intake Depth:**		**Sample Date:**	8/16/2022
				Tubing Diameter:		**Depth to Water Before Purge:**		**Sample Time:**	11:25

STABILIZATION = 3 successive readings within limits

TIME	TEMP °Celsius (+/- 3%)	PH (+/- 0.1)	ORP mV (+/- 10mV)	CONDUCTIVITY mS/cm (+/- 3%)	TURBIDITY ntu (+/- 10%) above 5 NTU	DO mg/l (+/- 10%) above 0.5 mg/l	DTW ft Drawdown < 0.33 ft	Flow Rate (gpm) <0.13 gpm)	Cumulative Discharge Volume (Gal)	NOTES color, odor etc.	Stabilized?
BEGIN PURGING											
11:10	19.58	6.52	-148	1.450	142.0	0.32	9.95	150.000	2.00		**N/A**
11:15	20.05	6.42	-144	1.450	111.0	0.13	10.20	100.000			**N/A**
11:20	20.28	6.36	-147	1.450	106.0	0.11	9.95	100.000			**N**
11:25	20.33	6.41	-150	1.450	110.0	0.10	9.95	100.000			**Y**
11:38	20.52	6.43	-158	1.430	1.1	0.05	9.95	150.000			**N**
											N
											N
											N
											N
											N
											N
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											N
											N

Notes:

1. Well depths and groundwater depths were measured in feet below the top of well casing.
2. Well and tubing diameters are measured in inches.
3. PID = Photoionization Detector
4. PPM = Parts per million
5. pH = Hydrogen ion concentration
6. ORP = Oxidation-reduction potential, measured in millivolts (mV)
7. DO = Dissolved Oxygen, measured in milligrams per liter (mg/L)
8. DTW = Depth to water
9. mS/cm = milli-Siemans per centimeter
10. NTU = Nephelometric Turbidity Unit

APPENDIX D

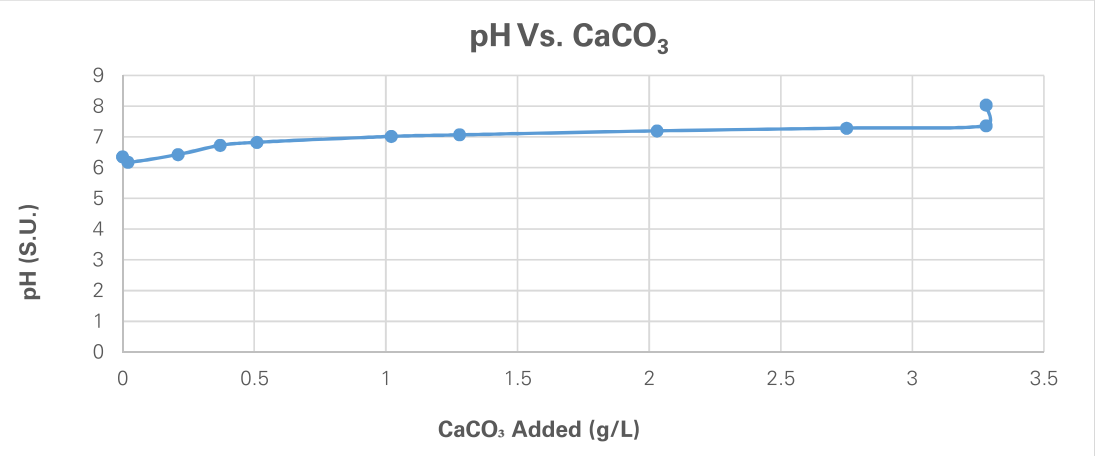
TITRATION DATA

Titration Raw Data
Treatability Testing
1487 First Ave, New York
Langan Project No. 100963701
January 2023

Groundwater Titration

Date titration performed	**8/26/2022**
Groundwater	50 mL
Rock:	0 g
Alkaline Reagent Used	$CaCO_3$

Cumulative CaCO3 Added (g)	Time	pH (S.U.)	g/L
0	8:51	6.36	0
0.02	8:52	6.18	0.4
0.21	8:55	6.43	4.2
0.37	9:04	6.73	7.4
0.51	9:07	6.83	10.2
1.02	9:10	7.02	20.4
1.28	9:19	7.07	25.6
2.03	9:25	7.20	40.6
2.75	9:43	7.29	55
3.28	9:47	7.37	65.6
3.28	11:50	8.04	65.6



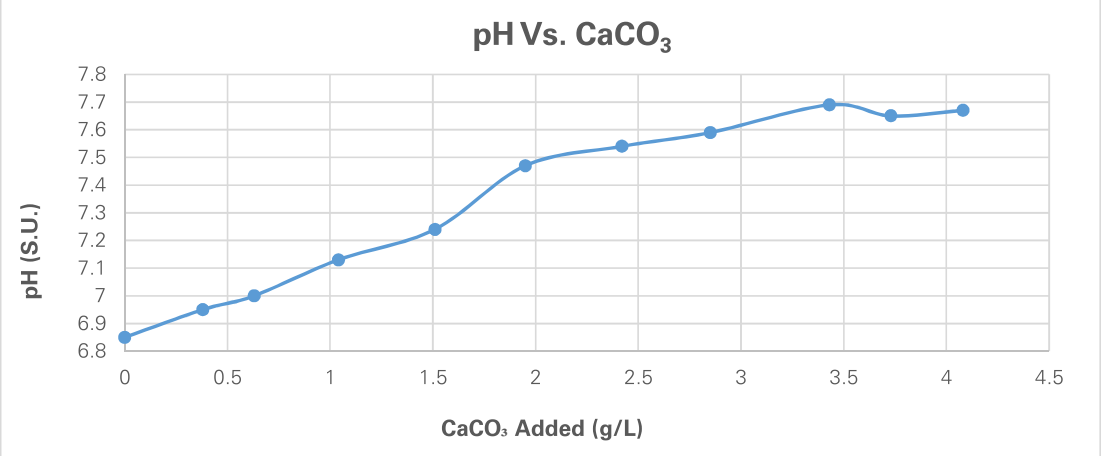
Notes:
mL - milliliters
g - gram
$CaCO_3$ - calcium carbonate
S.U. - standard units
g/L - grams per liter

Titration Raw Data
Treatability Testing
1487 First Ave, New York
Langan Project No. 100963701
January 2023

Rock + Groundwater Titration

Date titration performed	**8/26/2022**
Groundwater	50 mL
Rock:	51 g
Alkaline Reagent Used	$CaCO_3$

Cumulative CaCO3 Added (g)	Time	pH (S.U.)	g/L
0	11:06	6.85	0
0.38	11:08	6.95	7.6
0.63	11:10	7	12.6
1.04	11:14	7.13	20.8
1.51	11:18	7.24	30.2
1.95	11:25	7.47	39
2.42	11:27	7.54	48.4
2.85	11:29	7.59	57
3.43	11:34	7.69	68.6
3.73	11:35	7.65	74.6
4.08	11:38	7.67	81.6
4.57	11:40	7.71	91.4
4.57	12:19	7.74	91.4



Notes:
mL - milliliters
g - gram
$CaCO_3$ - calcium carbonate
S.U. - standard units
g/L - grams per liter

APPENDIX C

LAB ANALYTICAL REPORTS

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report



Technical Report for

Langan Engineering & Environmental

1487 First Avenue, NY, NY

100963701

SGS Job Number: JD50285

Sampling Dates: 08/16/22 - 08/18/22

Report to:

Langan Engineering & Environmental
300 Kimball Drive
Parsippany, NJ 07054
ptozzi@langan.com; datamanagement@langan.com

ATTN: Paul Tozzi

Total number of pages in report: **36**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

David Chastain
General Manager

Client Service contact: Beth Stopen 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA(68-00408), RI, SC, TX, UT, VA, WV

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Test results relate only to samples analyzed.

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SGS North America Inc.

Sample Summary

Langan Engineering & Environmental

Job No: JD50285

1487 First Avenue, NY, NY
Project No: 100963701

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
JD50285-1	08/16/22	12:00	PT	08/18/22	AQ	Ground Water	BASELINE_GW
JD50285-2	08/18/22	07:00	PT	08/18/22	AQ	Ground Water	BASELINE_2
JD50285-3	08/18/22	07:00	PT	08/18/22	AQ	Ground Water	BASELINE_5
JD50285-4	08/18/22	07:00	PT	08/18/22	AQ	Ground Water	BASELINE_8
JD50285-5	08/18/22	07:00	PT	08/18/22	AQ	Ground Water	BASELINE_12

This report contains results reported as ND = Not detected. The following applies:
Organics ND = Not detected above the MDL

Summary of Hits

Job Number: JD50285
Account: Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY
Collected: 08/16/22 thru 08/18/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD50285-1	**BASELINE_GW**					
Acetone		3.1 J	10	3.1	ug/l	SW846 8260D
Benzene		0.57	0.50	0.43	ug/l	SW846 8260D
Chloroform		14.0	1.0	0.50	ug/l	SW846 8260D
cis-1,2-Dichloroethene		190	10	5.1	ug/l	SW846 8260D
trans-1,2-Dichloroethene		0.83 J	1.0	0.54	ug/l	SW846 8260D
Methylene chloride		2.7	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene		42.6	1.0	0.90	ug/l	SW846 8260D
Trichloroethene		53.0	1.0	0.53	ug/l	SW846 8260D
Vinyl chloride		0.83 J	1.0	0.79	ug/l	SW846 8260D
JD50285-2	**BASELINE_2**					
Acetone		199	10	3.1	ug/l	SW846 8260D
Chloroform		10.2	1.0	0.50	ug/l	SW846 8260D
cis-1,2-Dichloroethene		133	1.0	0.51	ug/l	SW846 8260D
Methylene chloride		2.3	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene		16.0	1.0	0.90	ug/l	SW846 8260D
Trichloroethene		24.3	1.0	0.53	ug/l	SW846 8260D
JD50285-3	**BASELINE_5**					
Acetone		157	10	3.1	ug/l	SW846 8260D
Chloroform		10.6	1.0	0.50	ug/l	SW846 8260D
cis-1,2-Dichloroethene		138	1.0	0.51	ug/l	SW846 8260D
Methylene chloride		2.3	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene		17.6	1.0	0.90	ug/l	SW846 8260D
Trichloroethene		26.1	1.0	0.53	ug/l	SW846 8260D
JD50285-4	**BASELINE_8**					
Acetone		163	10	3.1	ug/l	SW846 8260D
Chloroform		10.1	1.0	0.50	ug/l	SW846 8260D
cis-1,2-Dichloroethene		132	1.0	0.51	ug/l	SW846 8260D
trans-1,2-Dichloroethene		0.56 J	1.0	0.54	ug/l	SW846 8260D
Methylene chloride		2.2	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene		16.0	1.0	0.90	ug/l	SW846 8260D
Trichloroethene		24.1	1.0	0.53	ug/l	SW846 8260D
JD50285-5	**BASELINE_12**					
Acetone		203	10	3.1	ug/l	SW846 8260D
Chloroform		10.1	1.0	0.50	ug/l	SW846 8260D
cis-1,2-Dichloroethene		133	1.0	0.51	ug/l	SW846 8260D

Summary of Hits

Job Number: JD50285
Account: Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY
Collected: 08/16/22 thru 08/18/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Methylene chloride		2.3	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene		16.0	1.0	0.90	ug/l	SW846 8260D
Trichloroethene		24.6	1.0	0.53	ug/l	SW846 8260D

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	BASELINE_GW		
Lab Sample ID:	JD50285-1	**Date Sampled:**	08/16/22
Matrix:	AQ - Ground Water	**Date Received:**	08/18/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1X199275.D	1	08/19/22 17:57	TS	n/a	n/a	V1X8591
Run #2	1X199321.D	10	08/20/22 12:47	TS	n/a	n/a	V1X8593

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	3.1	10	3.1	ug/l	J
71-43-2	Benzene	0.57	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane [a]	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	6.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	14.0	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane [a]	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	190 [b]	10	5.1	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.83	1.0	0.54	ug/l	J
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BASELINE_GW		
Lab Sample ID:	JD50285-1	**Date Sampled:**	08/16/22
Matrix:	AQ - Ground Water	**Date Received:**	08/18/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate [a]	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	2.7	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	42.6	1.0	0.90	ug/l	
108-88-3	Toluene	ND	1.0	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	53.0	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	0.83	1.0	0.79	ug/l	J
	m,p-Xylene	ND	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%	102%	80-120%
17060-07-0	1,2-Dichloroethane-D4	95%	96%	80-120%
2037-26-5	Toluene-D8	97%	99%	80-120%
460-00-4	4-Bromofluorobenzene	98%	98%	82-114%

(a) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.
(b) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BASELINE_2		
Lab Sample ID:	JD50285-2	**Date Sampled:**	08/18/22
Matrix:	AQ - Ground Water	**Date Received:**	08/18/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1X199276.D	1	08/19/22 18:20	TS	n/a	n/a	V1X8591
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	199	10	3.1	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane [a]	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	6.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	10.2	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane [a]	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	133	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BASELINE_2		
Lab Sample ID:	JD50285-2	**Date Sampled:**	08/18/22
Matrix:	AQ - Ground Water	**Date Received:**	08/18/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate [a]	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	2.3	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	16.0	1.0	0.90	ug/l	
108-88-3	Toluene	ND	1.0	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	24.3	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	
	m,p-Xylene	ND	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		80-120%
17060-07-0	1,2-Dichloroethane-D4	94%		80-120%
2037-26-5	Toluene-D8	98%		80-120%
460-00-4	4-Bromofluorobenzene	96%		82-114%

(a) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BASELINE_5		
Lab Sample ID:	JD50285-3	**Date Sampled:**	08/18/22
Matrix:	AQ - Ground Water	**Date Received:**	08/18/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1X199277.D	1	08/19/22 18:43	TS	n/a	n/a	V1X8591
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	157	10	3.1	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane [a]	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	6.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	10.6	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane [a]	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	138	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BASELINE_5		
Lab Sample ID:	JD50285-3	**Date Sampled:**	08/18/22
Matrix:	AQ - Ground Water	**Date Received:**	08/18/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate [a]	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	2.3	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	17.6	1.0	0.90	ug/l	
108-88-3	Toluene	ND	1.0	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	26.1	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	
	m,p-Xylene	ND	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		80-120%
17060-07-0	1,2-Dichloroethane-D4	95%		80-120%
2037-26-5	Toluene-D8	98%		80-120%
460-00-4	4-Bromofluorobenzene	97%		82-114%

(a) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BASELINE_8		
Lab Sample ID:	JD50285-4	**Date Sampled:**	08/18/22
Matrix:	AQ - Ground Water	**Date Received:**	08/18/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1X199278.D	1	08/19/22 19:06	TS	n/a	n/a	V1X8591
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	163	10	3.1	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane [a]	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	6.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	10.1	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane [a]	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	132	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.56	1.0	0.54	ug/l	J
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BASELINE_8		
Lab Sample ID:	JD50285-4	**Date Sampled:**	08/18/22
Matrix:	AQ - Ground Water	**Date Received:**	08/18/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate [a]	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	2.2	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	16.0	1.0	0.90	ug/l	
108-88-3	Toluene	ND	1.0	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	24.1	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	
	m,p-Xylene	ND	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		80-120%
17060-07-0	1,2-Dichloroethane-D4	95%		80-120%
2037-26-5	Toluene-D8	98%		80-120%
460-00-4	4-Bromofluorobenzene	98%		82-114%

(a) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BASELINE_12		
Lab Sample ID:	JD50285-5	**Date Sampled:**	08/18/22
Matrix:	AQ - Ground Water	**Date Received:**	08/18/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1X199279.D	1	08/19/22 19:29	TS	n/a	n/a	V1X8591
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	203	10	3.1	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane [a]	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	6.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	10.1	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane [a]	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	133	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BASELINE_12		
Lab Sample ID:	JD50285-5	**Date Sampled:**	08/18/22
Matrix:	AQ - Ground Water	**Date Received:**	08/18/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate [a]	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	2.3	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	16.0	1.0	0.90	ug/l	
108-88-3	Toluene	ND	1.0	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	24.6	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	
	m,p-Xylene	ND	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		80-120%
17060-07-0	1,2-Dichloroethane-D4	95%		80-120%
2037-26-5	Toluene-D8	98%		80-120%
460-00-4	4-Bromofluorobenzene	97%		82-114%

(a) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

GW

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.sgs.com/ehsusa

EHSA-QAC-0023-04-FORM-Standard COC

Page 1 of 1

FED-EX Tracking #:
Bottle Order Control #: BW 081022-28
SGS Quote #:
SGS Job #: JD 50285

Client / Reporting Information

Company Name: Langan
Street Address: 300 Kimball Dr
City: Parsippany State: NJ Zip: 07054
Project Contact: Paul Tozzi E-mail: ptozzi@langan.com
Phone #: (908) 670-6646
Sampler(s) Name(s): Paul Tozzi Phone #:

Project Information

Project Name: 1487 First Ave
Street: First Ave
City: New York State: NY
Project #: 100963701
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)
Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis

VOCs

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB-Equipment Blank; RB - Rinse Blank; TB - Trip Blank

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Grab (G) Comp (C)	Source Chlorinated (Y/N)	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	NONE	DI Water	MEOH	ENCORE	pH Check (Lab Use Only)	LAB USE ONLY
1	Baseline_GW		08/16	1200	PT	G	Y	GW	3	3								X	
2	Baseline_2		08/18	700		C			2	2								X	V380
3	Baseline_5		↓	↓	↓	↓	↓	↓	2	2								X	
4	Baseline_8		↓	↓	↓	↓	↓	↓	2	2								X	
5	Baseline_12		↓	↓	↓	↓	↓	↓	2	2								X	

Turn Around Time (Business Days)

Approved By (SGS PM): / Date:

- [ ] 10 Business Days
- [ ] 5 Business Days
- [ ] 3 Business Days*
- [ ] 2 Business Days*
- [x] 1 Business Day* — B. Stopper
- [ ] Other

All data available via Lablink

* Approval needed for 1-3 Business Day TAT

Deliverable

- [ ] Commercial "A" (Level 1)
- [x] Commercial "B" (Level 2)
- [ ] NJ Reduced (Level 3)
- [ ] Full Tier I (Level 4)
- [ ] Commercial "C"
- [ ] NJ DKQP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] MA MCP Criteria_____
- [ ] CT RCP Criteria_____
- [ ] State Forms
- [ ] EDD Format_____
- [ ] DOD-QSM5

Commercial "A" = Results only; Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Project Assessment
Level Verification

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by:	Date / Time:	Received By:	Relinquished By:	Date / Time:	Received By:
1		8/18 1120	Mike Gonzalez	Mike Gonzalez	8/18 1730	
2						
3						
4						
5						

Custody Seal #: ☐ Intact ☐ Not intact ☐ Absent
Therm ID: See Sample Receipt Summary
On Ice ☐ 3.5 Cooler Temp. °C

SGS Sample Receipt Summary

Job Number: JD50285 **Client:** LANGAN ENGINEERING & ENVIRONMEN **Project:** 1487 FIRST AVENUE, NY, NY

Date / Time Received: 8/18/2022 5:30:00 PM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (3.5);

Cooler Temps (Corrected) °C: Cooler 1: (4.1);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☑		☐	☐
2. Trip Blank listed on COC:	☑		☐	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 231619 pH 12+: 203117A Other: (Specify)

Comments

SM089-03
Rev. Date 12/7/17

Job Change Order: JD50285

Requested Date: 8/19/2022 **Received Date:** 8/18/2022

Account Name: Langan Engineering & Environme **Due Date:** 8/19/2022

Project Description: 1487 First Avenue, NY, NY **Deliverable:** COMMB

C/O Initiated By: BETH.WASS **PM:** BW **TAT (Days):** 3

==========

Sample #: JD50285-All **Change:**

Dept: Revise to 3 day TAT

TAT: 3

==========

Above Changes Per: CSR **Date/Time:** 8/19/2022

To Client: This Change Order is confirmation of the revisions, previously discussed with the Client Service Representative.

JD50285: Chain of Custody
Page 3 of 3

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MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: JD50285
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1X8591-MB	1X199256.D	1	08/19/22	TS	n/a	n/a	V1X8591

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD50285-1, JD50285-2, JD50285-3, JD50285-4, JD50285-5

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.1	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	6.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	

Method Blank Summary

Job Number: JD50285
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1X8591-MB	1X199256.D	1	08/19/22	TS	n/a	n/a	V1X8591

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD50285-1, JD50285-2, JD50285-3, JD50285-4, JD50285-5

CAS No.	Compound	Result	RL	MDL	Units	Q
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.90	ug/l	
108-88-3	Toluene	ND	1.0	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	
	m,p-Xylene	ND	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	102%	80-120%
17060-07-0	1,2-Dichloroethane-D4	94%	80-120%
2037-26-5	Toluene-D8	98%	80-120%
460-00-4	4-Bromofluorobenzene	97%	82-114%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	1.12	6.8	ug/l	J
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JD50285
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1X8593-MB	1X199315.D	1	08/20/22	TS	n/a	n/a	V1X8593

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD50285-1

CAS No.	Compound	Result	RL	MDL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	103%	80-120%
17060-07-0	1,2-Dichloroethane-D4	96%	80-120%
2037-26-5	Toluene-D8	100%	80-120%
460-00-4	4-Bromofluorobenzene	97%	82-114%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	1.12	6.8	ug/l	J
	Total TIC, Volatile		0	ug/l	

Blank Spike Summary

Job Number: JD50285
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1X8591-BS	1X199254.D	1	08/19/22	TS	n/a	n/a	V1X8591

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD50285-1, JD50285-2, JD50285-3, JD50285-4, JD50285-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	200	192	96	27-175
71-43-2	Benzene	50	43.3	87	80-115
74-97-5	Bromochloromethane	50	48.2	96	83-122
75-27-4	Bromodichloromethane	50	42.4	85	82-119
75-25-2	Bromoform	50	44.5	89	77-135
74-83-9	Bromomethane	50	27.9	56	40-162
78-93-3	2-Butanone (MEK)	200	193	97	61-150
75-15-0	Carbon disulfide	50	40.9	82	64-130
56-23-5	Carbon tetrachloride	50	41.1	82	75-127
108-90-7	Chlorobenzene	50	44.5	89	80-115
75-00-3	Chloroethane	50	52.7	105	56-144
67-66-3	Chloroform	50	40.3	81	75-116
74-87-3	Chloromethane	50	45.3	91	41-153
110-82-7	Cyclohexane	50	40.2	80	66-129
96-12-8	1,2-Dibromo-3-chloropropane	50	47.8	96	69-134
124-48-1	Dibromochloromethane	50	44.3	89	81-123
106-93-4	1,2-Dibromoethane	50	48.8	98	67-138
95-50-1	1,2-Dichlorobenzene	50	45.7	91	81-117
541-73-1	1,3-Dichlorobenzene	50	44.2	88	81-115
106-46-7	1,4-Dichlorobenzene	50	44.6	89	80-114
75-71-8	Dichlorodifluoromethane	50	40.1	80	43-152
75-34-3	1,1-Dichloroethane	50	42.2	84	75-125
107-06-2	1,2-Dichloroethane	50	40.4	81	73-117
75-35-4	1,1-Dichloroethene	50	42.9	86	70-124
156-59-2	cis-1,2-Dichloroethene	50	43.4	87	80-120
156-60-5	trans-1,2-Dichloroethene	50	42.8	86	77-121
78-87-5	1,2-Dichloropropane	50	44.2	88	79-121
10061-01-5	cis-1,3-Dichloropropene	50	44.6	89	83-123
10061-02-6	trans-1,3-Dichloropropene	50	43.2	86	83-122
100-41-4	Ethylbenzene	50	43.2	86	78-116
76-13-1	Freon 113	50	43.6	87	68-134
591-78-6	2-Hexanone	200	175	88	66-136
98-82-8	Isopropylbenzene	50	43.4	87	78-121
79-20-9	Methyl Acetate	50	39.6	79	60-143
108-87-2	Methylcyclohexane	50	42.5	85	71-123
1634-04-4	Methyl Tert Butyl Ether	50	43.3	87	76-123

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD50285
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1X8591-BS	1X199254.D	1	08/19/22	TS	n/a	n/a	V1X8591

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD50285-1, JD50285-2, JD50285-3, JD50285-4, JD50285-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	200	181	91	73-134
75-09-2	Methylene chloride	50	43.7	87	73-123
100-42-5	Styrene	50	45.5	91	81-125
79-34-5	1,1,2,2-Tetrachloroethane	50	48.7	97	73-126
127-18-4	Tetrachloroethene	50	44.8	90	73-119
108-88-3	Toluene	50	43.5	87	79-116
87-61-6	1,2,3-Trichlorobenzene	50	48.3	97	63-137
120-82-1	1,2,4-Trichlorobenzene	50	47.3	95	68-135
71-55-6	1,1,1-Trichloroethane	50	40.9	82	76-124
79-00-5	1,1,2-Trichloroethane	50	47.2	94	83-117
79-01-6	Trichloroethene	50	45.3	91	80-118
75-69-4	Trichlorofluoromethane	50	44.3	89	67-134
75-01-4	Vinyl chloride	50	49.7	99	52-146
	m,p-Xylene	100	87.7	88	79-119
95-47-6	o-Xylene	50	43.2	86	81-119
1330-20-7	Xylene (total)	150	131	87	80-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	80-120%
17060-07-0	1,2-Dichloroethane-D4	92%	80-120%
2037-26-5	Toluene-D8	98%	80-120%
460-00-4	4-Bromofluorobenzene	94%	82-114%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD50285
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1X8593-BS	1X199313.D	1	08/20/22	TS	n/a	n/a	V1X8593

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD50285-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
156-59-2	cis-1,2-Dichloroethene	50	42.6	85	80-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	80-120%
17060-07-0	1,2-Dichloroethane-D4	93%	80-120%
2037-26-5	Toluene-D8	99%	80-120%
460-00-4	4-Bromofluorobenzene	94%	82-114%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD50285
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD50226-1MS	1X199267.D	1	08/19/22	TS	n/a	n/a	V1X8591
JD50226-1MSD	1X199268.D	1	08/19/22	TS	n/a	n/a	V1X8591
JD50226-1 [a]	1X199259.D	1	08/19/22	TS	n/a	n/a	V1X8591

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD50285-1, JD50285-2, JD50285-3, JD50285-4, JD50285-5

CAS No.	Compound	JD50226-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		200	189	95	200	199	100	5	22-134/19
71-43-2	Benzene	ND		50	46.2	92	50	50.9	102	10	49-137/12
74-97-5	Bromochloromethane	ND		50	49.5	99	50	54.2	108	9	78-122/12
75-27-4	Bromodichloromethane	ND		50	43.4	87	50	48.5	97	11	76-121/12
75-25-2	Bromoform	ND		50	44.9	90	50	50.0	100	11	70-133/13
74-83-9	Bromomethane	ND		50	25.7	51	50	33.7	67	27	27-164/38
78-93-3	2-Butanone (MEK)	ND		200	194	97	200	205	103	6	52-137/17
75-15-0	Carbon disulfide	ND		50	45.6	91	50	48.9	98	7	54-136/16
56-23-5	Carbon tetrachloride	ND		50	45.4	91	50	50.5	101	11	70-132/13
108-90-7	Chlorobenzene	ND		50	47.7	95	50	53.0	106	11	68-123/12
75-00-3	Chloroethane	ND		50	57.9	116	50	62.5	125	8	48-152/17
67-66-3	Chloroform	0.89	J	50	43.3	85	50	47.4	93	9	68-120/13
74-87-3	Chloromethane	ND		50	49.7	99	50	54.8	110	10	35-156/18
110-82-7	Cyclohexane	ND		50	44.2	88	50	48.0	96	8	53-146/14
96-12-8	1,2-Dibromo-3-chloropropane	ND		50	48.5	97	50	52.8	106	8	63-134/16
124-48-1	Dibromochloromethane	ND		50	45.0	90	50	50.4	101	11	75-122/12
106-93-4	1,2-Dibromoethane	ND		50	49.4	99	50	53.9	108	9	63-134/12
95-50-1	1,2-Dichlorobenzene	ND		50	48.0	96	50	52.3	105	9	74-119/12
541-73-1	1,3-Dichlorobenzene	ND		50	46.9	94	50	51.7	103	10	75-117/12
106-46-7	1,4-Dichlorobenzene	ND		50	47.9	96	50	52.0	104	8	72-117/12
75-71-8	Dichlorodifluoromethane	ND		50	45.1	90	50	49.6	99	10	34-163/16
75-34-3	1,1-Dichloroethane	ND		50	45.1	90	50	49.0	98	8	68-129/13
107-06-2	1,2-Dichloroethane	ND		50	40.2	80	50	44.5	89	10	66-120/13
75-35-4	1,1-Dichloroethene	ND		50	48.1	96	50	51.8	104	7	59-133/15
156-59-2	cis-1,2-Dichloroethene	ND		50	45.9	92	50	50.5	101	10	52-140/12
156-60-5	trans-1,2-Dichloroethene	ND		50	45.8	92	50	49.9	100	9	70-125/13
78-87-5	1,2-Dichloropropane	ND		50	46.6	93	50	50.6	101	8	73-124/12
10061-01-5	cis-1,3-Dichloropropene	ND		50	45.1	90	50	50.4	101	11	75-125/13
10061-02-6	trans-1,3-Dichloropropene	ND		50	43.0	86	50	48.2	96	11	75-122/12
100-41-4	Ethylbenzene	ND		50	47.3	95	50	52.0	104	9	37-144/12
76-13-1	Freon 113	ND		50	49.4	99	50	53.5	107	8	61-142/14
591-78-6	2-Hexanone	ND		200	180	90	200	195	98	8	56-132/16
98-82-8	Isopropylbenzene	ND		50	47.9	96	50	52.6	105	9	71-126/13
79-20-9	Methyl Acetate	ND		50	37.9	76	50	40.7	81	7	51-139/18
108-87-2	Methylcyclohexane	ND		50	47.8	96	50	51.4	103	7	59-137/16
1634-04-4	Methyl Tert Butyl Ether	ND		50	43.1	86	50	47.5	95	10	66-124/12

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD50285
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD50226-1MS	1X199267.D	1	08/19/22	TS	n/a	n/a	V1X8591
JD50226-1MSD	1X199268.D	1	08/19/22	TS	n/a	n/a	V1X8591
JD50226-1 [a]	1X199259.D	1	08/19/22	TS	n/a	n/a	V1X8591

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD50285-1, JD50285-2, JD50285-3, JD50285-4, JD50285-5

CAS No.	Compound	JD50226-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		200	183	92	200	199	100	8	65-135/14
75-09-2	Methylene chloride	ND		50	44.6	89	50	50.0	100	11	66-125/14
100-42-5	Styrene	ND		50	48.5	97	50	52.9	106	9	71-133/12
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	49.4	99	50	54.0	108	9	68-127/14
127-18-4	Tetrachloroethene	ND		50	49.9	100	50	54.0	108	8	58-132/13
108-88-3	Toluene	ND		50	47.9	96	50	51.7	103	8	46-139/12
87-61-6	1,2,3-Trichlorobenzene	ND		50	48.3	97	50	53.5	107	10	57-136/17
120-82-1	1,2,4-Trichlorobenzene	ND		50	49.2	98	50	52.6	105	7	61-137/16
71-55-6	1,1,1-Trichloroethane	ND		50	44.3	89	50	48.4	97	9	67-132/13
79-00-5	1,1,2-Trichloroethane	ND		50	48.0	96	50	52.7	105	9	75-120/12
79-01-6	Trichloroethene	ND		50	49.6	99	50	54.6	109	10	56-136/12
75-69-4	Trichlorofluoromethane	ND		50	49.7	99	50	54.0	108	8	61-145/16
75-01-4	Vinyl chloride	ND		50	56.4	113	50	60.7	121	7	41-156/16
	m,p-Xylene	ND		100	96.1	96	100	105	105	9	32-151/12
95-47-6	o-Xylene	ND		50	46.2	92	50	50.4	101	9	50-139/12
1330-20-7	Xylene (total)	ND		150	142	95	150	155	103	9	38-147/12

CAS No.	Surrogate Recoveries	MS	MSD	JD50226-1	Limits
1868-53-7	Dibromofluoromethane	99%	100%	103%	80-120%
17060-07-0	1,2-Dichloroethane-D4	91%	91%	94%	80-120%
2037-26-5	Toluene-D8	98%	99%	99%	80-120%
460-00-4	4-Bromofluorobenzene	94%	93%	97%	82-114%

(a) Results reported from the HCl preserved sample. The reported result for acrolein is for screening only and cannot be used for compliance purposes.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD50285
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD50241-1MS	1X199326.D	1	08/20/22	TS	n/a	n/a	V1X8593
JD50241-1MSD	1X199327.D	1	08/20/22	TS	n/a	n/a	V1X8593
JD50241-1	1X199320.D	1	08/20/22	TS	n/a	n/a	V1X8593
JD50241-1	1X199325.D	10	08/20/22	TS	n/a	n/a	V1X8593

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD50285-1

CAS No.	Compound	JD50241-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
156-59-2	cis-1,2-Dichloroethene	ND		50	47.0	94	50	48.2	96	3	52-140/12

CAS No.	Surrogate Recoveries	MS	MSD	JD50241-1	JD50241-1	Limits
1868-53-7	Dibromofluoromethane	99%	98%	102%	105%	80-120%
17060-07-0	1,2-Dichloroethane-D4	94%	94%	95%	96%	80-120%
2037-26-5	Toluene-D8	99%	98%	98%	98%	80-120%
460-00-4	4-Bromofluorobenzene	94%	92%	96%	98%	82-114%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JD50285
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: V1X8531-BFB
Lab File ID: 1X197514.D
Instrument ID: GCMS1X
Injection Date: 07/06/22
Injection Time: 19:43

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	38192	20.9		Pass
75	30.0 - 60.0% of mass 95	87837	48.1		Pass
95	Base peak, 100% relative abundance	182656	100.0		Pass
96	5.0 - 9.0% of mass 95	11967	6.55		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	167018	91.4		Pass
175	5.0 - 9.0% of mass 174	12684	6.94	(7.59) [a]	Pass
176	95.0 - 101.0% of mass 174	163434	89.5	(97.9) [a]	Pass
177	5.0 - 9.0% of mass 176	10347	5.66	(6.33) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V1X8531-IC8531	1X197516.D	07/06/22	21:06	01:23	Initial cal 0.2
V1X8531-IC8531	1X197518.D	07/06/22	21:43	02:00	Initial cal 0.5
V1X8531-IC8531	1X197520.D	07/06/22	22:20	02:37	Initial cal 1
V1X8531-IC8531	1X197522.D	07/06/22	22:57	03:14	Initial cal 2
V1X8531-IC8531	1X197524.D	07/06/22	23:34	03:51	Initial cal 4
V1X8531-IC8531	1X197526.D	07/07/22	00:11	04:28	Initial cal 8
V1X8531-IC8531	1X197528.D	07/07/22	00:48	05:05	Initial cal 20
V1X8531-ICC8531	1X197530.D	07/07/22	01:25	05:42	Initial cal 50
V1X8531-IC8531	1X197532.D	07/07/22	02:02	06:19	Initial cal 100
V1X8531-IC8531	1X197534.D	07/07/22	02:39	06:56	Initial cal 200
V1X8531-ICV8531	1X197540.D	07/07/22	04:30	08:47	Initial cal verification 50
V1X8531-ICV8531	1X197542.D	07/07/22	05:07	09:24	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JD50285
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: V1X8591-BFB
Lab File ID: 1X199252.D
Instrument ID: GCMS1X
Injection Date: 08/19/22
Injection Time: 09:01

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	44165	20.6		Pass
75	30.0 - 60.0% of mass 95	103120	48.2		Pass
95	Base peak, 100% relative abundance	213888	100.0		Pass
96	5.0 - 9.0% of mass 95	14048	6.57		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	203008	94.9		Pass
175	5.0 - 9.0% of mass 174	15746	7.36	(7.76) [a]	Pass
176	95.0 - 101.0% of mass 174	198315	92.7	(97.7) [a]	Pass
177	5.0 - 9.0% of mass 176	12713	5.94	(6.41) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V1X8591-CC8531	1X199252.D	08/19/22	09:01	00:00	Continuing cal 20
V1X8591-BS	1X199254.D	08/19/22	09:54	00:53	Blank Spike
V1X8591-MB	1X199256.D	08/19/22	10:40	01:39	Method Blank
ZZZZZZ	1X199257.D	08/19/22	11:02	02:01	(unrelated sample)
ZZZZZZ	1X199258.D	08/19/22	11:25	02:24	(unrelated sample)
JD50226-1	1X199259.D	08/19/22	11:48	02:47	(used for QC only; not part of job JD50285)
ZZZZZZ	1X199260.D	08/19/22	12:12	03:11	(unrelated sample)
ZZZZZZ	1X199261.D	08/19/22	12:35	03:34	(unrelated sample)
ZZZZZZ	1X199262.D	08/19/22	12:58	03:57	(unrelated sample)
ZZZZZZ	1X199263.D	08/19/22	13:20	04:19	(unrelated sample)
ZZZZZZ	1X199264.D	08/19/22	13:43	04:42	(unrelated sample)
ZZZZZZ	1X199265.D	08/19/22	14:06	05:05	(unrelated sample)
ZZZZZZ	1X199266.D	08/19/22	14:29	05:28	(unrelated sample)
JD50226-1MS	1X199267.D	08/19/22	14:52	05:51	Matrix Spike
JD50226-1MSD	1X199268.D	08/19/22	15:15	06:14	Matrix Spike Duplicate
ZZZZZZ	1X199270.D	08/19/22	16:02	07:01	(unrelated sample)
ZZZZZZ	1X199271.D	08/19/22	16:25	07:24	(unrelated sample)
ZZZZZZ	1X199272.D	08/19/22	16:48	07:47	(unrelated sample)
ZZZZZZ	1X199273.D	08/19/22	17:11	08:10	(unrelated sample)
ZZZZZZ	1X199274.D	08/19/22	17:34	08:33	(unrelated sample)
JD50285-1	1X199275.D	08/19/22	17:57	08:56	BASELINE_GW
JD50285-2	1X199276.D	08/19/22	18:20	09:19	BASELINE_2
JD50285-3	1X199277.D	08/19/22	18:43	09:42	BASELINE_5
JD50285-4	1X199278.D	08/19/22	19:06	10:05	BASELINE_8

Instrument Performance Check (BFB)

Job Number: JD50285
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample:	V1X8591-BFB	**Injection Date:**	08/19/22
Lab File ID:	1X199252.D	**Injection Time:**	09:01
Instrument ID:	GCMS1X		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
JD50285-5	1X199279.D	08/19/22	19:29	10:28	BASELINE_12

Instrument Performance Check (BFB)

Job Number: JD50285
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: V1X8593-BFB
Lab File ID: 1X199311.D
Instrument ID: GCMS1X
Injection Date: 08/20/22
Injection Time: 08:47

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	43928	21.0		Pass
75	30.0 - 60.0% of mass 95	102093	48.8		Pass
95	Base peak, 100% relative abundance	209216	100.0		Pass
96	5.0 - 9.0% of mass 95	13595	6.50		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	189760	90.7		Pass
175	5.0 - 9.0% of mass 174	14430	6.90	(7.60) [a]	Pass
176	95.0 - 101.0% of mass 174	188203	90.0	(99.2) [a]	Pass
177	5.0 - 9.0% of mass 176	12367	5.91	(6.57) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V1X8593-CC8531	1X199311.D	08/20/22	08:47	00:00	Continuing cal 20
V1X8593-BS	1X199313.D	08/20/22	09:39	00:52	Blank Spike
V1X8593-MB	1X199315.D	08/20/22	10:25	01:38	Method Blank
ZZZZZZ	1X199316.D	08/20/22	10:53	02:06	(unrelated sample)
ZZZZZZ	1X199317.D	08/20/22	11:15	02:28	(unrelated sample)
ZZZZZZ	1X199318.D	08/20/22	11:38	02:51	(unrelated sample)
ZZZZZZ	1X199319.D	08/20/22	12:01	03:14	(unrelated sample)
JD50241-1	1X199320.D	08/20/22	12:24	03:37	(used for QC only; not part of job JD50285)
JD50285-1	1X199321.D	08/20/22	12:47	04:00	BASELINE_GW
ZZZZZZ	1X199322.D	08/20/22	13:10	04:23	(unrelated sample)
ZZZZZZ	1X199323.D	08/20/22	13:33	04:46	(unrelated sample)
ZZZZZZ	1X199324.D	08/20/22	13:56	05:09	(unrelated sample)
JD50241-1	1X199325.D	08/20/22	14:19	05:32	(used for QC only; not part of job JD50285)
JD50241-1MS	1X199326.D	08/20/22	14:42	05:55	Matrix Spike
JD50241-1MSD	1X199327.D	08/20/22	15:05	06:18	Matrix Spike Duplicate
ZZZZZZ	1X199329.D	08/20/22	15:51	07:04	(unrelated sample)
ZZZZZZ	1X199330.D	08/20/22	16:14	07:27	(unrelated sample)
ZZZZZZ	1X199331.D	08/20/22	16:37	07:50	(unrelated sample)
ZZZZZZ	1X199332.D	08/20/22	17:00	08:13	(unrelated sample)
ZZZZZZ	1X199333.D	08/20/22	17:23	08:36	(unrelated sample)
ZZZZZZ	1X199334.D	08/20/22	17:45	08:58	(unrelated sample)
ZZZZZZ	1X199335.D	08/20/22	18:08	09:21	(unrelated sample)
ZZZZZZ	1X199336.D	08/20/22	18:31	09:44	(unrelated sample)
ZZZZZZ	1X199337.D	08/20/22	18:54	10:07	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JD50285
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample:	V1X8593-BFB	**Injection Date:**	08/20/22
Lab File ID:	1X199311.D	**Injection Time:**	08:47
Instrument ID:	GCMS1X		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	1X199338.D	08/20/22	19:17	10:30	(unrelated sample)
ZZZZZZ	1X199339.D	08/20/22	19:40	10:53	(unrelated sample)

Surrogate Recovery Summary

Job Number: JD50285
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Method: SW846 8260D **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JD50285-1	1X199321.D	102	96	99	98
JD50285-1	1X199275.D	104	95	97	98
JD50285-2	1X199276.D	104	94	98	96
JD50285-3	1X199277.D	101	95	98	97
JD50285-4	1X199278.D	104	95	98	98
JD50285-5	1X199279.D	103	95	98	97
JD50226-1MS	1X199267.D	99	91	98	94
JD50226-1MSD	1X199268.D	100	91	99	93
JD50241-1MS	1X199326.D	99	94	99	94
JD50241-1MSD	1X199327.D	98	94	98	92
V1X8591-BS	1X199254.D	100	92	98	94
V1X8591-MB	1X199256.D	102	94	98	97
V1X8593-BS	1X199313.D	99	93	99	94
V1X8593-MB	1X199315.D	103	96	100	97

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	80-120%
S2 = 1,2-Dichloroethane-D4	80-120%
S3 = Toluene-D8	80-120%
S4 = 4-Bromofluorobenzene	82-114%

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report



Technical Report for

Langan Engineering & Environmental

1487 First Avenue, NY, NY

100963701

SGS Job Number: JD50950

Sampling Date: 08/26/22

Report to:

Langan Engineering & Environmental
300 Kimball Drive
Parsippany, NJ 07054
ptozzi@langan.com; datamanagement@langan.com

ATTN: Paul Tozzi

Total number of pages in report: 69

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

David Chastain
General Manager

Client Service contact: Beth Stopen 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA(68-00408), RI, SC, TX, UT, VA, WV

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SGS North America Inc.

Sample Summary

Langan Engineering & Environmental

Job No: JD50950

1487 First Avenue, NY, NY
Project No: 100963701

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
This report contains results reported as ND = Not detected. The following applies: Organics ND = Not detected above the MDL							
JD50950-1	08/26/22	18:00	PT	08/31/22	AQ	Ground Water	C_1_0
JD50950-2	08/26/22	18:00	PT	08/31/22	AQ	Ground Water	C_2_0
JD50950-3	08/26/22	18:00	PT	08/31/22	AQ	Ground Water	C_3_0
JD50950-4	08/26/22	18:00	PT	08/31/22	AQ	Ground Water	Z_1_0
JD50950-5	08/26/22	18:00	PT	08/31/22	AQ	Ground Water	Z_2_0
JD50950-6	08/26/22	18:00	PT	08/31/22	AQ	Ground Water	Z_3_0
JD50950-7	08/26/22	18:00	PT	08/31/22	AQ	Ground Water	P_1_0
JD50950-8	08/26/22	18:00	PT	08/31/22	AQ	Ground Water	P_2_0
JD50950-9	08/26/22	18:00	PT	08/31/22	AQ	Ground Water	P_3_0
JD50950-10	08/26/22	18:00	PT	08/31/22	AQ	Ground Water	Z_4_0
JD50950-11	08/26/22	18:00	PT	08/31/22	AQ	Ground Water	Z_5_0
JD50950-12	08/26/22	18:00	PT	08/31/22	AQ	Ground Water	Z_6_0

Summary of Hits

Job Number: JD50950
Account: Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY
Collected: 08/26/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD50950-1	**C_1_0**					
Acetone		310	10	3.1	ug/l	SW846 8260D
Benzene		0.63	0.50	0.43	ug/l	SW846 8260D
Bromomethane		4.9	2.0	1.6	ug/l	SW846 8260D
Chloroform		11.5	1.0	0.50	ug/l	SW846 8260D
cis-1,2-Dichloroethene		135	1.0	0.51	ug/l	SW846 8260D
Ethylbenzene		1.2	1.0	0.60	ug/l	SW846 8260D
Methylene chloride		9.7	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene		66.5	1.0	0.90	ug/l	SW846 8260D
Toluene		1.3	1.0	0.53	ug/l	SW846 8260D
Trichloroethene		20.6	1.0	0.53	ug/l	SW846 8260D
m,p-Xylene		6.2	1.0	0.78	ug/l	SW846 8260D
o-Xylene		1.8	1.0	0.59	ug/l	SW846 8260D
Xylene (total)		8.0	1.0	0.59	ug/l	SW846 8260D
JD50950-2	**C_2_0**					
Acetone [a]		17.9	10	3.1	ug/l	SW846 8260D
Benzene [a]		0.64	0.50	0.43	ug/l	SW846 8260D
Chloroform [a]		9.8	1.0	0.50	ug/l	SW846 8260D
cis-1,2-Dichloroethene [a]		124	1.0	0.51	ug/l	SW846 8260D
trans-1,2-Dichloroethene [a]		0.55 J	1.0	0.54	ug/l	SW846 8260D
Ethylbenzene [a]		0.99 J	1.0	0.60	ug/l	SW846 8260D
Methylene chloride [a]		8.7	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [a]		74.1	1.0	0.90	ug/l	SW846 8260D
Toluene [a]		1.4	1.0	0.53	ug/l	SW846 8260D
Trichloroethene [a]		17.3	1.0	0.53	ug/l	SW846 8260D
m,p-Xylene [a]		7.5	1.0	0.78	ug/l	SW846 8260D
o-Xylene [a]		2.0	1.0	0.59	ug/l	SW846 8260D
Xylene (total) [a]		9.5	1.0	0.59	ug/l	SW846 8260D
JD50950-3	**C_3_0**					
Acetone [a]		19.3	10	3.1	ug/l	SW846 8260D
Benzene [a]		1.2	0.50	0.43	ug/l	SW846 8260D
Chloroform [a]		10.2	1.0	0.50	ug/l	SW846 8260D
cis-1,2-Dichloroethene [a]		118	1.0	0.51	ug/l	SW846 8260D
Ethylbenzene [a]		0.65 J	1.0	0.60	ug/l	SW846 8260D
Methylene chloride [a]		10.9	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [a]		35.3	1.0	0.90	ug/l	SW846 8260D
Toluene [a]		3.1	1.0	0.53	ug/l	SW846 8260D
Trichloroethene [a]		15.7	1.0	0.53	ug/l	SW846 8260D
m,p-Xylene [a]		19.0	1.0	0.78	ug/l	SW846 8260D
o-Xylene [a]		4.6	1.0	0.59	ug/l	SW846 8260D

Summary of Hits

Job Number: JD50950
Account: Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY
Collected: 08/26/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Xylene (total) [a]		23.6	1.0	0.59	ug/l	SW846 8260D
JD50950-4	**Z_1_0**					
Acetone [b]		62.5	20	6.1	ug/l	SW846 8260D
2-Butanone (MEK) [b]		855	20	14	ug/l	SW846 8260D
Chloroform [b]		2.3	2.0	1.0	ug/l	SW846 8260D
cis-1,2-Dichloroethene [b]		84.7	2.0	1.0	ug/l	SW846 8260D
Methylene chloride [b]		7.7	4.0	2.0	ug/l	SW846 8260D
Tetrachloroethene [b]		8.4	2.0	1.8	ug/l	SW846 8260D
Trichloroethene [b]		5.9	2.0	1.1	ug/l	SW846 8260D
JD50950-5	**Z_2_0**					
Acetone [b]		52.7	20	6.1	ug/l	SW846 8260D
2-Butanone (MEK) [b]		624	20	14	ug/l	SW846 8260D
Chloroform [b]		1.5 J	2.0	1.0	ug/l	SW846 8260D
cis-1,2-Dichloroethene [b]		87.4	2.0	1.0	ug/l	SW846 8260D
Methylene chloride [b]		7.5	4.0	2.0	ug/l	SW846 8260D
Tetrachloroethene [b]		9.3	2.0	1.8	ug/l	SW846 8260D
Trichloroethene [b]		6.5	2.0	1.1	ug/l	SW846 8260D
JD50950-6	**Z_3_0**					
Acetone [a]		199	10	3.1	ug/l	SW846 8260D
Benzene [a]		0.73	0.50	0.43	ug/l	SW846 8260D
2-Butanone (MEK) [c]		1280	100	69	ug/l	SW846 8260D
Carbon disulfide [a]		0.62 J	2.0	0.46	ug/l	SW846 8260D
Chloroform [a]		2.6	1.0	0.50	ug/l	SW846 8260D
cis-1,2-Dichloroethene [a]		71.0	1.0	0.51	ug/l	SW846 8260D
Methylene chloride [a]		9.2	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [a]		9.7	1.0	0.90	ug/l	SW846 8260D
Toluene [a]		1.0	1.0	0.53	ug/l	SW846 8260D
Trichloroethene [a]		4.8	1.0	0.53	ug/l	SW846 8260D
m,p-Xylene [a]		1.9	1.0	0.78	ug/l	SW846 8260D
Xylene (total) [a]		1.9	1.0	0.59	ug/l	SW846 8260D
JD50950-7	**P_1_0**					
Acetone [d]		518	10	3.1	ug/l	SW846 8260D
Benzene [d]		0.47 J	0.50	0.43	ug/l	SW846 8260D
2-Butanone (MEK) [d]		9.5 J	10	6.9	ug/l	SW846 8260D
Carbon disulfide [d]		0.70 J	2.0	0.46	ug/l	SW846 8260D
Chloroform [d]		8.3	1.0	0.50	ug/l	SW846 8260D
cis-1,2-Dichloroethene [d]		102	1.0	0.51	ug/l	SW846 8260D

Summary of Hits

Job Number: JD50950
Account: Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY
Collected: 08/26/22

Lab Sample ID / Client Sample ID / Analyte	Result/ Qual	RL	MDL	Units	Method
Methylene chloride [d]	5.7	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [d]	28.2	1.0	0.90	ug/l	SW846 8260D
Toluene [d]	0.68 J	1.0	0.53	ug/l	SW846 8260D
Trichloroethene [d]	10.9	1.0	0.53	ug/l	SW846 8260D
JD50950-8 P_2_0					
Acetone [d]	205	10	3.1	ug/l	SW846 8260D
Benzene [d]	0.52	0.50	0.43	ug/l	SW846 8260D
Carbon disulfide [d]	0.63 J	2.0	0.46	ug/l	SW846 8260D
Chloroform [d]	9.4	1.0	0.50	ug/l	SW846 8260D
cis-1,2-Dichloroethene [d]	114	1.0	0.51	ug/l	SW846 8260D
Methylene chloride [d]	5.7	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [d]	22.9	1.0	0.90	ug/l	SW846 8260D
Toluene [d]	0.62 J	1.0	0.53	ug/l	SW846 8260D
Trichloroethene [d]	11.9	1.0	0.53	ug/l	SW846 8260D
m,p-Xylene [d]	1.5	1.0	0.78	ug/l	SW846 8260D
Xylene (total) [d]	1.5	1.0	0.59	ug/l	SW846 8260D
JD50950-9 P_3_0					
Acetone [d]	171	10	3.1	ug/l	SW846 8260D
Benzene [d]	0.52	0.50	0.43	ug/l	SW846 8260D
2-Butanone (MEK) [d]	8.1 J	10	6.9	ug/l	SW846 8260D
Carbon disulfide [d]	0.66 J	2.0	0.46	ug/l	SW846 8260D
Chloroform [d]	9.1	1.0	0.50	ug/l	SW846 8260D
cis-1,2-Dichloroethene [d]	120	1.0	0.51	ug/l	SW846 8260D
Methylene chloride [d]	5.3	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [d]	31.3	1.0	0.90	ug/l	SW846 8260D
Toluene [d]	0.62 J	1.0	0.53	ug/l	SW846 8260D
Trichloroethene [d]	12.6	1.0	0.53	ug/l	SW846 8260D
m,p-Xylene [d]	1.6	1.0	0.78	ug/l	SW846 8260D
Xylene (total) [d]	1.6	1.0	0.59	ug/l	SW846 8260D
JD50950-10 Z_4_0					
Acetone [e]	184	25	7.6	ug/l	SW846 8260D
2-Butanone (MEK) [e]	1360	25	17	ug/l	SW846 8260D
Carbon disulfide [e]	4.1 J	5.0	1.1	ug/l	SW846 8260D
cis-1,2-Dichloroethene [e]	72.8	2.5	1.3	ug/l	SW846 8260D
Methylene chloride [e]	7.2	5.0	2.5	ug/l	SW846 8260D
Tetrachloroethene [e]	5.4	2.5	2.2	ug/l	SW846 8260D
Trichloroethene [e]	5.1	2.5	1.3	ug/l	SW846 8260D
Vinyl chloride [e]	5.8	2.5	2.0	ug/l	SW846 8260D

Summary of Hits

Job Number: JD50950
Account: Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY
Collected: 08/26/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD50950-11	**Z_5_0**					
Acetone [e]		178	25	7.6	ug/l	SW846 8260D
2-Butanone (MEK) [e]		1230	25	17	ug/l	SW846 8260D
Carbon disulfide [e]		3.4 J	5.0	1.1	ug/l	SW846 8260D
cis-1,2-Dichloroethene [e]		73.9	2.5	1.3	ug/l	SW846 8260D
Methylene chloride [e]		6.8	5.0	2.5	ug/l	SW846 8260D
Tetrachloroethene [e]		5.3	2.5	2.2	ug/l	SW846 8260D
Trichloroethene [e]		4.6	2.5	1.3	ug/l	SW846 8260D
Vinyl chloride [e]		6.8	2.5	2.0	ug/l	SW846 8260D
JD50950-12	**Z_6_0**					
Acetone [e]		64.4	25	7.6	ug/l	SW846 8260D
2-Butanone (MEK) [e]		422	25	17	ug/l	SW846 8260D
Carbon disulfide [e]		2.7 J	5.0	1.1	ug/l	SW846 8260D
cis-1,2-Dichloroethene [e]		72.5	2.5	1.3	ug/l	SW846 8260D
Methylene chloride [e]		8.0	5.0	2.5	ug/l	SW846 8260D
Tetrachloroethene [e]		8.5	2.5	2.2	ug/l	SW846 8260D
Trichloroethene [e]		4.7	2.5	1.3	ug/l	SW846 8260D
Vinyl chloride [e]		2.7	2.5	2.0	ug/l	SW846 8260D

(a) (pH = 6)Sample pH did not satisfy field preservation criteria.
(b) (pH = 6)Sample pH did not satisfy field preservation criteria.Dilution required due to high concentration of target compound.
(c) (pH = 4)Sample pH did not satisfy field preservation criteria. Dilution required due to high concentration of target compound.
(d) (pH = 2)Sample pH did not satisfy field preservation criteria.
(e) (pH = 4)Sample pH did not satisfy field preservation criteria.Dilution due to suspended particles.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	C_1_0		
Lab Sample ID:	JD50950-1	**Date Sampled:**	08/26/22
Matrix:	AQ - Ground Water	**Date Received:**	08/31/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L346508.D	1	09/02/22 20:46	NH	n/a	n/a	VL10475
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	310	10	3.1	ug/l	
71-43-2	Benzene	0.63	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	4.9	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	6.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	11.5	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	135	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	1.2	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	C_1_0		
Lab Sample ID:	JD50950-1	**Date Sampled:**	08/26/22
Matrix:	AQ - Ground Water	**Date Received:**	08/31/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	9.7	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	66.5	1.0	0.90	ug/l	
108-88-3	Toluene	1.3	1.0	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	20.6	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	
	m,p-Xylene	6.2	1.0	0.78	ug/l	
95-47-6	o-Xylene	1.8	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	8.0	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		80-120%
17060-07-0	1,2-Dichloroethane-D4	93%		80-120%
2037-26-5	Toluene-D8	97%		80-120%
460-00-4	4-Bromofluorobenzene	86%		82-114%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	C_2_0		
Lab Sample ID:	JD50950-2	**Date Sampled:**	08/26/22
Matrix:	AQ - Ground Water	**Date Received:**	08/31/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2A219838.D	1	09/06/22 12:19	NH	n/a	n/a	V2A9554
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	17.9	10	3.1	ug/l	
71-43-2	Benzene	0.64	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	6.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	9.8	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	124	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.55	1.0	0.54	ug/l	J
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	0.99	1.0	0.60	ug/l	J
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	C_2_0		
Lab Sample ID:	JD50950-2	**Date Sampled:**	08/26/22
Matrix:	AQ - Ground Water	**Date Received:**	08/31/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	8.7	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	74.1	1.0	0.90	ug/l	
108-88-3	Toluene	1.4	1.0	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	17.3	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	
	m,p-Xylene	7.5	1.0	0.78	ug/l	
95-47-6	o-Xylene	2.0	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	9.5	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		80-120%
17060-07-0	1,2-Dichloroethane-D4	87%		80-120%
2037-26-5	Toluene-D8	96%		80-120%
460-00-4	4-Bromofluorobenzene	98%		82-114%

(a) (pH = 6)Sample pH did not satisfy field preservation criteria.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	C_3_0		
Lab Sample ID:	JD50950-3	**Date Sampled:**	08/26/22
Matrix:	AQ - Ground Water	**Date Received:**	08/31/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2A219839.D	1	09/06/22 12:48	NH	n/a	n/a	V2A9554
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	19.3	10	3.1	ug/l	
71-43-2	Benzene	1.2	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	6.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	10.2	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	118	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	0.65	1.0	0.60	ug/l	J
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	C_3_0		
Lab Sample ID:	JD50950-3	**Date Sampled:**	08/26/22
Matrix:	AQ - Ground Water	**Date Received:**	08/31/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	10.9	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	35.3	1.0	0.90	ug/l	
108-88-3	Toluene	3.1	1.0	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	15.7	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	
	m,p-Xylene	19.0	1.0	0.78	ug/l	
95-47-6	o-Xylene	4.6	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	23.6	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		80-120%
17060-07-0	1,2-Dichloroethane-D4	88%		80-120%
2037-26-5	Toluene-D8	96%		80-120%
460-00-4	4-Bromofluorobenzene	101%		82-114%

(a) (pH = 6)Sample pH did not satisfy field preservation criteria.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z_1_0		
Lab Sample ID:	JD50950-4	**Date Sampled:**	08/26/22
Matrix:	AQ - Ground Water	**Date Received:**	08/31/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2A219843.D	2	09/06/22 15:08	NH	n/a	n/a	V2A9554
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	62.5	20	6.1	ug/l	
71-43-2	Benzene	ND	1.0	0.85	ug/l	
74-97-5	Bromochloromethane	ND	2.0	0.96	ug/l	
75-27-4	Bromodichloromethane	ND	2.0	0.90	ug/l	
75-25-2	Bromoform	ND	2.0	1.3	ug/l	
74-83-9	Bromomethane	ND	4.0	3.3	ug/l	
78-93-3	2-Butanone (MEK)	855	20	14	ug/l	
75-15-0	Carbon disulfide	ND	4.0	0.91	ug/l	
56-23-5	Carbon tetrachloride	ND	2.0	1.1	ug/l	
108-90-7	Chlorobenzene	ND	2.0	1.1	ug/l	
75-00-3	Chloroethane	ND	2.0	1.5	ug/l	
67-66-3	Chloroform	2.3	2.0	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	1.5	ug/l	
110-82-7	Cyclohexane	ND	10	1.6	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	4.0	1.1	ug/l	
124-48-1	Dibromochloromethane	ND	2.0	1.1	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.95	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	2.0	1.1	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2.0	1.1	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2.0	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	4.0	1.1	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.0	1.1	ug/l	
107-06-2	1,2-Dichloroethane	ND	2.0	1.2	ug/l	
75-35-4	1,1-Dichloroethene	ND	2.0	1.2	ug/l	
156-59-2	cis-1,2-Dichloroethene	84.7	2.0	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	2.0	1.1	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.94	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.86	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.2	ug/l	
76-13-1	Freon 113	ND	10	1.2	ug/l	
591-78-6	2-Hexanone	ND	10	4.1	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z_1_0		
Lab Sample ID:	JD50950-4	**Date Sampled:**	08/26/22
Matrix:	AQ - Ground Water	**Date Received:**	08/31/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	2.0	1.3	ug/l	
79-20-9	Methyl Acetate	ND	10	1.6	ug/l	
108-87-2	Methylcyclohexane	ND	10	1.2	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	10	3.7	ug/l	
75-09-2	Methylene chloride	7.7	4.0	2.0	ug/l	
100-42-5	Styrene	ND	2.0	0.97	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	1.3	ug/l	
127-18-4	Tetrachloroethene	8.4	2.0	1.8	ug/l	
108-88-3	Toluene	ND	2.0	1.1	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	1.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.0	1.1	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.0	1.1	ug/l	
79-01-6	Trichloroethene	5.9	2.0	1.1	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	0.80	ug/l	
75-01-4	Vinyl chloride	ND	2.0	1.6	ug/l	
	m,p-Xylene	ND	2.0	1.6	ug/l	
95-47-6	o-Xylene	ND	2.0	1.2	ug/l	
1330-20-7	Xylene (total)	ND	2.0	1.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		80-120%
17060-07-0	1,2-Dichloroethane-D4	88%		80-120%
2037-26-5	Toluene-D8	95%		80-120%
460-00-4	4-Bromofluorobenzene	102%		82-114%

(a) (pH = 6)Sample pH did not satisfy field preservation criteria.Dilution required due to high concentration of target compound.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z_2_0		
Lab Sample ID:	JD50950-5	**Date Sampled:**	08/26/22
Matrix:	AQ - Ground Water	**Date Received:**	08/31/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2A219844.D	2	09/06/22 15:38	NH	n/a	n/a	V2A9554
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	52.7	20	6.1	ug/l	
71-43-2	Benzene	ND	1.0	0.85	ug/l	
74-97-5	Bromochloromethane	ND	2.0	0.96	ug/l	
75-27-4	Bromodichloromethane	ND	2.0	0.90	ug/l	
75-25-2	Bromoform	ND	2.0	1.3	ug/l	
74-83-9	Bromomethane	ND	4.0	3.3	ug/l	
78-93-3	2-Butanone (MEK)	624	20	14	ug/l	
75-15-0	Carbon disulfide	ND	4.0	0.91	ug/l	
56-23-5	Carbon tetrachloride	ND	2.0	1.1	ug/l	
108-90-7	Chlorobenzene	ND	2.0	1.1	ug/l	
75-00-3	Chloroethane	ND	2.0	1.5	ug/l	
67-66-3	Chloroform	1.5	2.0	1.0	ug/l	J
74-87-3	Chloromethane	ND	2.0	1.5	ug/l	
110-82-7	Cyclohexane	ND	10	1.6	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	4.0	1.1	ug/l	
124-48-1	Dibromochloromethane	ND	2.0	1.1	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.95	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	2.0	1.1	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2.0	1.1	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2.0	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	4.0	1.1	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.0	1.1	ug/l	
107-06-2	1,2-Dichloroethane	ND	2.0	1.2	ug/l	
75-35-4	1,1-Dichloroethene	ND	2.0	1.2	ug/l	
156-59-2	cis-1,2-Dichloroethene	87.4	2.0	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	2.0	1.1	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.94	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.86	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.2	ug/l	
76-13-1	Freon 113	ND	10	1.2	ug/l	
591-78-6	2-Hexanone	ND	10	4.1	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z_2_0		
Lab Sample ID:	JD50950-5	**Date Sampled:**	08/26/22
Matrix:	AQ - Ground Water	**Date Received:**	08/31/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	2.0	1.3	ug/l	
79-20-9	Methyl Acetate	ND	10	1.6	ug/l	
108-87-2	Methylcyclohexane	ND	10	1.2	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	10	3.7	ug/l	
75-09-2	Methylene chloride	7.5	4.0	2.0	ug/l	
100-42-5	Styrene	ND	2.0	0.97	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	1.3	ug/l	
127-18-4	Tetrachloroethene	9.3	2.0	1.8	ug/l	
108-88-3	Toluene	ND	2.0	1.1	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	1.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.0	1.1	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.0	1.1	ug/l	
79-01-6	Trichloroethene	6.5	2.0	1.1	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	0.80	ug/l	
75-01-4	Vinyl chloride	ND	2.0	1.6	ug/l	
	m,p-Xylene	ND	2.0	1.6	ug/l	
95-47-6	o-Xylene	ND	2.0	1.2	ug/l	
1330-20-7	Xylene (total)	ND	2.0	1.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		80-120%
17060-07-0	1,2-Dichloroethane-D4	88%		80-120%
2037-26-5	Toluene-D8	95%		80-120%
460-00-4	4-Bromofluorobenzene	102%		82-114%

(a) (pH = 6)Sample pH did not satisfy field preservation criteria.Dilution required due to high concentration of target compound.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z_3_0		
Lab Sample ID:	JD50950-6	**Date Sampled:**	08/26/22
Matrix:	AQ - Ground Water	**Date Received:**	08/31/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L346676.D	1	09/07/22 16:07	NH	n/a	n/a	VL10481
Run #2 [b]	3D181193.D	10	09/02/22 20:31	NW	n/a	n/a	V3D7627

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	199	10	3.1	ug/l	
71-43-2	Benzene	0.73	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	1280 [c]	100	69	ug/l	
75-15-0	Carbon disulfide	0.62	2.0	0.46	ug/l	J
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	2.6	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	71.0	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z_3_0		
Lab Sample ID:	JD50950-6	**Date Sampled:**	08/26/22
Matrix:	AQ - Ground Water	**Date Received:**	08/31/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	9.2	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	9.7	1.0	0.90	ug/l	
108-88-3	Toluene	1.0	1.0	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	4.8	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	
	m,p-Xylene	1.9	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	1.9	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%	90%	80-120%
17060-07-0	1,2-Dichloroethane-D4	86%	110%	80-120%
2037-26-5	Toluene-D8	98%	110%	80-120%
460-00-4	4-Bromofluorobenzene	93%	104%	82-114%

(a) (pH = 6)Sample pH did not satisfy field preservation criteria.
(b) (pH = 4)Sample pH did not satisfy field preservation criteria. Dilution required due to high concentration of target compound.
(c) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P_1_0		
Lab Sample ID:	JD50950-7	**Date Sampled:**	08/26/22
Matrix:	AQ - Ground Water	**Date Received:**	08/31/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L346671.D	1	09/07/22 14:11	NH	n/a	n/a	VL10481
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	518	10	3.1	ug/l	
71-43-2	Benzene	0.47	0.50	0.43	ug/l	J
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	9.5	10	6.9	ug/l	J
75-15-0	Carbon disulfide	0.70	2.0	0.46	ug/l	J
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	8.3	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	102	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P_1_0		
Lab Sample ID:	JD50950-7	**Date Sampled:**	08/26/22
Matrix:	AQ - Ground Water	**Date Received:**	08/31/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	5.7	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	28.2	1.0	0.90	ug/l	
108-88-3	Toluene	0.68	1.0	0.53	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	10.9	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	
	m,p-Xylene	ND	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		80-120%
17060-07-0	1,2-Dichloroethane-D4	87%		80-120%
2037-26-5	Toluene-D8	102%		80-120%
460-00-4	4-Bromofluorobenzene	88%		82-114%

(a) (pH = 2)Sample pH did not satisfy field preservation criteria.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P_2_0		
Lab Sample ID:	JD50950-8	**Date Sampled:**	08/26/22
Matrix:	AQ - Ground Water	**Date Received:**	08/31/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L346670.D	1	09/07/22 13:48	NH	n/a	n/a	VL10481
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	205	10	3.1	ug/l	
71-43-2	Benzene	0.52	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	6.9	ug/l	
75-15-0	Carbon disulfide	0.63	2.0	0.46	ug/l	J
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	9.4	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	114	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P_2_0		
Lab Sample ID:	JD50950-8	**Date Sampled:**	08/26/22
Matrix:	AQ - Ground Water	**Date Received:**	08/31/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	5.7	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	22.9	1.0	0.90	ug/l	
108-88-3	Toluene	0.62	1.0	0.53	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	11.9	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	
	m,p-Xylene	1.5	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	1.5	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		80-120%
17060-07-0	1,2-Dichloroethane-D4	86%		80-120%
2037-26-5	Toluene-D8	102%		80-120%
460-00-4	4-Bromofluorobenzene	88%		82-114%

(a) (pH = 2)Sample pH did not satisfy field preservation criteria.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P_3_0		
Lab Sample ID:	JD50950-9	**Date Sampled:**	08/26/22
Matrix:	AQ - Ground Water	**Date Received:**	08/31/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L346669.D	1	09/07/22 13:25	NH	n/a	n/a	VL10481
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	171	10	3.1	ug/l	
71-43-2	Benzene	0.52	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	8.1	10	6.9	ug/l	J
75-15-0	Carbon disulfide	0.66	2.0	0.46	ug/l	J
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	9.1	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	120	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P_3_0		
Lab Sample ID:	JD50950-9	**Date Sampled:**	08/26/22
Matrix:	AQ - Ground Water	**Date Received:**	08/31/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	5.3	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	31.3	1.0	0.90	ug/l	
108-88-3	Toluene	0.62	1.0	0.53	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	12.6	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	
	m,p-Xylene	1.6	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	1.6	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		80-120%
17060-07-0	1,2-Dichloroethane-D4	88%		80-120%
2037-26-5	Toluene-D8	102%		80-120%
460-00-4	4-Bromofluorobenzene	86%		82-114%

(a) (pH = 2)Sample pH did not satisfy field preservation criteria.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z_4_0		
Lab Sample ID:	JD50950-10	**Date Sampled:**	08/26/22
Matrix:	AQ - Ground Water	**Date Received:**	08/31/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L346675.D	2.5	09/07/22 15:44	NH	n/a	n/a	VL10481
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	184	25	7.6	ug/l	
71-43-2	Benzene	ND	1.3	1.1	ug/l	
74-97-5	Bromochloromethane	ND	2.5	1.2	ug/l	
75-27-4	Bromodichloromethane	ND	2.5	1.1	ug/l	
75-25-2	Bromoform	ND	2.5	1.6	ug/l	
74-83-9	Bromomethane	ND	5.0	4.1	ug/l	
78-93-3	2-Butanone (MEK)	1360	25	17	ug/l	
75-15-0	Carbon disulfide	4.1	5.0	1.1	ug/l	J
56-23-5	Carbon tetrachloride	ND	2.5	1.4	ug/l	
108-90-7	Chlorobenzene	ND	2.5	1.4	ug/l	
75-00-3	Chloroethane	ND	2.5	1.8	ug/l	
67-66-3	Chloroform	ND	2.5	1.3	ug/l	
74-87-3	Chloromethane	ND	2.5	1.9	ug/l	
110-82-7	Cyclohexane	ND	13	2.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.3	ug/l	
124-48-1	Dibromochloromethane	ND	2.5	1.4	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.5	1.2	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	2.5	1.3	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2.5	1.4	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2.5	1.3	ug/l	
75-71-8	Dichlorodifluoromethane	ND	5.0	1.4	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.5	1.4	ug/l	
107-06-2	1,2-Dichloroethane	ND	2.5	1.5	ug/l	
75-35-4	1,1-Dichloroethene	ND	2.5	1.5	ug/l	
156-59-2	cis-1,2-Dichloroethene	72.8	2.5	1.3	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	2.5	1.3	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.5	1.3	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.5	1.2	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.5	1.1	ug/l	
100-41-4	Ethylbenzene	ND	2.5	1.5	ug/l	
76-13-1	Freon 113	ND	13	1.5	ug/l	
591-78-6	2-Hexanone	ND	13	5.1	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z_4_0		
Lab Sample ID:	JD50950-10	**Date Sampled:**	08/26/22
Matrix:	AQ - Ground Water	**Date Received:**	08/31/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	2.5	1.6	ug/l	
79-20-9	Methyl Acetate	ND	13	2.0	ug/l	
108-87-2	Methylcyclohexane	ND	13	1.5	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	2.5	1.3	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	13	4.6	ug/l	
75-09-2	Methylene chloride	7.2	5.0	2.5	ug/l	
100-42-5	Styrene	ND	2.5	1.2	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.5	1.6	ug/l	
127-18-4	Tetrachloroethene	5.4	2.5	2.2	ug/l	
108-88-3	Toluene	ND	2.5	1.3	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.5	1.3	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	1.3	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.5	1.3	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.5	1.3	ug/l	
79-01-6	Trichloroethene	5.1	2.5	1.3	ug/l	
75-69-4	Trichlorofluoromethane	ND	5.0	1.0	ug/l	
75-01-4	Vinyl chloride	5.8	2.5	2.0	ug/l	
	m,p-Xylene	ND	2.5	2.0	ug/l	
95-47-6	o-Xylene	ND	2.5	1.5	ug/l	
1330-20-7	Xylene (total)	ND	2.5	1.5	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		80-120%
17060-07-0	1,2-Dichloroethane-D4	87%		80-120%
2037-26-5	Toluene-D8	97%		80-120%
460-00-4	4-Bromofluorobenzene	89%		82-114%

(a) (pH = 4)Sample pH did not satisfy field preservation criteria.Dilution due to suspended particles.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z_5_0		
Lab Sample ID:	JD50950-11	**Date Sampled:**	08/26/22
Matrix:	AQ - Ground Water	**Date Received:**	08/31/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L346674.D	2.5	09/07/22 15:21	NH	n/a	n/a	VL10481
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	178	25	7.6	ug/l	
71-43-2	Benzene	ND	1.3	1.1	ug/l	
74-97-5	Bromochloromethane	ND	2.5	1.2	ug/l	
75-27-4	Bromodichloromethane	ND	2.5	1.1	ug/l	
75-25-2	Bromoform	ND	2.5	1.6	ug/l	
74-83-9	Bromomethane	ND	5.0	4.1	ug/l	
78-93-3	2-Butanone (MEK)	1230	25	17	ug/l	
75-15-0	Carbon disulfide	3.4	5.0	1.1	ug/l	J
56-23-5	Carbon tetrachloride	ND	2.5	1.4	ug/l	
108-90-7	Chlorobenzene	ND	2.5	1.4	ug/l	
75-00-3	Chloroethane	ND	2.5	1.8	ug/l	
67-66-3	Chloroform	ND	2.5	1.3	ug/l	
74-87-3	Chloromethane	ND	2.5	1.9	ug/l	
110-82-7	Cyclohexane	ND	13	2.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.3	ug/l	
124-48-1	Dibromochloromethane	ND	2.5	1.4	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.5	1.2	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	2.5	1.3	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2.5	1.4	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2.5	1.3	ug/l	
75-71-8	Dichlorodifluoromethane	ND	5.0	1.4	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.5	1.4	ug/l	
107-06-2	1,2-Dichloroethane	ND	2.5	1.5	ug/l	
75-35-4	1,1-Dichloroethene	ND	2.5	1.5	ug/l	
156-59-2	cis-1,2-Dichloroethene	73.9	2.5	1.3	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	2.5	1.3	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.5	1.3	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.5	1.2	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.5	1.1	ug/l	
100-41-4	Ethylbenzene	ND	2.5	1.5	ug/l	
76-13-1	Freon 113	ND	13	1.5	ug/l	
591-78-6	2-Hexanone	ND	13	5.1	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z_5_0		
Lab Sample ID:	JD50950-11	**Date Sampled:**	08/26/22
Matrix:	AQ - Ground Water	**Date Received:**	08/31/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	2.5	1.6	ug/l	
79-20-9	Methyl Acetate	ND	13	2.0	ug/l	
108-87-2	Methylcyclohexane	ND	13	1.5	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	2.5	1.3	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	13	4.6	ug/l	
75-09-2	Methylene chloride	6.8	5.0	2.5	ug/l	
100-42-5	Styrene	ND	2.5	1.2	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.5	1.6	ug/l	
127-18-4	Tetrachloroethene	5.3	2.5	2.2	ug/l	
108-88-3	Toluene	ND	2.5	1.3	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.5	1.3	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	1.3	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.5	1.3	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.5	1.3	ug/l	
79-01-6	Trichloroethene	4.6	2.5	1.3	ug/l	
75-69-4	Trichlorofluoromethane	ND	5.0	1.0	ug/l	
75-01-4	Vinyl chloride	6.8	2.5	2.0	ug/l	
	m,p-Xylene	ND	2.5	2.0	ug/l	
95-47-6	o-Xylene	ND	2.5	1.5	ug/l	
1330-20-7	Xylene (total)	ND	2.5	1.5	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		80-120%
17060-07-0	1,2-Dichloroethane-D4	86%		80-120%
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	90%		82-114%

(a) (pH = 4)Sample pH did not satisfy field preservation criteria.Dilution due to suspended particles.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z_6_0		
Lab Sample ID:	JD50950-12	**Date Sampled:**	08/26/22
Matrix:	AQ - Ground Water	**Date Received:**	08/31/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L346673.D	2.5	09/07/22 14:58	NH	n/a	n/a	VL10481
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	64.4	25	7.6	ug/l	
71-43-2	Benzene	ND	1.3	1.1	ug/l	
74-97-5	Bromochloromethane	ND	2.5	1.2	ug/l	
75-27-4	Bromodichloromethane	ND	2.5	1.1	ug/l	
75-25-2	Bromoform	ND	2.5	1.6	ug/l	
74-83-9	Bromomethane	ND	5.0	4.1	ug/l	
78-93-3	2-Butanone (MEK)	422	25	17	ug/l	
75-15-0	Carbon disulfide	2.7	5.0	1.1	ug/l	J
56-23-5	Carbon tetrachloride	ND	2.5	1.4	ug/l	
108-90-7	Chlorobenzene	ND	2.5	1.4	ug/l	
75-00-3	Chloroethane	ND	2.5	1.8	ug/l	
67-66-3	Chloroform	ND	2.5	1.3	ug/l	
74-87-3	Chloromethane	ND	2.5	1.9	ug/l	
110-82-7	Cyclohexane	ND	13	2.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.3	ug/l	
124-48-1	Dibromochloromethane	ND	2.5	1.4	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.5	1.2	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	2.5	1.3	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2.5	1.4	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2.5	1.3	ug/l	
75-71-8	Dichlorodifluoromethane	ND	5.0	1.4	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.5	1.4	ug/l	
107-06-2	1,2-Dichloroethane	ND	2.5	1.5	ug/l	
75-35-4	1,1-Dichloroethene	ND	2.5	1.5	ug/l	
156-59-2	cis-1,2-Dichloroethene	72.5	2.5	1.3	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	2.5	1.3	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.5	1.3	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.5	1.2	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.5	1.1	ug/l	
100-41-4	Ethylbenzene	ND	2.5	1.5	ug/l	
76-13-1	Freon 113	ND	13	1.5	ug/l	
591-78-6	2-Hexanone	ND	13	5.1	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z_6_0		
Lab Sample ID:	JD50950-12	**Date Sampled:**	08/26/22
Matrix:	AQ - Ground Water	**Date Received:**	08/31/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	2.5	1.6	ug/l	
79-20-9	Methyl Acetate	ND	13	2.0	ug/l	
108-87-2	Methylcyclohexane	ND	13	1.5	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	2.5	1.3	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	13	4.6	ug/l	
75-09-2	Methylene chloride	8.0	5.0	2.5	ug/l	
100-42-5	Styrene	ND	2.5	1.2	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.5	1.6	ug/l	
127-18-4	Tetrachloroethene	8.5	2.5	2.2	ug/l	
108-88-3	Toluene	ND	2.5	1.3	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.5	1.3	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	1.3	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.5	1.3	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.5	1.3	ug/l	
79-01-6	Trichloroethene	4.7	2.5	1.3	ug/l	
75-69-4	Trichlorofluoromethane	ND	5.0	1.0	ug/l	
75-01-4	Vinyl chloride	2.7	2.5	2.0	ug/l	
	m,p-Xylene	ND	2.5	2.0	ug/l	
95-47-6	o-Xylene	ND	2.5	1.5	ug/l	
1330-20-7	Xylene (total)	ND	2.5	1.5	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		80-120%
17060-07-0	1,2-Dichloroethane-D4	87%		80-120%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	89%		82-114%

(a) (pH = 4)Sample pH did not satisfy field preservation criteria.Dilution due to suspended particles.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

GW

CHAIN OF CUSTODY

Page 1 of 1 PN

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.sgs.com/ehsusa

EHSA-QAC-0023-04-FORM-Standard COC

FED-EX Tracking #:
Bottle Order Control #: SLV-081022-28
SGS Quote #:
SGS Job #: JD50950

Client / Reporting Information	Project Information	Requested Analysis	Matrix Codes
Company Name: Langan	Project Name: 1487 1st ave	VOC 8260	~~DW - Drinking Water~~ GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED-Sediment OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe ~~FB - Field Blank~~ EB-Equipment Blank RB - Rinse Blank TB - Trip Blank
Street Address: 300 Kimball Dr	Street: 1st ave		
City: Parsippany State: NJ Zip: 07054	City: NY State: NY	Billing Information (If different from Report to)	
Project Contact: pfuzzo@langan.com E-mail	Project #: 100963701	Company Name:	
Phone #: (908) 670-6676	Client Purchase Order #:	Street Address:	
Sampler(s) Name(s): Phil Tuzzo Phone #	Project Manager:	City State Zip	
		Attention:	

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Grab (G) Comp (C)	Source Chlorinated (Y/N)	Matrix	# of bottles	Preserved Bottles HCl	NaOH	HNO_3	H_2SO_4	NONE	DI Water	MEOH	ENCORE	pH Check (Lab Use Only)	LAB USE ONLY
1	C_1_0		8/26	1800	PT	C	Y	GW	2	2								X	V456
2	C_2_0																	X	
3	C_3_0																	X	
4	Z_1_0																	X	
5	Z_2_0																	X	
6	Z_3_0																	X	
	Z_1_0																	X	
	Z_2_0																	X	
	Z_3_0																	X	
7	P_1_0																	X	
8	P_2_0																	X	
9	P_3_0																	X	

Turn Around Time (Business Days)

Approved By (SGS PM): / Date:

- ☐ 10 Business Days
- ☐ 5 Business Days
- ☐ 3 Business Days*
- ☐ 2 Business Days*
- ☐ 1 Business Day*
- ☒ Other standard

All data available via Labilink

* Approval needed for 1-3 Business Day TAT

Deliverable

- ☐ Commercial "A" (Level 1)
- ☒ Commercial "B" (Level 2)
- ☐ NJ Reduced (Level 3)
- ☐ Full Tier I (Level 4)
- ☐ Commercial "C"
- ☐ NJ DKQP
- ☐ NYASP Category A
- ☐ NYASP Category B
- ☐ MA MCP Criteria_____
- ☐ CT RCP Criteria_____
- ☐ State Forms
- ☐ EDD Format _____
- ☐ DOD-QSM5

Commercial "A" = Results only; Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

AB2A

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by:	Date / Time:	Received By:	Relinquished by:	Date / Time:	Received By:
1		8-31-22/1025		2	8.31.22 1705	2
3			3	4		4
5			5	Custody Seal # ☐ Intact ☐ Not Intact ☐ Absent	Therm ID: See Sample Receipt Summary ☐	On Ice Cooler Temp. °C: 1.3

4.1 4

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.sgs.com/ehsusa

EHSA-QAC-0023-04-FORM-Standard COC

Page __ of __

FED-EX Tracking #: | Bottle Order Control #:
SGS Quote #: | SGS Job #: JD50950

Client / Reporting Information

Company Name: Langan
Street Address:
City State Zip
Project Contact E-mail
Phone #
Sampler(s) Name(s) Phone #

Project Information

Project Name: 1487 1st Ave
Street:
City State
Project #
Client Purchase Order #
Project Manager

Billing Information (If different from Report to)

Company Name
Street Address
City State Zip
Attention:

Requested Analysis

VOCs

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB - Field Blank
EB-Equipment Blank
RB - Rinse Blank
TB - Trip Blank

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Grab (G) Comp (C)	Source Chlorinated (Y/N)	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO_3	H_2SO_4	NONE	DI Water	MEOH	ENCORE	pH Check (Lab Use Only)	LAB USE ONLY
10	Z-4-0		8/26/22	1800					2	2								X	
11	Z-5-0		8/26/22	1800					2	2								X	
12	Z-6-0		8/26/22	1800					2	2								X	

Turn Around Time (Business Days)

Approved By (SGS PM): / Date:

- ☐ 10 Business Days
- ☐ 5 Business Days
- ☐ 3 Business Days*
- ☐ 2 Business Days*
- ☐ 1 Business Day*
- ☐ Other

All data available via Lablink

* Approval needed for 1-3 Business Day TAT

Deliverable

- ☐ Commercial "A" (Level 1)
- ☐ Commercial "B" (Level 2)
- ☐ NJ Reduced (Level 3)
- ☐ Full Tier I (Level 4)
- ☐ Commercial "C"
- ☐ NJ DKQP
- ☐ NYASP Category A
- ☐ NYASP Category B
- ☐ MA MCP Criteria_____
- ☐ CT RCP Criteria_____
- ☐ State Forms
- ☐ EDD Format _____
- ☐ DOD-QSM5

"Commercial "A" = Results only; "Commercial "B" = Results + QC Summary
"Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by:	Date / Time:	Received By:	Relinquished By:	Date / Time:	Received By:
1		1	2	8/31/22 17:05	2
3		3	4		4
5		5	Custody Seal # ☐ Intact ☐ Not intact ☐ Absent	Therm ID: See Sample Receipt Summary ☐	On Ice ☐ Cooler Temp. °C: 1.3

SGS Sample Receipt Summary

Job Number: JD50950 **Client:** LANGAN ENGINEERING & ENVIRONMENT **Project:** 1487 FIRST AVENUE, NY, NY

Date / Time Received: 8/31/2022 5:05:00 PM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (1.3);

Cooler Temps (Corrected) °C: Cooler 1: (1.9);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control _Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 231619 pH 12+: 203117A Other: (Specify)

Comments
1). Samples "Z-1-0", "Z-2-0', and "Z-3-0" are listed twice on the COC. 2 x 40ml HCL bottles were received for these samples totaling 6 bottles. Please confirm.

2). Samples "Z-4-0", "Z-5-0", and "Z-6-0" were received as additional samples and appended to the COC as samples -10 thru -12 respecitvely. Please confirm.

Responded to by: bEth Stopen

Response Date: 9/1/22

Please proceed with -10, -11, -12 for V8260TCL20
Per Paul Tozzi

JD50950: Chain of Custody
Page 4 of 4

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: JD50950
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL10475-MB	L346486.D	1	09/02/22	NH	n/a	n/a	VL10475

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD50950-1

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.1	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	6.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	

Method Blank Summary

Job Number: JD50950
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL10475-MB	L346486.D	1	09/02/22	NH	n/a	n/a	VL10475

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD50950-1

CAS No.	Compound	Result	RL	MDL	Units	Q
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.90	ug/l	
108-88-3	Toluene	ND	1.0	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	
	m,p-Xylene	ND	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	97%	80-120%
17060-07-0	1,2-Dichloroethane-D4	94%	80-120%
2037-26-5	Toluene-D8	101%	80-120%
460-00-4	4-Bromofluorobenzene	90%	82-114%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JD50950
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3D7627-MB	3D181177.D	1	09/02/22	NW	n/a	n/a	V3D7627

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD50950-6

CAS No.	Compound	Result	RL	MDL	Units	Q
78-93-3	2-Butanone (MEK)	ND	10	6.9	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	90%	80-120%
17060-07-0	1,2-Dichloroethane-D4	112%	80-120%
2037-26-5	Toluene-D8	109%	80-120%
460-00-4	4-Bromofluorobenzene	104%	82-114%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JD50950
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2A9554-MB	2A219836.D	1	09/06/22	NH	n/a	n/a	V2A9554

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD50950-2, JD50950-3, JD50950-4, JD50950-5

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.1	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	6.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	

Method Blank Summary

Job Number: JD50950
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2A9554-MB	2A219836.D	1	09/06/22	NH	n/a	n/a	V2A9554

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD50950-2, JD50950-3, JD50950-4, JD50950-5

CAS No.	Compound	Result	RL	MDL	Units	Q
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.90	ug/l	
108-88-3	Toluene	ND	1.0	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	
	m,p-Xylene	ND	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	106%	80-120%
17060-07-0	1,2-Dichloroethane-D4	88%	80-120%
2037-26-5	Toluene-D8	96%	80-120%
460-00-4	4-Bromofluorobenzene	103%	82-114%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JD50950
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL10481-MB	L346665.D	1	09/07/22	NH	n/a	n/a	VL10481

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD50950-6, JD50950-7, JD50950-8, JD50950-9, JD50950-10, JD50950-11, JD50950-12

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.1	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	6.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	

Method Blank Summary

Job Number: JD50950
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL10481-MB	L346665.D	1	09/07/22	NH	n/a	n/a	VL10481

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD50950-6, JD50950-7, JD50950-8, JD50950-9, JD50950-10, JD50950-11, JD50950-12

CAS No.	Compound	Result	RL	MDL	Units	Q
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.90	ug/l	
108-88-3	Toluene	ND	1.0	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	
	m,p-Xylene	ND	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	97%	80-120%
17060-07-0	1,2-Dichloroethane-D4	93%	80-120%
2037-26-5	Toluene-D8	98%	80-120%
460-00-4	4-Bromofluorobenzene	89%	82-114%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Blank Spike Summary

Job Number: JD50950
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL10475-BS	L346484.D	1	09/02/22	NH	n/a	n/a	VL10475

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD50950-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	200	212	106	27-175
71-43-2	Benzene	50	46.3	93	80-115
74-97-5	Bromochloromethane	50	53.0	106	83-122
75-27-4	Bromodichloromethane	50	44.5	89	82-119
75-25-2	Bromoform	50	43.3	87	77-135
74-83-9	Bromomethane	50	50.4	101	40-162
78-93-3	2-Butanone (MEK)	200	194	97	61-150
75-15-0	Carbon disulfide	50	46.0	92	64-130
56-23-5	Carbon tetrachloride	50	43.5	87	75-127
108-90-7	Chlorobenzene	50	47.1	94	80-115
75-00-3	Chloroethane	50	47.7	95	56-144
67-66-3	Chloroform	50	43.3	87	75-116
74-87-3	Chloromethane	50	65.0	130	41-153
110-82-7	Cyclohexane	50	47.0	94	66-129
96-12-8	1,2-Dibromo-3-chloropropane	50	48.9	98	69-134
124-48-1	Dibromochloromethane	50	43.4	87	81-123
106-93-4	1,2-Dibromoethane	50	44.8	90	67-138
95-50-1	1,2-Dichlorobenzene	50	45.8	92	81-117
541-73-1	1,3-Dichlorobenzene	50	47.6	95	81-115
106-46-7	1,4-Dichlorobenzene	50	45.2	90	80-114
75-71-8	Dichlorodifluoromethane	50	66.7	133	43-152
75-34-3	1,1-Dichloroethane	50	48.9	98	75-125
107-06-2	1,2-Dichloroethane	50	42.9	86	73-117
75-35-4	1,1-Dichloroethene	50	49.4	99	70-124
156-59-2	cis-1,2-Dichloroethene	50	47.2	94	80-120
156-60-5	trans-1,2-Dichloroethene	50	49.4	99	77-121
78-87-5	1,2-Dichloropropane	50	51.0	102	79-121
10061-01-5	cis-1,3-Dichloropropene	50	47.1	94	83-123
10061-02-6	trans-1,3-Dichloropropene	50	40.5	81* [a]	83-122
100-41-4	Ethylbenzene	50	44.7	89	78-116
76-13-1	Freon 113	50	53.5	107	68-134
591-78-6	2-Hexanone	200	172	86	66-136
98-82-8	Isopropylbenzene	50	45.3	91	78-121
79-20-9	Methyl Acetate	50	48.8	98	60-143
108-87-2	Methylcyclohexane	50	48.6	97	71-123
1634-04-4	Methyl Tert Butyl Ether	50	45.1	90	76-123

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD50950
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL10475-BS	L346484.D	1	09/02/22	NH	n/a	n/a	VL10475

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD50950-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	200	193	97	73-134
75-09-2	Methylene chloride	50	47.9	96	73-123
100-42-5	Styrene	50	44.7	89	81-125
79-34-5	1,1,2,2-Tetrachloroethane	50	43.4	87	73-126
127-18-4	Tetrachloroethene	50	48.4	97	73-119
108-88-3	Toluene	50	45.2	90	79-116
87-61-6	1,2,3-Trichlorobenzene	50	50.2	100	63-137
120-82-1	1,2,4-Trichlorobenzene	50	51.2	102	68-135
71-55-6	1,1,1-Trichloroethane	50	45.0	90	76-124
79-00-5	1,1,2-Trichloroethane	50	46.0	92	83-117
79-01-6	Trichloroethene	50	47.3	95	80-118
75-69-4	Trichlorofluoromethane	50	49.4	99	67-134
75-01-4	Vinyl chloride	50	56.7	113	52-146
	m,p-Xylene	100	86.9	87	79-119
95-47-6	o-Xylene	50	45.4	91	81-119
1330-20-7	Xylene (total)	150	132	88	80-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	80-120%
17060-07-0	1,2-Dichloroethane-D4	85%	80-120%
2037-26-5	Toluene-D8	89%	80-120%
460-00-4	4-Bromofluorobenzene	94%	82-114%

(a) Outside of in house control limits, but within reasonable method recovery limits.

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD50950
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3D7627-BS	3D181175.D	1	09/02/22	NW	n/a	n/a	V3D7627

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD50950-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
78-93-3	2-Butanone (MEK)	200	212	106	61-150

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	92%	80-120%
17060-07-0	1,2-Dichloroethane-D4	106%	80-120%
2037-26-5	Toluene-D8	103%	80-120%
460-00-4	4-Bromofluorobenzene	107%	82-114%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD50950
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2A9554-BS	2A219834.D	1	09/06/22	NH	n/a	n/a	V2A9554

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD50950-2, JD50950-3, JD50950-4, JD50950-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	200	163	82	27-175
71-43-2	Benzene	50	47.3	95	80-115
74-97-5	Bromochloromethane	50	52.2	104	83-122
75-27-4	Bromodichloromethane	50	45.6	91	82-119
75-25-2	Bromoform	50	51.5	103	77-135
74-83-9	Bromomethane	50	46.8	94	40-162
78-93-3	2-Butanone (MEK)	200	214	107	61-150
75-15-0	Carbon disulfide	50	51.0	102	64-130
56-23-5	Carbon tetrachloride	50	47.5	95	75-127
108-90-7	Chlorobenzene	50	48.2	96	80-115
75-00-3	Chloroethane	50	50.7	101	56-144
67-66-3	Chloroform	50	46.0	92	75-116
74-87-3	Chloromethane	50	42.5	85	41-153
110-82-7	Cyclohexane	50	50.5	101	66-129
96-12-8	1,2-Dibromo-3-chloropropane	50	48.0	96	69-134
124-48-1	Dibromochloromethane	50	47.6	95	81-123
106-93-4	1,2-Dibromoethane	50	47.9	96	67-138
95-50-1	1,2-Dichlorobenzene	50	45.8	92	81-117
541-73-1	1,3-Dichlorobenzene	50	46.0	92	81-115
106-46-7	1,4-Dichlorobenzene	50	44.7	89	80-114
75-71-8	Dichlorodifluoromethane	50	45.0	90	43-152
75-34-3	1,1-Dichloroethane	50	50.2	100	75-125
107-06-2	1,2-Dichloroethane	50	41.0	82	73-117
75-35-4	1,1-Dichloroethene	50	48.9	98	70-124
156-59-2	cis-1,2-Dichloroethene	50	50.2	100	80-120
156-60-5	trans-1,2-Dichloroethene	50	49.2	98	77-121
78-87-5	1,2-Dichloropropane	50	48.3	97	79-121
10061-01-5	cis-1,3-Dichloropropene	50	51.3	103	83-123
10061-02-6	trans-1,3-Dichloropropene	50	49.0	98	83-122
100-41-4	Ethylbenzene	50	44.3	89	78-116
76-13-1	Freon 113	50	49.8	100	68-134
591-78-6	2-Hexanone	200	185	93	66-136
98-82-8	Isopropylbenzene	50	45.1	90	78-121
79-20-9	Methyl Acetate	50	42.9	86	60-143
108-87-2	Methylcyclohexane	50	48.0	96	71-123
1634-04-4	Methyl Tert Butyl Ether	50	47.7	95	76-123

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD50950
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2A9554-BS	2A219834.D	1	09/06/22	NH	n/a	n/a	V2A9554

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD50950-2, JD50950-3, JD50950-4, JD50950-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	200	185	93	73-134
75-09-2	Methylene chloride	50	50.0	100	73-123
100-42-5	Styrene	50	47.2	94	81-125
79-34-5	1,1,2,2-Tetrachloroethane	50	47.7	95	73-126
127-18-4	Tetrachloroethene	50	45.1	90	73-119
108-88-3	Toluene	50	46.3	93	79-116
87-61-6	1,2,3-Trichlorobenzene	50	48.5	97	63-137
120-82-1	1,2,4-Trichlorobenzene	50	50.8	102	68-135
71-55-6	1,1,1-Trichloroethane	50	46.8	94	76-124
79-00-5	1,1,2-Trichloroethane	50	47.4	95	83-117
79-01-6	Trichloroethene	50	45.6	91	80-118
75-69-4	Trichlorofluoromethane	50	46.4	93	67-134
75-01-4	Vinyl chloride	50	45.7	91	52-146
	m,p-Xylene	100	92.2	92	79-119
95-47-6	o-Xylene	50	44.3	89	81-119
1330-20-7	Xylene (total)	150	136	91	80-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	106%	80-120%
17060-07-0	1,2-Dichloroethane-D4	85%	80-120%
2037-26-5	Toluene-D8	98%	80-120%
460-00-4	4-Bromofluorobenzene	102%	82-114%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD50950
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL10481-BS	L346663.D	1	09/07/22	NH	n/a	n/a	VL10481

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD50950-6, JD50950-7, JD50950-8, JD50950-9, JD50950-10, JD50950-11, JD50950-12

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	200	210	105	27-175
71-43-2	Benzene	50	46.7	93	80-115
74-97-5	Bromochloromethane	50	52.5	105	83-122
75-27-4	Bromodichloromethane	50	43.6	87	82-119
75-25-2	Bromoform	50	44.2	88	77-135
74-83-9	Bromomethane	50	46.7	93	40-162
78-93-3	2-Butanone (MEK)	200	192	96	61-150
75-15-0	Carbon disulfide	50	44.7	89	64-130
56-23-5	Carbon tetrachloride	50	42.5	85	75-127
108-90-7	Chlorobenzene	50	48.2	96	80-115
75-00-3	Chloroethane	50	42.1	84	56-144
67-66-3	Chloroform	50	43.0	86	75-116
74-87-3	Chloromethane	50	54.3	109	41-153
110-82-7	Cyclohexane	50	42.1	84	66-129
96-12-8	1,2-Dibromo-3-chloropropane	50	50.7	101	69-134
124-48-1	Dibromochloromethane	50	43.4	87	81-123
106-93-4	1,2-Dibromoethane	50	44.1	88	67-138
95-50-1	1,2-Dichlorobenzene	50	45.6	91	81-117
541-73-1	1,3-Dichlorobenzene	50	47.5	95	81-115
106-46-7	1,4-Dichlorobenzene	50	45.5	91	80-114
75-71-8	Dichlorodifluoromethane	50	56.5	113	43-152
75-34-3	1,1-Dichloroethane	50	48.5	97	75-125
107-06-2	1,2-Dichloroethane	50	42.8	86	73-117
75-35-4	1,1-Dichloroethene	50	49.8	100	70-124
156-59-2	cis-1,2-Dichloroethene	50	48.3	97	80-120
156-60-5	trans-1,2-Dichloroethene	50	48.2	96	77-121
78-87-5	1,2-Dichloropropane	50	50.7	101	79-121
10061-01-5	cis-1,3-Dichloropropene	50	46.9	94	83-123
10061-02-6	trans-1,3-Dichloropropene	50	40.8	82* [a]	83-122
100-41-4	Ethylbenzene	50	43.7	87	78-116
76-13-1	Freon 113	50	54.0	108	68-134
591-78-6	2-Hexanone	200	173	87	66-136
98-82-8	Isopropylbenzene	50	44.9	90	78-121
79-20-9	Methyl Acetate	50	48.5	97	60-143
108-87-2	Methylcyclohexane	50	47.8	96	71-123
1634-04-4	Methyl Tert Butyl Ether	50	44.3	89	76-123

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD50950
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL10481-BS	L346663.D	1	09/07/22	NH	n/a	n/a	VL10481

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD50950-6, JD50950-7, JD50950-8, JD50950-9, JD50950-10, JD50950-11, JD50950-12

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	200	193	97	73-134
75-09-2	Methylene chloride	50	47.1	94	73-123
100-42-5	Styrene	50	44.3	89	81-125
79-34-5	1,1,2,2-Tetrachloroethane	50	42.5	85	73-126
127-18-4	Tetrachloroethene	50	48.2	96	73-119
108-88-3	Toluene	50	44.7	89	79-116
87-61-6	1,2,3-Trichlorobenzene	50	50.6	101	63-137
120-82-1	1,2,4-Trichlorobenzene	50	52.3	105	68-135
71-55-6	1,1,1-Trichloroethane	50	44.4	89	76-124
79-00-5	1,1,2-Trichloroethane	50	46.6	93	83-117
79-01-6	Trichloroethene	50	48.6	97	80-118
75-69-4	Trichlorofluoromethane	50	44.0	88	67-134
75-01-4	Vinyl chloride	50	49.4	99	52-146
	m,p-Xylene	100	86.0	86	79-119
95-47-6	o-Xylene	50	45.0	90	81-119
1330-20-7	Xylene (total)	150	131	87	80-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	97%	80-120%
17060-07-0	1,2-Dichloroethane-D4	80%	80-120%
2037-26-5	Toluene-D8	87%	80-120%
460-00-4	4-Bromofluorobenzene	92%	82-114%

(a) Outside of in house control limits, but within reasonable method recovery limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD50950
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD50957-1MS	L346495.D	1	09/02/22	NH	n/a	n/a	VL10475
JD50957-1MSD	L346496.D	1	09/02/22	NH	n/a	n/a	VL10475
JD50957-1	L346487.D	1	09/02/22	NH	n/a	n/a	VL10475

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD50950-1

CAS No.	Compound	JD50957-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		200	225	113	200	224	112	0	22-134/19
71-43-2	Benzene	ND		50	53.7	107	50	53.5	107	0	49-137/12
74-97-5	Bromochloromethane	ND		50	57.9	116	50	56.5	113	2	78-122/12
75-27-4	Bromodichloromethane	ND		50	49.4	99	50	48.7	97	1	76-121/12
75-25-2	Bromoform	ND		50	45.6	91	50	46.5	93	2	70-133/13
74-83-9	Bromomethane	ND		50	47.7	95	50	50.1	100	5	27-164/38
78-93-3	2-Butanone (MEK)	ND		200	216	108	200	217	109	0	52-137/17
75-15-0	Carbon disulfide	ND		50	52.8	106	50	51.3	103	3	54-136/16
56-23-5	Carbon tetrachloride	ND		50	52.7	105	50	51.1	102	3	70-132/13
108-90-7	Chlorobenzene	ND		50	54.3	109	50	54.6	109	1	68-123/12
75-00-3	Chloroethane	ND		50	51.6	103	50	50.5	101	2	48-152/17
67-66-3	Chloroform	ND		50	50.2	100	50	48.8	98	3	68-120/13
74-87-3	Chloromethane	ND		50	66.0	132	50	62.2	124	6	35-156/18
110-82-7	Cyclohexane	ND		50	51.9	104	50	52.2	104	1	53-146/14
96-12-8	1,2-Dibromo-3-chloropropane	ND		50	52.2	104	50	54.8	110	5	63-134/16
124-48-1	Dibromochloromethane	ND		50	47.9	96	50	47.5	95	1	75-122/12
106-93-4	1,2-Dibromoethane	ND		50	48.0	96	50	47.9	96	0	63-134/12
95-50-1	1,2-Dichlorobenzene	ND		50	49.9	100	50	51.2	102	3	74-119/12
541-73-1	1,3-Dichlorobenzene	ND		50	53.8	108	50	54.3	109	1	75-117/12
106-46-7	1,4-Dichlorobenzene	ND		50	51.1	102	50	51.6	103	1	72-117/12
75-71-8	Dichlorodifluoromethane	ND		50	67.6	135	50	66.2	132	2	34-163/16
75-34-3	1,1-Dichloroethane	ND		50	56.2	112	50	56.8	114	1	68-129/13
107-06-2	1,2-Dichloroethane	ND		50	46.4	93	50	46.6	93	0	66-120/13
75-35-4	1,1-Dichloroethene	0.99		50	61.0	120	50	57.4	113	6	59-133/15
156-59-2	cis-1,2-Dichloroethene	326	E	50	355	58	50	355	58	0	52-140/12
156-60-5	trans-1,2-Dichloroethene	3.3		50	63.6	121	50	58.3	110	9	70-125/13
78-87-5	1,2-Dichloropropane	ND		50	57.2	114	50	56.4	113	1	73-124/12
10061-01-5	cis-1,3-Dichloropropene	ND		50	53.0	106	50	53.7	107	1	75-125/13
10061-02-6	trans-1,3-Dichloropropene	ND		50	44.8	90	50	44.9	90	0	75-122/12
100-41-4	Ethylbenzene	ND		50	50.4	101	50	51.1	102	1	37-144/12
76-13-1	Freon 113	ND		50	63.9	128	50	62.1	124	3	61-142/14
591-78-6	2-Hexanone	ND		200	180	90	200	185	93	3	56-132/16
98-82-8	Isopropylbenzene	ND		50	51.5	103	50	52.8	106	2	71-126/13
79-20-9	Methyl Acetate	ND		50	51.4	103	50	51.2	102	0	51-139/18
108-87-2	Methylcyclohexane	ND		50	56.9	114	50	56.9	114	0	59-137/16
1634-04-4	Methyl Tert Butyl Ether	ND		50	49.2	98	50	48.5	97	1	66-124/12

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD50950
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD50957-1MS	L346495.D	1	09/02/22	NH	n/a	n/a	VL10475
JD50957-1MSD	L346496.D	1	09/02/22	NH	n/a	n/a	VL10475
JD50957-1	L346487.D	1	09/02/22	NH	n/a	n/a	VL10475

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD50950-1

CAS No.	Compound	JD50957-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		200	207	104	200	212	106	2	65-135/14
75-09-2	Methylene chloride	ND		50	54.5	109	50	52.9	106	3	66-125/14
100-42-5	Styrene	ND		50	50.1	100	50	49.8	100	1	71-133/12
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	46.7	93	50	47.4	95	1	68-127/14
127-18-4	Tetrachloroethene	102		50	152	100	50	150	96	1	58-132/13
108-88-3	Toluene	ND		50	52.7	105	50	52.3	105	1	46-139/12
87-61-6	1,2,3-Trichlorobenzene	ND		50	54.1	108	50	55.2	110	2	57-136/17
120-82-1	1,2,4-Trichlorobenzene	ND		50	56.2	112	50	57.7	115	3	61-137/16
71-55-6	1,1,1-Trichloroethane	ND		50	53.4	107	50	53.0	106	1	67-132/13
79-00-5	1,1,2-Trichloroethane	ND		50	50.2	100	50	51.1	102	2	75-120/12
79-01-6	Trichloroethene	19.1		50	72.1	106	50	73.0	108	1	56-136/12
75-69-4	Trichlorofluoromethane	ND		50	56.3	113	50	55.8	112	1	61-145/16
75-01-4	Vinyl chloride	15.9		50	76.5	121	50	74.8	118	2	41-156/16
	m,p-Xylene	ND		100	99.1	99	100	100	100	1	32-151/12
95-47-6	o-Xylene	ND		50	51.3	103	50	51.0	102	1	50-139/12
1330-20-7	Xylene (total)	ND		150	150	100	150	151	101	1	38-147/12

CAS No.	Surrogate Recoveries	MS	MSD	JD50957-1	Limits
1868-53-7	Dibromofluoromethane	105%	98%	100%	80-120%
17060-07-0	1,2-Dichloroethane-D4	83%	83%	94%	80-120%
2037-26-5	Toluene-D8	91%	89%	101%	80-120%
460-00-4	4-Bromofluorobenzene	96%	95%	91%	82-114%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD50950
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD50928-4MS	3D181186.D	5	09/02/22	NW	n/a	n/a	V3D7627
JD50928-4MSD	3D181187.D	5	09/02/22	NW	n/a	n/a	V3D7627
JD50928-4 [a]	3D181198.D	5	09/02/22	NW	n/a	n/a	V3D7627

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD50950-6

CAS No.	Compound	JD50928-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
78-93-3	2-Butanone (MEK)	ND		1000	1050	105	1000	1010	101	4	52-137/17

CAS No.	Surrogate Recoveries	MS	MSD	JD50928-4	Limits
1868-53-7	Dibromofluoromethane	94%	91%	91%	80-120%
17060-07-0	1,2-Dichloroethane-D4	107%	106%	115%	80-120%
2037-26-5	Toluene-D8	102%	102%	108%	80-120%
460-00-4	4-Bromofluorobenzene	105%	108%	101%	82-114%

(a) Dilution required due to high concentration of target compound.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD50950
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD51107-6MS	2A219845.D	10	09/06/22	NH	n/a	n/a	V2A9554
JD51107-6MSD	2A219846.D	10	09/06/22	NH	n/a	n/a	V2A9554
JD51107-6	2A219850.D	10	09/06/22	NH	n/a	n/a	V2A9554

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD50950-2, JD50950-3, JD50950-4, JD50950-5

CAS No.	Compound	JD51107-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		2000	1540	77	2000	1490	75	3	22-134/19
71-43-2	Benzene	1500		500	1680	36* [a]	500	1640	28* [a]	2	49-137/12
74-97-5	Bromochloromethane	ND		500	496	99	500	487	97	2	78-122/12
75-27-4	Bromodichloromethane	ND		500	449	90	500	443	89	1	76-121/12
75-25-2	Bromoform	ND		500	475	95	500	485	97	2	70-133/13
74-83-9	Bromomethane	ND		500	487	97	500	470	94	4	27-164/38
78-93-3	2-Butanone (MEK)	ND		2000	2040	102	2000	1980	99	3	52-137/17
75-15-0	Carbon disulfide	ND		500	405	81	500	396	79	2	54-136/16
56-23-5	Carbon tetrachloride	ND		500	462	92	500	451	90	2	70-132/13
108-90-7	Chlorobenzene	ND		500	475	95	500	465	93	2	68-123/12
75-00-3	Chloroethane	ND		500	540	108	500	527	105	2	48-152/17
67-66-3	Chloroform	ND		500	465	93	500	445	89	4	68-120/13
74-87-3	Chloromethane	ND		500	451	90	500	434	87	4	35-156/18
110-82-7	Cyclohexane	29.3	J	500	543	103	500	534	101	2	53-146/14
96-12-8	1,2-Dibromo-3-chloropropane	ND		500	457	91	500	466	93	2	63-134/16
124-48-1	Dibromochloromethane	ND		500	459	92	500	454	91	1	75-122/12
106-93-4	1,2-Dibromoethane	ND		500	464	93	500	454	91	2	63-134/12
95-50-1	1,2-Dichlorobenzene	ND		500	459	92	500	450	90	2	74-119/12
541-73-1	1,3-Dichlorobenzene	ND		500	456	91	500	450	90	1	75-117/12
106-46-7	1,4-Dichlorobenzene	ND		500	443	89	500	437	87	1	72-117/12
75-71-8	Dichlorodifluoromethane	ND		500	484	97	500	474	95	2	34-163/16
75-34-3	1,1-Dichloroethane	ND		500	494	99	500	475	95	4	68-129/13
107-06-2	1,2-Dichloroethane	ND		500	424	85	500	416	83	2	66-120/13
75-35-4	1,1-Dichloroethene	ND		500	426	85	500	418	84	2	59-133/15
156-59-2	cis-1,2-Dichloroethene	ND		500	501	100	500	481	96	4	52-140/12
156-60-5	trans-1,2-Dichloroethene	ND		500	467	93	500	449	90	4	70-125/13
78-87-5	1,2-Dichloropropane	ND		500	480	96	500	471	94	2	73-124/12
10061-01-5	cis-1,3-Dichloropropene	ND		500	501	100	500	491	98	2	75-125/13
10061-02-6	trans-1,3-Dichloropropene	ND		500	468	94	500	468	94	0	75-122/12
100-41-4	Ethylbenzene	56.3		500	489	87	500	475	84	3	37-144/12
76-13-1	Freon 113	ND		500	439	88	500	427	85	3	61-142/14
591-78-6	2-Hexanone	ND		2000	1830	92	2000	1840	92	1	56-132/16
98-82-8	Isopropylbenzene	36.6		500	487	90	500	470	87	4	71-126/13
79-20-9	Methyl Acetate	ND		500	616	123	500	617	123	0	51-139/18
108-87-2	Methylcyclohexane	27.1	J	500	476	90	500	467	88	2	59-137/16
1634-04-4	Methyl Tert Butyl Ether	26.5		500	480	91	500	470	89	2	66-124/12

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD50950
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD51107-6MS	2A219845.D	10	09/06/22	NH	n/a	n/a	V2A9554
JD51107-6MSD	2A219846.D	10	09/06/22	NH	n/a	n/a	V2A9554
JD51107-6	2A219850.D	10	09/06/22	NH	n/a	n/a	V2A9554

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD50950-2, JD50950-3, JD50950-4, JD50950-5

CAS No.	Compound	JD51107-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		2000	1850	93	2000	1840	92	1	65-135/14
75-09-2	Methylene chloride	ND		500	473	95	500	455	91	4	66-125/14
100-42-5	Styrene	ND		500	476	95	500	465	93	2	71-133/12
79-34-5	1,1,2,2-Tetrachloroethane	ND		500	472	94	500	469	94	1	68-127/14
127-18-4	Tetrachloroethene	ND		500	459	92	500	443	89	4	58-132/13
108-88-3	Toluene	10.8		500	465	91	500	456	89	2	46-139/12
87-61-6	1,2,3-Trichlorobenzene	ND		500	458	92	500	473	95	3	57-136/17
120-82-1	1,2,4-Trichlorobenzene	ND		500	482	96	500	484	97	0	61-137/16
71-55-6	1,1,1-Trichloroethane	ND		500	464	93	500	445	89	4	67-132/13
79-00-5	1,1,2-Trichloroethane	ND		500	463	93	500	467	93	1	75-120/12
79-01-6	Trichloroethene	ND		500	455	91	500	441	88	3	56-136/12
75-69-4	Trichlorofluoromethane	ND		500	480	96	500	474	95	1	61-145/16
75-01-4	Vinyl chloride	ND		500	504	101	500	487	97	3	41-156/16
	m,p-Xylene	198		1000	1080	88	1000	1040	84	4	32-151/12
95-47-6	o-Xylene	18.7		500	464	89	500	449	86	3	50-139/12
1330-20-7	Xylene (total)	217		1500	1540	88	1500	1490	85	3	38-147/12

CAS No.	Surrogate Recoveries	MS	MSD	JD51107-6	Limits
1868-53-7	Dibromofluoromethane	106%	105%	104%	80-120%
17060-07-0	1,2-Dichloroethane-D4	85%	85%	87%	80-120%
2037-26-5	Toluene-D8	97%	98%	96%	80-120%
460-00-4	4-Bromofluorobenzene	102%	103%	102%	82-114%

(a) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD50950
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD51056-1MS	L346677.D	5	09/07/22	NH	n/a	n/a	VL10481
JD51056-1MSD	L346678.D	5	09/07/22	NH	n/a	n/a	VL10481
JD51056-1 [a]	L346667.D	5	09/07/22	NH	n/a	n/a	VL10481

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD50950-6, JD50950-7, JD50950-8, JD50950-9, JD50950-10, JD50950-11, JD50950-12

CAS No.	Compound	JD51056-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		1000	1050	105	1000	1020	102	3	22-134/19
71-43-2	Benzene	ND		250	228	91	250	226	90	1	49-137/12
74-97-5	Bromochloromethane	ND		250	254	102	250	252	101	1	78-122/12
75-27-4	Bromodichloromethane	ND		250	214	86	250	214	86	0	76-121/12
75-25-2	Bromoform	ND		250	207	83	250	212	85	2	70-133/13
74-83-9	Bromomethane	ND		250	121	48	250	143	57	17	27-164/38
78-93-3	2-Butanone (MEK)	ND		1000	967	97	1000	940	94	3	52-137/17
75-15-0	Carbon disulfide	ND		250	214	86	250	208	83	3	54-136/16
56-23-5	Carbon tetrachloride	ND		250	213	85	250	209	84	2	70-132/13
108-90-7	Chlorobenzene	ND		250	236	94	250	237	95	0	68-123/12
75-00-3	Chloroethane	ND		250	191	76	250	190	76	1	48-152/17
67-66-3	Chloroform	6.9		250	216	84	250	214	83	1	68-120/13
74-87-3	Chloromethane	ND		250	220	88	250	212	85	4	35-156/18
110-82-7	Cyclohexane	ND		250	188	75	250	190	76	1	53-146/14
96-12-8	1,2-Dibromo-3-chloropropane	ND		250	246	98	250	241	96	2	63-134/16
124-48-1	Dibromochloromethane	ND		250	209	84	250	212	85	1	75-122/12
106-93-4	1,2-Dibromoethane	ND		250	212	85	250	216	86	2	63-134/12
95-50-1	1,2-Dichlorobenzene	ND		250	218	87	250	222	89	2	74-119/12
541-73-1	1,3-Dichlorobenzene	ND		250	234	94	250	234	94	0	75-117/12
106-46-7	1,4-Dichlorobenzene	ND		250	220	88	250	224	90	2	72-117/12
75-71-8	Dichlorodifluoromethane	ND		250	237	95	250	228	91	4	34-163/16
75-34-3	1,1-Dichloroethane	ND		250	239	96	250	235	94	2	68-129/13
107-06-2	1,2-Dichloroethane	ND		250	200	80	250	205	82	2	66-120/13
75-35-4	1,1-Dichloroethene	ND		250	236	94	250	236	94	0	59-133/15
156-59-2	cis-1,2-Dichloroethene	54.9		250	275	88	250	268	85	3	52-140/12
156-60-5	trans-1,2-Dichloroethene	ND		250	241	96	250	237	95	2	70-125/13
78-87-5	1,2-Dichloropropane	ND		250	246	98	250	247	99	0	73-124/12
10061-01-5	cis-1,3-Dichloropropene	ND		250	228	91	250	233	93	2	75-125/13
10061-02-6	trans-1,3-Dichloropropene	ND		250	192	77	250	196	78	2	75-122/12
100-41-4	Ethylbenzene	ND		250	219	88	250	218	87	0	37-144/12
76-13-1	Freon 113	ND		250	254	102	250	249	100	2	61-142/14
591-78-6	2-Hexanone	ND		1000	816	82	1000	815	82	0	56-132/16
98-82-8	Isopropylbenzene	ND		250	222	89	250	224	90	1	71-126/13
79-20-9	Methyl Acetate	ND		250	234	94	250	229	92	2	51-139/18
108-87-2	Methylcyclohexane	ND		250	229	92	250	233	93	2	59-137/16
1634-04-4	Methyl Tert Butyl Ether	ND		250	218	87	250	216	86	1	66-124/12

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD50950
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD51056-1MS	L346677.D	5	09/07/22	NH	n/a	n/a	VL10481
JD51056-1MSD	L346678.D	5	09/07/22	NH	n/a	n/a	VL10481
JD51056-1 [a]	L346667.D	5	09/07/22	NH	n/a	n/a	VL10481

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD50950-6, JD50950-7, JD50950-8, JD50950-9, JD50950-10, JD50950-11, JD50950-12

CAS No.	Compound	JD51056-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		1000	934	93	1000	953	95	2	65-135/14
75-09-2	Methylene chloride	ND		250	227	91	250	227	91	0	66-125/14
100-42-5	Styrene	ND		250	220	88	250	222	89	1	71-133/12
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	207	83	250	210	84	1	68-127/14
127-18-4	Tetrachloroethene	2020	E	250	1490	-212* [b]	250	1540	-192* [b]	3	58-132/13
108-88-3	Toluene	ND		250	219	88	250	223	89	2	46-139/12
87-61-6	1,2,3-Trichlorobenzene	ND		250	241	96	250	245	98	2	57-136/17
120-82-1	1,2,4-Trichlorobenzene	ND		250	243	97	250	252	101	4	61-137/16
71-55-6	1,1,1-Trichloroethane	ND		250	217	87	250	214	86	1	67-132/13
79-00-5	1,1,2-Trichloroethane	ND		250	223	89	250	227	91	2	75-120/12
79-01-6	Trichloroethene	120		250	308	75	250	312	77	1	56-136/12
75-69-4	Trichlorofluoromethane	ND		250	212	85	250	210	84	1	61-145/16
75-01-4	Vinyl chloride	ND		250	214	86	250	208	83	3	41-156/16
	m,p-Xylene	ND		500	428	86	500	426	85	0	32-151/12
95-47-6	o-Xylene	ND		250	222	89	250	223	89	0	50-139/12
1330-20-7	Xylene (total)	ND		750	650	87	750	649	87	0	38-147/12

CAS No.	Surrogate Recoveries	MS	MSD	JD51056-1	Limits
1868-53-7	Dibromofluoromethane	99%	99%	99%	80-120%
17060-07-0	1,2-Dichloroethane-D4	82%	80%	92%	80-120%
2037-26-5	Toluene-D8	89%	88%	104%	80-120%
460-00-4	4-Bromofluorobenzene	93%	92%	90%	82-114%

(a) Dilution required due to high concentration of target compound.
(b) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JD50950
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: V2A9511-BFB
Lab File ID: 2A218780.D
Instrument ID: GCMS2A
Injection Date: 07/31/22
Injection Time: 16:50

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	75120	25.4		Pass
75	30.0 - 60.0% of mass 95	147328	49.8		Pass
95	Base peak, 100% relative abundance	295616	100.0		Pass
96	5.0 - 9.0% of mass 95	20757	7.02		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	260096	88.0		Pass
175	5.0 - 9.0% of mass 174	19904	6.73	(7.65) [a]	Pass
176	95.0 - 101.0% of mass 174	248768	84.2	(95.6) [a]	Pass
177	5.0 - 9.0% of mass 176	16468	5.57	(6.62) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2A9511-IC9511	2A218781.D	07/31/22	17:23	00:33	Initial cal 0.2
V2A9511-IC9511	2A218782.D	07/31/22	17:51	01:01	Initial cal 0.5
V2A9511-IC9511	2A218783.D	07/31/22	18:19	01:29	Initial cal 1
V2A9511-IC9511	2A218784.D	07/31/22	18:48	01:58	Initial cal 2
V2A9511-IC9511	2A218785.D	07/31/22	19:16	02:26	Initial cal 4
V2A9511-IC9511	2A218786.D	07/31/22	19:44	02:54	Initial cal 8
V2A9511-IC9511	2A218787.D	07/31/22	20:13	03:23	Initial cal 20
V2A9511-ICC9511	2A218788.D	07/31/22	20:41	03:51	Initial cal 50
V2A9511-IC9511	2A218789.D	07/31/22	21:09	04:19	Initial cal 100
V2A9511-IC9511	2A218790.D	07/31/22	21:38	04:48	Initial cal 200
V2A9511-ICV9511	2A218793.D	07/31/22	23:03	06:13	Initial cal verification 50
V2A9511-ICV9511	2A218794.D	07/31/22	23:31	06:41	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JD50950
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: V2A9554-BFB
Lab File ID: 2A219833.D
Instrument ID: GCMS2A
Injection Date: 09/06/22
Injection Time: 09:42

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	102813	21.0		Pass
75	30.0 - 60.0% of mass 95	224683	45.8		Pass
95	Base peak, 100% relative abundance	490603	100.0		Pass
96	5.0 - 9.0% of mass 95	32533	6.63		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	459776	93.7		Pass
175	5.0 - 9.0% of mass 174	33152	6.76	(7.21) [a]	Pass
176	95.0 - 101.0% of mass 174	443093	90.3	(96.4) [a]	Pass
177	5.0 - 9.0% of mass 176	29675	6.05	(6.70) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2A9554-CC9511	2A219833.D	09/06/22	09:42	00:00	Continuing cal 20
V2A9554-BS	2A219834.D	09/06/22	10:18	00:36	Blank Spike
V2A9554-MB	2A219836.D	09/06/22	11:17	01:35	Method Blank
ZZZZZZ	2A219837.D	09/06/22	11:47	02:05	(unrelated sample)
JD50950-2	2A219838.D	09/06/22	12:19	02:37	C_2_0
JD50950-3	2A219839.D	09/06/22	12:48	03:06	C_3_0
ZZZZZZ	2A219842.D	09/06/22	14:35	04:53	(unrelated sample)
JD50950-4	2A219843.D	09/06/22	15:08	05:26	Z_1_0
JD50950-5	2A219844.D	09/06/22	15:38	05:56	Z_2_0
JD51107-6MS	2A219845.D	09/06/22	16:07	06:25	Matrix Spike
JD51107-6MSD	2A219846.D	09/06/22	16:37	06:55	Matrix Spike Duplicate
ZZZZZZ	2A219848.D	09/06/22	17:36	07:54	(unrelated sample)
ZZZZZZ	2A219849.D	09/06/22	18:05	08:23	(unrelated sample)
JD51107-6	2A219850.D	09/06/22	18:35	08:53	(used for QC only; not part of job JD50950)
ZZZZZZ	2A219851.D	09/06/22	19:05	09:23	(unrelated sample)
ZZZZZZ	2A219852.D	09/06/22	19:34	09:52	(unrelated sample)
ZZZZZZ	2A219853.D	09/06/22	20:04	10:22	(unrelated sample)
ZZZZZZ	2A219854.D	09/06/22	20:33	10:51	(unrelated sample)
ZZZZZZ	2A219855.D	09/06/22	21:02	11:20	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JD50950
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: V3D7582-BFB
Lab File ID: 3D179852.D
Instrument ID: GCMS3D
Injection Date: 08/03/22
Injection Time: 19:45

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.99 - 40.0% of mass 95	41317	21.2		Pass
75	30.0 - 60.0% of mass 95	101216	52.0		Pass
95	Base peak, 100% relative abundance	194773	100.0		Pass
96	5.0 - 9.0% of mass 95	12704	6.52		Pass
173	Less than 2.0% of mass 174	1441	0.74	(1.05) [a]	Pass
174	50.0 - 120.0% of mass 95	137064	70.4		Pass
175	5.0 - 9.0% of mass 174	11207	5.75	(8.18) [a]	Pass
176	95.0 - 101.0% of mass 174	132197	67.9	(96.4) [a]	Pass
177	5.0 - 9.0% of mass 176	9256	4.75	(7.00) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3D7582-IC7582	3D179853.D	08/03/22	20:17	00:32	Initial cal 0.2
V3D7582-IC7582	3D179854.D	08/03/22	20:41	00:56	Initial cal 0.5
V3D7582-IC7582	3D179855.D	08/03/22	21:04	01:19	Initial cal 1
V3D7582-IC7582	3D179856.D	08/03/22	21:28	01:43	Initial cal 2
V3D7582-IC7582	3D179857.D	08/03/22	21:51	02:06	Initial cal 4
V3D7582-IC7582	3D179858.D	08/03/22	22:15	02:30	Initial cal 8
V3D7582-IC7582	3D179859.D	08/03/22	22:38	02:53	Initial cal 20
V3D7582-ICC7582	3D179860.D	08/03/22	23:02	03:17	Initial cal 50
V3D7582-IC7582	3D179861.D	08/03/22	23:26	03:41	Initial cal 100
V3D7582-IC7582	3D179862.D	08/03/22	23:49	04:04	Initial cal 200
V3D7582-ICV7582	3D179865.D	08/04/22	00:59	05:14	Initial cal verification 50
V3D7582-ICV7582	3D179866.D	08/04/22	01:23	05:38	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JD50950
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: V3D7627-BFB
Lab File ID: 3D181173.D
Instrument ID: GCMS3D
Injection Date: 09/02/22
Injection Time: 11:23

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.99 - 40.0% of mass 95	46485	22.2		Pass
75	30.0 - 60.0% of mass 95	110168	52.7		Pass
95	Base peak, 100% relative abundance	208960	100.0		Pass
96	5.0 - 9.0% of mass 95	14309	6.85		Pass
173	Less than 2.0% of mass 174	1217	0.58	(0.83) [a]	Pass
174	50.0 - 120.0% of mass 95	146115	69.9		Pass
175	5.0 - 9.0% of mass 174	10899	5.22	(7.46) [a]	Pass
176	95.0 - 101.0% of mass 174	139485	66.8	(95.5) [a]	Pass
177	5.0 - 9.0% of mass 176	9325	4.46	(6.69) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3D7627-CC7582	3D181173.D	09/02/22	11:23	00:00	Continuing cal 20
V3D7627-BS	3D181175.D	09/02/22	12:24	01:01	Blank Spike
V3D7627-MB	3D181177.D	09/02/22	13:19	01:56	Method Blank
ZZZZZZ	3D181178.D	09/02/22	13:49	02:26	(unrelated sample)
ZZZZZZ	3D181180.D	09/02/22	14:37	03:14	(unrelated sample)
ZZZZZZ	3D181181.D	09/02/22	15:00	03:37	(unrelated sample)
ZZZZZZ	3D181182.D	09/02/22	15:24	04:01	(unrelated sample)
JD50928-4MS	3D181186.D	09/02/22	17:45	06:22	Matrix Spike
JD50928-4MSD	3D181187.D	09/02/22	18:09	06:46	Matrix Spike Duplicate
ZZZZZZ	3D181189.D	09/02/22	18:56	07:33	(unrelated sample)
ZZZZZZ	3D181191.D	09/02/22	19:44	08:21	(unrelated sample)
ZZZZZZ	3D181192.D	09/02/22	20:07	08:44	(unrelated sample)
JD50950-6	3D181193.D	09/02/22	20:31	09:08	Z_3_0
ZZZZZZ	3D181196.D	09/02/22	21:42	10:19	(unrelated sample)
ZZZZZZ	3D181197.D	09/02/22	22:05	10:42	(unrelated sample)
JD50928-4	3D181198.D	09/02/22	22:29	11:06	(used for QC only; not part of job JD50950)
ZZZZZZ	3D181199.D	09/02/22	22:53	11:30	(unrelated sample)
ZZZZZZ	3D181200.D	09/02/22	23:16	11:53	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JD50950
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample:	VL10355-BFB	**Injection Date:**	06/15/22
Lab File ID:	L342967.D	**Injection Time:**	16:00
Instrument ID:	GCMSL		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	15125	15.4		Pass
75	30.0 - 60.0% of mass 95	48661	49.4		Pass
95	Base peak, 100% relative abundance	98445	100.0		Pass
96	5.0 - 9.0% of mass 95	6625	6.73		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	66648	67.7		Pass
175	5.0 - 9.0% of mass 174	5157	5.24	(7.74) [a]	Pass
176	95.0 - 101.0% of mass 174	64099	65.1	(96.2) [a]	Pass
177	5.0 - 9.0% of mass 176	3835	3.90	(5.98) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VL10355-IC10355	L342968.D	06/15/22	16:25	00:25	Initial cal 0.2
VL10355-IC10355	L342969.D	06/15/22	16:48	00:48	Initial cal 0.5
VL10355-IC10355	L342970.D	06/15/22	17:11	01:11	Initial cal 1
VL10355-IC10355	L342971.D	06/15/22	17:35	01:35	Initial cal 2
VL10355-IC10355	L342972.D	06/15/22	17:58	01:58	Initial cal 4
VL10355-IC10355	L342973.D	06/15/22	18:22	02:22	Initial cal 8
VL10355-IC10355	L342974.D	06/15/22	18:45	02:45	Initial cal 20
VL10355-ICC10355	L342975.D	06/15/22	19:09	03:09	Initial cal 50
VL10355-IC10355	L342976.D	06/15/22	19:32	03:32	Initial cal 100
VL10355-IC10355	L342977.D	06/15/22	19:56	03:56	Initial cal 200
VL10355-ICV10355	L342980.D	06/15/22	21:06	05:06	Initial cal verification 50
VL10355-ICV10355	L342981.D	06/15/22	21:29	05:29	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JD50950
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: VL10355-BFB2
Lab File ID: L342984.D
Instrument ID: GCMSL
Injection Date: 06/16/22
Injection Time: 09:43

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	14743	15.8		Pass
75	30.0 - 60.0% of mass 95	47061	50.6		Pass
95	Base peak, 100% relative abundance	93093	100.0		Pass
96	5.0 - 9.0% of mass 95	6458	6.94		Pass
173	Less than 2.0% of mass 174	176	0.19	(0.27) [a]	Pass
174	50.0 - 120.0% of mass 95	64179	68.9		Pass
175	5.0 - 9.0% of mass 174	4737	5.09	(7.38) [a]	Pass
176	95.0 - 101.0% of mass 174	62803	67.5	(97.9) [a]	Pass
177	5.0 - 9.0% of mass 176	4165	4.47	(6.63) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VL10355-ICV10355	L342985.D	06/16/22	10:06	00:23	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JD50950
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: VL10475-BFB
Lab File ID: L346483.D
Instrument ID: GCMSL
Injection Date: 09/02/22
Injection Time: 10:45

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	17170	15.9		Pass
75	30.0 - 60.0% of mass 95	49920	46.1		Pass
95	Base peak, 100% relative abundance	108259	100.0		Pass
96	5.0 - 9.0% of mass 95	7765	7.17		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	79557	73.5		Pass
175	5.0 - 9.0% of mass 174	6182	5.71	(7.77) [a]	Pass
176	95.0 - 101.0% of mass 174	78397	72.4	(98.5) [a]	Pass
177	5.0 - 9.0% of mass 176	5311	4.91	(6.77) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VL10475-CC10355	L346483.D	09/02/22	10:45	00:00	Continuing cal 20
VL10475-BS	L346484.D	09/02/22	11:18	00:33	Blank Spike
VL10475-MB	L346486.D	09/02/22	12:04	01:19	Method Blank
JD50957-1	L346487.D	09/02/22	12:37	01:52	(used for QC only; not part of job JD50950)
ZZZZZZ	L346488.D	09/02/22	13:00	02:15	(unrelated sample)
ZZZZZZ	L346489.D	09/02/22	13:23	02:38	(unrelated sample)
ZZZZZZ	L346490.D	09/02/22	13:47	03:02	(unrelated sample)
ZZZZZZ	L346491.D	09/02/22	14:10	03:25	(unrelated sample)
ZZZZZZ	L346492.D	09/02/22	14:33	03:48	(unrelated sample)
ZZZZZZ	L346493.D	09/02/22	14:56	04:11	(unrelated sample)
ZZZZZZ	L346494.D	09/02/22	15:20	04:35	(unrelated sample)
JD50957-1MS	L346495.D	09/02/22	15:43	04:58	Matrix Spike
JD50957-1MSD	L346496.D	09/02/22	16:06	05:21	Matrix Spike Duplicate
ZZZZZZ	L346497.D	09/02/22	16:30	05:45	(unrelated sample)
ZZZZZZ	L346499.D	09/02/22	17:16	06:31	(unrelated sample)
ZZZZZZ	L346500.D	09/02/22	17:40	06:55	(unrelated sample)
ZZZZZZ	L346501.D	09/02/22	18:03	07:18	(unrelated sample)
ZZZZZZ	L346502.D	09/02/22	18:26	07:41	(unrelated sample)
ZZZZZZ	L346503.D	09/02/22	18:49	08:04	(unrelated sample)
ZZZZZZ	L346504.D	09/02/22	19:13	08:28	(unrelated sample)
ZZZZZZ	L346505.D	09/02/22	19:36	08:51	(unrelated sample)
ZZZZZZ	L346506.D	09/02/22	19:59	09:14	(unrelated sample)
ZZZZZZ	L346507.D	09/02/22	20:22	09:37	(unrelated sample)
JD50950-1	L346508.D	09/02/22	20:46	10:01	C_1_0

Instrument Performance Check (BFB)

Job Number: JD50950
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: VL10481-BFB
Lab File ID: L346662.D
Instrument ID: GCMSL
Injection Date: 09/07/22
Injection Time: 10:21

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	18248	16.3		Pass
75	30.0 - 60.0% of mass 95	51773	46.2		Pass
95	Base peak, 100% relative abundance	112096	100.0		Pass
96	5.0 - 9.0% of mass 95	8013	7.15		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	85085	75.9		Pass
175	5.0 - 9.0% of mass 174	6493	5.79	(7.63) [a]	Pass
176	95.0 - 101.0% of mass 174	81651	72.8	(96.0) [a]	Pass
177	5.0 - 9.0% of mass 176	5724	5.11	(7.01) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VL10481-CC10355	L346662.D	09/07/22	10:21	00:00	Continuing cal 20
VL10481-BS	L346663.D	09/07/22	10:53	00:32	Blank Spike
VL10481-MB	L346665.D	09/07/22	11:43	01:22	Method Blank
ZZZZZZ	L346666.D	09/07/22	12:15	01:54	(unrelated sample)
JD51056-1	L346667.D	09/07/22	12:38	02:17	(used for QC only; not part of job JD50950)
ZZZZZZ	L346668.D	09/07/22	13:01	02:40	(unrelated sample)
JD50950-9	L346669.D	09/07/22	13:25	03:04	P_3_0
JD50950-8	L346670.D	09/07/22	13:48	03:27	P_2_0
JD50950-7	L346671.D	09/07/22	14:11	03:50	P_1_0
JD50950-12	L346673.D	09/07/22	14:58	04:37	Z_6_0
JD50950-11	L346674.D	09/07/22	15:21	05:00	Z_5_0
JD50950-10	L346675.D	09/07/22	15:44	05:23	Z_4_0
JD50950-6	L346676.D	09/07/22	16:07	05:46	Z_3_0
JD51056-1MS	L346677.D	09/07/22	16:34	06:13	Matrix Spike
JD51056-1MSD	L346678.D	09/07/22	16:57	06:36	Matrix Spike Duplicate
ZZZZZZ	L346680.D	09/07/22	17:44	07:23	(unrelated sample)
ZZZZZZ	L346681.D	09/07/22	18:07	07:46	(unrelated sample)
ZZZZZZ	L346682.D	09/07/22	18:30	08:09	(unrelated sample)
ZZZZZZ	L346683.D	09/07/22	18:54	08:33	(unrelated sample)
ZZZZZZ	L346684.D	09/07/22	19:17	08:56	(unrelated sample)
ZZZZZZ	L346685.D	09/07/22	19:40	09:19	(unrelated sample)
ZZZZZZ	L346686.D	09/07/22	20:03	09:42	(unrelated sample)
ZZZZZZ	L346687.D	09/07/22	20:27	10:06	(unrelated sample)
ZZZZZZ	L346688.D	09/07/22	20:50	10:29	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JD50950
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample:	VL10481-BFB	**Injection Date:**	09/07/22
Lab File ID:	L346662.D	**Injection Time:**	10:21
Instrument ID:	GCMSL		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	L346689.D	09/07/22	21:13	10:52	(unrelated sample)
VL10482-BS	L346695.D	09/07/22	23:33	13:12	Blank Spike
VL10483-BS	L346719.D	09/08/22	10:27	24:06	Blank Spike

Surrogate Recovery Summary

Job Number: JD50950
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Method: SW846 8260D **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JD50950-1	L346508.D	109	93	97	86
JD50950-2	2A219838.D	108	87	96	98
JD50950-3	2A219839.D	109	88	96	101
JD50950-4	2A219843.D	107	88	95	102
JD50950-5	2A219844.D	107	88	95	102
JD50950-6	L346676.D	100	86	98	93
JD50950-6	3D181193.D	90	110	110	104
JD50950-7	L346671.D	100	87	102	88
JD50950-8	L346670.D	98	86	102	88
JD50950-9	L346669.D	99	88	102	86
JD50950-10	L346675.D	98	87	97	89
JD50950-11	L346674.D	100	86	99	90
JD50950-12	L346673.D	99	87	101	89
JD50928-4MS	3D181186.D	94	107	102	105
JD50928-4MSD	3D181187.D	91	106	102	108
JD50957-1MS	L346495.D	105	83	91	96
JD50957-1MSD	L346496.D	98	83	89	95
JD51056-1MS	L346677.D	99	82	89	93
JD51056-1MSD	L346678.D	99	80	88	92
JD51107-6MS	2A219845.D	106	85	97	102
JD51107-6MSD	2A219846.D	105	85	98	103
V2A9554-BS	2A219834.D	106	85	98	102
V2A9554-MB	2A219836.D	106	88	96	103
V3D7627-BS	3D181175.D	92	106	103	107
V3D7627-MB	3D181177.D	90	112	109	104
VL10475-BS	L346484.D	100	85	89	94
VL10475-MB	L346486.D	97	94	101	90
VL10481-BS	L346663.D	97	80	87	92
VL10481-MB	L346665.D	97	93	98	89

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	80-120%
S2 = 1,2-Dichloroethane-D4	80-120%
S3 = Toluene-D8	80-120%
S4 = 4-Bromofluorobenzene	82-114%

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Langan Engineering & Environmental

1487 First Avenue, NY, NY

100963701

SGS Job Number: JD51412

Sampling Date: 09/09/22



Report to:

Langan Engineering & Environmental
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Parsippany, NJ 07054
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ATTN: Paul Tozzi

Total number of pages in report: 77

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

David Chastain
General Manager

Client Service contact: Beth Stopen 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA(68-00408), RI, SC, TX, UT, VA, WV

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SGS North America Inc.

Sample Summary

Langan Engineering & Environmental

Job No: JD51412

1487 First Avenue, NY, NY
Project No: 100963701

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JD51412-1	09/09/22	11:00	PT	09/09/22	AQ	Ground Water	C_1_090922
JD51412-2	09/09/22	11:00	PT	09/09/22	AQ	Ground Water	C_2_090922
JD51412-3	09/09/22	11:00	PT	09/09/22	AQ	Ground Water	C_3_090922
JD51412-4	09/09/22	11:00	PT	09/09/22	AQ	Ground Water	Z_1_090922
JD51412-5	09/09/22	11:00	PT	09/09/22	AQ	Ground Water	Z_2_090922
JD51412-6	09/09/22	11:00	PT	09/09/22	AQ	Ground Water	Z_3_090922
JD51412-7	09/09/22	11:00	PT	09/09/22	AQ	Ground Water	Z_4_090922
JD51412-8	09/09/22	11:00	PT	09/09/22	AQ	Ground Water	Z_5_090922
JD51412-9	09/09/22	11:00	PT	09/09/22	AQ	Ground Water	Z_6_090922
JD51412-10	09/09/22	11:00	PT	09/09/22	AQ	Ground Water	P_1_090922
JD51412-11	09/09/22	11:00	PT	09/09/22	AQ	Ground Water	P_2_090922
JD51412-12	09/09/22	11:00	PT	09/09/22	AQ	Ground Water	P_3_090922

This report contains results reported as ND = Not detected. The following applies:
Organics ND = Not detected above the MDL

Summary of Hits

Job Number: JD51412
Account: Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY
Collected: 09/09/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD51412-1	**C_1_090922**					
Acetone [a]		291	10	3.1	ug/l	SW846 8260D
Benzene [a]		0.50	0.50	0.43	ug/l	SW846 8260D
Bromomethane [b]		4.3	2.0	1.6	ug/l	SW846 8260D
Chloroform [a]		9.5	1.0	0.50	ug/l	SW846 8260D
cis-1,2-Dichloroethene [a]		109	1.0	0.51	ug/l	SW846 8260D
Ethylbenzene [a]		1.1	1.0	0.60	ug/l	SW846 8260D
Methylene chloride [a]		6.8	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [a]		49.2	1.0	0.90	ug/l	SW846 8260D
Toluene [a]		1.2	1.0	0.53	ug/l	SW846 8260D
Trichloroethene [a]		16.3	1.0	0.53	ug/l	SW846 8260D
m,p-Xylene [a]		5.2	1.0	0.78	ug/l	SW846 8260D
o-Xylene [a]		1.6	1.0	0.59	ug/l	SW846 8260D
Xylene (total) [a]		6.8	1.0	0.59	ug/l	SW846 8260D
JD51412-2	**C_2_090922**					
Acetone [a]		200	10	3.1	ug/l	SW846 8260D
Benzene [a]		0.56	0.50	0.43	ug/l	SW846 8260D
Bromomethane [b]		2.1	2.0	1.6	ug/l	SW846 8260D
Chloroform [a]		8.6	1.0	0.50	ug/l	SW846 8260D
cis-1,2-Dichloroethene [a]		101	1.0	0.51	ug/l	SW846 8260D
Ethylbenzene [a]		1.0	1.0	0.60	ug/l	SW846 8260D
Methylene chloride [a]		6.3	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [a]		61.0	1.0	0.90	ug/l	SW846 8260D
Toluene [a]		1.5	1.0	0.53	ug/l	SW846 8260D
Trichloroethene [a]		15.3	1.0	0.53	ug/l	SW846 8260D
m,p-Xylene [a]		8.0	1.0	0.78	ug/l	SW846 8260D
o-Xylene [a]		2.4	1.0	0.59	ug/l	SW846 8260D
Xylene (total) [a]		10.4	1.0	0.59	ug/l	SW846 8260D
JD51412-3	**C_3_090922**					
Acetone [c]		343	25	7.6	ug/l	SW846 8260D
Bromomethane [d]		4.7 J	5.0	4.1	ug/l	SW846 8260D
Chloroform [c]		8.9	2.5	1.3	ug/l	SW846 8260D
cis-1,2-Dichloroethene [c]		101	2.5	1.3	ug/l	SW846 8260D
Methylene chloride [c]		6.9	5.0	2.5	ug/l	SW846 8260D
Tetrachloroethene [c]		28.2	2.5	2.2	ug/l	SW846 8260D
Toluene [c]		3.1	2.5	1.3	ug/l	SW846 8260D
Trichloroethene [c]		14.3	2.5	1.3	ug/l	SW846 8260D
m,p-Xylene [c]		17.5	2.5	2.0	ug/l	SW846 8260D
o-Xylene [c]		4.3	2.5	1.5	ug/l	SW846 8260D
Xylene (total) [c]		21.8	2.5	1.5	ug/l	SW846 8260D

Summary of Hits

Job Number: JD51412
Account: Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY
Collected: 09/09/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD51412-4	**Z_1_090922**					
Acetone [c]		115	10	3.1	ug/l	SW846 8260D
Benzene [c]		0.59	0.50	0.43	ug/l	SW846 8260D
2-Butanone (MEK) [c]		667	10	6.9	ug/l	SW846 8260D
Carbon disulfide [c]		0.88 J	2.0	0.46	ug/l	SW846 8260D
cis-1,2-Dichloroethene [c]		57.6	1.0	0.51	ug/l	SW846 8260D
Ethylbenzene [c]		0.67 J	1.0	0.60	ug/l	SW846 8260D
Methylene chloride [c]		8.9	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [c]		16.6	1.0	0.90	ug/l	SW846 8260D
Toluene [c]		1.2	1.0	0.53	ug/l	SW846 8260D
Trichloroethene [c]		6.5	1.0	0.53	ug/l	SW846 8260D
Vinyl chloride [c]		13.5	1.0	0.79	ug/l	SW846 8260D
m,p-Xylene [c]		2.5	1.0	0.78	ug/l	SW846 8260D
o-Xylene [c]		0.74 J	1.0	0.59	ug/l	SW846 8260D
Xylene (total) [c]		3.2	1.0	0.59	ug/l	SW846 8260D
JD51412-5	**Z_2_090922**					
Acetone [c]		81.6	10	3.1	ug/l	SW846 8260D
Benzene [c]		0.53	0.50	0.43	ug/l	SW846 8260D
2-Butanone (MEK) [c]		501	10	6.9	ug/l	SW846 8260D
Carbon disulfide [c]		1.7 J	2.0	0.46	ug/l	SW846 8260D
cis-1,2-Dichloroethene [c]		75.9	1.0	0.51	ug/l	SW846 8260D
Ethylbenzene [c]		0.66 J	1.0	0.60	ug/l	SW846 8260D
Methylene chloride [c]		8.3	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [c]		15.8	1.0	0.90	ug/l	SW846 8260D
Toluene [c]		0.92 J	1.0	0.53	ug/l	SW846 8260D
Trichloroethene [c]		7.1	1.0	0.53	ug/l	SW846 8260D
Vinyl chloride [c]		11.9	1.0	0.79	ug/l	SW846 8260D
m,p-Xylene [c]		1.7	1.0	0.78	ug/l	SW846 8260D
Xylene (total) [c]		1.7	1.0	0.59	ug/l	SW846 8260D
JD51412-6	**Z_3_090922**					
Acetone [a]		152	10	3.1	ug/l	SW846 8260D
Benzene [a]		0.90	0.50	0.43	ug/l	SW846 8260D
2-Butanone (MEK) [a]		1010	100	69	ug/l	SW846 8260D
Carbon disulfide [a]		2.2	2.0	0.46	ug/l	SW846 8260D
cis-1,2-Dichloroethene [a]		46.3	1.0	0.51	ug/l	SW846 8260D
Methylene chloride [a]		9.5	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [a]		17.0	1.0	0.90	ug/l	SW846 8260D
Toluene [a]		2.2	1.0	0.53	ug/l	SW846 8260D
Trichloroethene [a]		8.1	1.0	0.53	ug/l	SW846 8260D

Summary of Hits

Job Number: JD51412
Account: Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY
Collected: 09/09/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Vinyl chloride [a]		11.5	1.0	0.79	ug/l	SW846 8260D
m,p-Xylene [a]		6.2	1.0	0.78	ug/l	SW846 8260D
o-Xylene [a]		1.7	1.0	0.59	ug/l	SW846 8260D
Xylene (total) [a]		7.9	1.0	0.59	ug/l	SW846 8260D
JD51412-7	**Z_4_090922**					
Acetone [a]		66.6	10	3.1	ug/l	SW846 8260D
2-Butanone (MEK) [a]		962	100	69	ug/l	SW846 8260D
Carbon disulfide [a]		2.5	2.0	0.46	ug/l	SW846 8260D
cis-1,2-Dichloroethene [a]		81.1	1.0	0.51	ug/l	SW846 8260D
Methylene chloride [a]		7.7	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [a]		5.7	1.0	0.90	ug/l	SW846 8260D
Toluene [a]		0.66 J	1.0	0.53	ug/l	SW846 8260D
Trichloroethene [a]		4.8	1.0	0.53	ug/l	SW846 8260D
Vinyl chloride [a]		5.3	1.0	0.79	ug/l	SW846 8260D
m,p-Xylene [a]		0.82 J	1.0	0.78	ug/l	SW846 8260D
Xylene (total) [a]		0.82 J	1.0	0.59	ug/l	SW846 8260D
JD51412-8	**Z_5_090922**					
Acetone [a]		80.7	10	3.1	ug/l	SW846 8260D
Benzene [c]		0.44 J	0.50	0.43	ug/l	SW846 8260D
2-Butanone (MEK) [c]		1080	100	69	ug/l	SW846 8260D
Carbon disulfide [c]		3.1	2.0	0.46	ug/l	SW846 8260D
cis-1,2-Dichloroethene [c]		82.0	1.0	0.51	ug/l	SW846 8260D
Methylene chloride [c]		7.3	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [c]		5.2	1.0	0.90	ug/l	SW846 8260D
Toluene [c]		0.65 J	1.0	0.53	ug/l	SW846 8260D
Trichloroethene [c]		4.5	1.0	0.53	ug/l	SW846 8260D
Vinyl chloride [c]		5.1	1.0	0.79	ug/l	SW846 8260D
m,p-Xylene [c]		0.87 J	1.0	0.78	ug/l	SW846 8260D
Xylene (total) [c]		0.87 J	1.0	0.59	ug/l	SW846 8260D
JD51412-9	**Z_6_090922**					
Acetone [a]		45.8	10	3.1	ug/l	SW846 8260D
Benzene [a]		0.72	0.50	0.43	ug/l	SW846 8260D
2-Butanone (MEK) [a]		535	10	6.9	ug/l	SW846 8260D
Carbon disulfide [a]		3.8	2.0	0.46	ug/l	SW846 8260D
cis-1,2-Dichloroethene [a]		79.2	1.0	0.51	ug/l	SW846 8260D
Methylene chloride [a]		9.1	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [a]		5.6	1.0	0.90	ug/l	SW846 8260D
Toluene [a]		1.2	1.0	0.53	ug/l	SW846 8260D
Trichloroethene [a]		4.0	1.0	0.53	ug/l	SW846 8260D

Summary of Hits

Job Number: JD51412
Account: Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY
Collected: 09/09/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Vinyl chloride [a]		3.1	1.0	0.79	ug/l	SW846 8260D
m,p-Xylene [a]		2.4	1.0	0.78	ug/l	SW846 8260D
o-Xylene [a]		0.66 J	1.0	0.59	ug/l	SW846 8260D
Xylene (total) [a]		3.1	1.0	0.59	ug/l	SW846 8260D
JD51412-10	**P_1_090922**					
Acetone [e]		303	10	3.1	ug/l	SW846 8260D
Benzene [e]		0.77	0.50	0.43	ug/l	SW846 8260D
2-Butanone (MEK) [e]		14.8	10	6.9	ug/l	SW846 8260D
Carbon disulfide [f]		1.4 J	2.0	0.46	ug/l	SW846 8260D
Chloroform [e]		6.4	1.0	0.50	ug/l	SW846 8260D
cis-1,2-Dichloroethene [e]		87.8	1.0	0.51	ug/l	SW846 8260D
2-Hexanone [e]		4.3 J	5.0	2.0	ug/l	SW846 8260D
Methylene chloride [e]		4.8	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [e]		23.8	1.0	0.90	ug/l	SW846 8260D
Toluene [e]		0.57 J	1.0	0.53	ug/l	SW846 8260D
Trichloroethene [e]		9.0	1.0	0.53	ug/l	SW846 8260D
m,p-Xylene [e]		1.4	1.0	0.78	ug/l	SW846 8260D
Xylene (total) [e]		1.4	1.0	0.59	ug/l	SW846 8260D
JD51412-11	**P_2_090922**					
Acetone [e]		107	10	3.1	ug/l	SW846 8260D
Benzene [e]		0.66	0.50	0.43	ug/l	SW846 8260D
2-Butanone (MEK) [e]		7.2 J	10	6.9	ug/l	SW846 8260D
Carbon disulfide [f]		1.4 J	2.0	0.46	ug/l	SW846 8260D
Chloroform [e]		7.5	1.0	0.50	ug/l	SW846 8260D
cis-1,2-Dichloroethene [e]		101	1.0	0.51	ug/l	SW846 8260D
2-Hexanone [e]		3.8 J	5.0	2.0	ug/l	SW846 8260D
Methylene chloride [e]		4.6	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [e]		20.5	1.0	0.90	ug/l	SW846 8260D
Toluene [e]		0.53 J	1.0	0.53	ug/l	SW846 8260D
Trichloroethene [e]		10.6	1.0	0.53	ug/l	SW846 8260D
m,p-Xylene [e]		1.3	1.0	0.78	ug/l	SW846 8260D
Xylene (total) [e]		1.3	1.0	0.59	ug/l	SW846 8260D
JD51412-12	**P_3_090922**					
Acetone [e]		107	10	3.1	ug/l	SW846 8260D
Benzene [e]		0.66	0.50	0.43	ug/l	SW846 8260D
2-Butanone (MEK) [e]		7.0 J	10	6.9	ug/l	SW846 8260D
Carbon disulfide [f]		1.5 J	2.0	0.46	ug/l	SW846 8260D
Chloroform [e]		7.7	1.0	0.50	ug/l	SW846 8260D
cis-1,2-Dichloroethene [e]		105	1.0	0.51	ug/l	SW846 8260D

Summary of Hits

Job Number: JD51412
Account: Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY
Collected: 09/09/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
2-Hexanone [e]		4.1 J	5.0	2.0	ug/l	SW846 8260D
Methylene chloride [e]		4.4	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [e]		21.9	1.0	0.90	ug/l	SW846 8260D
Toluene [e]		0.54 J	1.0	0.53	ug/l	SW846 8260D
Trichloroethene [e]		11.0	1.0	0.53	ug/l	SW846 8260D
m,p-Xylene [e]		1.2	1.0	0.78	ug/l	SW846 8260D
Xylene (total) [e]		1.2	1.0	0.59	ug/l	SW846 8260D

(a) (pH = 4)Sample pH did not satisfy field preservation criteria.
(b) (pH = 4)Sample pH did not satisfy field preservation criteria. Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte.
(c) (pH = 5)Sample pH did not satisfy field preservation criteria.
(d) (pH = 5)Sample pH did not satisfy field preservation criteria. Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.
(e) (pH = 3)Sample pH did not satisfy field preservation criteria.
(f) (pH = 3)Sample pH did not satisfy field preservation criteria. Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	C_1_090922		
Lab Sample ID:	JD51412-1	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/09/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L346886.D	1	09/13/22 11:46	NH	n/a	n/a	VL10489
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	291	10	3.1	ug/l	
71-43-2	Benzene	0.50	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane [b]	4.3	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	6.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane [c]	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	9.5	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane [c]	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	109	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene [c]	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	1.1	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	C_1_090922		
Lab Sample ID:	JD51412-1	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/09/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	6.8	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	49.2	1.0	0.90	ug/l	
108-88-3	Toluene	1.2	1.0	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	16.3	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane [c]	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	
	m,p-Xylene	5.2	1.0	0.78	ug/l	
95-47-6	o-Xylene	1.6	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	6.8	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		80-120%
17060-07-0	1,2-Dichloroethane-D4	93%		80-120%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	88%		82-114%

(a) (pH = 4)Sample pH did not satisfy field preservation criteria.
(b) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte.
(c) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	C_2_090922		
Lab Sample ID:	JD51412-2	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/09/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L346887.D	1	09/13/22 12:13	NH	n/a	n/a	VL10489
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	200	10	3.1	ug/l	
71-43-2	Benzene	0.56	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane [b]	2.1	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	6.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane [c]	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	8.6	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane [c]	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	101	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene [c]	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	1.0	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	C_2_090922		
Lab Sample ID:	JD51412-2	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/09/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	6.3	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	61.0	1.0	0.90	ug/l	
108-88-3	Toluene	1.5	1.0	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	15.3	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane [c]	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	
	m,p-Xylene	8.0	1.0	0.78	ug/l	
95-47-6	o-Xylene	2.4	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	10.4	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		80-120%
17060-07-0	1,2-Dichloroethane-D4	88%		80-120%
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	88%		82-114%

(a) (pH = 4)Sample pH did not satisfy field preservation criteria.
(b) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte.
(c) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	C_3_090922		
Lab Sample ID:	JD51412-3	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/09/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L346907.D	2.5	09/13/22 20:33	NH	n/a	n/a	VL10489
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	343	25	7.6	ug/l	
71-43-2	Benzene	ND	1.3	1.1	ug/l	
74-97-5	Bromochloromethane	ND	2.5	1.2	ug/l	
75-27-4	Bromodichloromethane	ND	2.5	1.1	ug/l	
75-25-2	Bromoform	ND	2.5	1.6	ug/l	
74-83-9	Bromomethane [b]	4.7	5.0	4.1	ug/l	J
78-93-3	2-Butanone (MEK)	ND	25	17	ug/l	
75-15-0	Carbon disulfide	ND	5.0	1.1	ug/l	
56-23-5	Carbon tetrachloride	ND	2.5	1.4	ug/l	
108-90-7	Chlorobenzene	ND	2.5	1.4	ug/l	
75-00-3	Chloroethane [b]	ND	2.5	1.8	ug/l	
67-66-3	Chloroform	8.9	2.5	1.3	ug/l	
74-87-3	Chloromethane	ND	2.5	1.9	ug/l	
110-82-7	Cyclohexane [b]	ND	13	2.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.3	ug/l	
124-48-1	Dibromochloromethane	ND	2.5	1.4	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.5	1.2	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	2.5	1.3	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2.5	1.4	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2.5	1.3	ug/l	
75-71-8	Dichlorodifluoromethane	ND	5.0	1.4	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.5	1.4	ug/l	
107-06-2	1,2-Dichloroethane	ND	2.5	1.5	ug/l	
75-35-4	1,1-Dichloroethene	ND	2.5	1.5	ug/l	
156-59-2	cis-1,2-Dichloroethene	101	2.5	1.3	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	2.5	1.3	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.5	1.3	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.5	1.2	ug/l	
10061-02-6	trans-1,3-Dichloropropene [b]	ND	2.5	1.1	ug/l	
100-41-4	Ethylbenzene	ND	2.5	1.5	ug/l	
76-13-1	Freon 113	ND	13	1.5	ug/l	
591-78-6	2-Hexanone	ND	13	5.1	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	C_3_090922		
Lab Sample ID:	JD51412-3	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/09/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	2.5	1.6	ug/l	
79-20-9	Methyl Acetate	ND	13	2.0	ug/l	
108-87-2	Methylcyclohexane	ND	13	1.5	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	2.5	1.3	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	13	4.6	ug/l	
75-09-2	Methylene chloride	6.9	5.0	2.5	ug/l	
100-42-5	Styrene	ND	2.5	1.2	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.5	1.6	ug/l	
127-18-4	Tetrachloroethene	28.2	2.5	2.2	ug/l	
108-88-3	Toluene	3.1	2.5	1.3	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.5	1.3	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	1.3	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.5	1.3	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.5	1.3	ug/l	
79-01-6	Trichloroethene	14.3	2.5	1.3	ug/l	
75-69-4	Trichlorofluoromethane [b]	ND	5.0	1.0	ug/l	
75-01-4	Vinyl chloride	ND	2.5	2.0	ug/l	
	m,p-Xylene	17.5	2.5	2.0	ug/l	
95-47-6	o-Xylene	4.3	2.5	1.5	ug/l	
1330-20-7	Xylene (total)	21.8	2.5	1.5	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		80-120%
17060-07-0	1,2-Dichloroethane-D4	91%		80-120%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	87%		82-114%

(a) (pH = 5)Sample pH did not satisfy field preservation criteria.
(b) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z_1_090922		
Lab Sample ID:	JD51412-4	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/09/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L346905.D	1	09/13/22 19:47	NH	n/a	n/a	VL10489
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	115	10	3.1	ug/l	
71-43-2	Benzene	0.59	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane [b]	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	667	10	6.9	ug/l	
75-15-0	Carbon disulfide	0.88	2.0	0.46	ug/l	J
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane [b]	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane [b]	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	57.6	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene [b]	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	0.67	1.0	0.60	ug/l	J
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z_1_090922		
Lab Sample ID:	JD51412-4	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/09/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	8.9	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	16.6	1.0	0.90	ug/l	
108-88-3	Toluene	1.2	1.0	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	6.5	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane [b]	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	13.5	1.0	0.79	ug/l	
	m,p-Xylene	2.5	1.0	0.78	ug/l	
95-47-6	o-Xylene	0.74	1.0	0.59	ug/l	J
1330-20-7	Xylene (total)	3.2	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		80-120%
17060-07-0	1,2-Dichloroethane-D4	91%		80-120%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	95%		82-114%

(a) (pH = 5)Sample pH did not satisfy field preservation criteria.
(b) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z_2_090922		
Lab Sample ID:	JD51412-5	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/09/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L346906.D	1	09/13/22 20:10	NH	n/a	n/a	VL10489
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	81.6	10	3.1	ug/l	
71-43-2	Benzene	0.53	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane [b]	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	501	10	6.9	ug/l	
75-15-0	Carbon disulfide	1.7	2.0	0.46	ug/l	J
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane [b]	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane [b]	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	75.9	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene [b]	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	0.66	1.0	0.60	ug/l	J
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z_2_090922		
Lab Sample ID:	JD51412-5	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/09/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	8.3	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	15.8	1.0	0.90	ug/l	
108-88-3	Toluene	0.92	1.0	0.53	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	7.1	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane [b]	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	11.9	1.0	0.79	ug/l	
	m,p-Xylene	1.7	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	1.7	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		80-120%
17060-07-0	1,2-Dichloroethane-D4	90%		80-120%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	93%		82-114%

(a) (pH = 5)Sample pH did not satisfy field preservation criteria.
(b) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z_3_090922		
Lab Sample ID:	JD51412-6	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/09/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L346986.D	1	09/15/22 16:01	NH	n/a	n/a	VL10492
Run #2 [a]	2A220141.D	1	09/14/22 17:30	NH	n/a	n/a	V2A9566
Run #3 [a]	L346983.D	10	09/15/22 14:51	NH	n/a	n/a	VL10492

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml
Run #3	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	152 [b]	10	3.1	ug/l	
71-43-2	Benzene	0.90	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	1010 [c]	100	69	ug/l	
75-15-0	Carbon disulfide	2.2	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane [d]	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane [d]	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	46.3	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z_3_090922		
Lab Sample ID:	JD51412-6	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/09/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	9.5	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	17.0	1.0	0.90	ug/l	
108-88-3	Toluene	2.2	1.0	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	8.1	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	11.5	1.0	0.79	ug/l	
	m,p-Xylene	6.2	1.0	0.78	ug/l	
95-47-6	o-Xylene	1.7	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	7.9	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
1868-53-7	Dibromofluoromethane	106%	115%	108%	80-120%
17060-07-0	1,2-Dichloroethane-D4	92%	83%	95%	80-120%
2037-26-5	Toluene-D8	100%	90%	102%	80-120%
460-00-4	4-Bromofluorobenzene	96%	103%	97%	82-114%

(a) (pH = 4)Sample pH did not satisfy field preservation criteria.
(b) Result is from Run# 2
(c) Result is from Run# 3
(d) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z_4_090922		
Lab Sample ID:	JD51412-7	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/09/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L346987.D	1	09/15/22 16:24	NH	n/a	n/a	VL10492
Run #2 [a]	2A220142.D	1	09/14/22 17:59	NH	n/a	n/a	V2A9566
Run #3 [a]	L346984.D	10	09/15/22 15:14	NH	n/a	n/a	VL10492

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml
Run #3	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	66.6 [b]	10	3.1	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	962 [c]	100	69	ug/l	
75-15-0	Carbon disulfide	2.5	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane [d]	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane [d]	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	81.1	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z_4_090922		
Lab Sample ID:	JD51412-7	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/09/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	7.7	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	5.7	1.0	0.90	ug/l	
108-88-3	Toluene	0.66	1.0	0.53	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	4.8	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	5.3	1.0	0.79	ug/l	
	m,p-Xylene	0.82	1.0	0.78	ug/l	J
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	0.82	1.0	0.59	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
1868-53-7	Dibromofluoromethane	108%	112%	106%	80-120%
17060-07-0	1,2-Dichloroethane-D4	88%	82%	92%	80-120%
2037-26-5	Toluene-D8	101%	90%	103%	80-120%
460-00-4	4-Bromofluorobenzene	99%	102%	96%	82-114%

(a) (pH = 4)Sample pH did not satisfy field preservation criteria.
(b) Result is from Run# 2
(c) Result is from Run# 3
(d) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z_5_090922		
Lab Sample ID:	JD51412-8	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/09/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L346988.D	1	09/15/22 16:47	NH	n/a	n/a	VL10492
Run #2 [b]	2A220143.D	1	09/14/22 18:28	NH	n/a	n/a	V2A9566
Run #3 [a]	L346985.D	10	09/15/22 15:38	NH	n/a	n/a	VL10492

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml
Run #3	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	80.7 [c]	10	3.1	ug/l	
71-43-2	Benzene	0.44	0.50	0.43	ug/l	J
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	1080 [d]	100	69	ug/l	
75-15-0	Carbon disulfide	3.1	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane [e]	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane [e]	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	82.0	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z_5_090922		
Lab Sample ID:	JD51412-8	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/09/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	7.3	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	5.2	1.0	0.90	ug/l	
108-88-3	Toluene	0.65	1.0	0.53	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	4.5	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	5.1	1.0	0.79	ug/l	
	m,p-Xylene	0.87	1.0	0.78	ug/l	J
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	0.87	1.0	0.59	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
1868-53-7	Dibromofluoromethane	108%	114%	105%	80-120%
17060-07-0	1,2-Dichloroethane-D4	91%	83%	93%	80-120%
2037-26-5	Toluene-D8	99%	90%	102%	80-120%
460-00-4	4-Bromofluorobenzene	100%	101%	94%	82-114%

(a) (pH = 5)Sample pH did not satisfy field preservation criteria.
(b) (pH = 4)Sample pH did not satisfy field preservation criteria.
(c) Result is from Run# 2
(d) Result is from Run# 3
(e) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z_6_090922		
Lab Sample ID:	JD51412-9	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/09/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L346997.D	1	09/15/22 20:06	NH	n/a	n/a	VL10492
Run #2 [a]	2A220144.D	1	09/14/22 18:57	NH	n/a	n/a	V2A9566

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	45.8 [b]	10	3.1	ug/l	
71-43-2	Benzene	0.72	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	535	10	6.9	ug/l	
75-15-0	Carbon disulfide	3.8	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane [c]	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane [c]	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	79.2	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z_6_090922		
Lab Sample ID:	JD51412-9	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/09/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	9.1	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	5.6	1.0	0.90	ug/l	
108-88-3	Toluene	1.2	1.0	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	4.0	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	3.1	1.0	0.79	ug/l	
	m,p-Xylene	2.4	1.0	0.78	ug/l	
95-47-6	o-Xylene	0.66	1.0	0.59	ug/l	J
1330-20-7	Xylene (total)	3.1	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%	116%	80-120%
17060-07-0	1,2-Dichloroethane-D4	89%	82%	80-120%
2037-26-5	Toluene-D8	101%	91%	80-120%
460-00-4	4-Bromofluorobenzene	97%	101%	82-114%

(a) (pH = 4)Sample pH did not satisfy field preservation criteria.
(b) Result is from Run# 2
(c) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P_1_090922		
Lab Sample ID:	JD51412-10	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/09/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2V92381.D	1	09/16/22 11:45	KM	n/a	n/a	V2V3755
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	303	10	3.1	ug/l	
71-43-2	Benzene	0.77	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane [b]	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	14.8	10	6.9	ug/l	
75-15-0	Carbon disulfide [b]	1.4	2.0	0.46	ug/l	J
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	6.4	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene [b]	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	87.8	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	4.3	5.0	2.0	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P_1_090922		
Lab Sample ID:	JD51412-10	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/09/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	4.8	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	23.8	1.0	0.90	ug/l	
108-88-3	Toluene	0.57	1.0	0.53	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	9.0	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	
	m,p-Xylene	1.4	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	1.4	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		80-120%
17060-07-0	1,2-Dichloroethane-D4	92%		80-120%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	94%		82-114%

(a) (pH = 3)Sample pH did not satisfy field preservation criteria.
(b) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P_2_090922		
Lab Sample ID:	JD51412-11	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/09/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2V92382.D	1	09/16/22 12:08	KM	n/a	n/a	V2V3755
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	107	10	3.1	ug/l	
71-43-2	Benzene	0.66	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane [b]	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.2	10	6.9	ug/l	J
75-15-0	Carbon disulfide [b]	1.4	2.0	0.46	ug/l	J
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	7.5	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene [b]	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	101	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	3.8	5.0	2.0	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P_2_090922		
Lab Sample ID:	JD51412-11	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/09/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	4.6	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	20.5	1.0	0.90	ug/l	
108-88-3	Toluene	0.53	1.0	0.53	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	10.6	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	
	m,p-Xylene	1.3	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	1.3	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		80-120%
17060-07-0	1,2-Dichloroethane-D4	94%		80-120%
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	95%		82-114%

(a) (pH = 3)Sample pH did not satisfy field preservation criteria.
(b) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P_3_090922		
Lab Sample ID:	JD51412-12	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/09/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2V92383.D	1	09/16/22 12:31	KM	n/a	n/a	V2V3755
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	107	10	3.1	ug/l	
71-43-2	Benzene	0.66	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane [b]	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	7.0	10	6.9	ug/l	J
75-15-0	Carbon disulfide [b]	1.5	2.0	0.46	ug/l	J
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	7.7	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene [b]	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	105	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	4.1	5.0	2.0	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P_3_090922		
Lab Sample ID:	JD51412-12	**Date Sampled:**	09/09/22
Matrix:	AQ - Ground Water	**Date Received:**	09/09/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	4.4	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	21.9	1.0	0.90	ug/l	
108-88-3	Toluene	0.54	1.0	0.53	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	11.0	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	
	m,p-Xylene	1.2	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	1.2	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		80-120%
17060-07-0	1,2-Dichloroethane-D4	94%		80-120%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	97%		82-114%

(a) (pH = 3)Sample pH did not satisfy field preservation criteria.
(b) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.

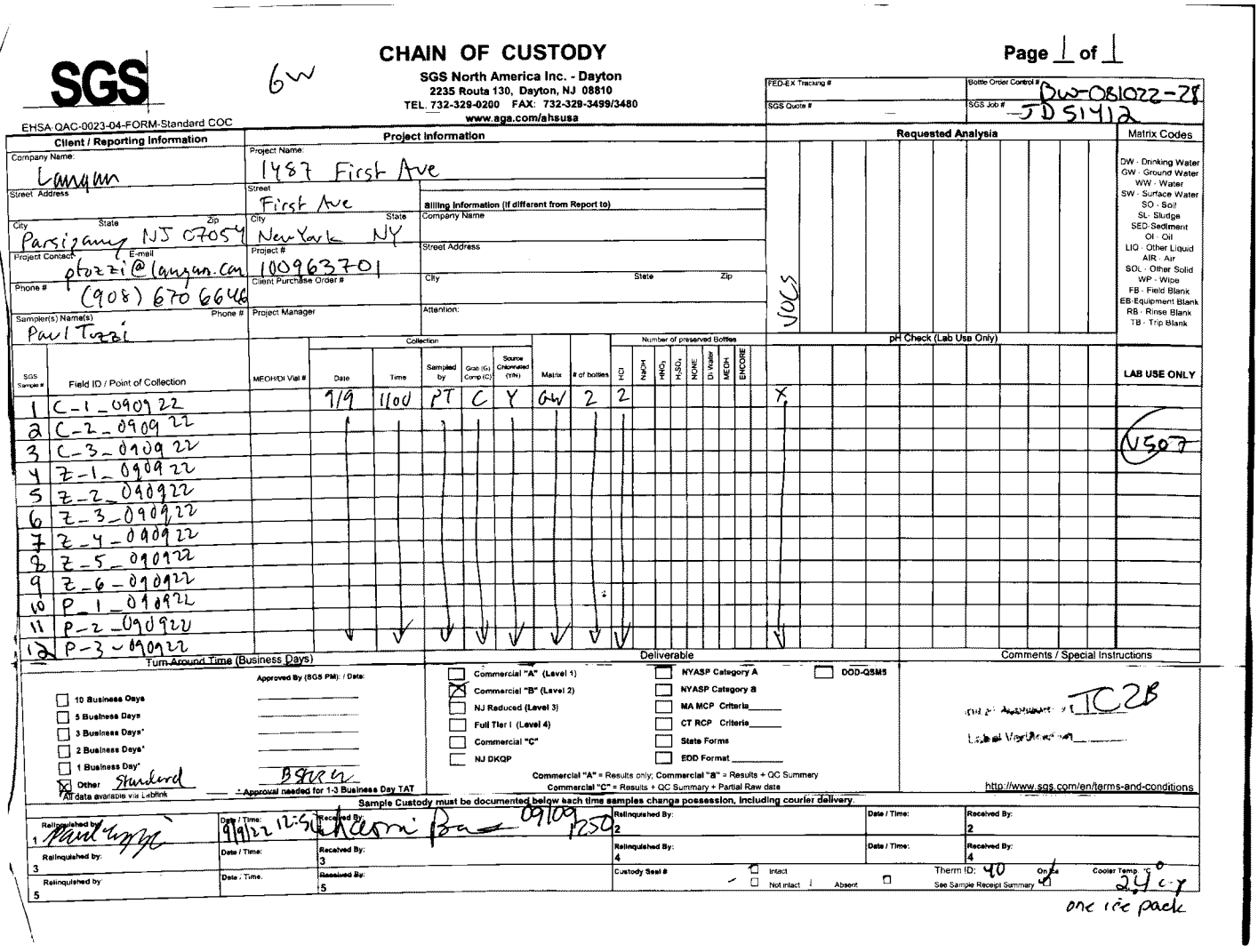
ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



SGS

EHSA-QAC-0023-04-FORM-Standard COC

6W

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.aga.com/ahsusa

Page 1 of 1

FED-EX Tracking #:
Bottle Order Control #: DW-081022-28
SGS Quote #:
SGS Job #: JD51412

Client / Reporting Information

Company Name: Langan
Street Address:
City: Parsippany State: NJ Zip: 07054
Project Contact: E-mail: ptozzi@langan.com
Phone #: (908) 670 6646
Sampler(s) Name(s): Paul Tozzi Phone #:

Project Information

Project Name: 1487 First Ave
Street: First Ave
City: New York State: NY
Project #: 100963701
Client Purchase Order #:
Project Manager:

Billing Information (If different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis

VOCs

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED - Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB - Field Blank
EB - Equipment Blank
RB - Rinse Blank
TB - Trip Blank

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Time	Sampled by	Grab (G) Comp (C)	Source Chlorinated (Y/N)	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO_3	H_2SO_4	NONE	DI Water	MEOH	ENCORE	pH Check (Lab Use Only)	LAB USE ONLY
1	C-1_090922		9/9	1100	PT	C	Y	GW	2	2								X	
2	C-2_090922																		V507
3	C-3_090922																		
4	Z-1_090922																		
5	Z-2_090922																		
6	Z-3_090922																		
7	Z-4_090922																		
8	Z-5_090922																		
9	Z-6_090922																		
10	P_1_090922																		
11	P-2_090922																		
12	P-3_090922																		

Turn-Around Time (Business Days)

Approved By (SGS PM): / Date:

- [ ] 10 Business Days
- [ ] 5 Business Days
- [ ] 3 Business Days*
- [ ] 2 Business Days*
- [ ] 1 Business Day*
- [x] Other Standard

All data available via Labtrak

* Approval needed for 1-3 Business Day TAT

Deliverable

- [ ] Commercial "A" (Level 1)
- [x] Commercial "B" (Level 2)
- [ ] NJ Reduced (Level 3)
- [ ] Full Tier I (Level 4)
- [ ] Commercial "C"
- [ ] NJ DKQP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] MA MCP Criteria
- [ ] CT RCP Criteria
- [ ] State Forms
- [ ] EDD Format
- [ ] DOD-QSM5

Commercial "A" = Results only; Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

TC2B

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished By:	Date / Time:	Received By:
1	Paul Tozzi	9/9/22 12:5	Sharmi Ba 09/09 1250
2			
3			
4			
5			

Custody Seal #: Intact / Not Intact / Absent

Therm ID: 40 On Ice

Cooler Temp °C: 2.4 c.y

See Sample Receipt Summary

one ice pack

SGS Sample Receipt Summary

Job Number: JD51412 **Client:** LANGAN ENGINEERING & ENVIRONMEN **Project:** 1487 FIRST AVENUE, NY, NY

Date / Time Received: 9/9/2022 12:50:00 PM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (2.4);

Cooler Temps (Corrected) °C: Cooler 1: (3.0);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice Pack (Blue)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 231619 pH 12+: 203117A Other: (Specify)

Comments

SM089-03
Rev. Date 12/7/17

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL10489-MB	L346885.D	1	09/13/22	NH	n/a	n/a	VL10489

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD51412-1, JD51412-2, JD51412-3, JD51412-4, JD51412-5

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.1	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	6.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	

Method Blank Summary

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL10489-MB	L346885.D	1	09/13/22	NH	n/a	n/a	VL10489

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD51412-1, JD51412-2, JD51412-3, JD51412-4, JD51412-5

CAS No.	Compound	Result	RL	MDL	Units	Q
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.90	ug/l	
108-88-3	Toluene	ND	1.0	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	
	m,p-Xylene	ND	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	98%	80-120%
17060-07-0	1,2-Dichloroethane-D4	96%	80-120%
2037-26-5	Toluene-D8	100%	80-120%
460-00-4	4-Bromofluorobenzene	92%	82-114%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	1.52	60	ug/l	J
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2A9566-MB	2A220130.D	1	09/14/22	NH	n/a	n/a	V2A9566

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD51412-6, JD51412-7, JD51412-8, JD51412-9

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.1	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	113%	80-120%
17060-07-0	1,2-Dichloroethane-D4	83%	80-120%
2037-26-5	Toluene-D8	91%	80-120%
460-00-4	4-Bromofluorobenzene	103%	82-114%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL10492-MB	L346980.D	1	09/15/22	NH	n/a	n/a	VL10492

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD51412-6, JD51412-7, JD51412-8, JD51412-9

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	6.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	

Method Blank Summary

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL10492-MB	L346980.D	1	09/15/22	NH	n/a	n/a	VL10492

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD51412-6, JD51412-7, JD51412-8, JD51412-9

CAS No.	Compound	Result	RL	MDL	Units	Q
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.90	ug/l	
108-88-3	Toluene	ND	1.0	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	
	m,p-Xylene	ND	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	106%	80-120%
17060-07-0	1,2-Dichloroethane-D4	92%	80-120%
2037-26-5	Toluene-D8	104%	80-120%
460-00-4	4-Bromofluorobenzene	96%	82-114%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2V3755-MB	2V92380.D	1	09/16/22	KM	n/a	n/a	V2V3755

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD51412-10, JD51412-11, JD51412-12

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.1	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	6.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane [a]	ND	0.50	0.37	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	

Method Blank Summary

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2V3755-MB	2V92380.D	1	09/16/22	KM	n/a	n/a	V2V3755

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD51412-10, JD51412-11, JD51412-12

CAS No.	Compound	Result	RL	MDL	Units	Q
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane [a]	ND	0.50	0.36	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.90	ug/l	
108-88-3	Toluene	ND	1.0	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	
	m,p-Xylene	ND	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	96%	80-120%
17060-07-0	1,2-Dichloroethane-D4	96%	80-120%
2037-26-5	Toluene-D8	101%	80-120%
460-00-4	4-Bromofluorobenzene	97%	82-114%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	1.34	5.2	ug/l	J
	Total TIC, Volatile		0	ug/l	

(a) MDL from current instrument.

Method Blank Summary

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL10489-MB2	L346945.D	1	09/14/22	NH	n/a	n/a	VL10489

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD51463-3MS

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.1	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	6.9	ug/l	
75-15-0	Carbon disulfide	0.60	2.0	0.46	ug/l	J
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	

Method Blank Summary

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL10489-MB2	L346945.D	1	09/14/22	NH	n/a	n/a	VL10489

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD51463-3MS

CAS No.	Compound	Result	RL	MDL	Units	Q
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.90	ug/l	
108-88-3	Toluene	ND	1.0	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	
	m,p-Xylene	ND	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	80-120%
17060-07-0	1,2-Dichloroethane-D4	90%	80-120%
2037-26-5	Toluene-D8	100%	80-120%
460-00-4	4-Bromofluorobenzene	92%	82-114%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Blank Spike Summary

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL10489-BS	L346883.D	1	09/13/22	NH	n/a	n/a	VL10489

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD51412-1, JD51412-2, JD51412-3, JD51412-4, JD51412-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	200	211	106	27-175
71-43-2	Benzene	50	46.6	93	80-115
74-97-5	Bromochloromethane	50	51.2	102	83-122
75-27-4	Bromodichloromethane	50	43.9	88	82-119
75-25-2	Bromoform	50	44.5	89	77-135
74-83-9	Bromomethane	50	40.8	82	40-162
78-93-3	2-Butanone (MEK)	200	192	96	61-150
75-15-0	Carbon disulfide	50	44.3	89	64-130
56-23-5	Carbon tetrachloride	50	42.8	86	75-127
108-90-7	Chlorobenzene	50	50.0	100	80-115
75-00-3	Chloroethane	50	45.1	90	56-144
67-66-3	Chloroform	50	44.2	88	75-116
74-87-3	Chloromethane	50	58.6	117	41-153
110-82-7	Cyclohexane	50	41.8	84	66-129
96-12-8	1,2-Dibromo-3-chloropropane	50	53.7	107	69-134
124-48-1	Dibromochloromethane	50	45.3	91	81-123
106-93-4	1,2-Dibromoethane	50	46.8	94	67-138
95-50-1	1,2-Dichlorobenzene	50	49.1	98	81-117
541-73-1	1,3-Dichlorobenzene	50	52.1	104	81-115
106-46-7	1,4-Dichlorobenzene	50	49.9	100	80-114
75-71-8	Dichlorodifluoromethane	50	56.8	114	43-152
75-34-3	1,1-Dichloroethane	50	48.9	98	75-125
107-06-2	1,2-Dichloroethane	50	41.9	84	73-117
75-35-4	1,1-Dichloroethene	50	49.0	98	70-124
156-59-2	cis-1,2-Dichloroethene	50	47.6	95	80-120
156-60-5	trans-1,2-Dichloroethene	50	48.6	97	77-121
78-87-5	1,2-Dichloropropane	50	50.9	102	79-121
10061-01-5	cis-1,3-Dichloropropene	50	46.0	92	83-123
10061-02-6	trans-1,3-Dichloropropene	50	41.6	83	83-122
100-41-4	Ethylbenzene	50	45.3	91	78-116
76-13-1	Freon 113	50	51.1	102	68-134
591-78-6	2-Hexanone	200	180	90	66-136
98-82-8	Isopropylbenzene	50	46.6	93	78-121
79-20-9	Methyl Acetate	50	46.2	92	60-143
108-87-2	Methylcyclohexane	50	47.0	94	71-123
1634-04-4	Methyl Tert Butyl Ether	50	43.9	88	76-123

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL10489-BS	L346883.D	1	09/13/22	NH	n/a	n/a	VL10489

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD51412-1, JD51412-2, JD51412-3, JD51412-4, JD51412-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	200	190	95	73-134
75-09-2	Methylene chloride	50	46.9	94	73-123
100-42-5	Styrene	50	45.8	92	81-125
79-34-5	1,1,2,2-Tetrachloroethane	50	47.2	94	73-126
127-18-4	Tetrachloroethene	50	49.9	100	73-119
108-88-3	Toluene	50	46.7	93	79-116
87-61-6	1,2,3-Trichlorobenzene	50	51.1	102	63-137
120-82-1	1,2,4-Trichlorobenzene	50	52.5	105	68-135
71-55-6	1,1,1-Trichloroethane	50	44.7	89	76-124
79-00-5	1,1,2-Trichloroethane	50	48.6	97	83-117
79-01-6	Trichloroethene	50	48.7	97	80-118
75-69-4	Trichlorofluoromethane	50	45.9	92	67-134
75-01-4	Vinyl chloride	50	51.7	103	52-146
	m,p-Xylene	100	89.8	90	79-119
95-47-6	o-Xylene	50	47.1	94	81-119
1330-20-7	Xylene (total)	150	137	91	80-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	80-120%
17060-07-0	1,2-Dichloroethane-D4	81%	80-120%
2037-26-5	Toluene-D8	90%	80-120%
460-00-4	4-Bromofluorobenzene	95%	82-114%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2A9566-BS	2A220128.D	1	09/14/22	NH	n/a	n/a	V2A9566

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD51412-6, JD51412-7, JD51412-8, JD51412-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	200	197	99	27-175

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	115%	80-120%
17060-07-0	1,2-Dichloroethane-D4	82%	80-120%
2037-26-5	Toluene-D8	93%	80-120%
460-00-4	4-Bromofluorobenzene	102%	82-114%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL10492-BS	L346978.D	1	09/15/22	NH	n/a	n/a	VL10492

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD51412-6, JD51412-7, JD51412-8, JD51412-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	47.1	94	80-115
74-97-5	Bromochloromethane	50	51.3	103	83-122
75-27-4	Bromodichloromethane	50	42.9	86	82-119
75-25-2	Bromoform	50	41.2	82	77-135
74-83-9	Bromomethane	50	43.3	87	40-162
78-93-3	2-Butanone (MEK)	200	204	102	61-150
75-15-0	Carbon disulfide	50	46.1	92	64-130
56-23-5	Carbon tetrachloride	50	42.1	84	75-127
108-90-7	Chlorobenzene	50	47.8	96	80-115
75-00-3	Chloroethane	50	46.2	92	56-144
67-66-3	Chloroform	50	44.4	89	75-116
74-87-3	Chloromethane	50	57.4	115	41-153
110-82-7	Cyclohexane	50	46.7	93	66-129
96-12-8	1,2-Dibromo-3-chloropropane	50	50.3	101	69-134
124-48-1	Dibromochloromethane	50	42.0	84	81-123
106-93-4	1,2-Dibromoethane	50	42.5	85	67-138
95-50-1	1,2-Dichlorobenzene	50	44.5	89	81-117
541-73-1	1,3-Dichlorobenzene	50	48.9	98	81-115
106-46-7	1,4-Dichlorobenzene	50	46.2	92	80-114
75-71-8	Dichlorodifluoromethane	50	49.0	98	43-152
75-34-3	1,1-Dichloroethane	50	51.7	103	75-125
107-06-2	1,2-Dichloroethane	50	42.1	84	73-117
75-35-4	1,1-Dichloroethene	50	50.1	100	70-124
156-59-2	cis-1,2-Dichloroethene	50	49.2	98	80-120
156-60-5	trans-1,2-Dichloroethene	50	49.6	99	77-121
78-87-5	1,2-Dichloropropane	50	52.9	106	79-121
10061-01-5	cis-1,3-Dichloropropene	50	46.8	94	83-123
10061-02-6	trans-1,3-Dichloropropene	50	41.3	83	83-122
100-41-4	Ethylbenzene	50	44.4	89	78-116
76-13-1	Freon 113	50	49.8	100	68-134
591-78-6	2-Hexanone	200	183	92	66-136
98-82-8	Isopropylbenzene	50	44.2	88	78-121
79-20-9	Methyl Acetate	50	49.9	100	60-143
108-87-2	Methylcyclohexane	50	47.9	96	71-123
1634-04-4	Methyl Tert Butyl Ether	50	47.1	94	76-123
108-10-1	4-Methyl-2-pentanone(MIBK)	200	198	99	73-134

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL10492-BS	L346978.D	1	09/15/22	NH	n/a	n/a	VL10492

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD51412-6, JD51412-7, JD51412-8, JD51412-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
75-09-2	Methylene chloride	50	49.3	99	73-123
100-42-5	Styrene	50	43.6	87	81-125
79-34-5	1,1,2,2-Tetrachloroethane	50	44.8	90	73-126
127-18-4	Tetrachloroethene	50	44.4	89	73-119
108-88-3	Toluene	50	45.0	90	79-116
87-61-6	1,2,3-Trichlorobenzene	50	48.0	96	63-137
120-82-1	1,2,4-Trichlorobenzene	50	50.0	100	68-135
71-55-6	1,1,1-Trichloroethane	50	45.8	92	76-124
79-00-5	1,1,2-Trichloroethane	50	47.0	94	83-117
79-01-6	Trichloroethene	50	46.7	93	80-118
75-69-4	Trichlorofluoromethane	50	45.1	90	67-134
75-01-4	Vinyl chloride	50	51.8	104	52-146
	m,p-Xylene	100	85.6	86	79-119
95-47-6	o-Xylene	50	44.7	89	81-119
1330-20-7	Xylene (total)	150	130	87	80-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	105%	80-120%
17060-07-0	1,2-Dichloroethane-D4	87%	80-120%
2037-26-5	Toluene-D8	90%	80-120%
460-00-4	4-Bromofluorobenzene	95%	82-114%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2V3755-BS	2V92378.D	1	09/16/22	KM	n/a	n/a	V2V3755

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD51412-10, JD51412-11, JD51412-12

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	200	197	99	27-175
71-43-2	Benzene	50	45.4	91	80-115
74-97-5	Bromochloromethane	50	49.3	99	83-122
75-27-4	Bromodichloromethane	50	46.1	92	82-119
75-25-2	Bromoform	50	50.8	102	77-135
74-83-9	Bromomethane	50	36.5	73	40-162
78-93-3	2-Butanone (MEK)	200	205	103	61-150
75-15-0	Carbon disulfide	50	38.4	77	64-130
56-23-5	Carbon tetrachloride	50	46.9	94	75-127
108-90-7	Chlorobenzene	50	46.2	92	80-115
75-00-3	Chloroethane	50	49.8	100	56-144
67-66-3	Chloroform	50	42.7	85	75-116
74-87-3	Chloromethane	50	41.8	84	41-153
110-82-7	Cyclohexane	50	42.5	85	66-129
96-12-8	1,2-Dibromo-3-chloropropane	50	53.4	107	69-134
124-48-1	Dibromochloromethane	50	48.4	97	81-123
106-93-4	1,2-Dibromoethane	50	47.5	95	67-138
95-50-1	1,2-Dichlorobenzene	50	46.7	93	81-117
541-73-1	1,3-Dichlorobenzene	50	46.2	92	81-115
106-46-7	1,4-Dichlorobenzene	50	45.3	91	80-114
75-71-8	Dichlorodifluoromethane	50	47.4	95	43-152
75-34-3	1,1-Dichloroethane	50	47.0	94	75-125
107-06-2	1,2-Dichloroethane	50	44.4	89	73-117
75-35-4	1,1-Dichloroethene	50	43.5	87	70-124
156-59-2	cis-1,2-Dichloroethene	50	48.2	96	80-120
156-60-5	trans-1,2-Dichloroethene	50	46.1	92	77-121
78-87-5	1,2-Dichloropropane	50	47.8	96	79-121
10061-01-5	cis-1,3-Dichloropropene	50	48.6	97	83-123
10061-02-6	trans-1,3-Dichloropropene	50	49.6	99	83-122
100-41-4	Ethylbenzene	50	47.3	95	78-116
76-13-1	Freon 113	50	46.0	92	68-134
591-78-6	2-Hexanone	200	204	102	66-136
98-82-8	Isopropylbenzene	50	46.2	92	78-121
79-20-9	Methyl Acetate	50	46.4	93	60-143
108-87-2	Methylcyclohexane	50	47.1	94	71-123
1634-04-4	Methyl Tert Butyl Ether	50	45.9	92	76-123

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2V3755-BS	2V92378.D	1	09/16/22	KM	n/a	n/a	V2V3755

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD51412-10, JD51412-11, JD51412-12

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	200	206	103	73-134
75-09-2	Methylene chloride	50	42.2	84	73-123
100-42-5	Styrene	50	48.6	97	81-125
79-34-5	1,1,2,2-Tetrachloroethane	50	46.5	93	73-126
127-18-4	Tetrachloroethene	50	48.9	98	73-119
108-88-3	Toluene	50	45.6	91	79-116
87-61-6	1,2,3-Trichlorobenzene	50	51.1	102	63-137
120-82-1	1,2,4-Trichlorobenzene	50	49.4	99	68-135
71-55-6	1,1,1-Trichloroethane	50	44.6	89	76-124
79-00-5	1,1,2-Trichloroethane	50	47.2	94	83-117
79-01-6	Trichloroethene	50	47.1	94	80-118
75-69-4	Trichlorofluoromethane	50	44.5	89	67-134
75-01-4	Vinyl chloride	50	46.9	94	52-146
	m,p-Xylene	100	93.9	94	79-119
95-47-6	o-Xylene	50	46.7	93	81-119
1330-20-7	Xylene (total)	150	141	94	80-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	80-120%
17060-07-0	1,2-Dichloroethane-D4	99%	80-120%
2037-26-5	Toluene-D8	98%	80-120%
460-00-4	4-Bromofluorobenzene	95%	82-114%

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD51463-3MS	L346968.D	1	09/14/22	NH	n/a	n/a	VL10489
JD51463-3	L346893.D	1	09/13/22	NH	n/a	n/a	VL10489

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD51412-1, JD51412-2, JD51412-3, JD51412-4, JD51412-5

CAS No.	Compound	JD51463-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
67-64-1	Acetone	ND		200	220	110	22-134
71-43-2	Benzene	1.4		50	52.7	103	49-137
74-97-5	Bromochloromethane	ND		50	55.4	111	78-122
75-27-4	Bromodichloromethane	ND		50	47.0	94	76-121
75-25-2	Bromoform	ND		50	46.9	94	70-133
74-83-9	Bromomethane	ND		50	39.5	79	27-164
78-93-3	2-Butanone (MEK)	ND		200	200	100	52-137
75-15-0	Carbon disulfide	ND		50	47.2	94	54-136
56-23-5	Carbon tetrachloride	ND		50	47.7	95	70-132
108-90-7	Chlorobenzene	1.9		50	55.3	107	68-123
75-00-3	Chloroethane	ND		50	43.0	86	48-152
67-66-3	Chloroform	ND		50	46.8	94	68-120
74-87-3	Chloromethane	ND		50	50.1	100	35-156
110-82-7	Cyclohexane	ND		50	46.7	93	53-146
96-12-8	1,2-Dibromo-3-chloropropane	ND		50	54.4	109	63-134
124-48-1	Dibromochloromethane	ND		50	47.3	95	75-122
106-93-4	1,2-Dibromoethane	ND		50	47.3	95	63-134
95-50-1	1,2-Dichlorobenzene	ND		50	50.7	101	74-119
541-73-1	1,3-Dichlorobenzene	ND		50	52.9	106	75-117
106-46-7	1,4-Dichlorobenzene	ND		50	50.7	101	72-117
75-71-8	Dichlorodifluoromethane	ND		50	52.5	105	34-163
75-34-3	1,1-Dichloroethane	ND		50	53.2	106	68-129
107-06-2	1,2-Dichloroethane	ND		50	43.7	87	66-120
75-35-4	1,1-Dichloroethene	ND		50	54.6	109	59-133
156-59-2	cis-1,2-Dichloroethene	0.55	J	50	52.5	104	52-140
156-60-5	trans-1,2-Dichloroethene	ND		50	54.3	109	70-125
78-87-5	1,2-Dichloropropane	ND		50	55.0	110	73-124
10061-01-5	cis-1,3-Dichloropropene	ND		50	52.0	104	75-125
10061-02-6	trans-1,3-Dichloropropene	ND		50	43.0	86	75-122
100-41-4	Ethylbenzene	ND		50	48.9	98	37-144
76-13-1	Freon 113	ND		50	56.3	113	61-142
591-78-6	2-Hexanone	ND		200	184	92	56-132
98-82-8	Isopropylbenzene	16.6		50	62.7	92	71-126
79-20-9	Methyl Acetate	ND		50	48.6	97	51-139
108-87-2	Methylcyclohexane	0.91	J	50	59.4	117	59-137
1634-04-4	Methyl Tert Butyl Ether	ND		50	45.6	91	66-124

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD51463-3MS	L346968.D	1	09/14/22	NH	n/a	n/a	VL10489
JD51463-3	L346893.D	1	09/13/22	NH	n/a	n/a	VL10489

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD51412-1, JD51412-2, JD51412-3, JD51412-4, JD51412-5

CAS No.	Compound	JD51463-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		200	203	102	65-135
75-09-2	Methylene chloride	ND		50	51.8	104	66-125
100-42-5	Styrene	ND		50	48.9	98	71-133
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	46.3	93	68-127
127-18-4	Tetrachloroethene	ND		50	52.4	105	58-132
108-88-3	Toluene	ND		50	51.2	102	46-139
87-61-6	1,2,3-Trichlorobenzene	ND		50	54.5	109	57-136
120-82-1	1,2,4-Trichlorobenzene	ND		50	55.4	111	61-137
71-55-6	1,1,1-Trichloroethane	ND		50	48.9	98	67-132
79-00-5	1,1,2-Trichloroethane	ND		50	50.1	100	75-120
79-01-6	Trichloroethene	ND		50	55.1	110	56-136
75-69-4	Trichlorofluoromethane	ND		50	49.2	98	61-145
75-01-4	Vinyl chloride	ND		50	49.7	99	41-156
	m,p-Xylene	ND		100	98.0	98	32-151
95-47-6	o-Xylene	ND		50	51.5	103	50-139
1330-20-7	Xylene (total)	ND		150	150	100	38-147

CAS No.	Surrogate Recoveries	MS	JD51463-3	Limits
1868-53-7	Dibromofluoromethane	101%	101%	80-120%
17060-07-0	1,2-Dichloroethane-D4	83%	94%	80-120%
2037-26-5	Toluene-D8	90%	101%	80-120%
460-00-4	4-Bromofluorobenzene	92%	92%	82-114%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD51590-1MS	2A220135.D	25	09/14/22	NH	n/a	n/a	V2A9566
JD51590-1MSD	2A220136.D	25	09/14/22	NH	n/a	n/a	V2A9566
JD51590-1 [a]	2A220132.D	25	09/14/22	NH	n/a	n/a	V2A9566

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD51412-6, JD51412-7, JD51412-8, JD51412-9

CAS No.	Compound	JD51590-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		5000	4460	89	5000	4600	92	3	22-134/19

CAS No.	Surrogate Recoveries	MS	MSD	JD51590-1	Limits
1868-53-7	Dibromofluoromethane	115%	114%	114%	80-120%
17060-07-0	1,2-Dichloroethane-D4	81%	81%	83%	80-120%
2037-26-5	Toluene-D8	92%	93%	91%	80-120%
460-00-4	4-Bromofluorobenzene	103%	102%	103%	82-114%

(a) Dilution required due to high concentrations of target and non-target compounds.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD51269-1MS	L346989.D	5	09/15/22	NH	n/a	n/a	VL10492
JD51269-1MSD	L346990.D	5	09/15/22	NH	n/a	n/a	VL10492
JD51269-1 [a]	L346982.D	5	09/15/22	NH	n/a	n/a	VL10492
JD51269-1	L346992.D	50	09/15/22	NH	n/a	n/a	VL10492

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD51412-6, JD51412-7, JD51412-8, JD51412-9

CAS No.	Compound	JD51269-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		250	236	94	250	243	97	3	49-137/12
74-97-5	Bromochloromethane	ND		250	272	109	250	276	110	1	78-122/12
75-27-4	Bromodichloromethane	ND		250	215	86	250	219	88	2	76-121/12
75-25-2	Bromoform	ND		250	214	86	250	222	89	4	70-133/13
74-83-9	Bromomethane	ND		250	132	53	250	170	68	25	27-164/38
78-93-3	2-Butanone (MEK)	ND		1000	1080	108	1000	1110	111	3	52-137/17
75-15-0	Carbon disulfide	ND		250	225	90	250	224	90	0	54-136/16
56-23-5	Carbon tetrachloride	3.3	J	250	222	87	250	227	89	2	70-132/13
108-90-7	Chlorobenzene	ND		250	251	100	250	256	102	2	68-123/12
75-00-3	Chloroethane	ND		250	250	100	250	249	100	0	48-152/17
67-66-3	Chloroform	21.7		250	248	91	250	255	93	3	68-120/13
74-87-3	Chloromethane	ND		250	288	115	250	286	114	1	35-156/18
110-82-7	Cyclohexane	ND		250	252	101	250	250	100	1	53-146/14
96-12-8	1,2-Dibromo-3-chloropropane	ND		250	269	108	250	275	110	2	63-134/16
124-48-1	Dibromochloromethane	ND		250	222	89	250	225	90	1	75-122/12
106-93-4	1,2-Dibromoethane	ND		250	226	90	250	231	92	2	63-134/12
95-50-1	1,2-Dichlorobenzene	ND		250	243	97	250	252	101	4	74-119/12
541-73-1	1,3-Dichlorobenzene	ND		250	250	100	250	266	106	6	75-117/12
106-46-7	1,4-Dichlorobenzene	ND		250	247	99	250	249	100	1	72-117/12
75-71-8	Dichlorodifluoromethane	ND		250	248	99	250	248	99	0	34-163/16
75-34-3	1,1-Dichloroethane	23.3		250	284	104	250	292	107	3	68-129/13
107-06-2	1,2-Dichloroethane	31.4		250	236	82	250	242	84	3	66-120/13
75-35-4	1,1-Dichloroethene	25.5		250	254	91	250	271	98	6	59-133/15
156-59-2	cis-1,2-Dichloroethene	913		250	979	26* [b]	250	984	28* [b]	1	52-140/12
156-60-5	trans-1,2-Dichloroethene	5.8		250	268	105	250	273	107	2	70-125/13
78-87-5	1,2-Dichloropropane	9.0		250	266	103	250	276	107	4	73-124/12
10061-01-5	cis-1,3-Dichloropropene	ND		250	239	96	250	255	102	6	75-125/13
10061-02-6	trans-1,3-Dichloropropene	ND		250	215	86	250	219	88	2	75-122/12
100-41-4	Ethylbenzene	ND		250	232	93	250	239	96	3	37-144/12
76-13-1	Freon 113	ND		250	252	101	250	266	106	5	61-142/14
591-78-6	2-Hexanone	ND		1000	961	96	1000	972	97	1	56-132/16
98-82-8	Isopropylbenzene	ND		250	236	94	250	245	98	4	71-126/13
79-20-9	Methyl Acetate	ND		250	265	106	250	252	101	5	51-139/18
108-87-2	Methylcyclohexane	ND		250	234	94	250	243	97	4	59-137/16
1634-04-4	Methyl Tert Butyl Ether	ND		250	241	96	250	248	99	3	66-124/12
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		1000	1010	101	1000	1020	102	1	65-135/14

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD51269-1MS	L346989.D	5	09/15/22	NH	n/a	n/a	VL10492
JD51269-1MSD	L346990.D	5	09/15/22	NH	n/a	n/a	VL10492
JD51269-1 [a]	L346982.D	5	09/15/22	NH	n/a	n/a	VL10492
JD51269-1	L346992.D	50	09/15/22	NH	n/a	n/a	VL10492

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD51412-6, JD51412-7, JD51412-8, JD51412-9

CAS No.	Compound	JD51269-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
75-09-2	Methylene chloride	ND		250	253	101	250	261	104	3	66-125/14
100-42-5	Styrene	ND		250	233	93	250	243	97	4	71-133/12
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	240	96	250	246	98	2	68-127/14
127-18-4	Tetrachloroethene	5.9		250	237	92	250	248	97	5	58-132/13
108-88-3	Toluene	ND		250	236	94	250	244	98	3	46-139/12
87-61-6	1,2,3-Trichlorobenzene	ND		250	261	104	250	277	111	6	57-136/17
120-82-1	1,2,4-Trichlorobenzene	ND		250	262	105	250	274	110	4	61-137/16
71-55-6	1,1,1-Trichloroethane	3.3	J	250	232	91	250	239	94	3	67-132/13
79-00-5	1,1,2-Trichloroethane	4.7	J	250	244	96	250	256	101	5	75-120/12
79-01-6	Trichloroethene	3570 [c]		250	2540	-52* [b]	250	2570	-40* [b]	1	56-136/12
75-69-4	Trichlorofluoromethane	ND		250	239	96	250	242	97	1	61-145/16
75-01-4	Vinyl chloride	ND		250	271	108	250	262	105	3	41-156/16
	m,p-Xylene	ND		500	455	91	500	463	93	2	32-151/12
95-47-6	o-Xylene	ND		250	233	93	250	244	98	5	50-139/12
1330-20-7	Xylene (total)	ND		750	688	92	750	707	94	3	38-147/12

CAS No.	Surrogate Recoveries	MS	MSD	JD51269-1	JD51269-1	Limits
1868-53-7	Dibromofluoromethane	106%	108%	103%	105%	80-120%
17060-07-0	1,2-Dichloroethane-D4	85%	85%	92%	94%	80-120%
2037-26-5	Toluene-D8	92%	92%	102%	100%	80-120%
460-00-4	4-Bromofluorobenzene	98%	100%	97%	94%	82-114%

(a) Dilution required due to high concentration of target compound.
(b) Outside control limits due to high level in sample relative to spike amount.
(c) Result is from Run #2.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD51852-6MS	2V92389.D	5	09/16/22	KM	n/a	n/a	V2V3755
JD51852-6MSD	2V92390.D	5	09/16/22	KM	n/a	n/a	V2V3755
JD51852-6 [a]	2V92393.D	5	09/16/22	KM	n/a	n/a	V2V3755

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD51412-10, JD51412-11, JD51412-12

CAS No.	Compound	JD51852-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		1000	940	94	1000	931	93	1	22-134/19
71-43-2	Benzene	ND		250	240	96	250	238	95	1	49-137/12
74-97-5	Bromochloromethane	ND		250	253	101	250	250	100	1	78-122/12
75-27-4	Bromodichloromethane	ND		250	243	97	250	243	97	0	76-121/12
75-25-2	Bromoform	ND		250	264	106	250	262	105	1	70-133/13
74-83-9	Bromomethane	ND		250	181	72	250	210	84	15	27-164/38
78-93-3	2-Butanone (MEK)	ND		1000	1040	104	1000	1020	102	2	52-137/17
75-15-0	Carbon disulfide	ND		250	196	78	250	197	79	1	54-136/16
56-23-5	Carbon tetrachloride	ND		250	247	99	250	251	100	2	70-132/13
108-90-7	Chlorobenzene	ND		250	240	96	250	238	95	1	68-123/12
75-00-3	Chloroethane	ND		250	251	100	250	258	103	3	48-152/17
67-66-3	Chloroform	ND		250	224	90	250	223	89	0	68-120/13
74-87-3	Chloromethane	ND		250	215	86	250	214	86	0	35-156/18
110-82-7	Cyclohexane	ND		250	221	88	250	222	89	0	53-146/14
96-12-8	1,2-Dibromo-3-chloropropane	ND		250	274	110	250	268	107	2	63-134/16
124-48-1	Dibromochloromethane	ND		250	253	101	250	250	100	1	75-122/12
106-93-4	1,2-Dibromoethane	ND		250	246	98	250	244	98	1	63-134/12
95-50-1	1,2-Dichlorobenzene	ND		250	240	96	250	237	95	1	74-119/12
541-73-1	1,3-Dichlorobenzene	ND		250	240	96	250	238	95	1	75-117/12
106-46-7	1,4-Dichlorobenzene	ND		250	233	93	250	233	93	0	72-117/12
75-71-8	Dichlorodifluoromethane	ND		250	254	102	250	256	102	1	34-163/16
75-34-3	1,1-Dichloroethane	ND		250	245	98	250	246	98	0	68-129/13
107-06-2	1,2-Dichloroethane	ND		250	234	94	250	233	93	0	66-120/13
75-35-4	1,1-Dichloroethene	276		250	485	84	250	488	85	1	59-133/15
156-59-2	cis-1,2-Dichloroethene	42.3		250	296	101	250	298	102	1	52-140/12
156-60-5	trans-1,2-Dichloroethene	ND		250	242	97	250	239	96	1	70-125/13
78-87-5	1,2-Dichloropropane	ND		250	254	102	250	251	100	1	73-124/12
10061-01-5	cis-1,3-Dichloropropene	ND		250	258	103	250	257	103	0	75-125/13
10061-02-6	trans-1,3-Dichloropropene	ND		250	257	103	250	256	102	0	75-122/12
100-41-4	Ethylbenzene	ND		250	245	98	250	243	97	1	37-144/12
76-13-1	Freon 113	ND		250	245	98	250	246	98	0	61-142/14
591-78-6	2-Hexanone	ND		1000	1030	103	1000	1010	101	2	56-132/16
98-82-8	Isopropylbenzene	ND		250	243	97	250	241	96	1	71-126/13
79-20-9	Methyl Acetate	ND		250	229	92	250	233	93	2	51-139/18
108-87-2	Methylcyclohexane	ND		250	248	99	250	248	99	0	59-137/16
1634-04-4	Methyl Tert Butyl Ether	ND		250	236	94	250	237	95	0	66-124/12

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD51852-6MS	2V92389.D	5	09/16/22	KM	n/a	n/a	V2V3755
JD51852-6MSD	2V92390.D	5	09/16/22	KM	n/a	n/a	V2V3755
JD51852-6 [a]	2V92393.D	5	09/16/22	KM	n/a	n/a	V2V3755

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD51412-10, JD51412-11, JD51412-12

CAS No.	Compound	JD51852-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		1000	1080	108	1000	1070	107	1	65-135/14
75-09-2	Methylene chloride	ND		250	217	87	250	217	87	0	66-125/14
100-42-5	Styrene	ND		250	245	98	250	242	97	1	71-133/12
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	241	96	250	240	96	0	68-127/14
127-18-4	Tetrachloroethene	185		250	427	97	250	427	97	0	58-132/13
108-88-3	Toluene	ND		250	235	94	250	234	94	0	46-139/12
87-61-6	1,2,3-Trichlorobenzene	ND		250	260	104	250	267	107	3	57-136/17
120-82-1	1,2,4-Trichlorobenzene	ND		250	260	104	250	259	104	0	61-137/16
71-55-6	1,1,1-Trichloroethane	423		250	619	78	250	625	81	1	67-132/13
79-00-5	1,1,2-Trichloroethane	ND		250	246	98	250	245	98	0	75-120/12
79-01-6	Trichloroethene	647		250	864	87	250	866	88	0	56-136/12
75-69-4	Trichlorofluoromethane	ND		250	243	97	250	258	103	6	61-145/16
75-01-4	Vinyl chloride	ND		250	249	100	250	243	97	2	41-156/16
	m,p-Xylene	ND		500	489	98	500	485	97	1	32-151/12
95-47-6	o-Xylene	ND		250	242	97	250	243	97	0	50-139/12
1330-20-7	Xylene (total)	ND		750	731	97	750	728	97	0	38-147/12

CAS No.	Surrogate Recoveries	MS	MSD	JD51852-6	Limits
1868-53-7	Dibromofluoromethane	99%	99%	99%	80-120%
17060-07-0	1,2-Dichloroethane-D4	100%	102%	96%	80-120%
2037-26-5	Toluene-D8	96%	96%	100%	80-120%
460-00-4	4-Bromofluorobenzene	97%	97%	93%	82-114%

(a) Preliminary data. Dilution required due to high concentration of target compound.

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD51533-1DUP	L346898.D	1	09/13/22	NH	n/a	n/a	VL10489
JD51533-1	L346892.D	1	09/13/22	NH	n/a	n/a	VL10489

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD51412-1, JD51412-2, JD51412-3, JD51412-4, JD51412-5

CAS No.	Compound	JD51533-1 ug/l	Q	DUP ug/l	Q	RPD	Limits
67-64-1	Acetone	ND		ND		nc	23
71-43-2	Benzene	ND		ND		nc	14
74-97-5	Bromochloromethane	ND		ND		nc	20
75-27-4	Bromodichloromethane	ND		ND		nc	10
75-25-2	Bromoform	ND		ND		nc	10
74-83-9	Bromomethane	ND		ND		nc	10
78-93-3	2-Butanone (MEK)	ND		ND		nc	10
75-15-0	Carbon disulfide	ND		ND		nc	10
56-23-5	Carbon tetrachloride	ND		ND		nc	10
108-90-7	Chlorobenzene	ND		ND		nc	10
75-00-3	Chloroethane	ND		ND		nc	10
67-66-3	Chloroform	ND		ND		nc	10
74-87-3	Chloromethane	ND		ND		nc	10
110-82-7	Cyclohexane	ND		ND		nc	14
96-12-8	1,2-Dibromo-3-chloropropane	ND		ND		nc	20
124-48-1	Dibromochloromethane	ND		ND		nc	10
106-93-4	1,2-Dibromoethane	ND		ND		nc	20
95-50-1	1,2-Dichlorobenzene	ND		ND		nc	10
541-73-1	1,3-Dichlorobenzene	ND		ND		nc	10
106-46-7	1,4-Dichlorobenzene	ND		ND		nc	10
75-71-8	Dichlorodifluoromethane	ND		ND		nc	20
75-34-3	1,1-Dichloroethane	ND		ND		nc	10
107-06-2	1,2-Dichloroethane	ND		ND		nc	10
75-35-4	1,1-Dichloroethene	ND		ND		nc	15
156-59-2	cis-1,2-Dichloroethene	ND		ND		nc	10
156-60-5	trans-1,2-Dichloroethene	ND		ND		nc	10
78-87-5	1,2-Dichloropropane	ND		ND		nc	20
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	20
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	20
100-41-4	Ethylbenzene	ND		ND		nc	20
76-13-1	Freon 113	ND		ND		nc	10
591-78-6	2-Hexanone	ND		ND		nc	10
98-82-8	Isopropylbenzene	ND		ND		nc	15
79-20-9	Methyl Acetate	ND		ND		nc	20
108-87-2	Methylcyclohexane	ND		ND		nc	20
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	12

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD51533-1DUP	L346898.D	1	09/13/22	NH	n/a	n/a	VL10489
JD51533-1	L346892.D	1	09/13/22	NH	n/a	n/a	VL10489

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD51412-1, JD51412-2, JD51412-3, JD51412-4, JD51412-5

CAS No.	Compound	JD51533-1 ug/l	Q	DUP ug/l	Q	RPD	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		ND		nc	10
75-09-2	Methylene chloride	ND		ND		nc	10
100-42-5	Styrene	ND		ND		nc	20
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	10
127-18-4	Tetrachloroethene	ND		ND		nc	10
108-88-3	Toluene	ND		ND		nc	16
87-61-6	1,2,3-Trichlorobenzene	ND		ND		nc	10
120-82-1	1,2,4-Trichlorobenzene	ND		ND		nc	10
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	10
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	10
79-01-6	Trichloroethene	ND		ND		nc	14
75-69-4	Trichlorofluoromethane	ND		ND		nc	10
75-01-4	Vinyl chloride	ND		ND		nc	10
	m,p-Xylene	ND		ND		nc	18
95-47-6	o-Xylene	ND		ND		nc	18
1330-20-7	Xylene (total)	ND		ND		nc	22

CAS No.	Surrogate Recoveries	DUP	JD51533-1	Limits
1868-53-7	Dibromofluoromethane	100%	105%	80-120%
17060-07-0	1,2-Dichloroethane-D4	94%	96%	80-120%
2037-26-5	Toluene-D8	100%	101%	80-120%
460-00-4	4-Bromofluorobenzene	92%	93%	82-114%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: V2A9511-BFB
Lab File ID: 2A218780.D
Instrument ID: GCMS2A
Injection Date: 07/31/22
Injection Time: 16:50

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	75120	25.4		Pass
75	30.0 - 60.0% of mass 95	147328	49.8		Pass
95	Base peak, 100% relative abundance	295616	100.0		Pass
96	5.0 - 9.0% of mass 95	20757	7.02		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	260096	88.0		Pass
175	5.0 - 9.0% of mass 174	19904	6.73	(7.65) [a]	Pass
176	95.0 - 101.0% of mass 174	248768	84.2	(95.6) [a]	Pass
177	5.0 - 9.0% of mass 176	16468	5.57	(6.62) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2A9511-IC9511	2A218781.D	07/31/22	17:23	00:33	Initial cal 0.2
V2A9511-IC9511	2A218782.D	07/31/22	17:51	01:01	Initial cal 0.5
V2A9511-IC9511	2A218783.D	07/31/22	18:19	01:29	Initial cal 1
V2A9511-IC9511	2A218784.D	07/31/22	18:48	01:58	Initial cal 2
V2A9511-IC9511	2A218785.D	07/31/22	19:16	02:26	Initial cal 4
V2A9511-IC9511	2A218786.D	07/31/22	19:44	02:54	Initial cal 8
V2A9511-IC9511	2A218787.D	07/31/22	20:13	03:23	Initial cal 20
V2A9511-ICC9511	2A218788.D	07/31/22	20:41	03:51	Initial cal 50
V2A9511-IC9511	2A218789.D	07/31/22	21:09	04:19	Initial cal 100
V2A9511-IC9511	2A218790.D	07/31/22	21:38	04:48	Initial cal 200
V2A9511-ICV9511	2A218793.D	07/31/22	23:03	06:13	Initial cal verification 50
V2A9511-ICV9511	2A218794.D	07/31/22	23:31	06:41	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: V2A9566-BFB
Lab File ID: 2A220126.D
Instrument ID: GCMS2A
Injection Date: 09/14/22
Injection Time: 10:10

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	93376	21.5		Pass
75	30.0 - 60.0% of mass 95	203371	46.9		Pass
95	Base peak, 100% relative abundance	433536	100.0		Pass
96	5.0 - 9.0% of mass 95	28360	6.54		Pass
173	Less than 2.0% of mass 174	1027	0.24	(0.27) [a]	Pass
174	50.0 - 120.0% of mass 95	378389	87.3		Pass
175	5.0 - 9.0% of mass 174	28885	6.66	(7.63) [a]	Pass
176	95.0 - 101.0% of mass 174	365141	84.2	(96.5) [a]	Pass
177	5.0 - 9.0% of mass 176	24928	5.75	(6.83) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2A9566-CC9511	2A220126.D	09/14/22	10:10	00:00	Continuing cal 20
V2A9566-BS	2A220128.D	09/14/22	11:09	00:59	Blank Spike
V2A9566-MB	2A220130.D	09/14/22	12:07	01:57	Method Blank
ZZZZZZ	2A220131.D	09/14/22	12:37	02:27	(unrelated sample)
JD51590-1	2A220132.D	09/14/22	13:06	02:56	(used for QC only; not part of job JD51412)
JD51590-1MS	2A220135.D	09/14/22	14:34	04:24	Matrix Spike
JD51590-1MSD	2A220136.D	09/14/22	15:03	04:53	Matrix Spike Duplicate
ZZZZZZ	2A220138.D	09/14/22	16:02	05:52	(unrelated sample)
ZZZZZZ	2A220139.D	09/14/22	16:31	06:21	(unrelated sample)
ZZZZZZ	2A220140.D	09/14/22	17:00	06:50	(unrelated sample)
JD51412-6	2A220141.D	09/14/22	17:30	07:20	Z_3_090922
JD51412-7	2A220142.D	09/14/22	17:59	07:49	Z_4_090922
JD51412-8	2A220143.D	09/14/22	18:28	08:18	Z_5_090922
JD51412-9	2A220144.D	09/14/22	18:57	08:47	Z_6_090922
ZZZZZZ	2A220145.D	09/14/22	19:27	09:17	(unrelated sample)
ZZZZZZ	2A220147.D	09/14/22	20:26	10:16	(unrelated sample)
ZZZZZZ	2A220148.D	09/14/22	20:55	10:45	(unrelated sample)
ZZZZZZ	2A220149.D	09/14/22	21:25	11:15	(unrelated sample)
ZZZZZZ	2A220150.D	09/14/22	21:54	11:44	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: V2V3747-BFB
Lab File ID: 2V92136.D
Instrument ID: GCMS2V
Injection Date: 09/11/22
Injection Time: 14:53

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	27517	20.1		Pass
75	30.0 - 60.0% of mass 95	71051	51.9		Pass
95	Base peak, 100% relative abundance	136912	100.0		Pass
96	5.0 - 9.0% of mass 95	9133	6.67		Pass
173	Less than 2.0% of mass 174	1406	1.03	(1.02) [a]	Pass
174	50.0 - 120.0% of mass 95	137259	100.3		Pass
175	5.0 - 9.0% of mass 174	10650	7.78	(7.76) [a]	Pass
176	95.0 - 101.0% of mass 174	136979	100.0	(99.8) [a]	Pass
177	5.0 - 9.0% of mass 176	9176	6.70	(6.70) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2V3747-IC3747	2V92138.D	09/11/22	15:36	00:43	Initial cal 0.2
V2V3747-IC3747	2V92140.D	09/11/22	16:05	01:12	Initial cal 0.5
V2V3747-IC3747	2V92142.D	09/11/22	16:35	01:42	Initial cal 1
V2V3747-IC3747	2V92144.D	09/11/22	17:04	02:11	Initial cal 2
V2V3747-IC3747	2V92146.D	09/11/22	17:33	02:40	Initial cal 4
V2V3747-IC3747	2V92148.D	09/11/22	18:02	03:09	Initial cal 8
V2V3747-IC3747	2V92150.D	09/11/22	18:32	03:39	Initial cal 20
V2V3747-ICC3747	2V92152.D	09/11/22	19:01	04:08	Initial cal 50
V2V3747-IC3747	2V92154.D	09/11/22	19:30	04:37	Initial cal 100
V2V3747-IC3747	2V92156.D	09/11/22	20:00	05:07	Initial cal 200
V2V3747-ICV3747	2V92162.D	09/11/22	21:28	06:35	Initial cal verification 50
V2V3747-ICV3747	2V92164.D	09/11/22	21:57	07:04	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: V2V3755-BFB
Lab File ID: 2V92376.D
Instrument ID: GCMS2V
Injection Date: 09/16/22
Injection Time: 09:33

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	26723	20.8		Pass
75	30.0 - 60.0% of mass 95	65979	51.3		Pass
95	Base peak, 100% relative abundance	128619	100.0		Pass
96	5.0 - 9.0% of mass 95	8786	6.83		Pass
173	Less than 2.0% of mass 174	1310	1.02	(1.01) [a]	Pass
174	50.0 - 120.0% of mass 95	129685	100.8		Pass
175	5.0 - 9.0% of mass 174	9758	7.59	(7.52) [a]	Pass
176	95.0 - 101.0% of mass 174	128827	100.2	(99.3) [a]	Pass
177	5.0 - 9.0% of mass 176	8435	6.56	(6.55) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2V3755-CC3747	2V92376.D	09/16/22	09:33	00:00	Continuing cal 20
V2V3755-BS	2V92378.D	09/16/22	10:26	00:53	Blank Spike
V2V3755-MB	2V92380.D	09/16/22	11:16	01:43	Method Blank
JD51412-10	2V92381.D	09/16/22	11:45	02:12	P_1_090922
JD51412-11	2V92382.D	09/16/22	12:08	02:35	P_2_090922
JD51412-12	2V92383.D	09/16/22	12:31	02:58	P_3_090922
ZZZZZZ	2V92384.D	09/16/22	12:55	03:22	(unrelated sample)
ZZZZZZ	2V92385.D	09/16/22	13:18	03:45	(unrelated sample)
ZZZZZZ	2V92386.D	09/16/22	13:41	04:08	(unrelated sample)
ZZZZZZ	2V92387.D	09/16/22	14:05	04:32	(unrelated sample)
ZZZZZZ	2V92388.D	09/16/22	14:28	04:55	(unrelated sample)
JD51852-6MS	2V92389.D	09/16/22	14:51	05:18	Matrix Spike
JD51852-6MSD	2V92390.D	09/16/22	15:15	05:42	Matrix Spike Duplicate
ZZZZZZ	2V92392.D	09/16/22	16:01	06:28	(unrelated sample)
JD51852-6	2V92393.D	09/16/22	16:25	06:52	(used for QC only; not part of job JD51412)
ZZZZZZ	2V92394.D	09/16/22	16:48	07:15	(unrelated sample)
ZZZZZZ	2V92395.D	09/16/22	17:12	07:39	(unrelated sample)
ZZZZZZ	2V92396.D	09/16/22	17:35	08:02	(unrelated sample)
ZZZZZZ	2V92397.D	09/16/22	17:58	08:25	(unrelated sample)
ZZZZZZ	2V92398.D	09/16/22	18:22	08:49	(unrelated sample)
ZZZZZZ	2V92399.D	09/16/22	18:45	09:12	(unrelated sample)
ZZZZZZ	2V92400.D	09/16/22	19:08	09:35	(unrelated sample)
ZZZZZZ	2V92401.D	09/16/22	19:32	09:59	(unrelated sample)
ZZZZZZ	2V92402.D	09/16/22	19:55	10:22	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample:	V2V3755-BFB	**Injection Date:**	09/16/22
Lab File ID:	2V92376.D	**Injection Time:**	09:33
Instrument ID:	GCMS2V		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	2V92403.D	09/16/22	20:19	10:46	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: VL10355-BFB
Lab File ID: L342967.D
Instrument ID: GCMSL
Injection Date: 06/15/22
Injection Time: 16:00

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	15125	15.4		Pass
75	30.0 - 60.0% of mass 95	48661	49.4		Pass
95	Base peak, 100% relative abundance	98445	100.0		Pass
96	5.0 - 9.0% of mass 95	6625	6.73		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	66648	67.7		Pass
175	5.0 - 9.0% of mass 174	5157	5.24	(7.74) [a]	Pass
176	95.0 - 101.0% of mass 174	64099	65.1	(96.2) [a]	Pass
177	5.0 - 9.0% of mass 176	3835	3.90	(5.98) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VL10355-IC10355	L342968.D	06/15/22	16:25	00:25	Initial cal 0.2
VL10355-IC10355	L342969.D	06/15/22	16:48	00:48	Initial cal 0.5
VL10355-IC10355	L342970.D	06/15/22	17:11	01:11	Initial cal 1
VL10355-IC10355	L342971.D	06/15/22	17:35	01:35	Initial cal 2
VL10355-IC10355	L342972.D	06/15/22	17:58	01:58	Initial cal 4
VL10355-IC10355	L342973.D	06/15/22	18:22	02:22	Initial cal 8
VL10355-IC10355	L342974.D	06/15/22	18:45	02:45	Initial cal 20
VL10355-ICC10355	L342975.D	06/15/22	19:09	03:09	Initial cal 50
VL10355-IC10355	L342976.D	06/15/22	19:32	03:32	Initial cal 100
VL10355-IC10355	L342977.D	06/15/22	19:56	03:56	Initial cal 200
VL10355-ICV10355	L342980.D	06/15/22	21:06	05:06	Initial cal verification 50
VL10355-ICV10355	L342981.D	06/15/22	21:29	05:29	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: VL10355-BFB2
Lab File ID: L342984.D
Instrument ID: GCMSL
Injection Date: 06/16/22
Injection Time: 09:43

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	14743	15.8		Pass
75	30.0 - 60.0% of mass 95	47061	50.6		Pass
95	Base peak, 100% relative abundance	93093	100.0		Pass
96	5.0 - 9.0% of mass 95	6458	6.94		Pass
173	Less than 2.0% of mass 174	176	0.19	(0.27) [a]	Pass
174	50.0 - 120.0% of mass 95	64179	68.9		Pass
175	5.0 - 9.0% of mass 174	4737	5.09	(7.38) [a]	Pass
176	95.0 - 101.0% of mass 174	62803	67.5	(97.9) [a]	Pass
177	5.0 - 9.0% of mass 176	4165	4.47	(6.63) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VL10355-ICV10355	L342985.D	06/16/22	10:06	00:23	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample:	VL10365-BFB	**Injection Date:**	06/22/22
Lab File ID:	L343246.D	**Injection Time:**	22:08
Instrument ID:	GCMSL		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	11711	17.0		Pass
75	30.0 - 60.0% of mass 95	35451	51.4		Pass
95	Base peak, 100% relative abundance	68926	100.0		Pass
96	5.0 - 9.0% of mass 95	4919	7.14		Pass
173	Less than 2.0% of mass 174	641	0.93	(1.19) [a]	Pass
174	50.0 - 120.0% of mass 95	53781	78.0		Pass
175	5.0 - 9.0% of mass 174	4179	6.06	(7.77) [a]	Pass
176	95.0 - 101.0% of mass 174	52189	75.7	(97.0) [a]	Pass
177	5.0 - 9.0% of mass 176	3357	4.87	(6.43) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VL10365-IC10365	L343247.D	06/22/22	22:31	00:23	Initial cal 1
VL10365-IC10365	L343248.D	06/22/22	22:55	00:47	Initial cal 2
VL10365-IC10365	L343249.D	06/22/22	23:18	01:10	Initial cal 4
VL10365-IC10365	L343250.D	06/22/22	23:42	01:34	Initial cal 8
VL10365-IC10365	L343251.D	06/23/22	00:05	01:57	Initial cal 20
VL10365-ICC10365	L343252.D	06/23/22	00:29	02:21	Initial cal 50
VL10365-IC10365	L343253.D	06/23/22	00:52	02:44	Initial cal 100
VL10365-IC10365	L343254.D	06/23/22	01:16	03:08	Initial cal 200
VL10365-ICV10365	L343257.D	06/23/22	02:26	04:18	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample:	VL10365-BFB2	**Injection Date:**	06/23/22
Lab File ID:	L343259.D	**Injection Time:**	09:37
Instrument ID:	GCMSL		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	12627	17.4		Pass
75	30.0 - 60.0% of mass 95	36720	50.6		Pass
95	Base peak, 100% relative abundance	72518	100.0		Pass
96	5.0 - 9.0% of mass 95	4917	6.78		Pass
173	Less than 2.0% of mass 174	108	0.15	(0.19) [a]	Pass
174	50.0 - 120.0% of mass 95	55707	76.8		Pass
175	5.0 - 9.0% of mass 174	4273	5.89	(7.67) [a]	Pass
176	95.0 - 101.0% of mass 174	53046	73.1	(95.2) [a]	Pass
177	5.0 - 9.0% of mass 176	3223	4.44	(6.08) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VL10365-ICV10365	L343260.D	06/23/22	10:00	00:23	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: VL10489-BFB
Lab File ID: L346880.D
Instrument ID: GCMSL
Injection Date: 09/13/22
Injection Time: 09:03

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	19293	15.2		Pass
75	30.0 - 60.0% of mass 95	58707	46.1		Pass
95	Base peak, 100% relative abundance	127219	100.0		Pass
96	5.0 - 9.0% of mass 95	8708	6.84		Pass
173	Less than 2.0% of mass 174	755	0.59	(0.80) [a]	Pass
174	50.0 - 120.0% of mass 95	94528	74.3		Pass
175	5.0 - 9.0% of mass 174	6430	5.05	(6.80) [a]	Pass
176	95.0 - 101.0% of mass 174	90787	71.4	(96.0) [a]	Pass
177	5.0 - 9.0% of mass 176	5821	4.58	(6.41) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VL10489-CC10355	L346881.D	09/13/22	09:30	00:27	Continuing cal 20
VL10489-BS	L346883.D	09/13/22	10:27	01:24	Blank Spike
VL10489-MB	L346885.D	09/13/22	11:13	02:10	Method Blank
JD51412-1	L346886.D	09/13/22	11:46	02:43	C_1_090922
JD51412-2	L346887.D	09/13/22	12:13	03:10	C_2_090922
JD51551-4	L346891.D	09/13/22	14:21	05:18	(used for QC only; not part of job JD51412)
JD51533-1	L346892.D	09/13/22	14:44	05:41	(used for QC only; not part of job JD51412)
JD51463-3	L346893.D	09/13/22	15:07	06:04	(used for QC only; not part of job JD51412)
ZZZZZZ	L346894.D	09/13/22	15:31	06:28	(unrelated sample)
ZZZZZZ	L346895.D	09/13/22	15:54	06:51	(unrelated sample)
JD51533-1DUP	L346898.D	09/13/22	17:04	08:01	Duplicate
ZZZZZZ	L346899.D	09/13/22	17:27	08:24	(unrelated sample)
ZZZZZZ	L346900.D	09/13/22	17:50	08:47	(unrelated sample)
ZZZZZZ	L346901.D	09/13/22	18:14	09:11	(unrelated sample)
ZZZZZZ	L346902.D	09/13/22	18:37	09:34	(unrelated sample)
ZZZZZZ	L346903.D	09/13/22	19:00	09:57	(unrelated sample)
ZZZZZZ	L346904.D	09/13/22	19:23	10:20	(unrelated sample)
JD51412-4	L346905.D	09/13/22	19:47	10:44	Z_1_090922
JD51412-5	L346906.D	09/13/22	20:10	11:07	Z_2_090922
JD51412-3	L346907.D	09/13/22	20:33	11:30	C_3_090922

Instrument Performance Check (BFB)

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: VL10491-BFB
Lab File ID: L346940.D
Instrument ID: GCMSL
Injection Date: 09/14/22
Injection Time: 09:41

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	18131	15.0		Pass
75	30.0 - 60.0% of mass 95	52408	43.4		Pass
95	Base peak, 100% relative abundance	120688	100.0		Pass
96	5.0 - 9.0% of mass 95	8744	7.25		Pass
173	Less than 2.0% of mass 174	396	0.33	(0.45) [a]	Pass
174	50.0 - 120.0% of mass 95	88832	73.6		Pass
175	5.0 - 9.0% of mass 174	6889	5.71	(7.76) [a]	Pass
176	95.0 - 101.0% of mass 174	85685	71.0	(96.5) [a]	Pass
177	5.0 - 9.0% of mass 176	5265	4.36	(6.14) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VL10491-CC10355	L346941.D	09/14/22	10:11	00:30	Continuing cal 20
VL10489-BS2	L346943.D	09/14/22	11:00	01:19	Blank Spike
VL10491-BS	L346943.D	09/14/22	11:00	01:19	Blank Spike
VL10489-MB2	L346945.D	09/14/22	11:47	02:06	Method Blank
VL10491-MB	L346945.D	09/14/22	11:47	02:06	Method Blank
ZZZZZZ	L346946.D	09/14/22	12:18	02:37	(unrelated sample)
ZZZZZZ	L346947.D	09/14/22	12:42	03:01	(unrelated sample)
ZZZZZZ	L346948.D	09/14/22	13:05	03:24	(unrelated sample)
JD51771-11	L346949.D	09/14/22	13:28	03:47	(used for QC only; not part of job JD51412)
ZZZZZZ	L346950.D	09/14/22	13:51	04:10	(unrelated sample)
ZZZZZZ	L346951.D	09/14/22	14:17	04:36	(unrelated sample)
ZZZZZZ	L346952.D	09/14/22	14:41	05:00	(unrelated sample)
ZZZZZZ	L346953.D	09/14/22	15:04	05:23	(unrelated sample)
ZZZZZZ	L346954.D	09/14/22	15:28	05:47	(unrelated sample)
JD51771-11MS	L346955.D	09/14/22	15:51	06:10	Matrix Spike
JD51771-11MSD	L346956.D	09/14/22	16:14	06:33	Matrix Spike Duplicate
ZZZZZZ	L346959.D	09/14/22	17:25	07:44	(unrelated sample)
ZZZZZZ	L346960.D	09/14/22	17:48	08:07	(unrelated sample)
ZZZZZZ	L346961.D	09/14/22	18:12	08:31	(unrelated sample)
ZZZZZZ	L346962.D	09/14/22	18:35	08:54	(unrelated sample)
ZZZZZZ	L346963.D	09/14/22	18:59	09:18	(unrelated sample)
ZZZZZZ	L346964.D	09/14/22	19:22	09:41	(unrelated sample)
ZZZZZZ	L346965.D	09/14/22	19:45	10:04	(unrelated sample)
ZZZZZZ	L346966.D	09/14/22	20:09	10:28	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample:	VL10491-BFB	**Injection Date:**	09/14/22
Lab File ID:	L346940.D	**Injection Time:**	09:41
Instrument ID:	GCMSL		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	L346967.D	09/14/22	20:32	10:51	(unrelated sample)
JD51463-3MS	L346968.D	09/14/22	20:56	11:15	Matrix Spike

Instrument Performance Check (BFB)

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: VL10492-BFB
Lab File ID: L346973.D
Instrument ID: GCMSL
Injection Date: 09/15/22
Injection Time: 10:22

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	17685	15.9		Pass
75	30.0 - 60.0% of mass 95	52184	47.0		Pass
95	Base peak, 100% relative abundance	110965	100.0		Pass
96	5.0 - 9.0% of mass 95	7295	6.57		Pass
173	Less than 2.0% of mass 174	126	0.11	(0.16) [a]	Pass
174	50.0 - 120.0% of mass 95	80605	72.6		Pass
175	5.0 - 9.0% of mass 174	6302	5.68	(7.82) [a]	Pass
176	95.0 - 101.0% of mass 174	79739	71.9	(98.9) [a]	Pass
177	5.0 - 9.0% of mass 176	5194	4.68	(6.51) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VL10492-CC10355	L346974.D	09/15/22	10:48	00:26	Continuing cal 20
VL10492-CC10365	L346977.D	09/15/22	12:12	01:50	Continuing cal 20
VL10492-BS	L346978.D	09/15/22	12:46	02:24	Blank Spike
VL10492-MB	L346980.D	09/15/22	13:32	03:10	Method Blank
ZZZZZZ	L346981.D	09/15/22	14:05	03:43	(unrelated sample)
JD51269-1	L346982.D	09/15/22	14:28	04:06	(used for QC only; not part of job JD51412)
JD51412-6	L346983.D	09/15/22	14:51	04:29	Z_3_090922
JD51412-7	L346984.D	09/15/22	15:14	04:52	Z_4_090922
JD51412-8	L346985.D	09/15/22	15:38	05:16	Z_5_090922
JD51412-6	L346986.D	09/15/22	16:01	05:39	Z_3_090922
JD51412-7	L346987.D	09/15/22	16:24	06:02	Z_4_090922
JD51412-8	L346988.D	09/15/22	16:47	06:25	Z_5_090922
JD51269-1MS	L346989.D	09/15/22	17:11	06:49	Matrix Spike
JD51269-1MSD	L346990.D	09/15/22	17:34	07:12	Matrix Spike Duplicate
JD51269-1	L346992.D	09/15/22	18:20	07:58	(used for QC only; not part of job JD51412)
ZZZZZZ	L346993.D	09/15/22	18:44	08:22	(unrelated sample)
ZZZZZZ	L346994.D	09/15/22	19:07	08:45	(unrelated sample)
ZZZZZZ	L346995.D	09/15/22	19:30	09:08	(unrelated sample)
ZZZZZZ	L346996.D	09/15/22	19:53	09:31	(unrelated sample)
JD51412-9	L346997.D	09/15/22	20:06	09:44	Z_6_090922
ZZZZZZ	L346998.D	09/15/22	20:29	10:07	(unrelated sample)
ZZZZZZ	L346999.D	09/15/22	20:52	10:30	(unrelated sample)

Surrogate Recovery Summary

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Method: SW846 8260D **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JD51412-1	L346886.D	104	93	100	88
JD51412-2	L346887.D	99	88	99	88
JD51412-3	L346907.D	103	91	100	87
JD51412-4	L346905.D	104	91	100	95
JD51412-5	L346906.D	103	90	100	93
JD51412-6	L346983.D	108	95	102	97
JD51412-6	L346986.D	106	92	100	96
JD51412-6	2A220141.D	115	83	90	103
JD51412-7	L346984.D	106	92	103	96
JD51412-7	L346987.D	108	88	101	99
JD51412-7	2A220142.D	112	82	90	102
JD51412-8	L346985.D	105	93	102	94
JD51412-8	L346988.D	108	91	99	100
JD51412-8	2A220143.D	114	83	90	101
JD51412-9	L346997.D	105	89	101	97
JD51412-9	2A220144.D	116	82	91	101
JD51412-10	2V92381.D	96	92	100	94
JD51412-11	2V92382.D	98	94	99	95
JD51412-12	2V92383.D	96	94	101	97
JD51269-1MS	L346989.D	106	85	92	98
JD51269-1MSD	L346990.D	108	85	92	100
JD51463-3MS	L346968.D	101	83	90	92
JD51533-1DUP	L346898.D	100	94	100	92
JD51590-1MS	2A220135.D	115	81	92	103
JD51590-1MSD	2A220136.D	114	81	93	102
JD51852-6MS	2V92389.D	99	100	96	97
JD51852-6MSD	2V92390.D	99	102	96	97
V2A9566-BS	2A220128.D	115	82	93	102
V2A9566-MB	2A220130.D	113	83	91	103
V2V3755-BS	2V92378.D	98	99	98	95
V2V3755-MB	2V92380.D	96	96	101	97
VL10489-BS	L346883.D	100	81	90	95
VL10489-MB	L346885.D	98	96	100	92
VL10492-BS	L346978.D	105	87	90	95
VL10492-MB	L346980.D	106	92	104	96
VL10489-MB2	L346945.D	100	90	100	92

Surrogate Compounds	Recovery Limits

Surrogate Recovery Summary

Job Number: JD51412
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Method: SW846 8260D **Matrix:** AQ

Samples and QC shown here apply to the above method

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	80-120%
S2 = 1,2-Dichloroethane-D4	80-120%
S3 = Toluene-D8	80-120%
S4 = 4-Bromofluorobenzene	82-114%

The results set forth herein are provided by SGS North America Inc.

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Automated Report



Technical Report for

Langan Engineering & Environmental

1487 First Avenue, NY, NY

100963701

SGS Job Number: JD52973

Sampling Date: 09/30/22

Report to:

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Total number of pages in report: 73

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

David Chastain
General Manager

Client Service contact: Beth Stopen 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA(68-00408), RI, SC, TX, UT, VA, WV

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SGS North America Inc.

Sample Summary

Langan Engineering & Environmental

Job No: JD52973

1487 First Avenue, NY, NY
Project No: 100963701

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JD52973-1	09/30/22	14:00	JC/XY	09/30/22	AQ	Ground Water	P-1_09302022
JD52973-2	09/30/22	14:05	JC/XY	09/30/22	AQ	Ground Water	P-2_09302022
JD52973-3	09/30/22	14:10	JC/XY	09/30/22	AQ	Ground Water	P-3_09302022
JD52973-4	09/30/22	14:15	JC/XY	09/30/22	AQ	Ground Water	C-1_09302022
JD52973-5	09/30/22	14:20	JC/XY	09/30/22	AQ	Ground Water	C-2_09302022
JD52973-6	09/30/22	14:25	JC/XY	09/30/22	AQ	Ground Water	C-3_09302022
JD52973-7	09/30/22	14:30	JC/XY	09/30/22	AQ	Ground Water	Z-1_09302022
JD52973-8	09/30/22	14:35	JC/XY	09/30/22	AQ	Ground Water	Z-2_09302022
JD52973-9	09/30/22	14:40	JC/XY	09/30/22	AQ	Ground Water	Z-3_09302022
JD52973-10	09/30/22	14:45	JC/XY	09/30/22	AQ	Ground Water	Z-4_09302022
JD52973-11	09/30/22	14:50	JC/XY	09/30/22	AQ	Ground Water	Z-5_09302022
JD52973-12	09/30/22	14:55	JC/XY	09/30/22	AQ	Ground Water	Z-6_09302022

This report contains results reported as ND = Not detected. The following applies:
Organics ND = Not detected above the MDL

Sample Summary
(continued)

Langan Engineering & Environmental

Job No: JD52973

1487 First Avenue, NY, NY
Project No: 100963701

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JD52973-13	09/30/22	15:00	JC/XY	09/30/22	AQ	Ground Water	GWONLY_09302022

Summary of Hits

Job Number: JD52973
Account: Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY
Collected: 09/30/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD52973-1	**P-1_09302022**					
Acetone [a]		308	10	3.1	ug/l	SW846 8260D
Benzene [a]		1.1	0.50	0.43	ug/l	SW846 8260D
Carbon disulfide [a]		2.8	2.0	0.46	ug/l	SW846 8260D
Chloroform [a]		6.8	1.0	0.50	ug/l	SW846 8260D
Cyclohexane [a]		28.6	5.0	0.78	ug/l	SW846 8260D
cis-1,2-Dichloroethene [a]		75.0	1.0	0.51	ug/l	SW846 8260D
2-Hexanone [a]		6.6	5.0	2.0	ug/l	SW846 8260D
Methylene chloride [a]		4.6	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [a]		936	20	11	ug/l	SW846 8260D
Toluene [a]		0.82 J	1.0	0.49	ug/l	SW846 8260D
Trichloroethene [a]		8.1	1.0	0.53	ug/l	SW846 8260D
m,p-Xylene [a]		2.1	1.0	0.78	ug/l	SW846 8260D
o-Xylene [a]		0.72 J	1.0	0.59	ug/l	SW846 8260D
Xylene (total) [a]		2.8	1.0	0.59	ug/l	SW846 8260D
JD52973-2	**P-2_09302022**					
Acetone [b]		220	10	3.1	ug/l	SW846 8260D
Benzene [b]		0.90	0.50	0.43	ug/l	SW846 8260D
2-Butanone (MEK) [b]		16.6	10	2.7	ug/l	SW846 8260D
Carbon disulfide [b]		2.8	2.0	0.46	ug/l	SW846 8260D
Chloroform [b]		7.4	1.0	0.50	ug/l	SW846 8260D
Cyclohexane [b]		13.1	5.0	0.78	ug/l	SW846 8260D
cis-1,2-Dichloroethene [b]		84.2	1.0	0.51	ug/l	SW846 8260D
2-Hexanone [b]		3.3 J	5.0	2.0	ug/l	SW846 8260D
Methylene chloride [b]		5.2	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [b]		705	5.0	2.8	ug/l	SW846 8260D
Toluene [b]		0.72 J	1.0	0.49	ug/l	SW846 8260D
Trichloroethene [b]		9.0	1.0	0.53	ug/l	SW846 8260D
Vinyl chloride [b]		0.56 J	1.0	0.52	ug/l	SW846 8260D
m,p-Xylene [b]		1.8	1.0	0.78	ug/l	SW846 8260D
Xylene (total) [b]		1.8	1.0	0.59	ug/l	SW846 8260D
JD52973-3	**P-3_09302022**					
Acetone [b]		98.6	10	3.1	ug/l	SW846 8260D
Benzene [b]		0.87	0.50	0.43	ug/l	SW846 8260D
Carbon disulfide [b]		2.3	2.0	0.46	ug/l	SW846 8260D
Chloroform [b]		7.0	1.0	0.50	ug/l	SW846 8260D
Cyclohexane [b]		7.5	5.0	0.78	ug/l	SW846 8260D
cis-1,2-Dichloroethene [b]		81.7	1.0	0.51	ug/l	SW846 8260D
2-Hexanone [b]		4.0 J	5.0	2.0	ug/l	SW846 8260D
Methylene chloride [b]		4.6	2.0	1.0	ug/l	SW846 8260D

Summary of Hits

Job Number: JD52973
Account: Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY
Collected: 09/30/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Tetrachloroethene [b]		633	4.0	2.2	ug/l	SW846 8260D
Toluene [b]		0.76 J	1.0	0.49	ug/l	SW846 8260D
Trichloroethene [b]		9.2	1.0	0.53	ug/l	SW846 8260D
m,p-Xylene [b]		1.8	1.0	0.78	ug/l	SW846 8260D
o-Xylene [b]		0.69 J	1.0	0.59	ug/l	SW846 8260D
Xylene (total) [b]		2.5	1.0	0.59	ug/l	SW846 8260D
JD52973-4	**C-1_09302022**					
Acetone [c]		311	10	3.1	ug/l	SW846 8260D
Chloroform [c]		7.4	1.0	0.50	ug/l	SW846 8260D
Chloromethane [c]		0.79 J	1.0	0.76	ug/l	SW846 8260D
Cyclohexane [c]		10.4	5.0	0.78	ug/l	SW846 8260D
cis-1,2-Dichloroethene [c]		78.5	1.0	0.51	ug/l	SW846 8260D
Ethylbenzene [c]		0.96 J	1.0	0.60	ug/l	SW846 8260D
Methylene chloride [c]		6.8	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [c]		1550	10	5.6	ug/l	SW846 8260D
Toluene [c]		1.1	1.0	0.49	ug/l	SW846 8260D
Trichloroethene [c]		8.8	1.0	0.53	ug/l	SW846 8260D
m,p-Xylene [c]		4.3	1.0	0.78	ug/l	SW846 8260D
o-Xylene [c]		1.5	1.0	0.59	ug/l	SW846 8260D
Xylene (total) [c]		5.8	1.0	0.59	ug/l	SW846 8260D
JD52973-5	**C-2_09302022**					
Acetone [c]		319	10	3.1	ug/l	SW846 8260D
Benzene [c]		0.45 J	0.50	0.43	ug/l	SW846 8260D
Chloroform [c]		6.4	1.0	0.50	ug/l	SW846 8260D
cis-1,2-Dichloroethene [c]		69.6	1.0	0.51	ug/l	SW846 8260D
Ethylbenzene [c]		0.93 J	1.0	0.60	ug/l	SW846 8260D
Methylene chloride [c]		5.8	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [d]		1660	10	5.6	ug/l	SW846 8260D
Toluene [c]		1.1	1.0	0.49	ug/l	SW846 8260D
Trichloroethene [c]		6.8	1.0	0.53	ug/l	SW846 8260D
m,p-Xylene [c]		5.4	1.0	0.78	ug/l	SW846 8260D
o-Xylene [c]		1.8	1.0	0.59	ug/l	SW846 8260D
Xylene (total) [c]		7.2	1.0	0.59	ug/l	SW846 8260D
JD52973-6	**C-3_09302022**					
Acetone [c]		343	10	3.1	ug/l	SW846 8260D
Benzene [c]		0.93	0.50	0.43	ug/l	SW846 8260D
2-Butanone (MEK) [c]		3.6 J	10	2.7	ug/l	SW846 8260D
Chloroform [c]		8.9	1.0	0.50	ug/l	SW846 8260D
cis-1,2-Dichloroethene [c]		101	1.0	0.51	ug/l	SW846 8260D

Summary of Hits

Job Number: JD52973
Account: Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY
Collected: 09/30/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Ethylbenzene [c]		0.93 J	1.0	0.60	ug/l	SW846 8260D
Methylene chloride [c]		7.9	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [c]		2630	25	14	ug/l	SW846 8260D
Toluene [c]		2.6	1.0	0.49	ug/l	SW846 8260D
Trichloroethene [c]		11.6	1.0	0.53	ug/l	SW846 8260D
m,p-Xylene [c]		12.3	1.0	0.78	ug/l	SW846 8260D
o-Xylene [c]		3.2	1.0	0.59	ug/l	SW846 8260D
Xylene (total) [c]		15.5	1.0	0.59	ug/l	SW846 8260D
JD52973-7	**Z-1_09302022**					
Acetone [c]		198	10	3.1	ug/l	SW846 8260D
Benzene [c]		0.61	0.50	0.43	ug/l	SW846 8260D
2-Butanone (MEK) [c]		604	10	2.7	ug/l	SW846 8260D
Carbon disulfide [c]		1.0 J	2.0	0.46	ug/l	SW846 8260D
Chloroform [c]		1.6	1.0	0.50	ug/l	SW846 8260D
Cyclohexane [c]		157	5.0	0.78	ug/l	SW846 8260D
cis-1,2-Dichloroethene [c]		19.1	1.0	0.51	ug/l	SW846 8260D
Ethylbenzene [c]		1.2	1.0	0.60	ug/l	SW846 8260D
2-Hexanone [c]		11.1	5.0	2.0	ug/l	SW846 8260D
Methylene chloride [c]		5.0	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [c]		884	20	11	ug/l	SW846 8260D
Toluene [c]		1.6	1.0	0.49	ug/l	SW846 8260D
Trichloroethene [c]		2.1	1.0	0.53	ug/l	SW846 8260D
Vinyl chloride [c]		12.7	1.0	0.52	ug/l	SW846 8260D
m,p-Xylene [c]		4.5	1.0	0.78	ug/l	SW846 8260D
o-Xylene [c]		1.5	1.0	0.59	ug/l	SW846 8260D
Xylene (total) [c]		6.0	1.0	0.59	ug/l	SW846 8260D
JD52973-8	**Z-2_09302022**					
Acetone [c]		186	10	3.1	ug/l	SW846 8260D
Benzene [c]		0.57	0.50	0.43	ug/l	SW846 8260D
2-Butanone (MEK) [c]		618	10	2.7	ug/l	SW846 8260D
Carbon disulfide [c]		1.0 J	2.0	0.46	ug/l	SW846 8260D
Chloroform [c]		1.3	1.0	0.50	ug/l	SW846 8260D
Cyclohexane [c]		106	5.0	0.78	ug/l	SW846 8260D
cis-1,2-Dichloroethene [c]		16.5	1.0	0.51	ug/l	SW846 8260D
Ethylbenzene [c]		1.4	1.0	0.60	ug/l	SW846 8260D
2-Hexanone [c]		9.4	5.0	2.0	ug/l	SW846 8260D
Methylene chloride [c]		6.2	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [c]		1710	20	11	ug/l	SW846 8260D
Toluene [c]		1.5	1.0	0.49	ug/l	SW846 8260D
Trichloroethene [c]		1.9	1.0	0.53	ug/l	SW846 8260D
Vinyl chloride [c]		13.2	1.0	0.52	ug/l	SW846 8260D

Summary of Hits

Job Number: JD52973
Account: Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY
Collected: 09/30/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
m,p-Xylene [c]		4.3	1.0	0.78	ug/l	SW846 8260D
o-Xylene [c]		1.4	1.0	0.59	ug/l	SW846 8260D
Xylene (total) [c]		5.7	1.0	0.59	ug/l	SW846 8260D
JD52973-9	**Z-3_09302022**					
Acetone [c]		201	10	3.1	ug/l	SW846 8260D
2-Butanone (MEK) [c]		20.9	10	2.7	ug/l	SW846 8260D
Carbon disulfide [c]		2.7	2.0	0.46	ug/l	SW846 8260D
Chloroform [c]		1.7	1.0	0.50	ug/l	SW846 8260D
Cyclohexane [c]		8.5	5.0	0.78	ug/l	SW846 8260D
cis-1,2-Dichloroethene [c]		24.3	1.0	0.51	ug/l	SW846 8260D
Ethylbenzene [c]		0.76 J	1.0	0.60	ug/l	SW846 8260D
2-Hexanone [c]		2.1 J	5.0	2.0	ug/l	SW846 8260D
Methylene chloride [c]		5.8	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [c]		622	20	11	ug/l	SW846 8260D
Trichloroethene [c]		3.1	1.0	0.53	ug/l	SW846 8260D
Vinyl chloride [c]		1.5	1.0	0.52	ug/l	SW846 8260D
m,p-Xylene [c]		1.4	1.0	0.78	ug/l	SW846 8260D
Xylene (total) [c]		1.9	1.0	0.59	ug/l	SW846 8260D
JD52973-10	**Z-4_09302022**					
Acetone [c]		238	10	3.1	ug/l	SW846 8260D
Benzene [c]		0.56	0.50	0.43	ug/l	SW846 8260D
2-Butanone (MEK) [c]		499	10	2.7	ug/l	SW846 8260D
Carbon disulfide [c]		1.4 J	2.0	0.46	ug/l	SW846 8260D
Chloroform [c]		1.8	1.0	0.50	ug/l	SW846 8260D
Cyclohexane [c]		2.8 J	5.0	0.78	ug/l	SW846 8260D
cis-1,2-Dichloroethene [c]		27.1	1.0	0.51	ug/l	SW846 8260D
2-Hexanone [c]		3.0 J	5.0	2.0	ug/l	SW846 8260D
Methylene chloride [c]		5.8	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [c]		959	20	11	ug/l	SW846 8260D
Toluene [c]		1.1	1.0	0.49	ug/l	SW846 8260D
Trichloroethene [c]		3.9	1.0	0.53	ug/l	SW846 8260D
Vinyl chloride [c]		29.1	1.0	0.52	ug/l	SW846 8260D
m,p-Xylene [c]		2.0	1.0	0.78	ug/l	SW846 8260D
Xylene (total) [c]		2.6	1.0	0.59	ug/l	SW846 8260D
JD52973-11	**Z-5_09302022**					
Acetone [c]		187	10	3.1	ug/l	SW846 8260D
Benzene [c]		0.53	0.50	0.43	ug/l	SW846 8260D
2-Butanone (MEK) [e]		925	50	14	ug/l	SW846 8260D
Carbon disulfide [c]		0.94 J	2.0	0.46	ug/l	SW846 8260D

Summary of Hits

Job Number: JD52973
Account: Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY
Collected: 09/30/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Chloroform [c]		1.3	1.0	0.50	ug/l	SW846 8260D
Cyclohexane [c]		3.4 J	5.0	0.78	ug/l	SW846 8260D
cis-1,2-Dichloroethene [c]		19.5	1.0	0.51	ug/l	SW846 8260D
Ethylbenzene [c]		0.68 J	1.0	0.60	ug/l	SW846 8260D
Methylene chloride [c]		5.9	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [e]		862	5.0	2.8	ug/l	SW846 8260D
Toluene [c]		1.0	1.0	0.49	ug/l	SW846 8260D
Trichloroethene [c]		4.5	1.0	0.53	ug/l	SW846 8260D
Vinyl chloride [c]		35.4	1.0	0.52	ug/l	SW846 8260D
m,p-Xylene [c]		2.0	1.0	0.78	ug/l	SW846 8260D
o-Xylene [c]		0.69 J	1.0	0.59	ug/l	SW846 8260D
Xylene (total) [c]		2.7	1.0	0.59	ug/l	SW846 8260D
JD52973-12	**Z-6_09302022**					
Acetone [e]		200	40	12	ug/l	SW846 8260D
2-Butanone (MEK) [e]		709	40	11	ug/l	SW846 8260D
Carbon disulfide [e]		3.0 J	8.0	1.8	ug/l	SW846 8260D
cis-1,2-Dichloroethene [e]		24.8	4.0	2.0	ug/l	SW846 8260D
Methylene chloride [e]		6.0 J	8.0	4.0	ug/l	SW846 8260D
Tetrachloroethene [e]		790	4.0	2.2	ug/l	SW846 8260D
Trichloroethene [e]		4.9	4.0	2.1	ug/l	SW846 8260D
Vinyl chloride [e]		17.2	4.0	2.1	ug/l	SW846 8260D
m,p-Xylene [e]		3.1 J	4.0	3.1	ug/l	SW846 8260D
Xylene (total) [e]		3.1 J	4.0	2.4	ug/l	SW846 8260D
JD52973-13	**GWONLY_09302022**					
Acetone [f]		717	100	31	ug/l	SW846 8260D
Chloroform [f]		8.8 J	10	5.0	ug/l	SW846 8260D
cis-1,2-Dichloroethene [f]		83.8	10	5.1	ug/l	SW846 8260D
Tetrachloroethene [f]		1510	10	5.6	ug/l	SW846 8260D
Trichloroethene [f]		9.6 J	10	5.3	ug/l	SW846 8260D

(a) (pH = 2)Sample pH did not satisfy field preservation criteria.
(b) (pH = 3)Sample pH did not satisfy field preservation criteria.
(c) (pH = 4)Sample pH did not satisfy field preservation criteria.
(d) (pH = 4)Sample pH did not satisfy field preservation criteria. Dilution required due to high concentrations of target and non-target compounds.
(e) (pH = 4)Sample pH did not satisfy field preservation criteria. Dilution required due to high concentration of target compound.
(f) Dilution required due to high concentration of target compound.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	P-1_09302022		
Lab Sample ID:	JD52973-1	**Date Sampled:**	09/30/22
Matrix:	AQ - Ground Water	**Date Received:**	09/30/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A226844.D	1	10/11/22 12:02	NH	n/a	n/a	V1A9715
Run #2 [a]	2V93581.D	20	10/12/22 14:11	KM	n/a	n/a	V2V3798

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	308	10	3.1	ug/l	
71-43-2	Benzene	1.1	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane [b]	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.7	ug/l	
75-15-0	Carbon disulfide	2.8	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	6.8	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	28.6	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	75.0	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	6.6	5.0	2.0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-1_09302022		
Lab Sample ID:	JD52973-1	**Date Sampled:**	09/30/22
Matrix:	AQ - Ground Water	**Date Received:**	09/30/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	4.6	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	936 [c]	20	11	ug/l	
108-88-3	Toluene	0.82	1.0	0.49	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	8.1	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.52	ug/l	
	m,p-Xylene	2.1	1.0	0.78	ug/l	
95-47-6	o-Xylene	0.72	1.0	0.59	ug/l	J
1330-20-7	Xylene (total)	2.8	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	89%	80-120%
17060-07-0	1,2-Dichloroethane-D4	106%	97%	80-120%
2037-26-5	Toluene-D8	107%	104%	80-120%
460-00-4	4-Bromofluorobenzene	99%	106%	82-114%

(a) (pH = 2)Sample pH did not satisfy field preservation criteria.
(b) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.
(c) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-2_09302022		
Lab Sample ID:	JD52973-2	**Date Sampled:**	09/30/22
Matrix:	AQ - Ground Water	**Date Received:**	09/30/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A226845.D	1	10/11/22 12:26	NH	n/a	n/a	V1A9715
Run #2 [a]	2B195027.D	5	10/12/22 14:20	NH	n/a	n/a	V2B8847

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	220	10	3.1	ug/l	
71-43-2	Benzene	0.90	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane [b]	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	16.6	10	2.7	ug/l	
75-15-0	Carbon disulfide	2.8	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	7.4	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	13.1	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	84.2	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	3.3	5.0	2.0	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-2_09302022		
Lab Sample ID:	JD52973-2	**Date Sampled:**	09/30/22
Matrix:	AQ - Ground Water	**Date Received:**	09/30/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	5.2	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	705 [c]	5.0	2.8	ug/l	
108-88-3	Toluene	0.72	1.0	0.49	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	9.0	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	0.56	1.0	0.52	ug/l	J
	m,p-Xylene	1.8	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	1.8	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%	103%	80-120%
17060-07-0	1,2-Dichloroethane-D4	104%	101%	80-120%
2037-26-5	Toluene-D8	107%	99%	80-120%
460-00-4	4-Bromofluorobenzene	99%	103%	82-114%

(a) (pH = 3)Sample pH did not satisfy field preservation criteria.
(b) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.
(c) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-3_09302022		
Lab Sample ID:	JD52973-3	**Date Sampled:**	09/30/22
Matrix:	AQ - Ground Water	**Date Received:**	09/30/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A226846.D	1	10/11/22 12:50	NH	n/a	n/a	V1A9715
Run #2 [a]	1A226961.D	4	10/13/22 12:15	NH	n/a	n/a	V1A9719

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	98.6	10	3.1	ug/l	
71-43-2	Benzene	0.87	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane [b]	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.7	ug/l	
75-15-0	Carbon disulfide	2.3	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	7.0	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	7.5	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	81.7	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	4.0	5.0	2.0	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-3_09302022		
Lab Sample ID:	JD52973-3	**Date Sampled:**	09/30/22
Matrix:	AQ - Ground Water	**Date Received:**	09/30/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	4.6	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	633 [c]	4.0	2.2	ug/l	
108-88-3	Toluene	0.76	1.0	0.49	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	9.2	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.52	ug/l	
	m,p-Xylene	1.8	1.0	0.78	ug/l	
95-47-6	o-Xylene	0.69	1.0	0.59	ug/l	J
1330-20-7	Xylene (total)	2.5	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%	101%	80-120%
17060-07-0	1,2-Dichloroethane-D4	107%	106%	80-120%
2037-26-5	Toluene-D8	106%	107%	80-120%
460-00-4	4-Bromofluorobenzene	95%	99%	82-114%

(a) (pH = 3)Sample pH did not satisfy field preservation criteria.
(b) Associated CCV outside of control limits low.
(c) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	C-1_09302022		
Lab Sample ID:	JD52973-4	**Date Sampled:**	09/30/22
Matrix:	AQ - Ground Water	**Date Received:**	09/30/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A226858.D	1	10/11/22 17:38	NH	n/a	n/a	V1A9715
Run #2 [a]	2B195038.D	10	10/12/22 19:42	NH	n/a	n/a	V2B8847

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	311	10	3.1	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane [b]	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.7	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	7.4	1.0	0.50	ug/l	
74-87-3	Chloromethane	0.79	1.0	0.76	ug/l	J
110-82-7	Cyclohexane	10.4	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	78.5	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	0.96	1.0	0.60	ug/l	J
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	C-1_09302022		
Lab Sample ID:	JD52973-4	**Date Sampled:**	09/30/22
Matrix:	AQ - Ground Water	**Date Received:**	09/30/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	6.8	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	1550 [c]	10	5.6	ug/l	
108-88-3	Toluene	1.1	1.0	0.49	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	8.8	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.52	ug/l	
	m,p-Xylene	4.3	1.0	0.78	ug/l	
95-47-6	o-Xylene	1.5	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	5.8	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%	104%	80-120%
17060-07-0	1,2-Dichloroethane-D4	113%	101%	80-120%
2037-26-5	Toluene-D8	104%	98%	80-120%
460-00-4	4-Bromofluorobenzene	98%	103%	82-114%

(a) (pH = 4)Sample pH did not satisfy field preservation criteria.
(b) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte.
(c) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	C-2_09302022		
Lab Sample ID:	JD52973-5	**Date Sampled:**	09/30/22
Matrix:	AQ - Ground Water	**Date Received:**	09/30/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A226859.D	1	10/11/22 18:02	NH	n/a	n/a	V1A9715
Run #2 [b]	2B195030.D	10	10/12/22 15:48	NH	n/a	n/a	V2B8847

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	319	10	3.1	ug/l	
71-43-2	Benzene	0.45	0.50	0.43	ug/l	J
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane [c]	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.7	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	6.4	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	69.6	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	0.93	1.0	0.60	ug/l	J
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	C-2_09302022		
Lab Sample ID:	JD52973-5	**Date Sampled:**	09/30/22
Matrix:	AQ - Ground Water	**Date Received:**	09/30/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	5.8	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	1660 [d]	10	5.6	ug/l	
108-88-3	Toluene	1.1	1.0	0.49	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	6.8	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.52	ug/l	
	m,p-Xylene	5.4	1.0	0.78	ug/l	
95-47-6	o-Xylene	1.8	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	7.2	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%	102%	80-120%
17060-07-0	1,2-Dichloroethane-D4	112%	101%	80-120%
2037-26-5	Toluene-D8	106%	100%	80-120%
460-00-4	4-Bromofluorobenzene	98%	103%	82-114%

(a) (pH = 4)Sample pH did not satisfy field preservation criteria.
(b) (pH = 4)Sample pH did not satisfy field preservation criteria. Dilution required due to high concentrations of target and non-target compounds.
(c) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.
(d) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	C-3_09302022		
Lab Sample ID:	JD52973-6	**Date Sampled:**	09/30/22
Matrix:	AQ - Ground Water	**Date Received:**	09/30/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A226860.D	1	10/11/22 18:26	NH	n/a	n/a	V1A9715
Run #2 [a]	2V93582.D	25	10/12/22 14:34	KM	n/a	n/a	V2V3798

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	343	10	3.1	ug/l	
71-43-2	Benzene	0.93	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane [b]	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	3.6	10	2.7	ug/l	J
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	8.9	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	101	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	0.93	1.0	0.60	ug/l	J
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	C-3_09302022		
Lab Sample ID:	JD52973-6	**Date Sampled:**	09/30/22
Matrix:	AQ - Ground Water	**Date Received:**	09/30/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	7.9	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	2630 [c]	25	14	ug/l	
108-88-3	Toluene	2.6	1.0	0.49	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	11.6	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.52	ug/l	
	m,p-Xylene	12.3	1.0	0.78	ug/l	
95-47-6	o-Xylene	3.2	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	15.5	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%	92%	80-120%
17060-07-0	1,2-Dichloroethane-D4	111%	103%	80-120%
2037-26-5	Toluene-D8	106%	103%	80-120%
460-00-4	4-Bromofluorobenzene	96%	108%	82-114%

(a) (pH = 4)Sample pH did not satisfy field preservation criteria.
(b) Associated CCV outside of control limits low.
(c) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z-1_09302022		
Lab Sample ID:	JD52973-7	**Date Sampled:**	09/30/22
Matrix:	AQ - Ground Water	**Date Received:**	09/30/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A226863.D	1	10/11/22 19:38	NH	n/a	n/a	V1A9715
Run #2 [a]	2V93584.D	20	10/12/22 15:21	KM	n/a	n/a	V2V3798

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	198	10	3.1	ug/l	
71-43-2	Benzene	0.61	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane [b]	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	604	10	2.7	ug/l	
75-15-0	Carbon disulfide	1.0	2.0	0.46	ug/l	J
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	1.6	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	157	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	19.1	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	1.2	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	11.1	5.0	2.0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z-1_09302022		
Lab Sample ID:	JD52973-7	**Date Sampled:**	09/30/22
Matrix:	AQ - Ground Water	**Date Received:**	09/30/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	5.0	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	884 [c]	20	11	ug/l	
108-88-3	Toluene	1.6	1.0	0.49	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	2.1	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	12.7	1.0	0.52	ug/l	
	m,p-Xylene	4.5	1.0	0.78	ug/l	
95-47-6	o-Xylene	1.5	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	6.0	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%	88%	80-120%
17060-07-0	1,2-Dichloroethane-D4	105%	95%	80-120%
2037-26-5	Toluene-D8	107%	102%	80-120%
460-00-4	4-Bromofluorobenzene	97%	107%	82-114%

(a) (pH = 4)Sample pH did not satisfy field preservation criteria.
(b) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.
(c) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z-2_09302022		
Lab Sample ID:	JD52973-8	**Date Sampled:**	09/30/22
Matrix:	AQ - Ground Water	**Date Received:**	09/30/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A226861.D	1	10/11/22 18:50	NH	n/a	n/a	V1A9715
Run #2 [a]	2V93585.D	20	10/12/22 15:45	KM	n/a	n/a	V2V3798

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	186	10	3.1	ug/l	
71-43-2	Benzene	0.57	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane [b]	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	618	10	2.7	ug/l	
75-15-0	Carbon disulfide	1.0	2.0	0.46	ug/l	J
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	1.3	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	106	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	16.5	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	1.4	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	9.4	5.0	2.0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z-2_09302022		
Lab Sample ID:	JD52973-8	**Date Sampled:**	09/30/22
Matrix:	AQ - Ground Water	**Date Received:**	09/30/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	6.2	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	1710 [c]	20	11	ug/l	
108-88-3	Toluene	1.5	1.0	0.49	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	1.9	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	13.2	1.0	0.52	ug/l	
	m,p-Xylene	4.3	1.0	0.78	ug/l	
95-47-6	o-Xylene	1.4	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	5.7	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	90%	80-120%
17060-07-0	1,2-Dichloroethane-D4	106%	100%	80-120%
2037-26-5	Toluene-D8	109%	103%	80-120%
460-00-4	4-Bromofluorobenzene	100%	107%	82-114%

(a) (pH = 4)Sample pH did not satisfy field preservation criteria.
(b) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.
(c) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z-3_09302022		
Lab Sample ID:	JD52973-9	**Date Sampled:**	09/30/22
Matrix:	AQ - Ground Water	**Date Received:**	09/30/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A226865.D	1	10/11/22 20:26	NH	n/a	n/a	V1A9715
Run #2 [a]	1A226853.D	20	10/11/22 15:38	NH	n/a	n/a	V1A9715

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	201	10	3.1	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane [b]	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	20.9	10	2.7	ug/l	
75-15-0	Carbon disulfide	2.7	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	1.7	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	8.5	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	24.3	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	0.76	1.0	0.60	ug/l	J
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	2.1	5.0	2.0	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z-3_09302022		
Lab Sample ID:	JD52973-9	**Date Sampled:**	09/30/22
Matrix:	AQ - Ground Water	**Date Received:**	09/30/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	5.8	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	622 [c]	20	11	ug/l	
108-88-3	Toluene	ND	1.0	0.49	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	3.1	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	1.5	1.0	0.52	ug/l	
	m,p-Xylene	1.4	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	1.9	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%	101%	80-120%
17060-07-0	1,2-Dichloroethane-D4	111%	111%	80-120%
2037-26-5	Toluene-D8	108%	106%	80-120%
460-00-4	4-Bromofluorobenzene	101%	98%	82-114%

(a) (pH = 4)Sample pH did not satisfy field preservation criteria.
(b) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.
(c) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z-4_09302022		
Lab Sample ID:	JD52973-10	**Date Sampled:**	09/30/22
Matrix:	AQ - Ground Water	**Date Received:**	09/30/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A226866.D	1	10/11/22 20:50	NH	n/a	n/a	V1A9715
Run #2 [a]	1A226854.D	20	10/11/22 16:02	NH	n/a	n/a	V1A9715

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	238	10	3.1	ug/l	
71-43-2	Benzene	0.56	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane [b]	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	499	10	2.7	ug/l	
75-15-0	Carbon disulfide	1.4	2.0	0.46	ug/l	J
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	1.8	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	2.8	5.0	0.78	ug/l	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	27.1	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	3.0	5.0	2.0	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z-4_09302022		
Lab Sample ID:	JD52973-10	**Date Sampled:**	09/30/22
Matrix:	AQ - Ground Water	**Date Received:**	09/30/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	5.8	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	959 [c]	20	11	ug/l	
108-88-3	Toluene	1.1	1.0	0.49	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	3.9	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	29.1	1.0	0.52	ug/l	
	m,p-Xylene	2.0	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	2.6	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	0%	102%	80-120%
17060-07-0	1,2-Dichloroethane-D4	106%	113%	80-120%
2037-26-5	Toluene-D8	106%	106%	80-120%
460-00-4	4-Bromofluorobenzene	94%	100%	82-114%

(a) (pH = 4)Sample pH did not satisfy field preservation criteria.
(b) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.
(c) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z-5_09302022		
Lab Sample ID:	JD52973-11	**Date Sampled:**	09/30/22
Matrix:	AQ - Ground Water	**Date Received:**	09/30/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A226864.D	1	10/11/22 20:02	NH	n/a	n/a	V1A9715
Run #2 [b]	2B195029.D	5	10/12/22 15:18	NH	n/a	n/a	V2B8847

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	187	10	3.1	ug/l	
71-43-2	Benzene	0.53	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane [c]	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	925 [d]	50	14	ug/l	
75-15-0	Carbon disulfide	0.94	2.0	0.46	ug/l	J
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	1.3	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	3.4	5.0	0.78	ug/l	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	19.5	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	0.68	1.0	0.60	ug/l	J
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z-5_09302022		
Lab Sample ID:	JD52973-11	**Date Sampled:**	09/30/22
Matrix:	AQ - Ground Water	**Date Received:**	09/30/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	5.9	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	862 [d]	5.0	2.8	ug/l	
108-88-3	Toluene	1.0	1.0	0.49	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	4.5	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	35.4	1.0	0.52	ug/l	
	m,p-Xylene	2.0	1.0	0.78	ug/l	
95-47-6	o-Xylene	0.69	1.0	0.59	ug/l	J
1330-20-7	Xylene (total)	2.7	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	101%	80-120%
17060-07-0	1,2-Dichloroethane-D4	108%	103%	80-120%
2037-26-5	Toluene-D8	106%	101%	80-120%
460-00-4	4-Bromofluorobenzene	96%	100%	82-114%

(a) (pH = 4)Sample pH did not satisfy field preservation criteria.
(b) (pH = 4)Sample pH did not satisfy field preservation criteria. Dilution required due to high concentration of target compound.
(c) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.
(d) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z-6_09302022		
Lab Sample ID:	JD52973-12	**Date Sampled:**	09/30/22
Matrix:	AQ - Ground Water	**Date Received:**	09/30/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2B195031.D	4	10/12/22 16:17	NH	n/a	n/a	V2B8847
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	200	40	12	ug/l	
71-43-2	Benzene	ND	2.0	1.7	ug/l	
74-97-5	Bromochloromethane	ND	4.0	1.9	ug/l	
75-27-4	Bromodichloromethane	ND	4.0	1.8	ug/l	
75-25-2	Bromoform	ND	4.0	2.5	ug/l	
74-83-9	Bromomethane	ND	8.0	6.6	ug/l	
78-93-3	2-Butanone (MEK)	709	40	11	ug/l	
75-15-0	Carbon disulfide	3.0	8.0	1.8	ug/l	J
56-23-5	Carbon tetrachloride	ND	4.0	2.2	ug/l	
108-90-7	Chlorobenzene	ND	4.0	2.2	ug/l	
75-00-3	Chloroethane	ND	4.0	2.9	ug/l	
67-66-3	Chloroform	ND	4.0	2.0	ug/l	
74-87-3	Chloromethane	ND	4.0	3.0	ug/l	
110-82-7	Cyclohexane	ND	20	3.1	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	8.0	2.1	ug/l	
124-48-1	Dibromochloromethane	ND	4.0	2.2	ug/l	
106-93-4	1,2-Dibromoethane	ND	4.0	1.9	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	4.0	2.1	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	4.0	2.2	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	4.0	2.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	8.0	2.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	4.0	2.3	ug/l	
107-06-2	1,2-Dichloroethane	ND	4.0	2.4	ug/l	
75-35-4	1,1-Dichloroethene	ND	4.0	2.4	ug/l	
156-59-2	cis-1,2-Dichloroethene	24.8	4.0	2.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	4.0	2.1	ug/l	
78-87-5	1,2-Dichloropropane	ND	4.0	2.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	4.0	1.9	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	4.0	1.7	ug/l	
100-41-4	Ethylbenzene	ND	4.0	2.4	ug/l	
76-13-1	Freon 113	ND	20	2.3	ug/l	
591-78-6	2-Hexanone	ND	20	8.1	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z-6_09302022		
Lab Sample ID:	JD52973-12	**Date Sampled:**	09/30/22
Matrix:	AQ - Ground Water	**Date Received:**	09/30/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	4.0	2.6	ug/l	
79-20-9	Methyl Acetate	ND	20	3.2	ug/l	
108-87-2	Methylcyclohexane	ND	20	2.4	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	20	7.4	ug/l	
75-09-2	Methylene chloride	6.0	8.0	4.0	ug/l	J
100-42-5	Styrene	ND	4.0	1.9	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.0	2.6	ug/l	
127-18-4	Tetrachloroethene	790	4.0	2.2	ug/l	
108-88-3	Toluene	ND	4.0	2.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene [b]	ND	4.0	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene [b]	ND	4.0	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	4.0	2.1	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	4.0	2.1	ug/l	
79-01-6	Trichloroethene	4.9	4.0	2.1	ug/l	
75-69-4	Trichlorofluoromethane	ND	8.0	1.6	ug/l	
75-01-4	Vinyl chloride	17.2	4.0	2.1	ug/l	
	m,p-Xylene	3.1	4.0	3.1	ug/l	J
95-47-6	o-Xylene	ND	4.0	2.4	ug/l	
1330-20-7	Xylene (total)	3.1	4.0	2.4	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		80-120%
17060-07-0	1,2-Dichloroethane-D4	101%		80-120%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	102%		82-114%

(a) (pH = 4)Sample pH did not satisfy field preservation criteria. Dilution required due to high concentration of target compound.
(b) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GWONLY_09302022		
Lab Sample ID:	JD52973-13	**Date Sampled:**	09/30/22
Matrix:	AQ - Ground Water	**Date Received:**	09/30/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1A226857.D	10	10/11/22 17:14	NH	n/a	n/a	V1A9715
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	717	100	31	ug/l	
71-43-2	Benzene	ND	5.0	4.3	ug/l	
74-97-5	Bromochloromethane	ND	10	4.8	ug/l	
75-27-4	Bromodichloromethane	ND	10	4.5	ug/l	
75-25-2	Bromoform	ND	10	6.3	ug/l	
74-83-9	Bromomethane [b]	ND	20	16	ug/l	
78-93-3	2-Butanone (MEK)	ND	100	27	ug/l	
75-15-0	Carbon disulfide	ND	20	4.6	ug/l	
56-23-5	Carbon tetrachloride	ND	10	5.5	ug/l	
108-90-7	Chlorobenzene	ND	10	5.6	ug/l	
75-00-3	Chloroethane	ND	10	7.3	ug/l	
67-66-3	Chloroform	8.8	10	5.0	ug/l	J
74-87-3	Chloromethane	ND	10	7.6	ug/l	
110-82-7	Cyclohexane	ND	50	7.8	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	20	5.3	ug/l	
124-48-1	Dibromochloromethane	ND	10	5.6	ug/l	
106-93-4	1,2-Dibromoethane	ND	10	4.8	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	10	5.3	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	10	5.4	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	10	5.1	ug/l	
75-71-8	Dichlorodifluoromethane	ND	20	5.6	ug/l	
75-34-3	1,1-Dichloroethane	ND	10	5.7	ug/l	
107-06-2	1,2-Dichloroethane	ND	10	6.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	10	5.9	ug/l	
156-59-2	cis-1,2-Dichloroethene	83.8	10	5.1	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	10	5.4	ug/l	
78-87-5	1,2-Dichloropropane	ND	10	5.1	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	10	4.7	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	10	4.3	ug/l	
100-41-4	Ethylbenzene	ND	10	6.0	ug/l	
76-13-1	Freon 113	ND	50	5.8	ug/l	
591-78-6	2-Hexanone	ND	50	20	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GWONLY_09302022		
Lab Sample ID:	JD52973-13	**Date Sampled:**	09/30/22
Matrix:	AQ - Ground Water	**Date Received:**	09/30/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	10	6.5	ug/l	
79-20-9	Methyl Acetate	ND	50	8.0	ug/l	
108-87-2	Methylcyclohexane	ND	50	6.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	10	5.1	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	50	19	ug/l	
75-09-2	Methylene chloride	ND	20	10	ug/l	
100-42-5	Styrene	ND	10	4.9	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	10	6.5	ug/l	
127-18-4	Tetrachloroethene	1510	10	5.6	ug/l	
108-88-3	Toluene	ND	10	4.9	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	10	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	10	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	10	5.4	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	10	5.3	ug/l	
79-01-6	Trichloroethene	9.6	10	5.3	ug/l	J
75-69-4	Trichlorofluoromethane	ND	20	4.0	ug/l	
75-01-4	Vinyl chloride	ND	10	5.2	ug/l	
	m,p-Xylene	ND	10	7.8	ug/l	
95-47-6	o-Xylene	ND	10	5.9	ug/l	
1330-20-7	Xylene (total)	ND	10	5.9	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		80-120%
17060-07-0	1,2-Dichloroethane-D4	110%		80-120%
2037-26-5	Toluene-D8	107%		80-120%
460-00-4	4-Bromofluorobenzene	97%		82-114%

(a) Dilution required due to high concentration of target compound.
(b) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

SGS

GW

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.sgs.com/ehsusa

EHSA-QAC-0023-04-FORM-Standard COC

FED-EX Tracking #: | Bottle Order Control #: Bur-092722-88
SGS Quote #: | SGS Job #: JD52973

Client / Reporting Information

Company Name: Langan Engineering
Street Address: 300 Kimball Dr.
City State Zip: Parsippany NJ 07054
Project Contact E-mail: Amita Oka aoka@langan.com
Phone #: 609-282-8019
Sampler(s) Name(s) Phone #: Jennifer Cabral, Xin Yin

Project Information

Project Name: 1487 First Avenue
Street: 1487 First Ave.
City State: NY NY
Project #:
Client Purchase Order #:
Project Manager: Beth Stopen

Billing Information (if different from Report to)

Company Name:
Street Address:
City State Zip:
Attention:

Requested Analysis

VOCs

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB - Field Blank
EB-Equipment Blank
RB - Rinse Blank
TB - Trip Blank

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Time	Sampled by	Grab (G) Comp (C)	Source Chlorinated (Y/N)	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO_3	H_2SO_4	NONE	DI Water	MEOH	ENCORE	pH Check (Lab Use Only)	LAB USE ONLY
1	P-1-09302022		09/30/22	2:00	JC/XY	C	Y	GW	2	2								✓	VTSA
2	P-2-09302022		09/30/22	2:05	JC/XY	C	Y	GW	2	2								✓	
3	P-3-09302022		09/30/22	2:10	JC/XY	C	Y	GW	2	2								✓	
4	C-1-09302022		09/30/22	2:15	JC/XY	C	Y	GW	2	2								✓	
5	C-2-09302022		09/30/22	2:20	JC/XY	C	Y	GW	2	2								✓	
6	C-3-09302022		09/30/22	2:25	JC/XY	C	Y	GW	2	2								✓	
7	E-1-09302022		09/30/22	2:30	JC/XY	C	Y	GW	2	2								✓	
8	E-2-09302022		09/30/22	2:35	JC/XY	C	Y	GW	2	2								✓	
9	E-3-09302022		09/30/22	2:40	JC/XY	C	Y	GW	2	2								✓	
10	E-4-09302022		09/30/22	2:45	JC/XY	C	Y	GW	2	2								✓	
11	E-5-09302022		09/30/22	2:50	JC/XY	C	Y	GW	2	2								✓	
12	E-6-09302022		09/30/22	2:55	JC/XY	C	Y	GW	2	2								✓	

Turn Around Time (Business Days)

Approved By (SGS PM): / Date:

- [ ] 10 Business Days
- [ ] 5 Business Days
- [ ] 3 Business Days*
- [ ] 2 Business Days*
- [ ] 1 Business Day*
- [x] Other
- All data available via Lablink
- * Approval needed for 1-3 Business Day TAT

Deliverable

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] NJ Reduced (Level 3)
- [ ] Full Tier I (Level 4)
- [ ] Commercial "C"
- [ ] NJ DKQP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] MA MCP Criteria
- [ ] CT RCP Criteria
- [ ] State Forms
- [ ] EDD Format
- [ ] OOD-QSM5

Commercial "A" = Results only; Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data
Data Verification
http://www.sgs.com/en/terms-and-conditions

Comments / Special Instructions

limited sample volume available

TC 2B

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by:	Date / Time:	Received By:	Relinquished By:	Date / Time:	Received By:
1 Xin Yin	9/30/22 1613	1	2	9/30/22 1720	2
3	Date / Time:	3	4	Date / Time:	4
5	Date / Time:	5	Custody Seal #	Intact / Not Intact / Absent	Therm ID: / See Sample Receipt Summary

Cooler Temp. °C: 2.2

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.sgs.com/ehsusa

EHSA-QAC-0023-04-FORM-Standard COC

Page 1 of 2

FED-EX Tracking #: | Bottle Order Control #:
SGS Quote #: | SGS Job #: JD52973

Client / Reporting Information

Company Name: Langan Engineering
Street Address: 300 Kimball Dr.
City: Parsippany State: NJ Zip: 07054
Project Contact: Anita Oka E-mail: aoka@langan.com
Phone #: 609-282-8019
Sampler(s) Name(s): Jennifer Cabral, Xin Yin Phone #:

Project Information

Project Name: 1487 First Avenue
Street: 1487 First Ave.
City: NY State: NY
Project #:
Client Purchase Order #:
Project Manager: Beth Stopen

Billing Information (If different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis

VOCs

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED - Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB - Field Blank
EB - Equipment Blank
RB - Rinse Blank
TB - Trip Blank

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Grab (G) Comp (C)	Source Chlorinated (Y/N)	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	pH Check (Lab Use Only)	LAB USE ONLY
13	GWonly-01302022		09/30/22	3:00	JC/XY	C	Y	GW	2	2								1	
14	QC-09302022		09/30/22	3.45	JC/XY		N	DI	2	2								✓	

Turn Around Time (Business Days)

Approved By (SGS PM): / Date:

- [ ] 10 Business Days
- [ ] 5 Business Days
- [ ] 3 Business Days*
- [ ] 2 Business Days*
- [ ] 1 Business Day*
- [ ] Other

All data available via Lablink

* Approval needed for 1-3 Business Day TAT

Deliverable

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] NJ Reduced (Level 3)
- [ ] Full Tier I (Level 4)
- [ ] Commercial "C"
- [ ] NJ DKQP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] MA MCP Criteria_____
- [ ] CT RCP Criteria_____
- [ ] State Forms
- [ ] EDD Format _____
- [ ] DOD-QSM5

Commercial "A" = Results only; Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

limited sample volume available

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by:	Date / Time:	Received By:	Relinquished By:	Date / Time:	Received By:
1	Xin Yin	9/30/22 1613	1	2	9/30/22 1720	2
3			3	4		4
5			5	Custody Seal #	Intact / Not intact / Absent	Therm ID: See Sample Receipt Summary; On Ice; Cooler Temp °C: 2.2

C-1p

SGS Sample Receipt Summary

Job Number: JD52973 **Client:** LANGAN ENGINEERING & ENVIRONMEN **Project:** 1487 FIRST AVENUE, NY, NY

Date / Time Received: 9/30/2022 2:20:00 PM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (2.2);

Cooler Temps (Corrected) °C: Cooler 1: (2.8);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 231619 pH 12+: 203117A Other: (Specify)

Comments

SM089-03
Rev. Date 12/7/17

Job Change Order: JD52973

Requested Date:	10/4/2022	**Received Date:**	9/30/2022
Account Name:	Langan Engineering & Environme	**Due Date:**	10/4/2022
Project Description:	1487 First Avenue, NY, NY	**Deliverable:**	COMMB
C/O Initiated By:	BETH.WASS **PM:** BW	**TAT (Days):**	7

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Sample #: JD52973-14 **Change:**
Remove V8260TCL20, add HOLD

Dept:

TAT: 7

QC_09302022

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Above Changes Per: Amita Oka **Date/Time:** 10/4/2022

To Client: This Change Order is confirmation of the revisions, previously discussed with the Client Service Representative.

Page 1 of 1

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: JD52973
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A9715-MB	1A226842.D	1	10/11/22	NH	n/a	n/a	V1A9715

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD52973-1, JD52973-2, JD52973-3, JD52973-4, JD52973-5, JD52973-6, JD52973-7, JD52973-8, JD52973-9, JD52973-10, JD52973-11, JD52973-13

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.1	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.7	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	

Method Blank Summary

Job Number: JD52973
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A9715-MB	1A226842.D	1	10/11/22	NH	n/a	n/a	V1A9715

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD52973-1, JD52973-2, JD52973-3, JD52973-4, JD52973-5, JD52973-6, JD52973-7, JD52973-8, JD52973-9, JD52973-10, JD52973-11, JD52973-13

CAS No.	Compound	Result	RL	MDL	Units	Q
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.56	ug/l	
108-88-3	Toluene	ND	1.0	0.49	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.52	ug/l	
	m,p-Xylene	ND	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	102%	80-120%
17060-07-0	1,2-Dichloroethane-D4	110%	80-120%
2037-26-5	Toluene-D8	107%	80-120%
460-00-4	4-Bromofluorobenzene	100%	82-114%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JD52973
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B8847-MB	2B195022.D	1	10/12/22	NH	n/a	n/a	V2B8847

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD52973-2, JD52973-4, JD52973-5, JD52973-11, JD52973-12

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.1	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.7	ug/l	
75-15-0	Carbon disulfide	0.82	2.0	0.46	ug/l	J
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	

Method Blank Summary

Job Number: JD52973
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B8847-MB	2B195022.D	1	10/12/22	NH	n/a	n/a	V2B8847

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD52973-2, JD52973-4, JD52973-5, JD52973-11, JD52973-12

CAS No.	Compound	Result	RL	MDL	Units	Q
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.56	ug/l	
108-88-3	Toluene	ND	1.0	0.49	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.52	ug/l	
	m,p-Xylene	ND	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	106%	80-120%
17060-07-0	1,2-Dichloroethane-D4	100%	80-120%
2037-26-5	Toluene-D8	97%	80-120%
460-00-4	4-Bromofluorobenzene	109%	82-114%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JD52973
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2V3798-MB	2V93575.D	1	10/12/22	KM	n/a	n/a	V2V3798

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD52973-1, JD52973-6, JD52973-7, JD52973-8

CAS No.	Compound	Result	RL	MDL	Units	Q
127-18-4	Tetrachloroethene	ND	1.0	0.56	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	90%	80-120%
17060-07-0	1,2-Dichloroethane-D4	101%	80-120%
2037-26-5	Toluene-D8	103%	80-120%
460-00-4	4-Bromofluorobenzene	107%	82-114%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	1.17	6	ug/l	J
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JD52973
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A9719-MB	1A226960.D	1	10/13/22	NH	n/a	n/a	V1A9719

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD52973-3

CAS No.	Compound	Result	RL	MDL	Units	Q
127-18-4	Tetrachloroethene	ND	1.0	0.56	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	103%	80-120%
17060-07-0	1,2-Dichloroethane-D4	107%	80-120%
2037-26-5	Toluene-D8	107%	80-120%
460-00-4	4-Bromofluorobenzene	99%	82-114%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Blank Spike Summary

Job Number: JD52973
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A9715-BS	1A226840.D	1	10/11/22	NH	n/a	n/a	V1A9715

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD52973-1, JD52973-2, JD52973-3, JD52973-4, JD52973-5, JD52973-6, JD52973-7, JD52973-8, JD52973-9, JD52973-10, JD52973-11, JD52973-13

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	200	160	80	27-175
71-43-2	Benzene	50	46.1	92	80-115
74-97-5	Bromochloromethane	50	45.3	91	83-122
75-27-4	Bromodichloromethane	50	46.8	94	82-119
75-25-2	Bromoform	50	42.3	85	77-135
74-83-9	Bromomethane	50	36.1	72	40-162
78-93-3	2-Butanone (MEK)	200	190	95	61-150
75-15-0	Carbon disulfide	50	41.5	83	64-130
56-23-5	Carbon tetrachloride	50	46.6	93	75-127
108-90-7	Chlorobenzene	50	46.0	92	80-115
75-00-3	Chloroethane	50	52.8	106	56-144
67-66-3	Chloroform	50	46.0	92	75-116
74-87-3	Chloromethane	50	39.4	79	41-153
110-82-7	Cyclohexane	50	45.8	92	66-129
96-12-8	1,2-Dibromo-3-chloropropane	50	44.9	90	69-134
124-48-1	Dibromochloromethane	50	43.9	88	81-123
106-93-4	1,2-Dibromoethane	50	47.2	94	67-138
95-50-1	1,2-Dichlorobenzene	50	47.2	94	81-117
541-73-1	1,3-Dichlorobenzene	50	47.2	94	81-115
106-46-7	1,4-Dichlorobenzene	50	45.5	91	80-114
75-71-8	Dichlorodifluoromethane	50	42.7	85	43-152
75-34-3	1,1-Dichloroethane	50	45.0	90	75-125
107-06-2	1,2-Dichloroethane	50	48.9	98	73-117
75-35-4	1,1-Dichloroethene	50	42.1	84	70-124
156-59-2	cis-1,2-Dichloroethene	50	47.3	95	80-120
156-60-5	trans-1,2-Dichloroethene	50	42.9	86	77-121
78-87-5	1,2-Dichloropropane	50	48.0	96	79-121
10061-01-5	cis-1,3-Dichloropropene	50	48.2	96	83-123
10061-02-6	trans-1,3-Dichloropropene	50	50.3	101	83-122
100-41-4	Ethylbenzene	50	47.0	94	78-116
76-13-1	Freon 113	50	41.2	82	68-134
591-78-6	2-Hexanone	200	195	98	66-136
98-82-8	Isopropylbenzene	50	47.9	96	78-121
79-20-9	Methyl Acetate	50	42.3	85	60-143
108-87-2	Methylcyclohexane	50	46.7	93	71-123
1634-04-4	Methyl Tert Butyl Ether	50	46.7	93	76-123

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD52973
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A9715-BS	1A226840.D	1	10/11/22	NH	n/a	n/a	V1A9715

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD52973-1, JD52973-2, JD52973-3, JD52973-4, JD52973-5, JD52973-6, JD52973-7, JD52973-8, JD52973-9, JD52973-10, JD52973-11, JD52973-13

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	200	202	101	73-134
75-09-2	Methylene chloride	50	44.0	88	73-123
100-42-5	Styrene	50	51.9	104	81-125
79-34-5	1,1,2,2-Tetrachloroethane	50	46.0	92	73-126
127-18-4	Tetrachloroethene	50	41.4	83	73-119
108-88-3	Toluene	50	46.6	93	79-116
87-61-6	1,2,3-Trichlorobenzene	50	43.1	86	63-137
120-82-1	1,2,4-Trichlorobenzene	50	45.1	90	68-135
71-55-6	1,1,1-Trichloroethane	50	47.7	95	76-124
79-00-5	1,1,2-Trichloroethane	50	45.5	91	83-117
79-01-6	Trichloroethene	50	45.4	91	80-118
75-69-4	Trichlorofluoromethane	50	47.7	95	67-134
75-01-4	Vinyl chloride	50	47.5	95	52-146
	m,p-Xylene	100	96.2	96	79-119
95-47-6	o-Xylene	50	48.4	97	81-119
1330-20-7	Xylene (total)	150	145	97	80-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	104%	80-120%
17060-07-0	1,2-Dichloroethane-D4	105%	80-120%
2037-26-5	Toluene-D8	101%	80-120%
460-00-4	4-Bromofluorobenzene	95%	82-114%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD52973
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B8847-BS	2B195020.D	1	10/12/22	NH	n/a	n/a	V2B8847

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD52973-2, JD52973-4, JD52973-5, JD52973-11, JD52973-12

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	200	156	78	27-175
71-43-2	Benzene	50	45.3	91	80-115
74-97-5	Bromochloromethane	50	47.1	94	83-122
75-27-4	Bromodichloromethane	50	46.5	93	82-119
75-25-2	Bromoform	50	51.5	103	77-135
74-83-9	Bromomethane	50	39.2	78	40-162
78-93-3	2-Butanone (MEK)	200	177	89	61-150
75-15-0	Carbon disulfide	50	38.9	78	64-130
56-23-5	Carbon tetrachloride	50	44.1	88	75-127
108-90-7	Chlorobenzene	50	46.4	93	80-115
75-00-3	Chloroethane	50	39.1	78	56-144
67-66-3	Chloroform	50	42.4	85	75-116
74-87-3	Chloromethane	50	36.8	74	41-153
110-82-7	Cyclohexane	50	43.4	87	66-129
96-12-8	1,2-Dibromo-3-chloropropane	50	49.0	98	69-134
124-48-1	Dibromochloromethane	50	47.6	95	81-123
106-93-4	1,2-Dibromoethane	50	49.1	98	67-138
95-50-1	1,2-Dichlorobenzene	50	49.0	98	81-117
541-73-1	1,3-Dichlorobenzene	50	47.3	95	81-115
106-46-7	1,4-Dichlorobenzene	50	45.5	91	80-114
75-71-8	Dichlorodifluoromethane	50	52.8	106	43-152
75-34-3	1,1-Dichloroethane	50	43.0	86	75-125
107-06-2	1,2-Dichloroethane	50	42.8	86	73-117
75-35-4	1,1-Dichloroethene	50	40.0	80	70-124
156-59-2	cis-1,2-Dichloroethene	50	44.9	90	80-120
156-60-5	trans-1,2-Dichloroethene	50	45.4	91	77-121
78-87-5	1,2-Dichloropropane	50	44.3	89	79-121
10061-01-5	cis-1,3-Dichloropropene	50	48.4	97	83-123
10061-02-6	trans-1,3-Dichloropropene	50	48.6	97	83-122
100-41-4	Ethylbenzene	50	46.3	93	78-116
76-13-1	Freon 113	50	41.3	83	68-134
591-78-6	2-Hexanone	200	206	103	66-136
98-82-8	Isopropylbenzene	50	50.4	101	78-121
79-20-9	Methyl Acetate	50	52.8	106	60-143
108-87-2	Methylcyclohexane	50	44.6	89	71-123
1634-04-4	Methyl Tert Butyl Ether	50	43.1	86	76-123

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD52973
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B8847-BS	2B195020.D	1	10/12/22	NH	n/a	n/a	V2B8847

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD52973-2, JD52973-4, JD52973-5, JD52973-11, JD52973-12

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	200	194	97	73-134
75-09-2	Methylene chloride	50	43.8	88	73-123
100-42-5	Styrene	50	50.2	100	81-125
79-34-5	1,1,2,2-Tetrachloroethane	50	38.1	76	73-126
127-18-4	Tetrachloroethene	50	46.6	93	73-119
108-88-3	Toluene	50	46.8	94	79-116
87-61-6	1,2,3-Trichlorobenzene	50	56.9	114	63-137
120-82-1	1,2,4-Trichlorobenzene	50	58.2	116	68-135
71-55-6	1,1,1-Trichloroethane	50	44.9	90	76-124
79-00-5	1,1,2-Trichloroethane	50	48.0	96	83-117
79-01-6	Trichloroethene	50	49.4	99	80-118
75-69-4	Trichlorofluoromethane	50	46.2	92	67-134
75-01-4	Vinyl chloride	50	39.8	80	52-146
	m,p-Xylene	100	97.8	98	79-119
95-47-6	o-Xylene	50	51.4	103	81-119
1330-20-7	Xylene (total)	150	149	99	80-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	80-120%
17060-07-0	1,2-Dichloroethane-D4	93%	80-120%
2037-26-5	Toluene-D8	98%	80-120%
460-00-4	4-Bromofluorobenzene	83%	82-114%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD52973
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2V3798-BS	2V93573.D	1	10/12/22	KM	n/a	n/a	V2V3798

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD52973-1, JD52973-6, JD52973-7, JD52973-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
127-18-4	Tetrachloroethene	50	58.5	117	73-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	91%	80-120%
17060-07-0	1,2-Dichloroethane-D4	100%	80-120%
2037-26-5	Toluene-D8	100%	80-120%
460-00-4	4-Bromofluorobenzene	108%	82-114%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD52973
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A9719-BS	1A226957.D	1	10/13/22	NH	n/a	n/a	V1A9719
V1A9719-BSD	1A226958.D	1	10/13/22	NH	n/a	n/a	V1A9719

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD52973-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
127-18-4	Tetrachloroethene	50	42.5	85	45.2	90	6	73-119/12

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	104%	104%	80-120%
17060-07-0	1,2-Dichloroethane-D4	103%	104%	80-120%
2037-26-5	Toluene-D8	102%	102%	80-120%
460-00-4	4-Bromofluorobenzene	94%	96%	82-114%

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JD52973
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD53343-2MS	1A226852.D	1	10/11/22	NH	n/a	n/a	V1A9715
JD53343-2	1A226849.D	1	10/11/22	NH	n/a	n/a	V1A9715

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD52973-1, JD52973-2, JD52973-3, JD52973-4, JD52973-5, JD52973-6, JD52973-7, JD52973-8, JD52973-9, JD52973-10, JD52973-11, JD52973-13

CAS No.	Compound	JD53343-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
67-64-1	Acetone	4.2	J	200	147	71	22-134
71-43-2	Benzene	1.7		50	49.8	96	49-137
74-97-5	Bromochloromethane	ND		50	45.5	91	78-122
75-27-4	Bromodichloromethane	23.9		50	72.5	97	76-121
75-25-2	Bromoform	ND		50	43.4	87	70-133
74-83-9	Bromomethane	ND		50	22.6	45	27-164
78-93-3	2-Butanone (MEK)	ND		200	184	92	52-137
75-15-0	Carbon disulfide	0.97	J	50	33.4	65	54-136
56-23-5	Carbon tetrachloride	ND		50	49.8	100	70-132
108-90-7	Chlorobenzene	ND		50	48.4	97	68-123
75-00-3	Chloroethane	ND		50	51.7	103	48-152
67-66-3	Chloroform	101		50	144	86	68-120
74-87-3	Chloromethane	ND		50	37.4	75	35-156
110-82-7	Cyclohexane	ND		50	42.8	86	53-146
96-12-8	1,2-Dibromo-3-chloropropane	ND		50	46.4	93	63-134
124-48-1	Dibromochloromethane	2.0		50	47.4	91	75-122
106-93-4	1,2-Dibromoethane	ND		50	45.8	92	63-134
95-50-1	1,2-Dichlorobenzene	ND		50	47.3	95	74-119
541-73-1	1,3-Dichlorobenzene	ND		50	48.4	97	75-117
106-46-7	1,4-Dichlorobenzene	ND		50	45.5	91	72-117
75-71-8	Dichlorodifluoromethane	ND		50	33.8	68	34-163
75-34-3	1,1-Dichloroethane	ND		50	46.3	93	68-129
107-06-2	1,2-Dichloroethane	ND		50	49.3	99	66-120
75-35-4	1,1-Dichloroethene	ND		50	38.9	78	59-133
156-59-2	cis-1,2-Dichloroethene	3.7		50	51.9	96	52-140
156-60-5	trans-1,2-Dichloroethene	ND		50	43.7	87	70-125
78-87-5	1,2-Dichloropropane	ND		50	48.6	97	73-124
10061-01-5	cis-1,3-Dichloropropene	ND		50	48.3	97	75-125
10061-02-6	trans-1,3-Dichloropropene	ND		50	48.8	98	75-122
100-41-4	Ethylbenzene	ND		50	49.5	99	37-144
76-13-1	Freon 113	ND		50	39.7	79	61-142
591-78-6	2-Hexanone	ND		200	197	99	56-132
98-82-8	Isopropylbenzene	ND		50	50.4	101	71-126
79-20-9	Methyl Acetate	ND		50	42.5	85	51-139
108-87-2	Methylcyclohexane	ND		50	48.9	98	59-137
1634-04-4	Methyl Tert Butyl Ether	ND		50	46.5	93	66-124

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JD52973
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD53343-2MS	1A226852.D	1	10/11/22	NH	n/a	n/a	V1A9715
JD53343-2	1A226849.D	1	10/11/22	NH	n/a	n/a	V1A9715

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD52973-1, JD52973-2, JD52973-3, JD52973-4, JD52973-5, JD52973-6, JD52973-7, JD52973-8, JD52973-9, JD52973-10, JD52973-11, JD52973-13

CAS No.	Compound	JD53343-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		200	208	104	65-135
75-09-2	Methylene chloride	ND		50	43.5	87	66-125
100-42-5	Styrene	ND		50	ND	0* [a]	71-133
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	45.6	91	68-127
127-18-4	Tetrachloroethene	ND		50	43.7	87	58-132
108-88-3	Toluene	ND		50	48.1	96	46-139
87-61-6	1,2,3-Trichlorobenzene	ND		50	46.9	94	57-136
120-82-1	1,2,4-Trichlorobenzene	ND		50	48.0	96	61-137
71-55-6	1,1,1-Trichloroethane	ND		50	50.4	101	67-132
79-00-5	1,1,2-Trichloroethane	ND		50	45.7	91	75-120
79-01-6	Trichloroethene	1.2		50	48.2	94	56-136
75-69-4	Trichlorofluoromethane	ND		50	48.7	97	61-145
75-01-4	Vinyl chloride	ND		50	42.8	86	41-156
	m,p-Xylene	ND		100	77.5	78	32-151
95-47-6	o-Xylene	ND		50	48.5	97	50-139
1330-20-7	Xylene (total)	ND		150	126	84	38-147

CAS No.	Surrogate Recoveries	MS	JD53343-2	Limits
1868-53-7	Dibromofluoromethane	104%	105%	80-120%
17060-07-0	1,2-Dichloroethane-D4	106%	111%	80-120%
2037-26-5	Toluene-D8	101%	106%	80-120%
460-00-4	4-Bromofluorobenzene	93%	99%	82-114%

(a) Outside control limits due to matrix interference.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD52973
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD53290-10MS	2V93587.D	1	10/12/22	KM	n/a	n/a	V2V3798
JD53290-10MSD	2V93588.D	1	10/12/22	KM	n/a	n/a	V2V3798
JD53290-10	2V93583.D	1	10/12/22	KM	n/a	n/a	V2V3798

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD52973-1, JD52973-6, JD52973-7, JD52973-8

CAS No.	Compound	JD53290-10 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
127-18-4	Tetrachloroethene	95.5		50	148	105	50	144	97	0	58-132/13

CAS No.	Surrogate Recoveries	MS	MSD	JD53290-10	Limits
1868-53-7	Dibromofluoromethane	91%	91%	88%	80-120%
17060-07-0	1,2-Dichloroethane-D4	98%	97%	97%	80-120%
2037-26-5	Toluene-D8	100%	100%	106%	80-120%
460-00-4	4-Bromofluorobenzene	109%	108%	108%	82-114%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD52973
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD52973-2MS [a]	2B195032.D	5	10/12/22	NH	n/a	n/a	V2B8847
JD52973-2MSD [a]	2B195033.D	5	10/12/22	NH	n/a	n/a	V2B8847
JD52973-2 [a]	2B195027.D	5	10/12/22	NH	n/a	n/a	V2B8847

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD52973-2, JD52973-4, JD52973-5, JD52973-11, JD52973-12

CAS No.	Compound	JD52973-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	232		1000	949	72	1000	938	71	1	22-134/19
71-43-2	Benzene	ND		250	231	92	250	232	93	0	49-137/12
74-97-5	Bromochloromethane	ND		250	226	90	250	230	92	2	78-122/12
75-27-4	Bromodichloromethane	ND		250	236	94	250	237	95	0	76-121/12
75-25-2	Bromoform	ND		250	272	109	250	282	113	4	70-133/13
74-83-9	Bromomethane	ND		250	203	81	250	203	81	0	27-164/38
78-93-3	2-Butanone (MEK)	ND		1000	880	88	1000	869	87	1	52-137/17
75-15-0	Carbon disulfide	4.6	J	250	205	80	250	214	84	4	54-136/16
56-23-5	Carbon tetrachloride	ND		250	226	90	250	230	92	2	70-132/13
108-90-7	Chlorobenzene	ND		250	234	94	250	240	96	3	68-123/12
75-00-3	Chloroethane	ND		250	210	84	250	213	85	1	48-152/17
67-66-3	Chloroform	8.0		250	216	83	250	219	84	1	68-120/13
74-87-3	Chloromethane	ND		250	196	78	250	195	78	1	35-156/18
110-82-7	Cyclohexane	5.2	J	250	234	92	250	233	91	0	53-146/14
96-12-8	1,2-Dibromo-3-chloropropane	ND		250	258	103	250	276	110	7	63-134/16
124-48-1	Dibromochloromethane	ND		250	242	97	250	251	100	4	75-122/12
106-93-4	1,2-Dibromoethane	ND		250	242	97	250	249	100	3	63-134/12
95-50-1	1,2-Dichlorobenzene	ND		250	245	98	250	254	102	4	74-119/12
541-73-1	1,3-Dichlorobenzene	ND		250	236	94	250	240	96	2	75-117/12
106-46-7	1,4-Dichlorobenzene	ND		250	228	91	250	233	93	2	72-117/12
75-71-8	Dichlorodifluoromethane	ND		250	268	107	250	284	114	6	34-163/16
75-34-3	1,1-Dichloroethane	ND		250	208	83	250	216	86	4	68-129/13
107-06-2	1,2-Dichloroethane	ND		250	205	82	250	212	85	3	66-120/13
75-35-4	1,1-Dichloroethene	ND		250	204	82	250	207	83	1	59-133/15
156-59-2	cis-1,2-Dichloroethene	93.5		250	288	78	250	290	79	1	52-140/12
156-60-5	trans-1,2-Dichloroethene	ND		250	229	92	250	231	92	1	70-125/13
78-87-5	1,2-Dichloropropane	ND		250	224	90	250	227	91	1	73-124/12
10061-01-5	cis-1,3-Dichloropropene	ND		250	252	101	250	253	101	0	75-125/13
10061-02-6	trans-1,3-Dichloropropene	ND		250	254	102	250	259	104	2	75-122/12
100-41-4	Ethylbenzene	ND		250	238	95	250	242	97	2	37-144/12
76-13-1	Freon 113	ND		250	213	85	250	215	86	1	61-142/14
591-78-6	2-Hexanone	ND		1000	1040	104	1000	1080	108	4	56-132/16
98-82-8	Isopropylbenzene	ND		250	262	105	250	271	108	3	71-126/13
79-20-9	Methyl Acetate	ND		250	229	92	250	228	91	0	51-139/18
108-87-2	Methylcyclohexane	ND		250	233	93	250	237	95	2	59-137/16
1634-04-4	Methyl Tert Butyl Ether	ND		250	202	81	250	212	85	5	66-124/12

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD52973
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD52973-2MS [a]	2B195032.D	5	10/12/22	NH	n/a	n/a	V2B8847
JD52973-2MSD [a]	2B195033.D	5	10/12/22	NH	n/a	n/a	V2B8847
JD52973-2 [a]	2B195027.D	5	10/12/22	NH	n/a	n/a	V2B8847

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD52973-2, JD52973-4, JD52973-5, JD52973-11, JD52973-12

CAS No.	Compound	JD52973-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		1000	987	99	1000	1000	100	1	65-135/14
75-09-2	Methylene chloride	5.8	J	250	214	83	250	217	84	1	66-125/14
100-42-5	Styrene	ND		250	288	115	250	294	118	2	71-133/12
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	188	75	250	194	78	3	68-127/14
127-18-4	Tetrachloroethene	705		250	708	1* [b]	250	711	2* [b]	0	58-132/13
108-88-3	Toluene	ND		250	239	96	250	250	100	4	46-139/12
87-61-6	1,2,3-Trichlorobenzene	ND		250	312	125	250	327	131	5	57-136/17
120-82-1	1,2,4-Trichlorobenzene	ND		250	303	121	250	316	126	4	61-137/16
71-55-6	1,1,1-Trichloroethane	ND		250	227	91	250	228	91	0	67-132/13
79-00-5	1,1,2-Trichloroethane	ND		250	234	94	250	248	99	6	75-120/12
79-01-6	Trichloroethene	11.1		250	263	101	250	267	102	2	56-136/12
75-69-4	Trichlorofluoromethane	ND		250	229	92	250	262	105	13	61-145/16
75-01-4	Vinyl chloride	ND		250	215	86	250	220	88	2	41-156/16
	m,p-Xylene	ND		500	513	103	500	524	105	2	32-151/12
95-47-6	o-Xylene	ND		250	263	105	250	270	108	3	50-139/12
1330-20-7	Xylene (total)	ND		750	775	103	750	794	106	2	38-147/12

CAS No.	Surrogate Recoveries	MS	MSD	JD52973-2	Limits
1868-53-7	Dibromofluoromethane	98%	98%	103%	80-120%
17060-07-0	1,2-Dichloroethane-D4	92%	92%	101%	80-120%
2037-26-5	Toluene-D8	97%	98%	99%	80-120%
460-00-4	4-Bromofluorobenzene	83%	82%	103%	82-114%

(a) (pH = 3)Sample pH did not satisfy field preservation criteria.
(b) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD52973
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD52973-3MS	1A226974.D	4	10/13/22	NH	n/a	n/a	V1A9719
JD52973-3MSD	1A226975.D	4	10/13/22	NH	n/a	n/a	V1A9719
JD52973-3 [a]	1A226961.D	4	10/13/22	NH	n/a	n/a	V1A9719

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD52973-3

CAS No.	Compound	JD52973-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
127-18-4	Tetrachloroethene	633		200	639	3* [b]	200	641	4* [b]	0	58-132/13

CAS No.	Surrogate Recoveries	MS	MSD	JD52973-3	Limits
1868-53-7	Dibromofluoromethane	103%	103%	101%	80-120%
17060-07-0	1,2-Dichloroethane-D4	102%	102%	106%	80-120%
2037-26-5	Toluene-D8	101%	102%	107%	80-120%
460-00-4	4-Bromofluorobenzene	95%	95%	99%	82-114%

(a) (pH = 3)Sample pH did not satisfy field preservation criteria.
(b) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD52973
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD53343-3DUP	1A226855.D	1	10/11/22	NH	n/a	n/a	V1A9715
JD53343-3	1A226850.D	1	10/11/22	NH	n/a	n/a	V1A9715

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD52973-1, JD52973-2, JD52973-3, JD52973-4, JD52973-5, JD52973-6, JD52973-7, JD52973-8, JD52973-9, JD52973-10, JD52973-11, JD52973-13

CAS No.	Compound	JD53343-3 ug/l	Q	DUP ug/l	Q	RPD	Limits
67-64-1	Acetone	ND		ND		nc	23
71-43-2	Benzene	ND		ND		nc	14
74-97-5	Bromochloromethane	ND		ND		nc	20
75-27-4	Bromodichloromethane	2.4		2.4		0	10
75-25-2	Bromoform	ND		ND		nc	10
74-83-9	Bromomethane	ND		ND		nc	10
78-93-3	2-Butanone (MEK)	ND		ND		nc	10
75-15-0	Carbon disulfide	ND		ND		nc	10
56-23-5	Carbon tetrachloride	ND		ND		nc	10
108-90-7	Chlorobenzene	ND		ND		nc	10
75-00-3	Chloroethane	ND		ND		nc	10
67-66-3	Chloroform	14.8		13.7		8	10
74-87-3	Chloromethane	ND		ND		nc	10
110-82-7	Cyclohexane	ND		ND		nc	14
96-12-8	1,2-Dibromo-3-chloropropane	ND		ND		nc	20
124-48-1	Dibromochloromethane	ND		ND		nc	10
106-93-4	1,2-Dibromoethane	ND		ND		nc	20
95-50-1	1,2-Dichlorobenzene	ND		ND		nc	10
541-73-1	1,3-Dichlorobenzene	ND		ND		nc	10
106-46-7	1,4-Dichlorobenzene	ND		ND		nc	10
75-71-8	Dichlorodifluoromethane	ND		ND		nc	20
75-34-3	1,1-Dichloroethane	ND		ND		nc	10
107-06-2	1,2-Dichloroethane	ND		ND		nc	10
75-35-4	1,1-Dichloroethene	ND		ND		nc	15
156-59-2	cis-1,2-Dichloroethene	ND		ND		nc	10
156-60-5	trans-1,2-Dichloroethene	ND		ND		nc	10
78-87-5	1,2-Dichloropropane	ND		ND		nc	20
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	20
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	20
100-41-4	Ethylbenzene	ND		ND		nc	20
76-13-1	Freon 113	ND		ND		nc	10
591-78-6	2-Hexanone	ND		ND		nc	10
98-82-8	Isopropylbenzene	ND		ND		nc	15
79-20-9	Methyl Acetate	ND		ND		nc	20
108-87-2	Methylcyclohexane	ND		ND		nc	20
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	12

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD52973
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD53343-3DUP	1A226855.D	1	10/11/22	NH	n/a	n/a	V1A9715
JD53343-3	1A226850.D	1	10/11/22	NH	n/a	n/a	V1A9715

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD52973-1, JD52973-2, JD52973-3, JD52973-4, JD52973-5, JD52973-6, JD52973-7, JD52973-8, JD52973-9, JD52973-10, JD52973-11, JD52973-13

CAS No.	Compound	JD53343-3 ug/l	Q	DUP ug/l	Q	RPD	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		ND		nc	10
75-09-2	Methylene chloride	ND		ND		nc	10
100-42-5	Styrene	ND		ND		nc	20
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	10
127-18-4	Tetrachloroethene	ND		ND		nc	10
108-88-3	Toluene	ND		ND		nc	16
87-61-6	1,2,3-Trichlorobenzene	ND		ND		nc	10
120-82-1	1,2,4-Trichlorobenzene	ND		ND		nc	10
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	10
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	10
79-01-6	Trichloroethene	ND		ND		nc	14
75-69-4	Trichlorofluoromethane	ND		ND		nc	10
75-01-4	Vinyl chloride	ND		ND		nc	10
	m,p-Xylene	ND		ND		nc	18
95-47-6	o-Xylene	ND		ND		nc	18
1330-20-7	Xylene (total)	ND		ND		nc	22

CAS No.	Surrogate Recoveries	DUP	JD53343-3	Limits
1868-53-7	Dibromofluoromethane	105%	104%	80-120%
17060-07-0	1,2-Dichloroethane-D4	111%	109%	80-120%
2037-26-5	Toluene-D8	105%	106%	80-120%
460-00-4	4-Bromofluorobenzene	97%	99%	82-114%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JD52973
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: V1A9711-BFB
Lab File ID: 1A226729.D
Instrument ID: GCMS1A
Injection Date: 10/06/22
Injection Time: 21:48

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	37840	19.2		Pass
75	30.0 - 60.0% of mass 95	96411	49.0		Pass
95	Base peak, 100% relative abundance	196817	100.0		Pass
96	5.0 - 9.0% of mass 95	13725	6.97		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	171328	87.0		Pass
175	5.0 - 9.0% of mass 174	12920	6.56	(7.54) [a]	Pass
176	95.0 - 101.0% of mass 174	167872	85.3	(98.0) [a]	Pass
177	5.0 - 9.0% of mass 176	11856	6.02	(7.06) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V1A9711-IC9711	1A226730.D	10/06/22	22:12	00:24	Initial cal 0.2
V1A9711-IC9711	1A226731.D	10/06/22	22:35	00:47	Initial cal 0.5
V1A9711-IC9711	1A226732.D	10/06/22	22:59	01:11	Initial cal 1
V1A9711-IC9711	1A226733.D	10/06/22	23:23	01:35	Initial cal 2
V1A9711-IC9711	1A226734.D	10/06/22	23:47	01:59	Initial cal 4
V1A9711-IC9711	1A226735.D	10/07/22	00:11	02:23	Initial cal 8
V1A9711-IC9711	1A226736.D	10/07/22	00:35	02:47	Initial cal 20
V1A9711-ICC9711	1A226737.D	10/07/22	00:59	03:11	Initial cal 50
V1A9711-IC9711	1A226738.D	10/07/22	01:23	03:35	Initial cal 100
V1A9711-IC9711	1A226739.D	10/07/22	01:47	03:59	Initial cal 200
V1A9711-ICV9711	1A226742.D	10/07/22	02:58	05:10	Initial cal verification 50
V1A9711-ICV9711	1A226743.D	10/07/22	03:22	05:34	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JD52973
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: V1A9715-BFB
Lab File ID: 1A226838.D
Instrument ID: GCMS1A
Injection Date: 10/11/22
Injection Time: 09:29

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	32629	20.5		Pass
75	30.0 - 60.0% of mass 95	83061	52.1		Pass
95	Base peak, 100% relative abundance	159445	100.0		Pass
96	5.0 - 9.0% of mass 95	10760	6.75		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	140757	88.3		Pass
175	5.0 - 9.0% of mass 174	11405	7.15	(8.10) [a]	Pass
176	95.0 - 101.0% of mass 174	134899	84.6	(95.8) [a]	Pass
177	5.0 - 9.0% of mass 176	7977	5.00	(5.91) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V1A9715-CC9711	1A226838.D	10/11/22	09:29	00:00	Continuing cal 20
V1A9715-BS	1A226840.D	10/11/22	10:20	00:51	Blank Spike
V1A9715-MB	1A226842.D	10/11/22	11:08	01:39	Method Blank
ZZZZZZ	1A226843.D	10/11/22	11:38	02:09	(unrelated sample)
JD52973-1	1A226844.D	10/11/22	12:02	02:33	P-1_09302022
JD52973-2	1A226845.D	10/11/22	12:26	02:57	P-2_09302022
JD52973-3	1A226846.D	10/11/22	12:50	03:21	P-3_09302022
ZZZZZZ	1A226847.D	10/11/22	13:14	03:45	(unrelated sample)
ZZZZZZ	1A226848.D	10/11/22	13:38	04:09	(unrelated sample)
JD53343-2	1A226849.D	10/11/22	14:02	04:33	(used for QC only; not part of job JD52973)
JD53343-3	1A226850.D	10/11/22	14:26	04:57	(used for QC only; not part of job JD52973)
ZZZZZZ	1A226851.D	10/11/22	14:50	05:21	(unrelated sample)
JD53343-2MS	1A226852.D	10/11/22	15:14	05:45	Matrix Spike
JD52973-9	1A226853.D	10/11/22	15:38	06:09	Z-3_09302022
JD52973-10	1A226854.D	10/11/22	16:02	06:33	Z-4_09302022
JD53343-3DUP	1A226855.D	10/11/22	16:26	06:57	Duplicate
JD52973-13	1A226857.D	10/11/22	17:14	07:45	GWONLY_09302022
JD52973-4	1A226858.D	10/11/22	17:38	08:09	C-1_09302022
JD52973-5	1A226859.D	10/11/22	18:02	08:33	C-2_09302022
JD52973-6	1A226860.D	10/11/22	18:26	08:57	C-3_09302022
JD52973-8	1A226861.D	10/11/22	18:50	09:21	Z-2_09302022
JD52973-7	1A226863.D	10/11/22	19:38	10:09	Z-1_09302022
JD52973-11	1A226864.D	10/11/22	20:02	10:33	Z-5_09302022
JD52973-9	1A226865.D	10/11/22	20:26	10:57	Z-3_09302022

Instrument Performance Check (BFB)

Job Number: JD52973
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample:	V1A9715-BFB	**Injection Date:**	10/11/22
Lab File ID:	1A226838.D	**Injection Time:**	09:29
Instrument ID:	GCMS1A		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
JD52973-10	1A226866.D	10/11/22	20:50	11:21	Z-4_09302022

Instrument Performance Check (BFB)

Job Number: JD52973
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: V1A9719-BFB
Lab File ID: 1A226955.D
Instrument ID: GCMS1A
Injection Date: 10/13/22
Injection Time: 09:37

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	34619	21.2		Pass
75	30.0 - 60.0% of mass 95	87887	53.8		Pass
95	Base peak, 100% relative abundance	163392	100.0		Pass
96	5.0 - 9.0% of mass 95	10912	6.68		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	148117	90.7		Pass
175	5.0 - 9.0% of mass 174	12572	7.69	(8.49) [a]	Pass
176	95.0 - 101.0% of mass 174	143128	87.6	(96.6) [a]	Pass
177	5.0 - 9.0% of mass 176	9101	5.57	(6.36) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V1A9719-CC9711	1A226955.D	10/13/22	09:37	00:00	Continuing cal 20
V1A9719-BS	1A226957.D	10/13/22	10:30	00:53	Blank Spike
V1A9719-BSD	1A226958.D	10/13/22	10:54	01:17	Blank Spike Duplicate
V1A9719-MB	1A226960.D	10/13/22	11:42	02:05	Method Blank
JD52973-3	1A226961.D	10/13/22	12:15	02:38	P-3_09302022
ZZZZZZ	1A226962.D	10/13/22	12:39	03:02	(unrelated sample)
ZZZZZZ	1A226963.D	10/13/22	13:03	03:26	(unrelated sample)
ZZZZZZ	1A226964.D	10/13/22	13:27	03:50	(unrelated sample)
ZZZZZZ	1A226965.D	10/13/22	13:51	04:14	(unrelated sample)
ZZZZZZ	1A226966.D	10/13/22	14:15	04:38	(unrelated sample)
ZZZZZZ	1A226967.D	10/13/22	14:39	05:02	(unrelated sample)
ZZZZZZ	1A226968.D	10/13/22	15:03	05:26	(unrelated sample)
ZZZZZZ	1A226969.D	10/13/22	15:27	05:50	(unrelated sample)
ZZZZZZ	1A226970.D	10/13/22	15:51	06:14	(unrelated sample)
ZZZZZZ	1A226971.D	10/13/22	16:16	06:39	(unrelated sample)
ZZZZZZ	1A226972.D	10/13/22	16:40	07:03	(unrelated sample)
ZZZZZZ	1A226973.D	10/13/22	17:04	07:27	(unrelated sample)
JD52973-3MS	1A226974.D	10/13/22	17:28	07:51	Matrix Spike
JD52973-3MSD	1A226975.D	10/13/22	17:52	08:15	Matrix Spike Duplicate
ZZZZZZ	1A226976.D	10/13/22	18:16	08:39	(unrelated sample)
ZZZZZZ	1A226977.D	10/13/22	18:40	09:03	(unrelated sample)
ZZZZZZ	1A226978.D	10/13/22	19:04	09:27	(unrelated sample)
ZZZZZZ	1A226979.D	10/13/22	19:28	09:51	(unrelated sample)
ZZZZZZ	1A226980.D	10/13/22	19:52	10:15	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JD52973
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample:	V1A9719-BFB	**Injection Date:**	10/13/22
Lab File ID:	1A226955.D	**Injection Time:**	09:37
Instrument ID:	GCMS1A		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	1A226982.D	10/13/22	20:40	11:03	(unrelated sample)
ZZZZZZ	1A226983.D	10/13/22	21:04	11:27	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JD52973
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample:	V2B8830-BFB	**Injection Date:**	09/28/22
Lab File ID:	2B194609.D	**Injection Time:**	21:28
Instrument ID:	GCMS2B		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.99 - 40.0% of mass 95	22059	19.1		Pass
75	30.0 - 80.0% of mass 95	61211	53.0		Pass
95	Base peak, 100% relative abundance	115579	100.0		Pass
96	5.0 - 9.0% of mass 95	7365	6.37		Pass
173	Less than 2.0% of mass 174	1416	1.23	(1.14) [a]	Pass
174	50.0 - 120.0% of mass 95	123920	107.2		Pass
175	5.0 - 9.0% of mass 174	8958	7.75	(7.23) [a]	Pass
176	95.0 - 101.0% of mass 174	122589	106.1	(98.9) [a]	Pass
177	5.0 - 9.0% of mass 176	7710	6.67	(6.29) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2B8830-IC8830	2B194610.D	09/28/22	22:06	00:38	Initial cal 0.2
V2B8830-IC8830	2B194611.D	09/28/22	22:36	01:08	Initial cal 0.5
V2B8830-IC8830	2B194612.D	09/28/22	23:04	01:36	Initial cal 1
V2B8830-IC8830	2B194613.D	09/28/22	23:34	02:06	Initial cal 2
V2B8830-IC8830	2B194614.D	09/29/22	00:03	02:35	Initial cal 4
V2B8830-IC8830	2B194615.D	09/29/22	00:32	03:04	Initial cal 8
V2B8830-IC8830	2B194616.D	09/29/22	01:02	03:34	Initial cal 20
V2B8830-ICC8830	2B194617.D	09/29/22	01:31	04:03	Initial cal 50
V2B8830-IC8830	2B194618.D	09/29/22	02:00	04:32	Initial cal 100
V2B8830-IC8830	2B194619.D	09/29/22	02:30	05:02	Initial cal 200
V2B8830-ICV8830	2B194622.D	09/29/22	03:58	06:30	Initial cal verification 50
V2B8830-ICV8830	2B194623.D	09/29/22	04:27	06:59	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JD52973
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample:	V2B8847-BFB	**Injection Date:**	10/12/22
Lab File ID:	2B195018.D	**Injection Time:**	09:31
Instrument ID:	GCMS2B		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.99 - 40.0% of mass 95	28517	15.8		Pass
75	30.0 - 60.0% of mass 95	89213	49.4		Pass
95	Base peak, 100% relative abundance	180629	100.0		Pass
96	5.0 - 9.0% of mass 95	11624	6.44		Pass
173	Less than 2.0% of mass 174	2248	1.24	(1.13) [a]	Pass
174	50.0 - 120.0% of mass 95	198571	109.9		Pass
175	5.0 - 9.0% of mass 174	14283	7.91	(7.19) [a]	Pass
176	95.0 - 101.0% of mass 174	194347	107.6	(97.9) [a]	Pass
177	5.0 - 9.0% of mass 176	12165	6.73	(6.26) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2B8847-CC8830	2B195018.D	10/12/22	09:31	00:00	Continuing cal 20
V2B8847-BS	2B195020.D	10/12/22	10:32	01:01	Blank Spike
V2B8847-MB	2B195022.D	10/12/22	11:31	02:00	Method Blank
ZZZZZZ	2B195023.D	10/12/22	12:17	02:46	(unrelated sample)
ZZZZZZ	2B195025.D	10/12/22	13:22	03:51	(unrelated sample)
JD52973-2	2B195027.D	10/12/22	14:20	04:49	P-2_09302022
JD52973-11	2B195029.D	10/12/22	15:18	05:47	Z-5_09302022
JD52973-5	2B195030.D	10/12/22	15:48	06:17	C-2_09302022
JD52973-12	2B195031.D	10/12/22	16:17	06:46	Z-6_09302022
JD52973-2MS	2B195032.D	10/12/22	16:46	07:15	Matrix Spike
JD52973-2MSD	2B195033.D	10/12/22	17:15	07:44	Matrix Spike Duplicate
ZZZZZZ	2B195035.D	10/12/22	18:15	08:44	(unrelated sample)
ZZZZZZ	2B195036.D	10/12/22	18:44	09:13	(unrelated sample)
ZZZZZZ	2B195037.D	10/12/22	19:13	09:42	(unrelated sample)
JD52973-4	2B195038.D	10/12/22	19:42	10:11	C-1_09302022

Instrument Performance Check (BFB)

Job Number: JD52973
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: V2V3747-BFB
Lab File ID: 2V92136.D
Instrument ID: GCMS2V
Injection Date: 09/11/22
Injection Time: 14:53

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	27517	20.1		Pass
75	30.0 - 60.0% of mass 95	71051	51.9		Pass
95	Base peak, 100% relative abundance	136912	100.0		Pass
96	5.0 - 9.0% of mass 95	9133	6.67		Pass
173	Less than 2.0% of mass 174	1406	1.03	(1.02) [a]	Pass
174	50.0 - 120.0% of mass 95	137259	100.3		Pass
175	5.0 - 9.0% of mass 174	10650	7.78	(7.76) [a]	Pass
176	95.0 - 101.0% of mass 174	136979	100.0	(99.8) [a]	Pass
177	5.0 - 9.0% of mass 176	9176	6.70	(6.70) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2V3747-IC3747	2V92138.D	09/11/22	15:36	00:43	Initial cal 0.2
V2V3747-IC3747	2V92140.D	09/11/22	16:05	01:12	Initial cal 0.5
V2V3747-IC3747	2V92142.D	09/11/22	16:35	01:42	Initial cal 1
V2V3747-IC3747	2V92144.D	09/11/22	17:04	02:11	Initial cal 2
V2V3747-IC3747	2V92146.D	09/11/22	17:33	02:40	Initial cal 4
V2V3747-IC3747	2V92148.D	09/11/22	18:02	03:09	Initial cal 8
V2V3747-IC3747	2V92150.D	09/11/22	18:32	03:39	Initial cal 20
V2V3747-ICC3747	2V92152.D	09/11/22	19:01	04:08	Initial cal 50
V2V3747-IC3747	2V92154.D	09/11/22	19:30	04:37	Initial cal 100
V2V3747-IC3747	2V92156.D	09/11/22	20:00	05:07	Initial cal 200
V2V3747-ICV3747	2V92162.D	09/11/22	21:28	06:35	Initial cal verification 50
V2V3747-ICV3747	2V92164.D	09/11/22	21:57	07:04	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JD52973
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: V2V3798-BFB
Lab File ID: 2V93571.D
Instrument ID: GCMS2V
Injection Date: 10/12/22
Injection Time: 09:48

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	36093	24.3		Pass
75	30.0 - 60.0% of mass 95	67301	45.3		Pass
95	Base peak, 100% relative abundance	148459	100.0		Pass
96	5.0 - 9.0% of mass 95	9622	6.48		Pass
173	Less than 2.0% of mass 174	605	0.41	(0.45) [a]	Pass
174	50.0 - 120.0% of mass 95	134917	90.9		Pass
175	5.0 - 9.0% of mass 174	10145	6.83	(7.52) [a]	Pass
176	95.0 - 101.0% of mass 174	129232	87.0	(95.8) [a]	Pass
177	5.0 - 9.0% of mass 176	8798	5.93	(6.81) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2V3798-CC3747	2V93571.D	10/12/22	09:48	00:00	Continuing cal 20
V2V3798-BS	2V93573.D	10/12/22	10:49	01:01	Blank Spike
V2V3798-MB	2V93575.D	10/12/22	11:36	01:48	Method Blank
ZZZZZZ	2V93576.D	10/12/22	12:06	02:18	(unrelated sample)
ZZZZZZ	2V93577.D	10/12/22	12:31	02:43	(unrelated sample)
ZZZZZZ	2V93578.D	10/12/22	13:01	03:13	(unrelated sample)
ZZZZZZ	2V93579.D	10/12/22	13:24	03:36	(unrelated sample)
ZZZZZZ	2V93580.D	10/12/22	13:48	04:00	(unrelated sample)
JD52973-1	2V93581.D	10/12/22	14:11	04:23	P-1_09302022
JD52973-6	2V93582.D	10/12/22	14:34	04:46	C-3_09302022
JD53290-10	2V93583.D	10/12/22	14:58	05:10	(used for QC only; not part of job JD52973)
JD52973-7	2V93584.D	10/12/22	15:21	05:33	Z-1_09302022
JD52973-8	2V93585.D	10/12/22	15:45	05:57	Z-2_09302022
ZZZZZZ	2V93586.D	10/12/22	16:08	06:20	(unrelated sample)
JD53290-10MS	2V93587.D	10/12/22	16:31	06:43	Matrix Spike
JD53290-10MSD	2V93588.D	10/12/22	16:55	07:07	Matrix Spike Duplicate
ZZZZZZ	2V93589.D	10/12/22	17:18	07:30	(unrelated sample)
ZZZZZZ	2V93590.D	10/12/22	17:42	07:54	(unrelated sample)
ZZZZZZ	2V93591.D	10/12/22	18:05	08:17	(unrelated sample)
ZZZZZZ	2V93592.D	10/12/22	18:29	08:41	(unrelated sample)
ZZZZZZ	2V93593.D	10/12/22	18:52	09:04	(unrelated sample)
ZZZZZZ	2V93594.D	10/12/22	19:15	09:27	(unrelated sample)
ZZZZZZ	2V93595.D	10/12/22	19:39	09:51	(unrelated sample)
ZZZZZZ	2V93597.D	10/12/22	20:26	10:38	(unrelated sample)

Surrogate Recovery Summary

Job Number: JD52973
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Method: SW846 8260D **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JD52973-1	2V93581.D	89	97	104	106
JD52973-1	1A226844.D	101	106	107	99
JD52973-2	2B195027.D	103	101	99	103
JD52973-2	1A226845.D	99	104	107	99
JD52973-3	1A226961.D	101	106	107	99
JD52973-3	1A226846.D	103	107	106	95
JD52973-4	1A226858.D	107	113	104	98
JD52973-4	2B195038.D	104	101	98	103
JD52973-5	1A226859.D	106	112	106	98
JD52973-5	2B195030.D	102	101	100	103
JD52973-6	1A226860.D	110	111	106	96
JD52973-6	2V93582.D	92	103	103	108
JD52973-7	1A226863.D	100	105	107	97
JD52973-7	2V93584.D	88	95	102	107
JD52973-8	1A226861.D	101	106	109	100
JD52973-8	2V93585.D	90	100	103	107
JD52973-9	1A226865.D	102	111	108	101
JD52973-9	1A226853.D	101	111	106	98
JD52973-10	1A226854.D	102	113	106	100
JD52973-10	1A226866.D	0*	106	106	94
JD52973-11	1A226864.D	101	108	106	96
JD52973-11	2B195029.D	101	103	101	100
JD52973-12	2B195031.D	101	101	100	102
JD52973-13	1A226857.D	101	110	107	97
JD52973-2MS	2B195032.D	98	92	97	83
JD52973-2MSD	2B195033.D	98	92	98	82
JD52973-3MS	1A226974.D	103	102	101	95
JD52973-3MSD	1A226975.D	103	102	102	95
JD53290-10MS	2V93587.D	91	98	100	109
JD53290-10MSD	2V93588.D	91	97	100	108
JD53343-2MS	1A226852.D	104	106	101	93
JD53343-3DUP	1A226855.D	105	111	105	97
V1A9715-BS	1A226840.D	104	105	101	95
V1A9715-MB	1A226842.D	102	110	107	100
V1A9719-BS	1A226957.D	104	103	102	94
V1A9719-BSD	1A226958.D	104	104	102	96
V1A9719-MB	1A226960.D	103	107	107	99
V2B8847-BS	2B195020.D	99	93	98	83
V2B8847-MB	2B195022.D	106	100	97	109
V2V3798-BS	2V93573.D	91	100	100	108

Surrogate Recovery Summary

Job Number: JD52973
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Method: SW846 8260D **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
V2V3798-MB	2V93575.D	90	101	103	107

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	80-120%
S2 = 1,2-Dichloroethane-D4	80-120%
S3 = Toluene-D8	80-120%
S4 = 4-Bromofluorobenzene	82-114%

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Langan Engineering & Environmental

1487 First Avenue, NY, NY

100963701

SGS Job Number: JD54163

Sampling Date: 10/21/22



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Total number of pages in report: 84

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

David Chastain
General Manager

Client Service contact: Beth Stopen 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA(68-00408), RI, SC, TX, UT, VA, WV

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SGS North America Inc.

Sample Summary

Langan Engineering & Environmental

Job No: JD54163

1487 First Avenue, NY, NY
Project No: 100963701

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JD54163-1	10/21/22	11:45	XY	10/21/22	AQ	Ground Water	P-1-102122A/B
JD54163-2	10/21/22	11:50	XY	10/21/22	AQ	Ground Water	P-2-102122A/B
JD54163-3	10/21/22	11:55	XY	10/21/22	AQ	Ground Water	P-3-102122A/B
JD54163-4	10/21/22	12:00	XY	10/21/22	AQ	Ground Water	C-1-102122A/B
JD54163-5	10/21/22	12:05	XY	10/21/22	AQ	Ground Water	C-2-102122A/B
JD54163-6	10/21/22	12:10	XY	10/21/22	AQ	Ground Water	C-3-102122A/B
JD54163-7	10/21/22	12:15	XY	10/21/22	AQ	Ground Water	Z-2-102122A/B
JD54163-8	10/21/22	12:20	XY	10/21/22	AQ	Ground Water	Z-3-102122A/B
JD54163-9	10/21/22	12:25	XY	10/21/22	AQ	Ground Water	Z-4-102122A/B
JD54163-10	10/21/22	12:30	XY	10/21/22	AQ	Ground Water	Z-5-102122A/B
JD54163-11	10/21/22	12:35	XY	10/21/22	AQ	Ground Water	Z-6-102122A/B

This report contains results reported as ND = Not detected. The following applies:
Organics ND = Not detected above the MDL

Summary of Hits

Job Number: JD54163
Account: Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY
Collected: 10/21/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD54163-1	**P-1-102122A/B**					
Acetone [a]		321	10	3.1	ug/l	SW846 8260D
Benzene [a]		1.1	0.50	0.43	ug/l	SW846 8260D
2-Butanone (MEK) [a]		14.7	10	2.7	ug/l	SW846 8260D
Carbon disulfide [a]		2.3	2.0	0.46	ug/l	SW846 8260D
Chloroform [a]		5.8	1.0	0.50	ug/l	SW846 8260D
Cyclohexane [a]		17.3	5.0	0.78	ug/l	SW846 8260D
cis-1,2-Dichloroethene [a]		69.0	1.0	0.51	ug/l	SW846 8260D
2-Hexanone [a]		5.9	5.0	2.0	ug/l	SW846 8260D
Methylene chloride [a]		4.8	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [a]		390	4.0	2.2	ug/l	SW846 8260D
Toluene [a]		0.92 J	1.0	0.49	ug/l	SW846 8260D
Trichloroethene [a]		7.8	1.0	0.53	ug/l	SW846 8260D
m,p-Xylene [a]		2.1	1.0	0.78	ug/l	SW846 8260D
o-Xylene [a]		0.62 J	1.0	0.59	ug/l	SW846 8260D
Xylene (total) [a]		2.7	1.0	0.59	ug/l	SW846 8260D
JD54163-2	**P-2-102122A/B**					
Acetone [b]		97.3	20	6.1	ug/l	SW846 8260D
Benzene [b]		0.89 J	1.0	0.85	ug/l	SW846 8260D
Carbon disulfide [b]		3.7 J	4.0	0.91	ug/l	SW846 8260D
Chloroform [b]		6.2	2.0	1.0	ug/l	SW846 8260D
Cyclohexane [b]		7.5 J	10	1.6	ug/l	SW846 8260D
cis-1,2-Dichloroethene [b]		78.1	2.0	1.0	ug/l	SW846 8260D
Methylene chloride [b]		5.1	4.0	2.0	ug/l	SW846 8260D
Tetrachloroethene [b]		347	2.0	1.1	ug/l	SW846 8260D
Trichloroethene [b]		8.0	2.0	1.1	ug/l	SW846 8260D
m,p-Xylene [b]		1.7 J	2.0	1.6	ug/l	SW846 8260D
Xylene (total) [b]		1.7 J	2.0	1.2	ug/l	SW846 8260D
JD54163-3	**P-3-102122A/B**					
Acetone [a]		46.5	10	3.1	ug/l	SW846 8260D
Benzene [a]		1.2	0.50	0.43	ug/l	SW846 8260D
Carbon disulfide [a]		0.59 J	2.0	0.46	ug/l	SW846 8260D
Chloroform [a]		6.2	1.0	0.50	ug/l	SW846 8260D
Cyclohexane [a]		8.3	5.0	0.78	ug/l	SW846 8260D
cis-1,2-Dichloroethene [a]		77.6	1.0	0.51	ug/l	SW846 8260D
2-Hexanone [a]		5.1	5.0	2.0	ug/l	SW846 8260D
Methylene chloride [a]		4.8	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [a]		422	4.0	2.2	ug/l	SW846 8260D
Toluene [a]		0.93 J	1.0	0.49	ug/l	SW846 8260D
Trichloroethene [a]		8.9	1.0	0.53	ug/l	SW846 8260D

Summary of Hits

Job Number: JD54163
Account: Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY
Collected: 10/21/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
m,p-Xylene [a]		2.0	1.0	0.78	ug/l	SW846 8260D
o-Xylene [a]		0.73 J	1.0	0.59	ug/l	SW846 8260D
Xylene (total) [a]		2.7	1.0	0.59	ug/l	SW846 8260D
JD54163-4	**C-1-102122A/B**					
Acetone [c]		304	10	3.1	ug/l	SW846 8260D
2-Butanone (MEK) [c]		3.5 J	10	2.7	ug/l	SW846 8260D
Chloroform [c]		4.7	1.0	0.50	ug/l	SW846 8260D
Cyclohexane [c]		4.5 J	5.0	0.78	ug/l	SW846 8260D
cis-1,2-Dichloroethene [c]		52.6	1.0	0.51	ug/l	SW846 8260D
Methylene chloride [c]		6.3	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [c]		506	10	5.6	ug/l	SW846 8260D
Toluene [c]		0.79 J	1.0	0.49	ug/l	SW846 8260D
Trichloroethene [c]		4.4	1.0	0.53	ug/l	SW846 8260D
m,p-Xylene [c]		2.7	1.0	0.78	ug/l	SW846 8260D
o-Xylene [c]		1.1	1.0	0.59	ug/l	SW846 8260D
Xylene (total) [c]		3.8	1.0	0.59	ug/l	SW846 8260D
JD54163-5	**C-2-102122A/B**					
Acetone [c]		53.5	10	3.1	ug/l	SW846 8260D
2-Butanone (MEK) [c]		3.4 J	10	2.7	ug/l	SW846 8260D
Chloroform [c]		5.0	1.0	0.50	ug/l	SW846 8260D
cis-1,2-Dichloroethene [c]		54.9	1.0	0.51	ug/l	SW846 8260D
Ethylbenzene [c]		0.66 J	1.0	0.60	ug/l	SW846 8260D
Methylene chloride [c]		5.4	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [c]		577	10	5.6	ug/l	SW846 8260D
Toluene [c]		0.94 J	1.0	0.49	ug/l	SW846 8260D
Trichloroethene [c]		4.9	1.0	0.53	ug/l	SW846 8260D
m,p-Xylene [c]		4.1	1.0	0.78	ug/l	SW846 8260D
o-Xylene [c]		1.5	1.0	0.59	ug/l	SW846 8260D
Xylene (total) [c]		5.6	1.0	0.59	ug/l	SW846 8260D
JD54163-6	**C-3-102122A/B**					
Acetone [d]		364	20	6.1	ug/l	SW846 8260D
Carbon disulfide [d]		0.96 J	4.0	0.91	ug/l	SW846 8260D
Chloroform [d]		7.7	2.0	1.0	ug/l	SW846 8260D
cis-1,2-Dichloroethene [d]		81.0	2.0	1.0	ug/l	SW846 8260D
Methylene chloride [d]		7.5	4.0	2.0	ug/l	SW846 8260D
Tetrachloroethene [c]		849	20	11	ug/l	SW846 8260D
Toluene [d]		1.9 J	2.0	0.98	ug/l	SW846 8260D
Trichloroethene [d]		7.4	2.0	1.1	ug/l	SW846 8260D
m,p-Xylene [d]		9.3	2.0	1.6	ug/l	SW846 8260D

Summary of Hits

Job Number: JD54163
Account: Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY
Collected: 10/21/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
o-Xylene [d]		2.6	2.0	1.2	ug/l	SW846 8260D
Xylene (total) [d]		11.9	2.0	1.2	ug/l	SW846 8260D
JD54163-7	**Z-2-102122A/B**					
Acetone [c]		217	10	3.1	ug/l	SW846 8260D
Benzene [c]		0.55	0.50	0.43	ug/l	SW846 8260D
2-Butanone (MEK) [c]		842	100	27	ug/l	SW846 8260D
Carbon disulfide [c]		1.1 J	2.0	0.46	ug/l	SW846 8260D
Ethylbenzene [c]		1.1	1.0	0.60	ug/l	SW846 8260D
2-Hexanone [e]		2.0 J	5.0	2.0	ug/l	SW846 8260D
Methylene chloride [c]		5.1	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [c]		1.7	1.0	0.56	ug/l	SW846 8260D
Toluene [c]		1.5	1.0	0.49	ug/l	SW846 8260D
Vinyl chloride [c]		0.92 J	1.0	0.52	ug/l	SW846 8260D
m,p-Xylene [c]		4.5	1.0	0.78	ug/l	SW846 8260D
o-Xylene [c]		1.3	1.0	0.59	ug/l	SW846 8260D
Xylene (total) [c]		5.8	1.0	0.59	ug/l	SW846 8260D
JD54163-8	**Z-3-102122A/B**					
Acetone [a]		42.8	10	3.1	ug/l	SW846 8260D
2-Butanone (MEK) [a]		11.0	10	2.7	ug/l	SW846 8260D
Carbon disulfide [a]		0.75 J	2.0	0.46	ug/l	SW846 8260D
Cyclohexane [a]		1.6 J	5.0	0.78	ug/l	SW846 8260D
cis-1,2-Dichloroethene [a]		1.1	1.0	0.51	ug/l	SW846 8260D
2-Hexanone [a]		5.3	5.0	2.0	ug/l	SW846 8260D
Tetrachloroethene [a]		2.5	1.0	0.56	ug/l	SW846 8260D
Vinyl chloride [a]		1.0	1.0	0.52	ug/l	SW846 8260D
JD54163-9	**Z-4-102122A/B**					
Acetone [c]		197	10	3.1	ug/l	SW846 8260D
Benzene [c]		0.56	0.50	0.43	ug/l	SW846 8260D
2-Butanone (MEK) [f]		799	40	11	ug/l	SW846 8260D
Carbon disulfide [c]		0.46 J	2.0	0.46	ug/l	SW846 8260D
cis-1,2-Dichloroethene [c]		6.4	1.0	0.51	ug/l	SW846 8260D
Ethylbenzene [c]		0.67 J	1.0	0.60	ug/l	SW846 8260D
2-Hexanone [e]		4.2 J	5.0	2.0	ug/l	SW846 8260D
Methylene chloride [c]		5.2	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [c]		1.0	1.0	0.56	ug/l	SW846 8260D
Toluene [c]		1.4	1.0	0.49	ug/l	SW846 8260D
Vinyl chloride [c]		1.9	1.0	0.52	ug/l	SW846 8260D
m,p-Xylene [c]		2.1	1.0	0.78	ug/l	SW846 8260D
o-Xylene [c]		0.78 J	1.0	0.59	ug/l	SW846 8260D

Summary of Hits

Job Number: JD54163
Account: Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY
Collected: 10/21/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Xylene (total) [c]		2.9	1.0	0.59	ug/l	SW846 8260D
JD54163-10	**Z-5-102122A/B**					
Acetone [c]		130	10	3.1	ug/l	SW846 8260D
Benzene [c]		0.57	0.50	0.43	ug/l	SW846 8260D
2-Butanone (MEK) [g]		1060	40	11	ug/l	SW846 8260D
2-Hexanone [e]		3.8 J	5.0	2.0	ug/l	SW846 8260D
Methylene chloride [c]		5.2	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [c]		0.88 J	1.0	0.56	ug/l	SW846 8260D
Toluene [c]		1.1	1.0	0.49	ug/l	SW846 8260D
Vinyl chloride [c]		14.0	1.0	0.52	ug/l	SW846 8260D
m,p-Xylene [c]		1.8	1.0	0.78	ug/l	SW846 8260D
Xylene (total) [c]		1.8	1.0	0.59	ug/l	SW846 8260D
JD54163-11	**Z-6-102122A/B**					
Acetone [c]		176	40	12	ug/l	SW846 8260D
Benzene [c]		0.89	0.50	0.43	ug/l	SW846 8260D
2-Butanone (MEK) [c]		1260	40	11	ug/l	SW846 8260D
cis-1,2-Dichloroethene [c]		1.8	1.0	0.51	ug/l	SW846 8260D
trans-1,2-Dichloroethene [c]		0.84 J	1.0	0.54	ug/l	SW846 8260D
2-Hexanone [c]		4.0 J	5.0	2.0	ug/l	SW846 8260D
Methylene chloride [c]		4.9	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [c]		3.5	1.0	0.56	ug/l	SW846 8260D
Toluene [c]		2.3	1.0	0.49	ug/l	SW846 8260D
Trichloroethene [c]		0.61 J	1.0	0.53	ug/l	SW846 8260D
Vinyl chloride [c]		3.9	1.0	0.52	ug/l	SW846 8260D
m,p-Xylene [c]		5.1	1.0	0.78	ug/l	SW846 8260D
o-Xylene [c]		1.5	1.0	0.59	ug/l	SW846 8260D
Xylene (total) [c]		6.6	1.0	0.59	ug/l	SW846 8260D

(a) (pH = 3)Sample pH did not satisfy field preservation criteria.
(b) (pH = 4)Sample pH did not satisfy field preservation criteria.Dilution required due to high concentration of target compound.
(c) (pH = 4)Sample pH did not satisfy field preservation criteria.
(d) Dilution required due to high concentration of target compound.(pH = 4)Sample pH did not satisfy field preservation criteria.
(e) (pH = 4)Sample pH did not satisfy field preservation criteria. Associated CCV outside of control limits high.
(f) (pH = 3)Sample pH did not satisfy field preservation criteria.corr rr cchit o/d
(g) (pH = 4)Sample pH did not satisfy field preservation criteria. Dilution required due to high concentration of target compound.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	P-1-102122A/B		
Lab Sample ID:	JD54163-1	**Date Sampled:**	10/21/22
Matrix:	AQ - Ground Water	**Date Received:**	10/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3D183445.D	1	10/27/22 13:53	NH	n/a	n/a	V3D7714
Run #2 [a]	3D183337.D	4	10/25/22 19:00	NW	n/a	n/a	V3D7710

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	321	10	3.1	ug/l	
71-43-2	Benzene	1.1	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane [b]	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	14.7	10	2.7	ug/l	
75-15-0	Carbon disulfide	2.3	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane [b]	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	5.8	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	17.3	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	69.0	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	5.9	5.0	2.0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-1-102122A/B		
Lab Sample ID:	JD54163-1	**Date Sampled:**	10/21/22
Matrix:	AQ - Ground Water	**Date Received:**	10/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	4.8	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	390 [c]	4.0	2.2	ug/l	
108-88-3	Toluene	0.92	1.0	0.49	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	7.8	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride [b]	ND	1.0	0.52	ug/l	
	m,p-Xylene	2.1	1.0	0.78	ug/l	
95-47-6	o-Xylene	0.62	1.0	0.59	ug/l	J
1330-20-7	Xylene (total)	2.7	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%	99%	80-120%
17060-07-0	1,2-Dichloroethane-D4	95%	99%	80-120%
2037-26-5	Toluene-D8	103%	103%	80-120%
460-00-4	4-Bromofluorobenzene	103%	101%	82-114%

(a) (pH = 3)Sample pH did not satisfy field preservation criteria.
(b) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.
(c) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-2-102122A/B		
Lab Sample ID:	JD54163-2	**Date Sampled:**	10/21/22
Matrix:	AQ - Ground Water	**Date Received:**	10/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3D183386.D	2	10/26/22 14:30	NW	n/a	n/a	V3D7712
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	97.3	20	6.1	ug/l	
71-43-2	Benzene	0.89	1.0	0.85	ug/l	J
74-97-5	Bromochloromethane	ND	2.0	0.96	ug/l	
75-27-4	Bromodichloromethane	ND	2.0	0.90	ug/l	
75-25-2	Bromoform	ND	2.0	1.3	ug/l	
74-83-9	Bromomethane	ND	4.0	3.3	ug/l	
78-93-3	2-Butanone (MEK)	ND	20	5.5	ug/l	
75-15-0	Carbon disulfide	3.7	4.0	0.91	ug/l	J
56-23-5	Carbon tetrachloride	ND	2.0	1.1	ug/l	
108-90-7	Chlorobenzene	ND	2.0	1.1	ug/l	
75-00-3	Chloroethane	ND	2.0	1.5	ug/l	
67-66-3	Chloroform	6.2	2.0	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	1.5	ug/l	
110-82-7	Cyclohexane	7.5	10	1.6	ug/l	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	4.0	1.1	ug/l	
124-48-1	Dibromochloromethane	ND	2.0	1.1	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.95	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	2.0	1.1	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2.0	1.1	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2.0	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	4.0	1.1	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.0	1.1	ug/l	
107-06-2	1,2-Dichloroethane	ND	2.0	1.2	ug/l	
75-35-4	1,1-Dichloroethene	ND	2.0	1.2	ug/l	
156-59-2	cis-1,2-Dichloroethene	78.1	2.0	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	2.0	1.1	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.94	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.86	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.2	ug/l	
76-13-1	Freon 113	ND	10	1.2	ug/l	
591-78-6	2-Hexanone [b]	ND	10	4.1	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-2-102122A/B		
Lab Sample ID:	JD54163-2	**Date Sampled:**	10/21/22
Matrix:	AQ - Ground Water	**Date Received:**	10/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	2.0	1.3	ug/l	
79-20-9	Methyl Acetate [b]	ND	10	1.6	ug/l	
108-87-2	Methylcyclohexane	ND	10	1.2	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK [b]	ND	10	3.7	ug/l	
75-09-2	Methylene chloride	5.1	4.0	2.0	ug/l	
100-42-5	Styrene	ND	2.0	0.97	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	1.3	ug/l	
127-18-4	Tetrachloroethene	347	2.0	1.1	ug/l	
108-88-3	Toluene	ND	2.0	0.98	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	1.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.0	1.1	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.0	1.1	ug/l	
79-01-6	Trichloroethene	8.0	2.0	1.1	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	0.80	ug/l	
75-01-4	Vinyl chloride	ND	2.0	1.0	ug/l	
	m,p-Xylene	1.7	2.0	1.6	ug/l	J
95-47-6	o-Xylene	ND	2.0	1.2	ug/l	
1330-20-7	Xylene (total)	1.7	2.0	1.2	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		80-120%
17060-07-0	1,2-Dichloroethane-D4	97%		80-120%
2037-26-5	Toluene-D8	105%		80-120%
460-00-4	4-Bromofluorobenzene	103%		82-114%

(a) (pH = 4)Sample pH did not satisfy field preservation criteria.Dilution required due to high concentration of target compound.
(b) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-3-102122A/B		
Lab Sample ID:	JD54163-3	**Date Sampled:**	10/21/22
Matrix:	AQ - Ground Water	**Date Received:**	10/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3D183444.D	1	10/27/22 13:29	NH	n/a	n/a	V3D7714
Run #2 [a]	3D183340.D	4	10/25/22 20:10	NW	n/a	n/a	V3D7710

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	46.5	10	3.1	ug/l	
71-43-2	Benzene	1.2	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane [b]	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.7	ug/l	
75-15-0	Carbon disulfide	0.59	2.0	0.46	ug/l	J
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane [b]	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	6.2	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	8.3	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	77.6	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	5.1	5.0	2.0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-3-102122A/B		
Lab Sample ID:	JD54163-3	**Date Sampled:**	10/21/22
Matrix:	AQ - Ground Water	**Date Received:**	10/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	4.8	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	422 [c]	4.0	2.2	ug/l	
108-88-3	Toluene	0.93	1.0	0.49	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	8.9	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride [b]	ND	1.0	0.52	ug/l	
	m,p-Xylene	2.0	1.0	0.78	ug/l	
95-47-6	o-Xylene	0.73	1.0	0.59	ug/l	J
1330-20-7	Xylene (total)	2.7	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%	97%	80-120%
17060-07-0	1,2-Dichloroethane-D4	94%	98%	80-120%
2037-26-5	Toluene-D8	102%	102%	80-120%
460-00-4	4-Bromofluorobenzene	104%	100%	82-114%

(a) (pH = 3)Sample pH did not satisfy field preservation criteria.
(b) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.
(c) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	C-1-102122A/B		
Lab Sample ID:	JD54163-4	**Date Sampled:**	10/21/22
Matrix:	AQ - Ground Water	**Date Received:**	10/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3D183325.D	1	10/25/22 14:16	NW	n/a	n/a	V3D7710
Run #2 [a]	1A227443.D	10	10/24/22 21:19	NH	n/a	n/a	V1A9735

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	304	10	3.1	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	3.5	10	2.7	ug/l	J
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane [b]	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	4.7	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	4.5	5.0	0.78	ug/l	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	52.6	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	C-1-102122A/B		
Lab Sample ID:	JD54163-4	**Date Sampled:**	10/21/22
Matrix:	AQ - Ground Water	**Date Received:**	10/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate [c]	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	6.3	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	506 [d]	10	5.6	ug/l	
108-88-3	Toluene	0.79	1.0	0.49	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	4.4	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride [b]	ND	1.0	0.52	ug/l	
	m,p-Xylene	2.7	1.0	0.78	ug/l	
95-47-6	o-Xylene	1.1	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	3.8	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	99%	80-120%
17060-07-0	1,2-Dichloroethane-D4	101%	114%	80-120%
2037-26-5	Toluene-D8	100%	99%	80-120%
460-00-4	4-Bromofluorobenzene	97%	96%	82-114%

(a) (pH = 4)Sample pH did not satisfy field preservation criteria.
(b) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.
(c) Associated CCV outside of control limits high, sample was ND.
(d) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	C-2-102122A/B		
Lab Sample ID:	JD54163-5	**Date Sampled:**	10/21/22
Matrix:	AQ - Ground Water	**Date Received:**	10/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3D183326.D	1	10/25/22 14:40	NW	n/a	n/a	V3D7710
Run #2 [a]	1A227444.D	10	10/24/22 21:43	NH	n/a	n/a	V1A9735

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	53.5	10	3.1	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	3.4	10	2.7	ug/l	J
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane [b]	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	5.0	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	54.9	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	0.66	1.0	0.60	ug/l	J
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	C-2-102122A/B		
Lab Sample ID:	JD54163-5	**Date Sampled:**	10/21/22
Matrix:	AQ - Ground Water	**Date Received:**	10/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate [c]	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	5.4	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	577 [d]	10	5.6	ug/l	
108-88-3	Toluene	0.94	1.0	0.49	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	4.9	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride [b]	ND	1.0	0.52	ug/l	
	m,p-Xylene	4.1	1.0	0.78	ug/l	
95-47-6	o-Xylene	1.5	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	5.6	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%	96%	80-120%
17060-07-0	1,2-Dichloroethane-D4	103%	114%	80-120%
2037-26-5	Toluene-D8	102%	98%	80-120%
460-00-4	4-Bromofluorobenzene	95%	96%	82-114%

(a) (pH = 4)Sample pH did not satisfy field preservation criteria.
(b) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.
(c) Associated CCV outside of control limits high, sample was ND.
(d) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	C-3-102122A/B		
Lab Sample ID:	JD54163-6	**Date Sampled:**	10/21/22
Matrix:	AQ - Ground Water	**Date Received:**	10/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3D183324.D	2	10/25/22 13:53	NW	n/a	n/a	V3D7710
Run #2 [b]	1A227445.D	20	10/24/22 22:07	NH	n/a	n/a	V1A9735

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	364	20	6.1	ug/l	
71-43-2	Benzene	ND	1.0	0.85	ug/l	
74-97-5	Bromochloromethane	ND	2.0	0.96	ug/l	
75-27-4	Bromodichloromethane	ND	2.0	0.90	ug/l	
75-25-2	Bromoform	ND	2.0	1.3	ug/l	
74-83-9	Bromomethane	ND	4.0	3.3	ug/l	
78-93-3	2-Butanone (MEK)	ND	20	5.5	ug/l	
75-15-0	Carbon disulfide	0.96	4.0	0.91	ug/l	J
56-23-5	Carbon tetrachloride	ND	2.0	1.1	ug/l	
108-90-7	Chlorobenzene	ND	2.0	1.1	ug/l	
75-00-3	Chloroethane [c]	ND	2.0	1.5	ug/l	
67-66-3	Chloroform	7.7	2.0	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	1.5	ug/l	
110-82-7	Cyclohexane	ND	10	1.6	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	4.0	1.1	ug/l	
124-48-1	Dibromochloromethane	ND	2.0	1.1	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.95	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	2.0	1.1	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2.0	1.1	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2.0	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	4.0	1.1	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.0	1.1	ug/l	
107-06-2	1,2-Dichloroethane	ND	2.0	1.2	ug/l	
75-35-4	1,1-Dichloroethene	ND	2.0	1.2	ug/l	
156-59-2	cis-1,2-Dichloroethene	81.0	2.0	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	2.0	1.1	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.94	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.86	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.2	ug/l	
76-13-1	Freon 113	ND	10	1.2	ug/l	
591-78-6	2-Hexanone	ND	10	4.1	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	C-3-102122A/B		
Lab Sample ID:	JD54163-6	**Date Sampled:**	10/21/22
Matrix:	AQ - Ground Water	**Date Received:**	10/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	2.0	1.3	ug/l	
79-20-9	Methyl Acetate [d]	ND	10	1.6	ug/l	
108-87-2	Methylcyclohexane	ND	10	1.2	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	10	3.7	ug/l	
75-09-2	Methylene chloride	7.5	4.0	2.0	ug/l	
100-42-5	Styrene	ND	2.0	0.97	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	1.3	ug/l	
127-18-4	Tetrachloroethene	849 [e]	20	11	ug/l	
108-88-3	Toluene	1.9	2.0	0.98	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	1.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.0	1.1	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.0	1.1	ug/l	
79-01-6	Trichloroethene	7.4	2.0	1.1	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	0.80	ug/l	
75-01-4	Vinyl chloride [c]	ND	2.0	1.0	ug/l	
	m,p-Xylene	9.3	2.0	1.6	ug/l	
95-47-6	o-Xylene	2.6	2.0	1.2	ug/l	
1330-20-7	Xylene (total)	11.9	2.0	1.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%	98%	80-120%
17060-07-0	1,2-Dichloroethane-D4	105%	110%	80-120%
2037-26-5	Toluene-D8	104%	98%	80-120%
460-00-4	4-Bromofluorobenzene	100%	96%	82-114%

(a) Dilution required due to high concentration of target compound.(pH = 4)Sample pH did not satisfy field preservation criteria.
(b) (pH = 4)Sample pH did not satisfy field preservation criteria.
(c) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.
(d) Associated CCV outside of control limits high, sample was ND.
(e) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z-2-102122A/B		
Lab Sample ID:	JD54163-7	**Date Sampled:**	10/21/22
Matrix:	AQ - Ground Water	**Date Received:**	10/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3D183381.D	1	10/26/22 12:32	NW	n/a	n/a	V3D7712
Run #2 [a]	1A227454.D	10	10/25/22 01:41	NH	n/a	n/a	V1A9736

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	217	10	3.1	ug/l	
71-43-2	Benzene	0.55	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	842 [b]	100	27	ug/l	
75-15-0	Carbon disulfide	1.1	2.0	0.46	ug/l	J
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	1.1	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone [c]	2.0	5.0	2.0	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z-2-102122A/B		
Lab Sample ID:	JD54163-7	**Date Sampled:**	10/21/22
Matrix:	AQ - Ground Water	**Date Received:**	10/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate [d]	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK [d]	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	5.1	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	1.7	1.0	0.56	ug/l	
108-88-3	Toluene	1.5	1.0	0.49	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	0.92	1.0	0.52	ug/l	J
	m,p-Xylene	4.5	1.0	0.78	ug/l	
95-47-6	o-Xylene	1.3	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	5.8	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%	97%	80-120%
17060-07-0	1,2-Dichloroethane-D4	100%	111%	80-120%
2037-26-5	Toluene-D8	104%	96%	80-120%
460-00-4	4-Bromofluorobenzene	107%	95%	82-114%

(a) (pH = 4)Sample pH did not satisfy field preservation criteria.
(b) Result is from Run# 2
(c) Associated CCV outside of control limits high.
(d) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z-3-102122A/B		
Lab Sample ID:	JD54163-8	**Date Sampled:**	10/21/22
Matrix:	AQ - Ground Water	**Date Received:**	10/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3D183323.D	1	10/25/22 13:29	NW	n/a	n/a	V3D7710
Run #2 [a]	1A227497.D	1	10/25/22 18:21	NH	n/a	n/a	V1A9737

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	42.8	10	3.1	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	11.0	10	2.7	ug/l	
75-15-0	Carbon disulfide	0.75	2.0	0.46	ug/l	J
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane [b]	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	1.6	5.0	0.78	ug/l	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	1.1	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	5.3	5.0	2.0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z-3-102122A/B		
Lab Sample ID:	JD54163-8	**Date Sampled:**	10/21/22
Matrix:	AQ - Ground Water	**Date Received:**	10/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate [c]	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	2.5	1.0	0.56	ug/l	
108-88-3	Toluene	ND	1.0	0.49	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	1.0 [d]	1.0	0.52	ug/l	
	m,p-Xylene	ND	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%	96%	80-120%
17060-07-0	1,2-Dichloroethane-D4	98%	112%	80-120%
2037-26-5	Toluene-D8	102%	99%	80-120%
460-00-4	4-Bromofluorobenzene	101%	94%	82-114%

(a) (pH = 3)Sample pH did not satisfy field preservation criteria.
(b) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.
(c) Associated CCV outside of control limits high, sample was ND.
(d) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z-4-102122A/B		
Lab Sample ID:	JD54163-9	**Date Sampled:**	10/21/22
Matrix:	AQ - Ground Water	**Date Received:**	10/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3D183382.D	1	10/26/22 12:56	NW	n/a	n/a	V3D7712
Run #2 [b]	1A227456.D	4	10/25/22 02:28	NH	n/a	n/a	V1A9736

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	197	10	3.1	ug/l	
71-43-2	Benzene	0.56	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	799 [c]	40	11	ug/l	
75-15-0	Carbon disulfide	0.46	2.0	0.46	ug/l	J
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	6.4	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	0.67	1.0	0.60	ug/l	J
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone [d]	4.2	5.0	2.0	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z-4-102122A/B		
Lab Sample ID:	JD54163-9	**Date Sampled:**	10/21/22
Matrix:	AQ - Ground Water	**Date Received:**	10/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate [e]	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK [e]	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	5.2	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	1.0	1.0	0.56	ug/l	
108-88-3	Toluene	1.4	1.0	0.49	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	1.9	1.0	0.52	ug/l	
	m,p-Xylene	2.1	1.0	0.78	ug/l	
95-47-6	o-Xylene	0.78	1.0	0.59	ug/l	J
1330-20-7	Xylene (total)	2.9	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%	95%	80-120%
17060-07-0	1,2-Dichloroethane-D4	98%	112%	80-120%
2037-26-5	Toluene-D8	102%	95%	80-120%
460-00-4	4-Bromofluorobenzene	99%	97%	82-114%

(a) (pH = 4)Sample pH did not satisfy field preservation criteria.
(b) (pH = 3)Sample pH did not satisfy field preservation criteria.corr rr cchit o/d
(c) Result is from Run# 2
(d) Associated CCV outside of control limits high.
(e) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z-5-102122A/B		
Lab Sample ID:	JD54163-10	**Date Sampled:**	10/21/22
Matrix:	AQ - Ground Water	**Date Received:**	10/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3D183383.D	1	10/26/22 13:19	NW	n/a	n/a	V3D7712
Run #2 [b]	3D183341.D	4	10/25/22 20:34	NW	n/a	n/a	V3D7710

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	130	10	3.1	ug/l	
71-43-2	Benzene	0.57	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	1060 [c]	40	11	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone [d]	3.8	5.0	2.0	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z-5-102122A/B		
Lab Sample ID:	JD54163-10	**Date Sampled:**	10/21/22
Matrix:	AQ - Ground Water	**Date Received:**	10/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate [e]	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK [e]	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	5.2	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	0.88	1.0	0.56	ug/l	J
108-88-3	Toluene	1.1	1.0	0.49	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	14.0	1.0	0.52	ug/l	
	m,p-Xylene	1.8	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	1.8	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%	96%	80-120%
17060-07-0	1,2-Dichloroethane-D4	96%	99%	80-120%
2037-26-5	Toluene-D8	101%	103%	80-120%
460-00-4	4-Bromofluorobenzene	103%	100%	82-114%

(a) (pH = 4)Sample pH did not satisfy field preservation criteria.
(b) (pH = 4)Sample pH did not satisfy field preservation criteria. Dilution required due to high concentration of target compound.
(c) Result is from Run# 2
(d) Associated CCV outside of control limits high.
(e) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z-6-102122A/B		
Lab Sample ID:	JD54163-11	**Date Sampled:**	10/21/22
Matrix:	AQ - Ground Water	**Date Received:**	10/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	2K00916.D	1	10/27/22 15:47	TS	n/a	n/a	V2K28
Run #2 [a]	3D183342.D	4	10/25/22 20:58	NW	n/a	n/a	V3D7710

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	176 [b]	40	12	ug/l	
71-43-2	Benzene	0.89	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	1260 [b]	40	11	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride [c]	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane [c]	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	1.8	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.84	1.0	0.54	ug/l	J
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	4.0	5.0	2.0	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z-6-102122A/B		
Lab Sample ID:	JD54163-11	**Date Sampled:**	10/21/22
Matrix:	AQ - Ground Water	**Date Received:**	10/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate [c]	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	4.9	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	3.5	1.0	0.56	ug/l	
108-88-3	Toluene	2.3	1.0	0.49	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	0.61	1.0	0.53	ug/l	J
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	3.9	1.0	0.52	ug/l	
	m,p-Xylene	5.1	1.0	0.78	ug/l	
95-47-6	o-Xylene	1.5	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	6.6	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%	96%	80-120%
17060-07-0	1,2-Dichloroethane-D4	99%	97%	80-120%
2037-26-5	Toluene-D8	99%	101%	80-120%
460-00-4	4-Bromofluorobenzene	106%	101%	82-114%

(a) (pH = 4)Sample pH did not satisfy field preservation criteria.
(b) Result is from Run# 2
(c) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200
www.sgs.com/ehsusa

Page 1 of 2

FED-EX Tracking #

Bottle Order Control # BW-101922-117

SGS Quote #

SGS Job # JD54163

Client / Reporting Information

Company Name: Langan Engineering
Street Address: 300 Kimball Dr.
City: Parsippany State: NJ Zip: 07054
Project Contact: Amia Oka E-mail: aoka@langan.com
Phone #: 609-282-6019
Sampler(s) Name(s): Xin Yin Phone #:

Project Information

Project Name: 1487 First Ave
Street: 1487 First Ave
City: NY State: NY
Project #:
Client Purchase Order #:
Project Manager: Beth Stopen

Billing Information (If different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

VOCs

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB - Field Blank
EB-Equipment Blank
RB - Rinse Blank
TB - Trip Blank

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Grab (G) Comp (C)	Source Chlorinated (Y/N)	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	NONE	DI Water	MEOH	ENCORE	pH Check (Lab Use Only)	LAB USE ONLY
1	P-1-10212022A	1	10/21/2022	11:45	XY	C	Y		1	X								6	V870
2	P-1-10212022B								4										
3	P-2-10212022 ~~BA~~	2		11:50															
4	P-2-10212022B																		
5	P-3-10212022A	3		11:55															
6	P-3-10212022B																		
7	C-1-10212022A	4		12:00															
8	C-1-10212022B																		
9	C-2-10212022A	5		12:05															
10	C-2-10212022B																		
11	C-3-10212022A	6		12:10															
12	C-3-10212022B																		

Turn Around Time (Business Days)

Approved By (SGS PM) / Date:

- [ ] 10 Business Days
- [ ] 5 Business Days
- [ ] 3 Business Days*
- [x] 2 Business Days*
- [ ] 1 Business Day*
- [ ] Other

All data available via SGS Engage

* Approval needed for 1-3 BD TAT

Deliverable

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] NJ Reduced (Level 3)
- [ ] Full Tier I (Level 4)
- [ ] Commercial "C"
- [ ] NJ DKQP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] MA MCP Criteria
- [ ] CT RCP Criteria
- [ ] State Forms
- [ ] EDD Format

Impact Assessment: 2A
Laboral Verification

Commercial "A" = Results only; Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special instructions

11 Samples are collected in duplicate. One sample cannot be collected since it's broken.

SGS courier

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by:	Date / Time:	Received By:
1 Xin Yin	10/21/2022 13:40	1
2		2
3		3
4		4
5		5

Custody Seal # ☐ Intact ☐ Not Intact ☐ Absent

Therm ID: On Ice ☑ Cooler Temp. °C 2.8

See Sample Receipt Summary

2 of 5

EHSA-QAC-0023-05 Rev.Date:8/5/22

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200
www.sgs.com/ehsusa

FED-EX Tracking # | Bottle Order Control #
SGS Quote # | SGS Job # JD54163

Client / Reporting Information

Company Name: Langan Engineering
Street Address: 300 Kimball Dr.
City: Parsippany State: NJ Zip: 07054
Project Contact: Anita Oka E-mail: aoka@langan.com
Phone #: 609-282-8019
Sampler(s) Name(s): Xin Yin Phone #:

Project Information

Project Name: 1487 First Ave
Street: 1487 First Ave
City: NY State: NY
Project #:
Client Purchase Order #:
Project Manager: Beth Stippen

Billing Information (If different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED - Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB - Equipment Blank; RB - Rinse Blank; TB - Trip Blank

VOCs

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Grab (G) Comp (C)	Source Chlorinated (Y/N)	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	NONE	DI Water	MEOH	ENCORE	pH Check (Lab Use Only)	LAB USE ONLY
15	Z-2-102122A	7	10/21/22	12:15	XY	C	Y	GW	1	X									
14	Z-2-102122B																		
13	Z-3-102122A	8		12:20															
16	Z-3-102122B																		
17	Z-4-102122A	9		12:25															
18	Z-4-102122B																		
19	Z-5-102122A	10		12:30															
20	Z-5-102122B																		
21	Z-6-102122A	11		12:35															
22	Z-6-102122B																		
12	BC-102122A	not include for analyses		12:40															
12	BC-102122B																		

Number of Bottles

Turn Around Time (Business Days)

Approved By (SGS PM) / Date:

- [ ] 10 Business Days
- [ ] 5 Business Days
- [ ] 3 Business Days*
- [x] 2 Business Days*
- [ ] 1 Business Day*
- [ ] Other

All data available via SGS Engage

* Approval needed for 1-3 BD TAT

Deliverable

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] NJ Reduced (Level 3)
- [ ] Full Tier I (Level 4)
- [ ] Commercial "C"
- [ ] NJ DKQP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] MA MCP Criteria
- [ ] CT RCP Criteria
- [ ] State Forms
- [ ] EDD Format

Commercial "A" = Results only; Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

One ~~two~~ samples of 11 samples are collected in duplicate. One sample ~~is~~ ~~broken~~ cannot be collected since it's broken.

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by:	Date / Time:	Received By:
1 Xin Yin	10/21/22 13:40	1
2		2
3		3
4		4
5		5

Custody Seal # | Intact | Not intact | Absent

Therm ID: | See Sample Receipt Summary | On Ice | Cooler Temp. °C: 2.8

EHSA-QAC-0023-05 Rev.Date:8/5/22

SGS Sample Receipt Summary

Job Number: JD54163 **Client:** LANGAN ENGINEERING & ENVIRONMENT **Project:** 1487 FIRST AVENUE, NY, NY

Date / Time Received: 10/21/2022 5:16:00 PM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (2.8);

Cooler Temps (Corrected) °C: Cooler 1: (2.8);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:			
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control _Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 231619 pH 12+: 203117A Other: (Specify)

Comments
1). All samples received, in total, 2 x 40ml HCL bottles for VOC analysis. No bottles will be allocated for screens due to this volume.

2). Sample -12 was received despite being crossed out on the COC. Please confirm.

Responded to by: Beth Stopen

Response Date: 10/24/22

1) OK to proceed as noted
2) Place -12 on hold.
Per Amita Oka

Job Change Order: JD54163

Requested Date:	10/24/2022	**Received Date:**	10/21/2022
Account Name:	Langan Engineering & Environme	**Due Date:**	10/24/2022
Project Description:	1487 First Avenue, NY, NY	**Deliverable:**	COMMB
C/O Initiated By:	BETH.WASS **PM:** BW	**TAT (Days):**	3

==========

Sample #: JD54163-1 thru 11

Dept:

TAT: 3

Change:
Revise to 3 day TAT

==========

Above Changes Per: CSR **Date/Time:** 10/24/2022

To Client: This Change Order is confirmation of the revisions, previously discussed with the Client Service Representative.

Page 1 of 1

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A9735-MB	1A227420.D	1	10/24/22	NH	n/a	n/a	V1A9735

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD54163-4, JD54163-5, JD54163-6

CAS No.	Compound	Result	RL	MDL	Units	Q
127-18-4	Tetrachloroethene	ND	1.0	0.56	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	99%	80-120%
17060-07-0	1,2-Dichloroethane-D4	113%	80-120%
2037-26-5	Toluene-D8	97%	80-120%
460-00-4	4-Bromofluorobenzene	99%	82-114%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A9736-MB	1A227452.D	1	10/25/22	NH	n/a	n/a	V1A9736

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD54163-7, JD54163-9

CAS No.	Compound	Result	RL	MDL	Units	Q
78-93-3	2-Butanone (MEK)	ND	10	2.7	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	95%	80-120%
17060-07-0	1,2-Dichloroethane-D4	114%	80-120%
2037-26-5	Toluene-D8	97%	80-120%
460-00-4	4-Bromofluorobenzene	97%	82-114%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3D7710-MB	3D183319.D	1	10/25/22	NW	n/a	n/a	V3D7710

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD54163-1, JD54163-3, JD54163-4, JD54163-5, JD54163-6, JD54163-8, JD54163-10, JD54163-11

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.1	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.7	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	

Method Blank Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3D7710-MB	3D183319.D	1	10/25/22	NW	n/a	n/a	V3D7710

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD54163-1, JD54163-3, JD54163-4, JD54163-5, JD54163-6, JD54163-8, JD54163-10, JD54163-11

CAS No.	Compound	Result	RL	MDL	Units	Q
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.56	ug/l	
108-88-3	Toluene	ND	1.0	0.49	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.52	ug/l	
	m,p-Xylene	ND	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	98%	80-120%
17060-07-0	1,2-Dichloroethane-D4	102%	80-120%
2037-26-5	Toluene-D8	101%	80-120%
460-00-4	4-Bromofluorobenzene	102%	82-114%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A9737-MB	1A227485.D	1	10/25/22	NH	n/a	n/a	V1A9737

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD54163-8

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.52	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	96%	80-120%
17060-07-0	1,2-Dichloroethane-D4	117%	80-120%
2037-26-5	Toluene-D8	97%	80-120%
460-00-4	4-Bromofluorobenzene	96%	82-114%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3D7712-MB	3D183379.D	1	10/26/22	NW	n/a	n/a	V3D7712

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD54163-2, JD54163-7, JD54163-9, JD54163-10

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.1	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.7	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	

Method Blank Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3D7712-MB	3D183379.D	1	10/26/22	NW	n/a	n/a	V3D7712

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD54163-2, JD54163-7, JD54163-9, JD54163-10

CAS No.	Compound	Result	RL	MDL	Units	Q
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.56	ug/l	
108-88-3	Toluene	ND	1.0	0.49	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.52	ug/l	
	m,p-Xylene	ND	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	94%	80-120%
17060-07-0	1,2-Dichloroethane-D4	102%	80-120%
2037-26-5	Toluene-D8	101%	80-120%
460-00-4	4-Bromofluorobenzene	101%	82-114%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3D7714-MB	3D183438.D	1	10/27/22	NH	n/a	n/a	V3D7714

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD54163-1, JD54163-3

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.1	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.7	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	

Method Blank Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3D7714-MB	3D183438.D	1	10/27/22	NH	n/a	n/a	V3D7714

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD54163-1, JD54163-3

CAS No.	Compound	Result	RL	MDL	Units	Q
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
108-88-3	Toluene	ND	1.0	0.49	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.52	ug/l	
	m,p-Xylene	ND	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	97%	80-120%
17060-07-0	1,2-Dichloroethane-D4	101%	80-120%
2037-26-5	Toluene-D8	101%	80-120%
460-00-4	4-Bromofluorobenzene	105%	82-114%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2K28-MB	2K00906.D	1	10/27/22	TS	n/a	n/a	V2K28

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD54163-11

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	

Method Blank Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2K28-MB	2K00906.D	1	10/27/22	TS	n/a	n/a	V2K28

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD54163-11

CAS No.	Compound	Result	RL	MDL	Units	Q
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.56	ug/l	
108-88-3	Toluene	ND	1.0	0.49	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.52	ug/l	
	m,p-Xylene	ND	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	97%	80-120%
17060-07-0	1,2-Dichloroethane-D4	101%	80-120%
2037-26-5	Toluene-D8	100%	80-120%
460-00-4	4-Bromofluorobenzene	100%	82-114%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Blank Spike Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A9735-BS	1A227418.D	1	10/24/22	NH	n/a	n/a	V1A9735

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD54163-4, JD54163-5, JD54163-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
127-18-4	Tetrachloroethene	50	43.9	88	73-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	97%	80-120%
17060-07-0	1,2-Dichloroethane-D4	107%	80-120%
2037-26-5	Toluene-D8	93%	80-120%
460-00-4	4-Bromofluorobenzene	94%	82-114%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A9736-BS	1A227450.D	1	10/25/22	NH	n/a	n/a	V1A9736

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD54163-7, JD54163-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
78-93-3	2-Butanone (MEK)	200	215	108	61-150

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	95%	80-120%
17060-07-0	1,2-Dichloroethane-D4	106%	80-120%
2037-26-5	Toluene-D8	92%	80-120%
460-00-4	4-Bromofluorobenzene	96%	82-114%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3D7710-BS	3D183317.D	1	10/25/22	NW	n/a	n/a	V3D7710

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD54163-1, JD54163-3, JD54163-4, JD54163-5, JD54163-6, JD54163-8, JD54163-10, JD54163-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	200	170	85	27-175
71-43-2	Benzene	50	46.6	93	80-115
74-97-5	Bromochloromethane	50	45.9	92	83-122
75-27-4	Bromodichloromethane	50	47.9	96	82-119
75-25-2	Bromoform	50	51.6	103	77-135
74-83-9	Bromomethane	50	36.3	73	40-162
78-93-3	2-Butanone (MEK)	200	187	94	61-150
75-15-0	Carbon disulfide	50	51.6	103	64-130
56-23-5	Carbon tetrachloride	50	46.5	93	75-127
108-90-7	Chlorobenzene	50	46.1	92	80-115
75-00-3	Chloroethane	50	35.0	70	56-144
67-66-3	Chloroform	50	46.2	92	75-116
74-87-3	Chloromethane	50	41.2	82	41-153
110-82-7	Cyclohexane	50	41.4	83	66-129
96-12-8	1,2-Dibromo-3-chloropropane	50	53.1	106	69-134
124-48-1	Dibromochloromethane	50	47.7	95	81-123
106-93-4	1,2-Dibromoethane	50	47.3	95	67-138
95-50-1	1,2-Dichlorobenzene	50	47.3	95	81-117
541-73-1	1,3-Dichlorobenzene	50	48.7	97	81-115
106-46-7	1,4-Dichlorobenzene	50	46.5	93	80-114
75-71-8	Dichlorodifluoromethane	50	46.8	94	43-152
75-34-3	1,1-Dichloroethane	50	49.1	98	75-125
107-06-2	1,2-Dichloroethane	50	45.7	91	73-117
75-35-4	1,1-Dichloroethene	50	48.4	97	70-124
156-59-2	cis-1,2-Dichloroethene	50	46.3	93	80-120
156-60-5	trans-1,2-Dichloroethene	50	46.9	94	77-121
78-87-5	1,2-Dichloropropane	50	49.6	99	79-121
10061-01-5	cis-1,3-Dichloropropene	50	52.9	106	83-123
10061-02-6	trans-1,3-Dichloropropene	50	52.8	106	83-122
100-41-4	Ethylbenzene	50	43.3	87	78-116
76-13-1	Freon 113	50	46.8	94	68-134
591-78-6	2-Hexanone	200	209	105	66-136
98-82-8	Isopropylbenzene	50	45.4	91	78-121
79-20-9	Methyl Acetate	50	57.3	115	60-143
108-87-2	Methylcyclohexane	50	47.0	94	71-123
1634-04-4	Methyl Tert Butyl Ether	50	47.3	95	76-123

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3D7710-BS	3D183317.D	1	10/25/22	NW	n/a	n/a	V3D7710

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD54163-1, JD54163-3, JD54163-4, JD54163-5, JD54163-6, JD54163-8, JD54163-10, JD54163-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	200	208	104	73-134
75-09-2	Methylene chloride	50	47.5	95	73-123
100-42-5	Styrene	50	46.1	92	81-125
79-34-5	1,1,2,2-Tetrachloroethane	50	53.3	107	73-126
127-18-4	Tetrachloroethene	50	44.3	89	73-119
108-88-3	Toluene	50	45.5	91	79-116
87-61-6	1,2,3-Trichlorobenzene	50	51.4	103	63-137
120-82-1	1,2,4-Trichlorobenzene	50	50.9	102	68-135
71-55-6	1,1,1-Trichloroethane	50	46.2	92	76-124
79-00-5	1,1,2-Trichloroethane	50	49.9	100	83-117
79-01-6	Trichloroethene	50	45.2	90	80-118
75-69-4	Trichlorofluoromethane	50	45.9	92	67-134
75-01-4	Vinyl chloride	50	35.2	70	52-146
	m,p-Xylene	100	89.8	90	79-119
95-47-6	o-Xylene	50	43.9	88	81-119
1330-20-7	Xylene (total)	150	134	89	80-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	80-120%
17060-07-0	1,2-Dichloroethane-D4	101%	80-120%
2037-26-5	Toluene-D8	97%	80-120%
460-00-4	4-Bromofluorobenzene	104%	82-114%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3D7712-BS	3D183377.D	1	10/26/22	NW	n/a	n/a	V3D7712

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD54163-2, JD54163-7, JD54163-9, JD54163-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	200	245	123	27-175
71-43-2	Benzene	50	48.5	97	80-115
74-97-5	Bromochloromethane	50	47.8	96	83-122
75-27-4	Bromodichloromethane	50	49.2	98	82-119
75-25-2	Bromoform	50	53.3	107	77-135
74-83-9	Bromomethane	50	40.6	81	40-162
78-93-3	2-Butanone (MEK)	200	215	108	61-150
75-15-0	Carbon disulfide	50	51.0	102	64-130
56-23-5	Carbon tetrachloride	50	45.9	92	75-127
108-90-7	Chlorobenzene	50	47.2	94	80-115
75-00-3	Chloroethane	50	37.3	75	56-144
67-66-3	Chloroform	50	46.8	94	75-116
74-87-3	Chloromethane	50	44.6	89	41-153
110-82-7	Cyclohexane	50	43.3	87	66-129
96-12-8	1,2-Dibromo-3-chloropropane	50	55.2	110	69-134
124-48-1	Dibromochloromethane	50	49.0	98	81-123
106-93-4	1,2-Dibromoethane	50	49.9	100	67-138
95-50-1	1,2-Dichlorobenzene	50	49.3	99	81-117
541-73-1	1,3-Dichlorobenzene	50	50.2	100	81-115
106-46-7	1,4-Dichlorobenzene	50	49.2	98	80-114
75-71-8	Dichlorodifluoromethane	50	50.6	101	43-152
75-34-3	1,1-Dichloroethane	50	48.8	98	75-125
107-06-2	1,2-Dichloroethane	50	47.1	94	73-117
75-35-4	1,1-Dichloroethene	50	48.1	96	70-124
156-59-2	cis-1,2-Dichloroethene	50	46.2	92	80-120
156-60-5	trans-1,2-Dichloroethene	50	47.2	94	77-121
78-87-5	1,2-Dichloropropane	50	52.5	105	79-121
10061-01-5	cis-1,3-Dichloropropene	50	53.7	107	83-123
10061-02-6	trans-1,3-Dichloropropene	50	54.8	110	83-122
100-41-4	Ethylbenzene	50	45.8	92	78-116
76-13-1	Freon 113	50	46.0	92	68-134
591-78-6	2-Hexanone	200	229	115	66-136
98-82-8	Isopropylbenzene	50	48.5	97	78-121
79-20-9	Methyl Acetate	50	65.2	130	60-143
108-87-2	Methylcyclohexane	50	47.6	95	71-123
1634-04-4	Methyl Tert Butyl Ether	50	47.8	96	76-123

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3D7712-BS	3D183377.D	1	10/26/22	NW	n/a	n/a	V3D7712

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD54163-2, JD54163-7, JD54163-9, JD54163-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	200	219	110	73-134
75-09-2	Methylene chloride	50	47.8	96	73-123
100-42-5	Styrene	50	47.7	95	81-125
79-34-5	1,1,2,2-Tetrachloroethane	50	53.7	107	73-126
127-18-4	Tetrachloroethene	50	45.9	92	73-119
108-88-3	Toluene	50	47.1	94	79-116
87-61-6	1,2,3-Trichlorobenzene	50	51.9	104	63-137
120-82-1	1,2,4-Trichlorobenzene	50	52.6	105	68-135
71-55-6	1,1,1-Trichloroethane	50	46.0	92	76-124
79-00-5	1,1,2-Trichloroethane	50	49.9	100	83-117
79-01-6	Trichloroethene	50	45.5	91	80-118
75-69-4	Trichlorofluoromethane	50	47.9	96	67-134
75-01-4	Vinyl chloride	50	39.1	78	52-146
	m,p-Xylene	100	92.4	92	79-119
95-47-6	o-Xylene	50	45.5	91	81-119
1330-20-7	Xylene (total)	150	138	92	80-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	80-120%
17060-07-0	1,2-Dichloroethane-D4	99%	80-120%
2037-26-5	Toluene-D8	98%	80-120%
460-00-4	4-Bromofluorobenzene	103%	82-114%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3D7714-BS	3D183436.D	1	10/27/22	NH	n/a	n/a	V3D7714

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD54163-1, JD54163-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	200	226	113	27-175
71-43-2	Benzene	50	45.6	91	80-115
74-97-5	Bromochloromethane	50	45.9	92	83-122
75-27-4	Bromodichloromethane	50	47.3	95	82-119
75-25-2	Bromoform	50	49.6	99	77-135
74-83-9	Bromomethane	50	33.3	67	40-162
78-93-3	2-Butanone (MEK)	200	205	103	61-150
75-15-0	Carbon disulfide	50	48.5	97	64-130
56-23-5	Carbon tetrachloride	50	43.6	87	75-127
108-90-7	Chlorobenzene	50	44.8	90	80-115
75-00-3	Chloroethane	50	38.9	78	56-144
67-66-3	Chloroform	50	45.8	92	75-116
74-87-3	Chloromethane	50	48.8	98	41-153
110-82-7	Cyclohexane	50	43.7	87	66-129
96-12-8	1,2-Dibromo-3-chloropropane	50	53.0	106	69-134
124-48-1	Dibromochloromethane	50	46.5	93	81-123
106-93-4	1,2-Dibromoethane	50	46.9	94	67-138
95-50-1	1,2-Dichlorobenzene	50	46.1	92	81-117
541-73-1	1,3-Dichlorobenzene	50	47.7	95	81-115
106-46-7	1,4-Dichlorobenzene	50	46.0	92	80-114
75-71-8	Dichlorodifluoromethane	50	50.8	102	43-152
75-34-3	1,1-Dichloroethane	50	47.4	95	75-125
107-06-2	1,2-Dichloroethane	50	45.1	90	73-117
75-35-4	1,1-Dichloroethene	50	45.6	91	70-124
156-59-2	cis-1,2-Dichloroethene	50	43.6	87	80-120
156-60-5	trans-1,2-Dichloroethene	50	43.8	88	77-121
78-87-5	1,2-Dichloropropane	50	49.9	100	79-121
10061-01-5	cis-1,3-Dichloropropene	50	51.5	103	83-123
10061-02-6	trans-1,3-Dichloropropene	50	49.2	98	83-122
100-41-4	Ethylbenzene	50	42.5	85	78-116
76-13-1	Freon 113	50	44.1	88	68-134
591-78-6	2-Hexanone	200	217	109	66-136
98-82-8	Isopropylbenzene	50	44.5	89	78-121
79-20-9	Methyl Acetate	50	55.2	110	60-143
108-87-2	Methylcyclohexane	50	45.6	91	71-123
1634-04-4	Methyl Tert Butyl Ether	50	46.6	93	76-123

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3D7714-BS	3D183436.D	1	10/27/22	NH	n/a	n/a	V3D7714

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD54163-1, JD54163-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	200	214	107	73-134
75-09-2	Methylene chloride	50	46.2	92	73-123
100-42-5	Styrene	50	45.3	91	81-125
79-34-5	1,1,2,2-Tetrachloroethane	50	51.7	103	73-126
108-88-3	Toluene	50	43.7	87	79-116
87-61-6	1,2,3-Trichlorobenzene	50	50.5	101	63-137
120-82-1	1,2,4-Trichlorobenzene	50	50.8	102	68-135
71-55-6	1,1,1-Trichloroethane	50	44.5	89	76-124
79-00-5	1,1,2-Trichloroethane	50	48.2	96	83-117
79-01-6	Trichloroethene	50	43.2	86	80-118
75-69-4	Trichlorofluoromethane	50	46.6	93	67-134
75-01-4	Vinyl chloride	50	39.9	80	52-146
	m,p-Xylene	100	86.3	86	79-119
95-47-6	o-Xylene	50	42.4	85	81-119
1330-20-7	Xylene (total)	150	129	86	80-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	80-120%
17060-07-0	1,2-Dichloroethane-D4	99%	80-120%
2037-26-5	Toluene-D8	96%	80-120%
460-00-4	4-Bromofluorobenzene	107%	82-114%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2K28-BS	2K00902.D	1	10/27/22	TS	n/a	n/a	V2K28

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD54163-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	44.6	89	80-115
74-97-5	Bromochloromethane	50	43.2	86	83-122
75-27-4	Bromodichloromethane	50	46.7	93	82-119
75-25-2	Bromoform	50	46.4	93	77-135
74-83-9	Bromomethane	50	39.3	79	40-162
75-15-0	Carbon disulfide	50	45.2	90	64-130
56-23-5	Carbon tetrachloride	50	42.4	85	75-127
108-90-7	Chlorobenzene	50	47.1	94	80-115
75-00-3	Chloroethane	50	43.6	87	56-144
67-66-3	Chloroform	50	43.9	88	75-116
74-87-3	Chloromethane	50	37.4	75	41-153
110-82-7	Cyclohexane	50	42.4	85	66-129
96-12-8	1,2-Dibromo-3-chloropropane	50	49.4	99	69-134
124-48-1	Dibromochloromethane	50	47.6	95	81-123
106-93-4	1,2-Dibromoethane	50	48.9	98	67-138
95-50-1	1,2-Dichlorobenzene	50	45.9	92	81-117
541-73-1	1,3-Dichlorobenzene	50	45.9	92	81-115
106-46-7	1,4-Dichlorobenzene	50	46.4	93	80-114
75-71-8	Dichlorodifluoromethane	50	47.2	94	43-152
75-34-3	1,1-Dichloroethane	50	45.6	91	75-125
107-06-2	1,2-Dichloroethane	50	43.6	87	73-117
75-35-4	1,1-Dichloroethene	50	47.0	94	70-124
156-59-2	cis-1,2-Dichloroethene	50	45.3	91	80-120
156-60-5	trans-1,2-Dichloroethene	50	41.5	83	77-121
78-87-5	1,2-Dichloropropane	50	45.6	91	79-121
10061-01-5	cis-1,3-Dichloropropene	50	46.9	94	83-123
10061-02-6	trans-1,3-Dichloropropene	50	50.3	101	83-122
100-41-4	Ethylbenzene	50	44.8	90	78-116
76-13-1	Freon 113	50	46.5	93	68-134
591-78-6	2-Hexanone	200	198	99	66-136
98-82-8	Isopropylbenzene	50	46.7	93	78-121
79-20-9	Methyl Acetate	50	32.5	65	60-143
108-87-2	Methylcyclohexane	50	44.5	89	71-123
1634-04-4	Methyl Tert Butyl Ether	50	48.1	96	76-123
108-10-1	4-Methyl-2-pentanone(MIBK)	200	190	95	73-134
75-09-2	Methylene chloride	50	44.4	89	73-123

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2K28-BS	2K00902.D	1	10/27/22	TS	n/a	n/a	V2K28

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD54163-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
100-42-5	Styrene	50	48.9	98	81-125
79-34-5	1,1,2,2-Tetrachloroethane	50	49.4	99	73-126
127-18-4	Tetrachloroethene	50	47.3	95	73-119
108-88-3	Toluene	50	45.4	91	79-116
87-61-6	1,2,3-Trichlorobenzene	50	46.6	93	63-137
120-82-1	1,2,4-Trichlorobenzene	50	47.0	94	68-135
71-55-6	1,1,1-Trichloroethane	50	47.9	96	76-124
79-00-5	1,1,2-Trichloroethane	50	46.7	93	83-117
79-01-6	Trichloroethene	50	45.6	91	80-118
75-69-4	Trichlorofluoromethane	50	49.0	98	67-134
75-01-4	Vinyl chloride	50	43.3	87	52-146
	m,p-Xylene	100	90.5	91	79-119
95-47-6	o-Xylene	50	47.1	94	81-119
1330-20-7	Xylene (total)	150	138	92	80-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	80-120%
17060-07-0	1,2-Dichloroethane-D4	99%	80-120%
2037-26-5	Toluene-D8	102%	80-120%
460-00-4	4-Bromofluorobenzene	102%	82-114%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A9737-BS	1A227482.D	1	10/25/22	NH	n/a	n/a	V1A9737
V1A9737-BSD	1A227483.D	1	10/25/22	NH	n/a	n/a	V1A9737

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD54163-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
75-01-4	Vinyl chloride	50	49.2	98	48.1	96	2	52-146/15

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	95%	97%	80-120%
17060-07-0	1,2-Dichloroethane-D4	108%	110%	80-120%
2037-26-5	Toluene-D8	93%	93%	80-120%
460-00-4	4-Bromofluorobenzene	95%	96%	82-114%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD53388-48MS	1A227434.D	5	10/24/22	NH	n/a	n/a	V1A9735
JD53388-48MSD	1A227435.D	5	10/24/22	NH	n/a	n/a	V1A9735
JD53388-48 [a]	1A227422.D	5	10/24/22	NH	n/a	n/a	V1A9735

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD54163-4, JD54163-5, JD54163-6

CAS No.	Compound	JD53388-48 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
127-18-4	Tetrachloroethene	ND		250	227	91	250	230	92	1	58-132/13

CAS No.	Surrogate Recoveries	MS	MSD	JD53388-48	Limits
1868-53-7	Dibromofluoromethane	102%	101%	101%	80-120%
17060-07-0	1,2-Dichloroethane-D4	109%	109%	113%	80-120%
2037-26-5	Toluene-D8	91%	92%	97%	80-120%
460-00-4	4-Bromofluorobenzene	95%	95%	95%	82-114%

(a) Dilution required due to high concentration of target compound.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD54149-3MS	1A227457.D	1	10/25/22	NH	n/a	n/a	V1A9736
JD54149-3MSD	1A227458.D	1	10/25/22	NH	n/a	n/a	V1A9736
JD54149-3	1A227453.D	1	10/25/22	NH	n/a	n/a	V1A9736

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD54163-7, JD54163-9

CAS No.	Compound	JD54149-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
78-93-3	2-Butanone (MEK)	ND		200	163	82	200	162	81	1	52-137/17

CAS No.	Surrogate Recoveries	MS	MSD	JD54149-3	Limits
1868-53-7	Dibromofluoromethane	95%	93%	94%	80-120%
17060-07-0	1,2-Dichloroethane-D4	106%	105%	113%	80-120%
2037-26-5	Toluene-D8	91%	91%	98%	80-120%
460-00-4	4-Bromofluorobenzene	95%	97%	98%	82-114%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD54163-1MS [a]	3D183327.D	4	10/25/22	NW	n/a	n/a	V3D7710
JD54163-1MSD [a]	3D183328.D	4	10/25/22	NW	n/a	n/a	V3D7710
JD54163-1 [a]	3D183337.D	4	10/25/22	NW	n/a	n/a	V3D7710

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD54163-1, JD54163-3, JD54163-4, JD54163-5, JD54163-6, JD54163-8, JD54163-10, JD54163-11

CAS No.	Compound	JD54163-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	339		800	984	81	800	947	76	4	22-134/19
71-43-2	Benzene	ND		200	204	102	200	203	102	0	49-137/12
74-97-5	Bromochloromethane	ND		200	190	95	200	193	97	2	78-122/12
75-27-4	Bromodichloromethane	ND		200	211	106	200	211	106	0	76-121/12
75-25-2	Bromoform	ND		200	238	119	200	234	117	2	70-133/13
74-83-9	Bromomethane	ND		200	61.8	31	200	76.7	38	22	27-164/38
78-93-3	2-Butanone (MEK)	18.6	J	800	733	89	800	721	88	2	52-137/17
75-15-0	Carbon disulfide	2.4	J	200	25.6	12* [b]	200	72.5	35* [b]	96* [b]	54-136/16
56-23-5	Carbon tetrachloride	ND		200	205	103	200	204	102	0	70-132/13
108-90-7	Chlorobenzene	ND		200	209	105	200	208	104	0	68-123/12
75-00-3	Chloroethane	ND		200	127	64	200	128	64	1	48-152/17
67-66-3	Chloroform	7.0		200	206	100	200	206	100	0	68-120/13
74-87-3	Chloromethane	ND		200	133	67	200	129	65	3	35-156/18
110-82-7	Cyclohexane	22.5		200	166	72	200	162	70	2	53-146/14
96-12-8	1,2-Dibromo-3-chloropropane	ND		200	249	125	200	248	124	0	63-134/16
124-48-1	Dibromochloromethane	ND		200	209	105	200	206	103	1	75-122/12
106-93-4	1,2-Dibromoethane	ND		200	211	106	200	210	105	0	63-134/12
95-50-1	1,2-Dichlorobenzene	ND		200	205	103	200	208	104	1	74-119/12
541-73-1	1,3-Dichlorobenzene	ND		200	210	105	200	216	108	3	75-117/12
106-46-7	1,4-Dichlorobenzene	ND		200	206	103	200	208	104	1	72-117/12
75-71-8	Dichlorodifluoromethane	ND		200	176	88	200	169	85	4	34-163/16
75-34-3	1,1-Dichloroethane	ND		200	205	103	200	202	101	1	68-129/13
107-06-2	1,2-Dichloroethane	ND		200	194	97	200	198	99	2	66-120/13
75-35-4	1,1-Dichloroethene	ND		200	194	97	200	190	95	2	59-133/15
156-59-2	cis-1,2-Dichloroethene	68.8		200	248	90	200	247	89	0	52-140/12
156-60-5	trans-1,2-Dichloroethene	ND		200	197	99	200	196	98	1	70-125/13
78-87-5	1,2-Dichloropropane	ND		200	218	109	200	218	109	0	73-124/12
10061-01-5	cis-1,3-Dichloropropene	ND		200	237	119	200	236	118	0	75-125/13
10061-02-6	trans-1,3-Dichloropropene	ND		200	244	122	200	241	121	1	75-122/12
100-41-4	Ethylbenzene	ND		200	202	101	200	198	99	2	37-144/12
76-13-1	Freon 113	ND		200	199	100	200	200	100	1	61-142/14
591-78-6	2-Hexanone	ND		800	894	112	800	889	111	1	56-132/16
98-82-8	Isopropylbenzene	ND		200	211	106	200	207	104	2	71-126/13
79-20-9	Methyl Acetate	ND		200	344	172* [b]	200	245	123	34* [b]	51-139/18
108-87-2	Methylcyclohexane	ND		200	196	98	200	198	99	1	59-137/16
1634-04-4	Methyl Tert Butyl Ether	ND		200	185	93	200	181	91	2	66-124/12

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD54163-1MS [a]	3D183327.D	4	10/25/22	NW	n/a	n/a	V3D7710
JD54163-1MSD [a]	3D183328.D	4	10/25/22	NW	n/a	n/a	V3D7710
JD54163-1 [a]	3D183337.D	4	10/25/22	NW	n/a	n/a	V3D7710

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD54163-1, JD54163-3, JD54163-4, JD54163-5, JD54163-6, JD54163-8, JD54163-10, JD54163-11

CAS No.	Compound	JD54163-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		800	908	114	800	910	114	0	65-135/14
75-09-2	Methylene chloride	4.7	J	200	203	99	200	200	98	1	66-125/14
100-42-5	Styrene	ND		200	207	104	200	205	103	1	71-133/12
79-34-5	1,1,2,2-Tetrachloroethane	ND		200	227	114	200	224	112	1	68-127/14
127-18-4	Tetrachloroethene	390		200	526	68	200	527	69	0	58-132/13
108-88-3	Toluene	ND		200	207	104	200	208	104	0	46-139/12
87-61-6	1,2,3-Trichlorobenzene	ND		200	229	115	200	235	118	3	57-136/17
120-82-1	1,2,4-Trichlorobenzene	ND		200	227	114	200	239	120	5	61-137/16
71-55-6	1,1,1-Trichloroethane	ND		200	204	102	200	202	101	1	67-132/13
79-00-5	1,1,2-Trichloroethane	ND		200	214	107	200	217	109	1	75-120/12
79-01-6	Trichloroethene	6.5		200	203	98	200	210	102	3	56-136/12
75-69-4	Trichlorofluoromethane	ND		200	176	88	200	177	89	1	61-145/16
75-01-4	Vinyl chloride	ND		200	119	60	200	121	61	2	41-156/16
	m,p-Xylene	ND		400	408	102	400	408	102	0	32-151/12
95-47-6	o-Xylene	ND		200	203	102	200	197	99	3	50-139/12
1330-20-7	Xylene (total)	ND		600	611	102	600	606	101	1	38-147/12

CAS No.	Surrogate Recoveries	MS	MSD	JD54163-1	Limits
1868-53-7	Dibromofluoromethane	97%	97%	99%	80-120%
17060-07-0	1,2-Dichloroethane-D4	97%	98%	99%	80-120%
2037-26-5	Toluene-D8	99%	99%	103%	80-120%
460-00-4	4-Bromofluorobenzene	104%	105%	101%	82-114%

(a) (pH = 3)Sample pH did not satisfy field preservation criteria.
(b) Outside control limits due to matrix interference.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD53952-2MS	1A227494.D	10	10/25/22	NH	n/a	n/a	V1A9737
JD53952-2MSD	1A227495.D	10	10/25/22	NH	n/a	n/a	V1A9737
JD53952-2 [a]	1A227492.D	10	10/25/22	NH	n/a	n/a	V1A9737
JD53952-2	1A227496.D	100	10/25/22	NH	n/a	n/a	V1A9737

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD54163-8

CAS No.	Compound	JD53952-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
75-01-4	Vinyl chloride	27.5		500	439	82	500	459	86	4	41-156/16

CAS No.	Surrogate Recoveries	MS	MSD	JD53952-2	JD53952-2	Limits
1868-53-7	Dibromofluoromethane	98%	98%	99%	95%	80-120%
17060-07-0	1,2-Dichloroethane-D4	111%	110%	117%	115%	80-120%
2037-26-5	Toluene-D8	93%	94%	98%	99%	80-120%
460-00-4	4-Bromofluorobenzene	95%	96%	96%	97%	82-114%

(a) Dilution required due to high concentration of target compound.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD54013-5MS	3D183390.D	10	10/26/22	NW	n/a	n/a	V3D7712
JD54013-5MSD	3D183391.D	10	10/26/22	NW	n/a	n/a	V3D7712
JD54013-5 [a]	3D183393.D	10	10/26/22	NW	n/a	n/a	V3D7712

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD54163-2, JD54163-7, JD54163-9, JD54163-10

CAS No.	Compound	JD54013-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		2000	1630	82	2000	1480	74	10	22-134/19
71-43-2	Benzene	21.9		500	446	85	500	421	80	6	49-137/12
74-97-5	Bromochloromethane	ND		500	434	87	500	405	81	7	78-122/12
75-27-4	Bromodichloromethane	ND		500	467	93	500	449	90	4	76-121/12
75-25-2	Bromoform	ND		500	540	108	500	514	103	5	70-133/13
74-83-9	Bromomethane	ND		500	160	32	500	153	31	4	27-164/38
78-93-3	2-Butanone (MEK)	ND		2000	1840	92	2000	1730	87	6	52-137/17
75-15-0	Carbon disulfide	10.8	J	500	397	77	500	367	71	8	54-136/16
56-23-5	Carbon tetrachloride	ND		500	415	83	500	387	77	7	70-132/13
108-90-7	Chlorobenzene	ND		500	451	90	500	426	85	6	68-123/12
75-00-3	Chloroethane	ND		500	335	67	500	301	60	11	48-152/17
67-66-3	Chloroform	ND		500	431	86	500	417	83	3	68-120/13
74-87-3	Chloromethane	ND		500	398	80	500	354	71	12	35-156/18
110-82-7	Cyclohexane	ND		500	393	79	500	363	73	8	53-146/14
96-12-8	1,2-Dibromo-3-chloropropane	ND		500	564	113	500	560	112	1	63-134/16
124-48-1	Dibromochloromethane	ND		500	475	95	500	452	90	5	75-122/12
106-93-4	1,2-Dibromoethane	ND		500	474	95	500	451	90	5	63-134/12
95-50-1	1,2-Dichlorobenzene	ND		500	474	95	500	457	91	4	74-119/12
541-73-1	1,3-Dichlorobenzene	ND		500	459	92	500	453	91	1	75-117/12
106-46-7	1,4-Dichlorobenzene	ND		500	468	94	500	451	90	4	72-117/12
75-71-8	Dichlorodifluoromethane	ND		500	439	88	500	401	80	9	34-163/16
75-34-3	1,1-Dichloroethane	ND		500	439	88	500	405	81	8	68-129/13
107-06-2	1,2-Dichloroethane	ND		500	431	86	500	422	84	2	66-120/13
75-35-4	1,1-Dichloroethene	ND		500	369	74	500	342	68	8	59-133/15
156-59-2	cis-1,2-Dichloroethene	ND		500	411	82	500	393	79	4	52-140/12
156-60-5	trans-1,2-Dichloroethene	ND		500	400	80	500	376	75	6	70-125/13
78-87-5	1,2-Dichloropropane	ND		500	490	98	500	454	91	8	73-124/12
10061-01-5	cis-1,3-Dichloropropene	ND		500	515	103	500	496	99	4	75-125/13
10061-02-6	trans-1,3-Dichloropropene	ND		500	530	106	500	507	101	4	75-122/12
100-41-4	Ethylbenzene	708		500	917	42	500	900	38	2	37-144/12
76-13-1	Freon 113	ND		500	370	74	500	350	70	6	61-142/14
591-78-6	2-Hexanone	ND		2000	2130	107	2000	2030	102	5	56-132/16
98-82-8	Isopropylbenzene	64.0		500	498	87	500	481	83	3	71-126/13
79-20-9	Methyl Acetate	ND		500	526	105	500	476	95	10	51-139/18
108-87-2	Methylcyclohexane	ND		500	405	81	500	390	78	4	59-137/16
1634-04-4	Methyl Tert Butyl Ether	ND		500	435	87	500	414	83	5	66-124/12

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD54013-5MS	3D183390.D	10	10/26/22	NW	n/a	n/a	V3D7712
JD54013-5MSD	3D183391.D	10	10/26/22	NW	n/a	n/a	V3D7712
JD54013-5 [a]	3D183393.D	10	10/26/22	NW	n/a	n/a	V3D7712

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD54163-2, JD54163-7, JD54163-9, JD54163-10

CAS No.	Compound	JD54013-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		2000	2190	110	2000	2050	103	7	65-135/14
75-09-2	Methylene chloride	ND		500	419	84	500	390	78	7	66-125/14
100-42-5	Styrene	ND		500	498	100	500	469	94	6	71-133/12
79-34-5	1,1,2,2-Tetrachloroethane	ND		500	528	106	500	520	104	2	68-127/14
127-18-4	Tetrachloroethene	ND		500	429	86	500	409	82	5	58-132/13
108-88-3	Toluene	58.8		500	476	83	500	458	80	4	46-139/12
87-61-6	1,2,3-Trichlorobenzene	ND		500	591	118	500	568	114	4	57-136/17
120-82-1	1,2,4-Trichlorobenzene	ND		500	545	109	500	555	111	2	61-137/16
71-55-6	1,1,1-Trichloroethane	ND		500	428	86	500	402	80	6	67-132/13
79-00-5	1,1,2-Trichloroethane	ND		500	482	96	500	476	95	1	75-120/12
79-01-6	Trichloroethene	ND		500	414	83	500	394	79	5	56-136/12
75-69-4	Trichlorofluoromethane	ND		500	427	85	500	402	80	6	61-145/16
75-01-4	Vinyl chloride	ND		500	343	69	500	302	60	13	41-156/16
	m,p-Xylene	1460		1000	1990	53	1000	1940	48	3	32-151/12
95-47-6	o-Xylene	729		500	1020	58	500	980	50	4	50-139/12
1330-20-7	Xylene (total)	2190		1500	3010	55	1500	2920	49	3	38-147/12

CAS No.	Surrogate Recoveries	MS	MSD	JD54013-5	Limits
1868-53-7	Dibromofluoromethane	100%	97%	93%	80-120%
17060-07-0	1,2-Dichloroethane-D4	101%	100%	103%	80-120%
2037-26-5	Toluene-D8	98%	97%	100%	80-120%
460-00-4	4-Bromofluorobenzene	104%	105%	100%	82-114%

(a) Dilution required due to high concentration of non-target compound.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD54049-7MS	3D183454.D	20	10/27/22	NH	n/a	n/a	V3D7714
JD54049-7MSD	3D183455.D	20	10/27/22	NH	n/a	n/a	V3D7714
JD54049-7	3D183451.D	20	10/27/22	NH	n/a	n/a	V3D7714

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD54163-1, JD54163-3

CAS No.	Compound	JD54049-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	68.0	J	4000	3100	76	4000	3240	79	4	22-134/19
71-43-2	Benzene	ND		1000	835	84	1000	854	85	2	49-137/12
74-97-5	Bromochloromethane	ND		1000	830	83	1000	896	90	8	78-122/12
75-27-4	Bromodichloromethane	ND		1000	924	92	1000	946	95	2	76-121/12
75-25-2	Bromoform	ND		1000	993	99	1000	1070	107	7	70-133/13
74-83-9	Bromomethane	ND		1000	360	36	1000	461	46	25	27-164/38
78-93-3	2-Butanone (MEK)	ND		4000	3550	89	4000	3680	92	4	52-137/17
75-15-0	Carbon disulfide	ND		1000	721	72	1000	744	74	3	54-136/16
56-23-5	Carbon tetrachloride	ND		1000	805	81	1000	830	83	3	70-132/13
108-90-7	Chlorobenzene	ND		1000	875	88	1000	894	89	2	68-123/12
75-00-3	Chloroethane	ND		1000	632	63	1000	630	63	0	48-152/17
67-66-3	Chloroform	ND		1000	857	86	1000	869	87	1	68-120/13
74-87-3	Chloromethane	ND		1000	644	64	1000	689	69	7	35-156/18
110-82-7	Cyclohexane	103		1000	801	70	1000	814	71	2	53-146/14
96-12-8	1,2-Dibromo-3-chloropropane	ND		1000	1090	109	1000	1130	113	4	63-134/16
124-48-1	Dibromochloromethane	ND		1000	902	90	1000	959	96	6	75-122/12
106-93-4	1,2-Dibromoethane	ND		1000	927	93	1000	955	96	3	63-134/12
95-50-1	1,2-Dichlorobenzene	ND		1000	897	90	1000	936	94	4	74-119/12
541-73-1	1,3-Dichlorobenzene	ND		1000	912	91	1000	957	96	5	75-117/12
106-46-7	1,4-Dichlorobenzene	ND		1000	909	91	1000	941	94	3	72-117/12
75-71-8	Dichlorodifluoromethane	ND		1000	740	74	1000	808	81	9	34-163/16
75-34-3	1,1-Dichloroethane	ND		1000	862	86	1000	884	88	3	68-129/13
107-06-2	1,2-Dichloroethane	ND		1000	853	85	1000	893	89	5	66-120/13
75-35-4	1,1-Dichloroethene	ND		1000	738	74	1000	755	76	2	59-133/15
156-59-2	cis-1,2-Dichloroethene	ND		1000	812	81	1000	808	81	0	52-140/12
156-60-5	trans-1,2-Dichloroethene	ND		1000	771	77	1000	784	78	2	70-125/13
78-87-5	1,2-Dichloropropane	ND		1000	947	95	1000	986	99	4	73-124/12
10061-01-5	cis-1,3-Dichloropropene	ND		1000	997	100	1000	1040	104	4	75-125/13
10061-02-6	trans-1,3-Dichloropropene	ND		1000	1010	101	1000	1060	106	5	75-122/12
100-41-4	Ethylbenzene	649		1000	1300	65	1000	1320	67	2	37-144/12
76-13-1	Freon 113	ND		1000	744	74	1000	735	74	1	61-142/14
591-78-6	2-Hexanone	ND		4000	4180	105	4000	4340	109	4	56-132/16
98-82-8	Isopropylbenzene	30.2		1000	896	87	1000	932	90	4	71-126/13
79-20-9	Methyl Acetate	ND		1000	1050	105	1000	1040	104	1	51-139/18
108-87-2	Methylcyclohexane	56.4	J	1000	836	78	1000	825	77	1	59-137/16
1634-04-4	Methyl Tert Butyl Ether	ND		1000	862	86	1000	881	88	2	66-124/12

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD54049-7MS	3D183454.D	20	10/27/22	NH	n/a	n/a	V3D7714
JD54049-7MSD	3D183455.D	20	10/27/22	NH	n/a	n/a	V3D7714
JD54049-7	3D183451.D	20	10/27/22	NH	n/a	n/a	V3D7714

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD54163-1, JD54163-3

CAS No.	Compound	JD54049-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		4000	4190	105	4000	4330	108	3	65-135/14
75-09-2	Methylene chloride	ND		1000	808	81	1000	861	86	6	66-125/14
100-42-5	Styrene	ND		1000	922	92	1000	958	96	4	71-133/12
79-34-5	1,1,2,2-Tetrachloroethane	ND		1000	1020	102	1000	1060	106	4	68-127/14
108-88-3	Toluene	511		1000	1260	75	1000	1260	75	0	46-139/12
87-61-6	1,2,3-Trichlorobenzene	ND		1000	1030	103	1000	1080	108	5	57-136/17
120-82-1	1,2,4-Trichlorobenzene	ND		1000	1010	101	1000	1070	107	6	61-137/16
71-55-6	1,1,1-Trichloroethane	ND		1000	816	82	1000	829	83	2	67-132/13
79-00-5	1,1,2-Trichloroethane	ND		1000	976	98	1000	974	97	0	75-120/12
79-01-6	Trichloroethene	ND		1000	802	80	1000	830	83	3	56-136/12
75-69-4	Trichlorofluoromethane	ND		1000	797	80	1000	853	85	7	61-145/16
75-01-4	Vinyl chloride	ND		1000	578	58	1000	608	61	5	41-156/16
	m,p-Xylene	4280		2000	5180	45	2000	5130	43	1	32-151/12
95-47-6	o-Xylene	2170		1000	2690	52	1000	2680	51	0	50-139/12
1330-20-7	Xylene (total)	6450		3000	7860	47	3000	7810	46	1	38-147/12

CAS No.	Surrogate Recoveries	MS	MSD	JD54049-7	Limits
1868-53-7	Dibromofluoromethane	97%	100%	97%	80-120%
17060-07-0	1,2-Dichloroethane-D4	101%	100%	102%	80-120%
2037-26-5	Toluene-D8	97%	96%	101%	80-120%
460-00-4	4-Bromofluorobenzene	107%	106%	105%	82-114%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD54019-17MS	2K00926.D	10	10/27/22	TS	n/a	n/a	V2K28
JD54019-17MSD	2K00928.D	10	10/27/22	TS	n/a	n/a	V2K28
JD54019-17 [a]	2K00922.D	10	10/27/22	TS	n/a	n/a	V2K28

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD54163-11

CAS No.	Compound	JD54019-17 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		500	434	87	500	444	89	2	49-137/12
74-97-5	Bromochloromethane	ND		500	430	86	500	443	89	3	78-122/12
75-27-4	Bromodichloromethane	ND		500	476	95	500	484	97	2	76-121/12
75-25-2	Bromoform	ND		500	492	98	500	504	101	2	70-133/13
74-83-9	Bromomethane	ND		500	302	60	500	371	74	21	27-164/38
75-15-0	Carbon disulfide	ND		500	423	85	500	436	87	3	54-136/16
56-23-5	Carbon tetrachloride	ND		500	436	87	500	444	89	2	70-132/13
108-90-7	Chlorobenzene	ND		500	466	93	500	482	96	3	68-123/12
75-00-3	Chloroethane	ND		500	434	87	500	442	88	2	48-152/17
67-66-3	Chloroform	ND		500	447	89	500	446	89	0	68-120/13
74-87-3	Chloromethane	ND		500	358	72	500	374	75	4	35-156/18
110-82-7	Cyclohexane	ND		500	409	82	500	428	86	5	53-146/14
96-12-8	1,2-Dibromo-3-chloropropane	ND		500	507	101	500	524	105	3	63-134/16
124-48-1	Dibromochloromethane	ND		500	491	98	500	510	102	4	75-122/12
106-93-4	1,2-Dibromoethane	ND		500	497	99	500	507	101	2	63-134/12
95-50-1	1,2-Dichlorobenzene	ND		500	464	93	500	481	96	4	74-119/12
541-73-1	1,3-Dichlorobenzene	ND		500	468	94	500	481	96	3	75-117/12
106-46-7	1,4-Dichlorobenzene	ND		500	464	93	500	483	97	4	72-117/12
75-71-8	Dichlorodifluoromethane	ND		500	463	93	500	472	94	2	34-163/16
75-34-3	1,1-Dichloroethane	237		500	685	90	500	694	91	1	68-129/13
107-06-2	1,2-Dichloroethane	ND		500	446	89	500	446	89	0	66-120/13
75-35-4	1,1-Dichloroethene	522		500	851	66	500	873	70	3	59-133/15
156-59-2	cis-1,2-Dichloroethene	1190		500	1600	82	500	1650	92	3	52-140/12
156-60-5	trans-1,2-Dichloroethene	12.2		500	406	79	500	421	82	4	70-125/13
78-87-5	1,2-Dichloropropane	ND		500	455	91	500	466	93	2	73-124/12
10061-01-5	cis-1,3-Dichloropropene	ND		500	474	95	500	491	98	4	75-125/13
10061-02-6	trans-1,3-Dichloropropene	ND		500	505	101	500	522	104	3	75-122/12
100-41-4	Ethylbenzene	ND		500	445	89	500	464	93	4	37-144/12
76-13-1	Freon 113	26.4	J	500	460	87	500	474	90	3	61-142/14
591-78-6	2-Hexanone	ND		2000	1970	99	2000	2020	101	3	56-132/16
98-82-8	Isopropylbenzene	ND		500	467	93	500	481	96	3	71-126/13
79-20-9	Methyl Acetate	ND		500	335	67	500	340	68	1	51-139/18
108-87-2	Methylcyclohexane	ND		500	427	85	500	436	87	2	59-137/16
1634-04-4	Methyl Tert Butyl Ether	ND		500	483	97	500	500	100	3	66-124/12
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		2000	1960	98	2000	1990	100	2	65-135/14
75-09-2	Methylene chloride	ND		500	447	89	500	467	93	4	66-125/14

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD54019-17MS	2K00926.D	10	10/27/22	TS	n/a	n/a	V2K28
JD54019-17MSD	2K00928.D	10	10/27/22	TS	n/a	n/a	V2K28
JD54019-17 [a]	2K00922.D	10	10/27/22	TS	n/a	n/a	V2K28

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD54163-11

CAS No.	Compound	JD54019-17 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
100-42-5	Styrene	ND		500	490	98	500	514	103	5	71-133/12
79-34-5	1,1,2,2-Tetrachloroethane	ND		500	500	100	500	523	105	4	68-127/14
127-18-4	Tetrachloroethene	88.7		500	538	90	500	551	92	2	58-132/13
108-88-3	Toluene	32.7		500	484	90	500	505	94	4	46-139/12
87-61-6	1,2,3-Trichlorobenzene	ND		500	462	92	500	478	96	3	57-136/17
120-82-1	1,2,4-Trichlorobenzene	ND		500	475	95	500	491	98	3	61-137/16
71-55-6	1,1,1-Trichloroethane	2410	E	500	2580	34* [b]	500	2610	40* [b]	1	67-132/13
79-00-5	1,1,2-Trichloroethane	9.5	J	500	481	94	500	503	99	4	75-120/12
79-01-6	Trichloroethene	48.7		500	496	89	500	500	90	1	56-136/12
75-69-4	Trichlorofluoromethane	ND		500	500	100	500	502	100	0	61-145/16
75-01-4	Vinyl chloride	ND		500	422	84	500	427	85	1	41-156/16
	m,p-Xylene	ND		1000	909	91	1000	933	93	3	32-151/12
95-47-6	o-Xylene	ND		500	472	94	500	496	99	5	50-139/12
1330-20-7	Xylene (total)	10.5		1500	1380	91	1500	1430	95	4	38-147/12

CAS No.	Surrogate Recoveries	MS	MSD	JD54019-17	Limits
1868-53-7	Dibromofluoromethane	101%	101%	100%	80-120%
17060-07-0	1,2-Dichloroethane-D4	105%	104%	101%	80-120%
2037-26-5	Toluene-D8	101%	102%	101%	80-120%
460-00-4	4-Bromofluorobenzene	101%	103%	104%	82-114%

(a) Preliminary Data. Dilution required due to high concentration of target compound.
(b) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: V1A9711-BFB
Lab File ID: 1A226729.D
Instrument ID: GCMS1A
Injection Date: 10/06/22
Injection Time: 21:48

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	37840	19.2		Pass
75	30.0 - 60.0% of mass 95	96411	49.0		Pass
95	Base peak, 100% relative abundance	196817	100.0		Pass
96	5.0 - 9.0% of mass 95	13725	6.97		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	171328	87.0		Pass
175	5.0 - 9.0% of mass 174	12920	6.56	(7.54) [a]	Pass
176	95.0 - 101.0% of mass 174	167872	85.3	(98.0) [a]	Pass
177	5.0 - 9.0% of mass 176	11856	6.02	(7.06) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V1A9711-IC9711	1A226730.D	10/06/22	22:12	00:24	Initial cal 0.2
V1A9711-IC9711	1A226731.D	10/06/22	22:35	00:47	Initial cal 0.5
V1A9711-IC9711	1A226732.D	10/06/22	22:59	01:11	Initial cal 1
V1A9711-IC9711	1A226733.D	10/06/22	23:23	01:35	Initial cal 2
V1A9711-IC9711	1A226734.D	10/06/22	23:47	01:59	Initial cal 4
V1A9711-IC9711	1A226735.D	10/07/22	00:11	02:23	Initial cal 8
V1A9711-IC9711	1A226736.D	10/07/22	00:35	02:47	Initial cal 20
V1A9711-ICC9711	1A226737.D	10/07/22	00:59	03:11	Initial cal 50
V1A9711-IC9711	1A226738.D	10/07/22	01:23	03:35	Initial cal 100
V1A9711-IC9711	1A226739.D	10/07/22	01:47	03:59	Initial cal 200
V1A9711-ICV9711	1A226742.D	10/07/22	02:58	05:10	Initial cal verification 50
V1A9711-ICV9711	1A226743.D	10/07/22	03:22	05:34	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: V1A9735-BFB
Lab File ID: 1A227416.D
Instrument ID: GCMS1A
Injection Date: 10/24/22
Injection Time: 10:39

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	49800	21.5		Pass
75	30.0 - 60.0% of mass 95	116280	50.2		Pass
95	Base peak, 100% relative abundance	231595	100.0		Pass
96	5.0 - 9.0% of mass 95	16539	7.14		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	212608	91.8		Pass
175	5.0 - 9.0% of mass 174	11797	5.09	(5.55) [a]	Pass
176	95.0 - 101.0% of mass 174	207296	89.5	(97.5) [a]	Pass
177	5.0 - 9.0% of mass 176	13626	5.88	(6.57) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V1A9735-CC9711	1A227416.D	10/24/22	10:39	00:00	Continuing cal 20
V1A9735-BS	1A227418.D	10/24/22	11:37	00:58	Blank Spike
V1A9735-MB	1A227420.D	10/24/22	12:25	01:46	Method Blank
ZZZZZZ	1A227421.D	10/24/22	12:56	02:17	(unrelated sample)
JD53388-48	1A227422.D	10/24/22	13:20	02:41	(used for QC only; not part of job JD54163)
ZZZZZZ	1A227423.D	10/24/22	13:44	03:05	(unrelated sample)
ZZZZZZ	1A227426.D	10/24/22	14:33	03:54	(unrelated sample)
ZZZZZZ	1A227427.D	10/24/22	14:57	04:18	(unrelated sample)
ZZZZZZ	1A227428.D	10/24/22	15:21	04:42	(unrelated sample)
ZZZZZZ	1A227429.D	10/24/22	15:45	05:06	(unrelated sample)
ZZZZZZ	1A227430.D	10/24/22	16:09	05:30	(unrelated sample)
ZZZZZZ	1A227431.D	10/24/22	16:33	05:54	(unrelated sample)
ZZZZZZ	1A227432.D	10/24/22	16:57	06:18	(unrelated sample)
ZZZZZZ	1A227433.D	10/24/22	17:21	06:42	(unrelated sample)
JD53388-48MS	1A227434.D	10/24/22	17:45	07:06	Matrix Spike
JD53388-48MSD	1A227435.D	10/24/22	18:09	07:30	Matrix Spike Duplicate
ZZZZZZ	1A227436.D	10/24/22	18:33	07:54	(unrelated sample)
ZZZZZZ	1A227437.D	10/24/22	18:56	08:17	(unrelated sample)
ZZZZZZ	1A227438.D	10/24/22	19:20	08:41	(unrelated sample)
ZZZZZZ	1A227439.D	10/24/22	19:44	09:05	(unrelated sample)
ZZZZZZ	1A227440.D	10/24/22	20:08	09:29	(unrelated sample)
ZZZZZZ	1A227441.D	10/24/22	20:31	09:52	(unrelated sample)
ZZZZZZ	1A227442.D	10/24/22	20:55	10:16	(unrelated sample)
JD54163-4	1A227443.D	10/24/22	21:19	10:40	C-1-102122A/B

Instrument Performance Check (BFB)

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample:	V1A9735-BFB	**Injection Date:**	10/24/22
Lab File ID:	1A227416.D	**Injection Time:**	10:39
Instrument ID:	GCMS1A		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
JD54163-5	1A227444.D	10/24/22	21:43	11:04	C-2-102122A/B
JD54163-6	1A227445.D	10/24/22	22:07	11:28	C-3-102122A/B

Instrument Performance Check (BFB)

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: V1A9736-BFB
Lab File ID: 1A227447.D
Instrument ID: GCMS1A
Injection Date: 10/24/22
Injection Time: 22:54

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	43493	21.6		Pass
75	30.0 - 60.0% of mass 95	99869	49.7		Pass
95	Base peak, 100% relative abundance	200939	100.0		Pass
96	5.0 - 9.0% of mass 95	12660	6.30		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	181291	90.2		Pass
175	5.0 - 9.0% of mass 174	15248	7.59	(8.41) [a]	Pass
176	95.0 - 101.0% of mass 174	173803	86.5	(95.9) [a]	Pass
177	5.0 - 9.0% of mass 176	11524	5.74	(6.63) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V1A9736-CC9711	1A227448.D	10/24/22	23:18	00:24	Continuing cal 50
V1A9736-BS	1A227450.D	10/25/22	00:06	01:12	Blank Spike
V1A9736-MB	1A227452.D	10/25/22	00:53	01:59	Method Blank
JD54149-3	1A227453.D	10/25/22	01:17	02:23	(used for QC only; not part of job JD54163)
JD54163-7	1A227454.D	10/25/22	01:41	02:47	Z-2-102122A/B
JD54163-9	1A227456.D	10/25/22	02:28	03:34	Z-4-102122A/B
JD54149-3MS	1A227457.D	10/25/22	02:52	03:58	Matrix Spike
JD54149-3MSD	1A227458.D	10/25/22	03:16	04:22	Matrix Spike Duplicate
ZZZZZZ	1A227460.D	10/25/22	04:03	05:09	(unrelated sample)
ZZZZZZ	1A227461.D	10/25/22	04:27	05:33	(unrelated sample)
ZZZZZZ	1A227462.D	10/25/22	04:51	05:57	(unrelated sample)
ZZZZZZ	1A227463.D	10/25/22	05:15	06:21	(unrelated sample)
ZZZZZZ	1A227464.D	10/25/22	05:39	06:45	(unrelated sample)
ZZZZZZ	1A227465.D	10/25/22	06:02	07:08	(unrelated sample)
ZZZZZZ	1A227466.D	10/25/22	06:26	07:32	(unrelated sample)
ZZZZZZ	1A227467.D	10/25/22	06:50	07:56	(unrelated sample)
ZZZZZZ	1A227468.D	10/25/22	07:14	08:20	(unrelated sample)
ZZZZZZ	1A227469.D	10/25/22	07:38	08:44	(unrelated sample)
ZZZZZZ	1A227470.D	10/25/22	08:01	09:07	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: V1A9737-BFB
Lab File ID: 1A227480.D
Instrument ID: GCMS1A
Injection Date: 10/25/22
Injection Time: 11:04

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	44842	22.3		Pass
75	30.0 - 60.0% of mass 95	103360	51.3		Pass
95	Base peak, 100% relative abundance	201357	100.0		Pass
96	5.0 - 9.0% of mass 95	14132	7.02		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	189069	93.9		Pass
175	5.0 - 9.0% of mass 174	9507	4.72	(5.03) [a]	Pass
176	95.0 - 101.0% of mass 174	182490	90.6	(96.5) [a]	Pass
177	5.0 - 9.0% of mass 176	11717	5.82	(6.42) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V1A9737-CC9711	1A227480.D	10/25/22	11:04	00:00	Continuing cal 20
V1A9737-BS	1A227482.D	10/25/22	12:14	01:10	Blank Spike
V1A9737-BSD	1A227483.D	10/25/22	12:38	01:34	Blank Spike Duplicate
V1A9737-MB	1A227485.D	10/25/22	13:26	02:22	Method Blank
ZZZZZZ	1A227486.D	10/25/22	13:57	02:53	(unrelated sample)
ZZZZZZ	1A227487.D	10/25/22	14:21	03:17	(unrelated sample)
ZZZZZZ	1A227488.D	10/25/22	14:45	03:41	(unrelated sample)
ZZZZZZ	1A227489.D	10/25/22	15:09	04:05	(unrelated sample)
ZZZZZZ	1A227490.D	10/25/22	15:33	04:29	(unrelated sample)
ZZZZZZ	1A227491.D	10/25/22	15:57	04:53	(unrelated sample)
JD53952-2	1A227492.D	10/25/22	16:21	05:17	(used for QC only; not part of job JD54163)
ZZZZZZ	1A227493.D	10/25/22	16:45	05:41	(unrelated sample)
JD53952-2MS	1A227494.D	10/25/22	17:09	06:05	Matrix Spike
JD53952-2MSD	1A227495.D	10/25/22	17:33	06:29	Matrix Spike Duplicate
JD53952-2	1A227496.D	10/25/22	17:57	06:53	(used for QC only; not part of job JD54163)
JD54163-8	1A227497.D	10/25/22	18:21	07:17	Z-3-102122A/B
ZZZZZZ	1A227498.D	10/25/22	18:45	07:41	(unrelated sample)
ZZZZZZ	1A227499.D	10/25/22	19:09	08:05	(unrelated sample)
ZZZZZZ	1A227500.D	10/25/22	19:33	08:29	(unrelated sample)
ZZZZZZ	1A227501.D	10/25/22	19:56	08:52	(unrelated sample)
ZZZZZZ	1A227502.D	10/25/22	20:20	09:16	(unrelated sample)
ZZZZZZ	1A227503.D	10/25/22	20:44	09:40	(unrelated sample)
ZZZZZZ	1A227504.D	10/25/22	21:08	10:04	(unrelated sample)
ZZZZZZ	1A227505.D	10/25/22	21:32	10:28	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample:	V1A9737-BFB	**Injection Date:**	10/25/22
Lab File ID:	1A227480.D	**Injection Time:**	11:04
Instrument ID:	GCMS1A		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	1A227506.D	10/25/22	21:56	10:52	(unrelated sample)
ZZZZZZ	1A227507.D	10/25/22	22:20	11:16	(unrelated sample)
ZZZZZZ	1A227508.D	10/25/22	22:44	11:40	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample:	V2K11-BFB	**Injection Date:**	10/16/22
Lab File ID:	2K00255.D	**Injection Time:**	17:05
Instrument ID:	GCMS2K		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	37189	29.4		Pass
75	30.0 - 60.0% of mass 95	70907	56.0		Pass
95	Base peak, 100% relative abundance	126680	100.0		Pass
96	5.0 - 9.0% of mass 95	7977	6.30		Pass
173	Less than 2.0% of mass 174	538	0.42	(0.64) [a]	Pass
174	50.0 - 120.0% of mass 95	84037	66.3		Pass
175	5.0 - 9.0% of mass 174	5815	4.59	(6.92) [a]	Pass
176	95.0 - 101.0% of mass 174	82376	65.0	(98.0) [a]	Pass
177	5.0 - 9.0% of mass 176	5418	4.28	(6.58) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2K11-IC11	2K00257.D	10/16/22	18:23	01:18	Initial cal 0.2
V2K11-IC11	2K00259.D	10/16/22	18:56	01:51	Initial cal 0.5
V2K11-IC11	2K00261.D	10/16/22	19:29	02:24	Initial cal 1
V2K11-IC11	2K00263.D	10/16/22	20:01	02:56	Initial cal 2
V2K11-IC11	2K00265.D	10/16/22	20:34	03:29	Initial cal 4
V2K11-IC11	2K00267.D	10/16/22	21:07	04:02	Initial cal 8
V2K11-IC11	2K00269.D	10/16/22	21:39	04:34	Initial cal 20
V2K11-ICC11	2K00271.D	10/16/22	22:12	05:07	Initial cal 50
V2K11-IC11	2K00273.D	10/16/22	22:44	05:39	Initial cal 100
V2K11-IC11	2K00275.D	10/16/22	23:17	06:12	Initial cal 200
V2K11-ICV11	2K00281.D	10/17/22	00:54	07:49	Initial cal verification 50
V2K11-ICV11	2K00283.D	10/17/22	01:27	08:22	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: V2K28-BFB
Lab File ID: 2K00898.D
Instrument ID: GCMS2K
Injection Date: 10/27/22
Injection Time: 10:34

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	27837	28.5		Pass
75	30.0 - 60.0% of mass 95	55651	57.1		Pass
95	Base peak, 100% relative abundance	97533	100.0		Pass
96	5.0 - 9.0% of mass 95	6439	6.60		Pass
173	Less than 2.0% of mass 174	457	0.47	(0.68) [a]	Pass
174	50.0 - 120.0% of mass 95	67149	68.8		Pass
175	5.0 - 9.0% of mass 174	4966	5.09	(7.40) [a]	Pass
176	95.0 - 101.0% of mass 174	64861	66.5	(96.6) [a]	Pass
177	5.0 - 9.0% of mass 176	4393	4.50	(6.77) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2K28-CC11	2K00898.D	10/27/22	10:34	00:00	Continuing cal 20
V2K28-BS	2K00902.D	10/27/22	11:53	01:19	Blank Spike
V2K28-MB	2K00906.D	10/27/22	12:58	02:24	Method Blank
ZZZZZZ	2K00908.D	10/27/22	13:37	03:03	(unrelated sample)
ZZZZZZ	2K00910.D	10/27/22	14:09	03:35	(unrelated sample)
ZZZZZZ	2K00912.D	10/27/22	14:42	04:08	(unrelated sample)
ZZZZZZ	2K00914.D	10/27/22	15:15	04:41	(unrelated sample)
JD54163-11	2K00916.D	10/27/22	15:47	05:13	Z-6-102122A/B
ZZZZZZ	2K00918.D	10/27/22	16:20	05:46	(unrelated sample)
ZZZZZZ	2K00920.D	10/27/22	16:53	06:19	(unrelated sample)
JD54019-17	2K00922.D	10/27/22	17:25	06:51	(used for QC only; not part of job JD54163)
ZZZZZZ	2K00924.D	10/27/22	17:58	07:24	(unrelated sample)
JD54019-17MS	2K00926.D	10/27/22	18:31	07:57	Matrix Spike
JD54019-17MSD	2K00928.D	10/27/22	19:03	08:29	Matrix Spike Duplicate
ZZZZZZ	2K00930.D	10/27/22	19:36	09:02	(unrelated sample)
ZZZZZZ	2K00932.D	10/27/22	20:09	09:35	(unrelated sample)
ZZZZZZ	2K00934.D	10/27/22	20:41	10:07	(unrelated sample)
ZZZZZZ	2K00936.D	10/27/22	21:14	10:40	(unrelated sample)
ZZZZZZ	2K00938.D	10/27/22	21:47	11:13	(unrelated sample)
ZZZZZZ	2K00940.D	10/27/22	22:19	11:45	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: V3D7672-BFB
Lab File ID: 3D182416.D
Instrument ID: GCMS3D
Injection Date: 10/05/22
Injection Time: 21:46

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.99 - 40.0% of mass 95	42821	20.5		Pass
75	30.0 - 60.0% of mass 95	119480	57.2		Pass
95	Base peak, 100% relative abundance	208768	100.0		Pass
96	5.0 - 9.0% of mass 95	13308	6.37		Pass
173	Less than 2.0% of mass 174	2486	1.19	(1.44) [a]	Pass
174	50.0 - 120.0% of mass 95	172277	82.5		Pass
175	5.0 - 9.0% of mass 174	14934	7.15	(8.67) [a]	Pass
176	95.0 - 101.0% of mass 174	165768	79.4	(96.2) [a]	Pass
177	5.0 - 9.0% of mass 176	11282	5.40	(6.81) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3D7672-IC7672	3D182417.D	10/05/22	22:22	00:36	Initial cal 0.2
V3D7672-IC7672	3D182418.D	10/05/22	22:46	01:00	Initial cal 0.5
V3D7672-IC7672	3D182419.D	10/05/22	23:09	01:23	Initial cal 1
V3D7672-IC7672	3D182420.D	10/05/22	23:33	01:47	Initial cal 2
V3D7672-IC7672	3D182421.D	10/05/22	23:57	02:11	Initial cal 4
V3D7672-IC7672	3D182422.D	10/06/22	00:20	02:34	Initial cal 8
V3D7672-IC7672	3D182423.D	10/06/22	00:44	02:58	Initial cal 20
V3D7672-ICC7672	3D182424.D	10/06/22	01:07	03:21	Initial cal 50
V3D7672-IC7672	3D182425.D	10/06/22	01:31	03:45	Initial cal 100
V3D7672-IC7672	3D182426.D	10/06/22	01:55	04:09	Initial cal 200
V3D7672-ICV7672	3D182429.D	10/06/22	03:05	05:19	Initial cal verification 50
V3D7672-ICV7672	3D182430.D	10/06/22	03:28	05:42	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: V3D7710-BFB
Lab File ID: 3D183315.D
Instrument ID: GCMS3D
Injection Date: 10/25/22
Injection Time: 09:58

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.99 - 40.0% of mass 95	33054	20.9		Pass
75	30.0 - 60.0% of mass 95	86800	55.0		Pass
95	Base peak, 100% relative abundance	157902	100.0		Pass
96	5.0 - 9.0% of mass 95	11063	7.01		Pass
173	Less than 2.0% of mass 174	1176	0.74	(0.85) [a]	Pass
174	50.0 - 120.0% of mass 95	137997	87.4		Pass
175	5.0 - 9.0% of mass 174	12414	7.86	(9.00) [a]	Pass
176	95.0 - 101.0% of mass 174	133472	84.5	(96.7) [a]	Pass
177	5.0 - 9.0% of mass 176	8849	5.60	(6.63) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3D7710-CC7672	3D183315.D	10/25/22	09:58	00:00	Continuing cal 20
V3D7710-BS	3D183317.D	10/25/22	11:01	01:03	Blank Spike
V3D7710-MB	3D183319.D	10/25/22	11:48	01:50	Method Blank
ZZZZZZ	3D183320.D	10/25/22	12:18	02:20	(unrelated sample)
ZZZZZZ	3D183321.D	10/25/22	12:42	02:44	(unrelated sample)
ZZZZZZ	3D183322.D	10/25/22	13:06	03:08	(unrelated sample)
JD54163-8	3D183323.D	10/25/22	13:29	03:31	Z-3-102122A/B
JD54163-6	3D183324.D	10/25/22	13:53	03:55	C-3-102122A/B
JD54163-4	3D183325.D	10/25/22	14:16	04:18	C-1-102122A/B
JD54163-5	3D183326.D	10/25/22	14:40	04:42	C-2-102122A/B
JD54163-1MS	3D183327.D	10/25/22	15:03	05:05	Matrix Spike
JD54163-1MSD	3D183328.D	10/25/22	15:27	05:29	Matrix Spike Duplicate
ZZZZZZ	3D183330.D	10/25/22	16:14	06:16	(unrelated sample)
ZZZZZZ	3D183331.D	10/25/22	16:38	06:40	(unrelated sample)
ZZZZZZ	3D183332.D	10/25/22	17:02	07:04	(unrelated sample)
ZZZZZZ	3D183333.D	10/25/22	17:25	07:27	(unrelated sample)
ZZZZZZ	3D183334.D	10/25/22	17:49	07:51	(unrelated sample)
ZZZZZZ	3D183335.D	10/25/22	18:12	08:14	(unrelated sample)
ZZZZZZ	3D183336.D	10/25/22	18:36	08:38	(unrelated sample)
JD54163-1	3D183337.D	10/25/22	19:00	09:02	P-1-102122A/B
ZZZZZZ	3D183338.D	10/25/22	19:23	09:25	(unrelated sample)
JD54163-3	3D183340.D	10/25/22	20:10	10:12	P-3-102122A/B
JD54163-10	3D183341.D	10/25/22	20:34	10:36	Z-5-102122A/B
JD54163-11	3D183342.D	10/25/22	20:58	11:00	Z-6-102122A/B

Instrument Performance Check (BFB)

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: V3D7712-BFB
Lab File ID: 3D183375.D
Instrument ID: GCMS3D
Injection Date: 10/26/22
Injection Time: 09:44

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.99 - 40.0% of mass 95	39445	21.8		Pass
75	30.0 - 60.0% of mass 95	105155	58.1		Pass
95	Base peak, 100% relative abundance	180949	100.0		Pass
96	5.0 - 9.0% of mass 95	11567	6.39		Pass
173	Less than 2.0% of mass 174	2134	1.18	(1.37) [a]	Pass
174	50.0 - 120.0% of mass 95	155547	86.0		Pass
175	5.0 - 9.0% of mass 174	13250	7.32	(8.52) [a]	Pass
176	95.0 - 101.0% of mass 174	150040	82.9	(96.5) [a]	Pass
177	5.0 - 9.0% of mass 176	9865	5.45	(6.57) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3D7712-CC7672	3D183375.D	10/26/22	09:44	00:00	Continuing cal 20
V3D7712-BS	3D183377.D	10/26/22	10:41	00:57	Blank Spike
V3D7712-MB	3D183379.D	10/26/22	11:28	01:44	Method Blank
ZZZZZZ	3D183380.D	10/26/22	12:04	02:20	(unrelated sample)
JD54163-7	3D183381.D	10/26/22	12:32	02:48	Z-2-102122A/B
JD54163-9	3D183382.D	10/26/22	12:56	03:12	Z-4-102122A/B
JD54163-10	3D183383.D	10/26/22	13:19	03:35	Z-5-102122A/B
ZZZZZZ	3D183385.D	10/26/22	14:06	04:22	(unrelated sample)
JD54163-2	3D183386.D	10/26/22	14:30	04:46	P-2-102122A/B
ZZZZZZ	3D183387.D	10/26/22	14:53	05:09	(unrelated sample)
ZZZZZZ	3D183388.D	10/26/22	15:17	05:33	(unrelated sample)
ZZZZZZ	3D183389.D	10/26/22	15:40	05:56	(unrelated sample)
JD54013-5MS	3D183390.D	10/26/22	16:04	06:20	Matrix Spike
JD54013-5MSD	3D183391.D	10/26/22	16:28	06:44	Matrix Spike Duplicate
JD54013-5	3D183393.D	10/26/22	17:15	07:31	(used for QC only; not part of job JD54163)
ZZZZZZ	3D183394.D	10/26/22	17:38	07:54	(unrelated sample)
ZZZZZZ	3D183395.D	10/26/22	18:02	08:18	(unrelated sample)
ZZZZZZ	3D183396.D	10/26/22	18:25	08:41	(unrelated sample)
ZZZZZZ	3D183398.D	10/26/22	19:12	09:28	(unrelated sample)
ZZZZZZ	3D183399.D	10/26/22	19:36	09:52	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: V3D7714-BFB
Lab File ID: 3D183434.D
Instrument ID: GCMS3D
Injection Date: 10/27/22
Injection Time: 09:19

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.99 - 40.0% of mass 95	42413	20.8		Pass
75	30.0 - 60.0% of mass 95	112569	55.1		Pass
95	Base peak, 100% relative abundance	204288	100.0		Pass
96	5.0 - 9.0% of mass 95	14345	7.02		Pass
173	Less than 2.0% of mass 174	1292	0.63	(0.74) [a]	Pass
174	50.0 - 120.0% of mass 95	173760	85.1		Pass
175	5.0 - 9.0% of mass 174	14485	7.09	(8.34) [a]	Pass
176	95.0 - 101.0% of mass 174	168979	82.7	(97.2) [a]	Pass
177	5.0 - 9.0% of mass 176	11039	5.40	(6.53) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3D7714-CC7672	3D183434.D	10/27/22	09:19	00:00	Continuing cal 20
V3D7714-BS	3D183436.D	10/27/22	10:08	00:49	Blank Spike
V3D7714-MB	3D183438.D	10/27/22	10:55	01:36	Method Blank
ZZZZZZ	3D183440.D	10/27/22	11:55	02:36	(unrelated sample)
ZZZZZZ	3D183441.D	10/27/22	12:19	03:00	(unrelated sample)
ZZZZZZ	3D183442.D	10/27/22	12:42	03:23	(unrelated sample)
ZZZZZZ	3D183443.D	10/27/22	13:06	03:47	(unrelated sample)
JD54163-3	3D183444.D	10/27/22	13:29	04:10	P-3-102122A/B
JD54163-1	3D183445.D	10/27/22	13:53	04:34	P-1-102122A/B
ZZZZZZ	3D183446.D	10/27/22	14:16	04:57	(unrelated sample)
ZZZZZZ	3D183447.D	10/27/22	14:40	05:21	(unrelated sample)
ZZZZZZ	3D183448.D	10/27/22	15:03	05:44	(unrelated sample)
ZZZZZZ	3D183449.D	10/27/22	15:27	06:08	(unrelated sample)
ZZZZZZ	3D183450.D	10/27/22	15:50	06:31	(unrelated sample)
JD54049-7	3D183451.D	10/27/22	16:14	06:55	(used for QC only; not part of job JD54163)
ZZZZZZ	3D183452.D	10/27/22	16:38	07:19	(unrelated sample)
ZZZZZZ	3D183453.D	10/27/22	17:01	07:42	(unrelated sample)
JD54049-7MS	3D183454.D	10/27/22	17:25	08:06	Matrix Spike
JD54049-7MSD	3D183455.D	10/27/22	17:48	08:29	Matrix Spike Duplicate
ZZZZZZ	3D183457.D	10/27/22	18:35	09:16	(unrelated sample)
ZZZZZZ	3D183458.D	10/27/22	18:59	09:40	(unrelated sample)
ZZZZZZ	3D183459.D	10/27/22	19:23	10:04	(unrelated sample)
ZZZZZZ	3D183461.D	10/27/22	20:10	10:51	(unrelated sample)

Surrogate Recovery Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Method: SW846 8260D **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JD54163-1	3D183445.D	92	95	103	103
JD54163-1	3D183337.D	99	99	103	101
JD54163-2	3D183386.D	95	97	105	103
JD54163-3	3D183444.D	97	94	102	104
JD54163-3	3D183340.D	97	98	102	100
JD54163-4	3D183325.D	101	101	100	97
JD54163-4	1A227443.D	99	114	99	96
JD54163-5	1A227444.D	96	114	98	96
JD54163-5	3D183326.D	98	103	102	95
JD54163-6	1A227445.D	98	110	98	96
JD54163-6	3D183324.D	103	105	104	100
JD54163-7	3D183381.D	94	100	104	107
JD54163-7	1A227454.D	97	111	96	95
JD54163-8	3D183323.D	95	98	102	101
JD54163-8	1A227497.D	96	112	99	94
JD54163-9	1A227456.D	95	112	95	97
JD54163-9	3D183382.D	97	98	102	99
JD54163-10	3D183341.D	96	99	103	100
JD54163-10	3D183383.D	96	96	101	103
JD54163-11	2K00916.D	95	99	99	106
JD54163-11	3D183342.D	96	97	101	101
JD53388-48MS	1A227434.D	102	109	91	95
JD53388-48MSD	1A227435.D	101	109	92	95
JD53952-2MS	1A227494.D	98	111	93	95
JD53952-2MSD	1A227495.D	98	110	94	96
JD54013-5MS	3D183390.D	100	101	98	104
JD54013-5MSD	3D183391.D	97	100	97	105
JD54019-17MS	2K00926.D	101	105	101	101
JD54019-17MSD	2K00928.D	101	104	102	103
JD54049-7MS	3D183454.D	97	101	97	107
JD54049-7MSD	3D183455.D	100	100	96	106
JD54149-3MS	1A227457.D	95	106	91	95
JD54149-3MSD	1A227458.D	93	105	91	97
JD54163-1MS	3D183327.D	97	97	99	104
JD54163-1MSD	3D183328.D	97	98	99	105
V1A9735-BS	1A227418.D	97	107	93	94
V1A9735-MB	1A227420.D	99	113	97	99
V1A9736-BS	1A227450.D	95	106	92	96
V1A9736-MB	1A227452.D	95	114	97	97
V1A9737-BS	1A227482.D	95	108	93	95

Surrogate Recovery Summary

Job Number: JD54163
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Method: SW846 8260D **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
V1A9737-BSD	1A227483.D	97	110	93	96
V1A9737-MB	1A227485.D	96	117	97	96
V2K28-BS	2K00902.D	99	99	102	102
V2K28-MB	2K00906.D	97	101	100	100
V3D7710-BS	3D183317.D	98	101	97	104
V3D7710-MB	3D183319.D	98	102	101	102
V3D7712-BS	3D183377.D	98	99	98	103
V3D7712-MB	3D183379.D	94	102	101	101
V3D7714-BS	3D183436.D	98	99	96	107
V3D7714-MB	3D183438.D	97	101	101	105

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	80-120%
S2 = 1,2-Dichloroethane-D4	80-120%
S3 = Toluene-D8	80-120%
S4 = 4-Bromofluorobenzene	82-114%

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Langan Engineering & Environmental

1487 First Avenue, NY, NY

100963701

SGS Job Number: JD56097

Sampling Date: 11/21/22



Report to:

Langan Engineering & Environmental
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Total number of pages in report: 46

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

David Chastain
General Manager

Client Service contact: Beth Stopen 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA(68-00408), RI, SC, TX, UT, VA, WV

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SGS North America Inc.

Sample Summary

Langan Engineering & Environmental

Job No: JD56097

1487 First Avenue, NY, NY
Project No: 100963701

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JD56097-1	11/21/22	11:00	AD/XY	11/21/22	AQ	Ground Water	C_1_11212022
JD56097-2	11/21/22	11:05	AD/XY	11/21/22	AQ	Ground Water	C_2_11212022
JD56097-3	11/21/22	11:10	AD/XY	11/21/22	AQ	Ground Water	C_3_11212022
JD56097-4	11/21/22	11:20	AD/XY	11/21/22	AQ	Ground Water	Z_4_11212022
JD56097-5	11/21/22	11:25	AD/XY	11/21/22	AQ	Ground Water	Z_5_11212022
JD56097-6	11/21/22	11:30	AD/XY	11/21/22	AQ	Ground Water	Z_6_11212022
JD56097-7	11/21/22	11:35	AD/XY	11/21/22	AQ	Ground Water	GW ONLY_11212022
JD56097-8	11/21/22	11:15	AD/XY	11/21/22	AQ	Ground Water	Z_2_11212022

This report contains results reported as ND = Not detected. The following applies:
Organics ND = Not detected above the MDL

2

Summary of Hits

Job Number: JD56097
Account: Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY
Collected: 11/21/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD56097-1	**C_1_11212022**					
Acetone [a]		287	10	3.1	ug/l	SW846 8260D
2-Butanone (MEK) [a]		6.0 J	10	2.7	ug/l	SW846 8260D
Chloroform [a]		3.8	1.0	0.50	ug/l	SW846 8260D
Cyclohexane [a]		1.5 J	5.0	0.78	ug/l	SW846 8260D
cis-1,2-Dichloroethene [a]		43.9	1.0	0.51	ug/l	SW846 8260D
Methylene chloride [a]		4.6	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [a]		302	4.0	2.2	ug/l	SW846 8260D
Toluene [a]		0.69 J	1.0	0.49	ug/l	SW846 8260D
Trichloroethene [a]		3.7	1.0	0.53	ug/l	SW846 8260D
m,p-Xylene [a]		2.3	1.0	0.78	ug/l	SW846 8260D
o-Xylene [a]		0.91 J	1.0	0.59	ug/l	SW846 8260D
Xylene (total) [a]		3.2	1.0	0.59	ug/l	SW846 8260D
JD56097-2	**C_2_11212022**					
Acetone [b]		281	40	12	ug/l	SW846 8260D
Bromomethane [b]		17.4	8.0	6.6	ug/l	SW846 8260D
Chloroform [b]		4.2	4.0	2.0	ug/l	SW846 8260D
cis-1,2-Dichloroethene [b]		43.1	4.0	2.0	ug/l	SW846 8260D
Methylene chloride [b]		5.0 J	8.0	4.0	ug/l	SW846 8260D
Tetrachloroethene [b]		491	4.0	2.2	ug/l	SW846 8260D
Trichloroethene [b]		3.7 J	4.0	2.1	ug/l	SW846 8260D
m,p-Xylene [b]		3.2 J	4.0	3.1	ug/l	SW846 8260D
Xylene (total) [b]		3.2 J	4.0	2.4	ug/l	SW846 8260D
JD56097-3	**C_3_11212022**					
Acetone [c]		329	40	12	ug/l	SW846 8260D
Bromomethane [c]		10.1	8.0	6.6	ug/l	SW846 8260D
Chloroform [c]		7.7	4.0	2.0	ug/l	SW846 8260D
cis-1,2-Dichloroethene [c]		79.1	4.0	2.0	ug/l	SW846 8260D
Methylene chloride [c]		6.1 J	8.0	4.0	ug/l	SW846 8260D
Tetrachloroethene [a]		1210	50	28	ug/l	SW846 8260D
Toluene [c]		2.5 J	4.0	2.0	ug/l	SW846 8260D
Trichloroethene [c]		9.3	4.0	2.1	ug/l	SW846 8260D
m,p-Xylene [c]		10.4	4.0	3.1	ug/l	SW846 8260D
o-Xylene [c]		2.9 J	4.0	2.4	ug/l	SW846 8260D
Xylene (total) [c]		13.3	4.0	2.4	ug/l	SW846 8260D
JD56097-4	**Z_4_11212022**					
Acetone [a]		145	10	3.1	ug/l	SW846 8260D
Benzene [a]		0.54	0.50	0.43	ug/l	SW846 8260D

Summary of Hits

Job Number: JD56097
Account: Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY
Collected: 11/21/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
2-Butanone (MEK) [a]		636	10	2.7	ug/l	SW846 8260D
Ethylbenzene [a]		0.75 J	1.0	0.60	ug/l	SW846 8260D
2-Hexanone [a]		3.4 J	5.0	2.0	ug/l	SW846 8260D
Methylene chloride [a]		1.9 J	2.0	1.0	ug/l	SW846 8260D
Toluene [a]		1.5	1.0	0.49	ug/l	SW846 8260D
m,p-Xylene [a]		2.7	1.0	0.78	ug/l	SW846 8260D
o-Xylene [a]		0.90 J	1.0	0.59	ug/l	SW846 8260D
Xylene (total) [a]		3.6	1.0	0.59	ug/l	SW846 8260D
JD56097-5	**Z_5_11212022**					
Acetone [a]		103	10	3.1	ug/l	SW846 8260D
Benzene [a]		0.52	0.50	0.43	ug/l	SW846 8260D
2-Butanone (MEK) [a]		901	100	27	ug/l	SW846 8260D
Carbon disulfide [a]		0.64 J	2.0	0.46	ug/l	SW846 8260D
Chloromethane [a]		0.80 J	1.0	0.76	ug/l	SW846 8260D
Ethylbenzene [a]		0.61 J	1.0	0.60	ug/l	SW846 8260D
2-Hexanone [a]		3.1 J	5.0	2.0	ug/l	SW846 8260D
Methylene chloride [a]		2.6	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [a]		0.63 J	1.0	0.56	ug/l	SW846 8260D
Toluene [a]		1.1	1.0	0.49	ug/l	SW846 8260D
Vinyl chloride [a]		0.59 J	1.0	0.52	ug/l	SW846 8260D
m,p-Xylene [a]		2.0	1.0	0.78	ug/l	SW846 8260D
o-Xylene [a]		0.64 J	1.0	0.59	ug/l	SW846 8260D
Xylene (total) [a]		2.6	1.0	0.59	ug/l	SW846 8260D
JD56097-6	**Z_6_11212022**					
Acetone [a]		112	10	3.1	ug/l	SW846 8260D
Benzene [a]		0.87	0.50	0.43	ug/l	SW846 8260D
2-Butanone (MEK) [a]		966	100	27	ug/l	SW846 8260D
Carbon disulfide [a]		1.4 J	2.0	0.46	ug/l	SW846 8260D
Ethylbenzene [a]		0.69 J	1.0	0.60	ug/l	SW846 8260D
2-Hexanone [a]		2.9 J	5.0	2.0	ug/l	SW846 8260D
Methylene chloride [a]		1.3 J	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [a]		0.95 J	1.0	0.56	ug/l	SW846 8260D
Toluene [a]		2.4	1.0	0.49	ug/l	SW846 8260D
m,p-Xylene [a]		6.0	1.0	0.78	ug/l	SW846 8260D
o-Xylene [a]		1.6	1.0	0.59	ug/l	SW846 8260D
Xylene (total) [a]		7.6	1.0	0.59	ug/l	SW846 8260D
JD56097-7	**GW ONLY_11212022**					
Chloroform		5.2	1.0	0.50	ug/l	SW846 8260D
cis-1,2-Dichloroethene		58.1	1.0	0.51	ug/l	SW846 8260D

Summary of Hits

Job Number: JD56097
Account: Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY
Collected: 11/21/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Methylene chloride		4.1	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene		402	10	5.6	ug/l	SW846 8260D
Trichloroethene		4.6	1.0	0.53	ug/l	SW846 8260D
JD56097-8	**Z_2_11212022**					
Acetone [a]		129	10	3.1	ug/l	SW846 8260D
Benzene [a]		0.50	0.50	0.43	ug/l	SW846 8260D
2-Butanone (MEK) [a]		540	10	2.7	ug/l	SW846 8260D
Carbon disulfide [a]		1.9 J	2.0	0.46	ug/l	SW846 8260D
Ethylbenzene [a]		1.3	1.0	0.60	ug/l	SW846 8260D
2-Hexanone [a]		2.0 J	5.0	2.0	ug/l	SW846 8260D
Methylene chloride [a]		1.5 J	2.0	1.0	ug/l	SW846 8260D
Tetrachloroethene [a]		1.2	1.0	0.56	ug/l	SW846 8260D
Toluene [a]		1.5	1.0	0.49	ug/l	SW846 8260D
m,p-Xylene [a]		4.4	1.0	0.78	ug/l	SW846 8260D
o-Xylene [a]		1.4	1.0	0.59	ug/l	SW846 8260D
Xylene (total) [a]		5.8	1.0	0.59	ug/l	SW846 8260D

(a) (pH = 4)Sample pH did not satisfy field preservation criteria.
(b) (pH = 4)Sample pH did not satisfy field preservation criteria. Dilution required due to high concentration of target compound.
(c) Dilution required due to high concentration of target compound. (pH = 4)Sample pH did not satisfy field preservation criteria.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	C_1_11212022		
Lab Sample ID:	JD56097-1	**Date Sampled:**	11/21/22
Matrix:	AQ - Ground Water	**Date Received:**	11/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L350259.D	1	12/02/22 14:56	NH	n/a	n/a	VL10604
Run #2 [a]	4D123866.D	4	12/01/22 01:32	NH	n/a	n/a	V4D5498

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	287	10	3.1	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	6.0	10	2.7	ug/l	J
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	3.8	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	1.5	5.0	0.78	ug/l	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	43.9	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	C_1_11212022		
Lab Sample ID:	JD56097-1	**Date Sampled:**	11/21/22
Matrix:	AQ - Ground Water	**Date Received:**	11/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	4.6	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	302 [b]	4.0	2.2	ug/l	
108-88-3	Toluene	0.69	1.0	0.49	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	3.7	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.52	ug/l	
	m,p-Xylene	2.3	1.0	0.78	ug/l	
95-47-6	o-Xylene	0.91	1.0	0.59	ug/l	J
1330-20-7	Xylene (total)	3.2	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%	95%	80-120%
17060-07-0	1,2-Dichloroethane-D4	105%	107%	80-120%
2037-26-5	Toluene-D8	103%	103%	80-120%
460-00-4	4-Bromofluorobenzene	92%	109%	82-114%

(a) (pH = 4)Sample pH did not satisfy field preservation criteria.
(b) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	C_2_11212022		
Lab Sample ID:	JD56097-2	**Date Sampled:**	11/21/22
Matrix:	AQ - Ground Water	**Date Received:**	11/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	4D123867.D	4	12/01/22 02:01	NH	n/a	n/a	V4D5498
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	281	40	12	ug/l	
71-43-2	Benzene	ND	2.0	1.7	ug/l	
74-97-5	Bromochloromethane	ND	4.0	1.9	ug/l	
75-27-4	Bromodichloromethane	ND	4.0	1.8	ug/l	
75-25-2	Bromoform	ND	4.0	2.5	ug/l	
74-83-9	Bromomethane	17.4	8.0	6.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	40	11	ug/l	
75-15-0	Carbon disulfide	ND	8.0	1.8	ug/l	
56-23-5	Carbon tetrachloride	ND	4.0	2.2	ug/l	
108-90-7	Chlorobenzene	ND	4.0	2.2	ug/l	
75-00-3	Chloroethane	ND	4.0	2.9	ug/l	
67-66-3	Chloroform	4.2	4.0	2.0	ug/l	
74-87-3	Chloromethane	ND	4.0	3.0	ug/l	
110-82-7	Cyclohexane	ND	20	3.1	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	8.0	2.1	ug/l	
124-48-1	Dibromochloromethane	ND	4.0	2.2	ug/l	
106-93-4	1,2-Dibromoethane	ND	4.0	1.9	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	4.0	2.1	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	4.0	2.2	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	4.0	2.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	8.0	2.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	4.0	2.3	ug/l	
107-06-2	1,2-Dichloroethane	ND	4.0	2.4	ug/l	
75-35-4	1,1-Dichloroethene	ND	4.0	2.4	ug/l	
156-59-2	cis-1,2-Dichloroethene	43.1	4.0	2.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	4.0	2.1	ug/l	
78-87-5	1,2-Dichloropropane	ND	4.0	2.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	4.0	1.9	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	4.0	1.7	ug/l	
100-41-4	Ethylbenzene	ND	4.0	2.4	ug/l	
76-13-1	Freon 113	ND	20	2.3	ug/l	
591-78-6	2-Hexanone	ND	20	8.1	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	C_2_11212022		
Lab Sample ID:	JD56097-2	**Date Sampled:**	11/21/22
Matrix:	AQ - Ground Water	**Date Received:**	11/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	4.0	2.6	ug/l	
79-20-9	Methyl Acetate	ND	20	3.2	ug/l	
108-87-2	Methylcyclohexane	ND	20	2.4	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	20	7.4	ug/l	
75-09-2	Methylene chloride	5.0	8.0	4.0	ug/l	J
100-42-5	Styrene	ND	4.0	1.9	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.0	2.6	ug/l	
127-18-4	Tetrachloroethene	491	4.0	2.2	ug/l	
108-88-3	Toluene	ND	4.0	2.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	4.0	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	4.0	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	4.0	2.1	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	4.0	2.1	ug/l	
79-01-6	Trichloroethene	3.7	4.0	2.1	ug/l	J
75-69-4	Trichlorofluoromethane	ND	8.0	1.6	ug/l	
75-01-4	Vinyl chloride	ND	4.0	2.1	ug/l	
	m,p-Xylene	3.2	4.0	3.1	ug/l	J
95-47-6	o-Xylene	ND	4.0	2.4	ug/l	
1330-20-7	Xylene (total)	3.2	4.0	2.4	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		80-120%
17060-07-0	1,2-Dichloroethane-D4	108%		80-120%
2037-26-5	Toluene-D8	103%		80-120%
460-00-4	4-Bromofluorobenzene	109%		82-114%

(a) (pH = 4)Sample pH did not satisfy field preservation criteria. Dilution required due to high concentration of target compound.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	C_3_11212022		
Lab Sample ID:	JD56097-3	**Date Sampled:**	11/21/22
Matrix:	AQ - Ground Water	**Date Received:**	11/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	4D123868.D	4	12/01/22 02:30	NH	n/a	n/a	V4D5498
Run #2 [b]	L350257.D	50	12/02/22 14:10	NH	n/a	n/a	VL10604

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	329	40	12	ug/l	
71-43-2	Benzene	ND	2.0	1.7	ug/l	
74-97-5	Bromochloromethane	ND	4.0	1.9	ug/l	
75-27-4	Bromodichloromethane	ND	4.0	1.8	ug/l	
75-25-2	Bromoform	ND	4.0	2.5	ug/l	
74-83-9	Bromomethane	10.1	8.0	6.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	40	11	ug/l	
75-15-0	Carbon disulfide	ND	8.0	1.8	ug/l	
56-23-5	Carbon tetrachloride	ND	4.0	2.2	ug/l	
108-90-7	Chlorobenzene	ND	4.0	2.2	ug/l	
75-00-3	Chloroethane	ND	4.0	2.9	ug/l	
67-66-3	Chloroform	7.7	4.0	2.0	ug/l	
74-87-3	Chloromethane	ND	4.0	3.0	ug/l	
110-82-7	Cyclohexane	ND	20	3.1	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	8.0	2.1	ug/l	
124-48-1	Dibromochloromethane	ND	4.0	2.2	ug/l	
106-93-4	1,2-Dibromoethane	ND	4.0	1.9	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	4.0	2.1	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	4.0	2.2	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	4.0	2.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	8.0	2.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	4.0	2.3	ug/l	
107-06-2	1,2-Dichloroethane	ND	4.0	2.4	ug/l	
75-35-4	1,1-Dichloroethene	ND	4.0	2.4	ug/l	
156-59-2	cis-1,2-Dichloroethene	79.1	4.0	2.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	4.0	2.1	ug/l	
78-87-5	1,2-Dichloropropane	ND	4.0	2.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	4.0	1.9	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	4.0	1.7	ug/l	
100-41-4	Ethylbenzene	ND	4.0	2.4	ug/l	
76-13-1	Freon 113	ND	20	2.3	ug/l	
591-78-6	2-Hexanone	ND	20	8.1	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	C_3_11212022		
Lab Sample ID:	JD56097-3	**Date Sampled:**	11/21/22
Matrix:	AQ - Ground Water	**Date Received:**	11/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	4.0	2.6	ug/l	
79-20-9	Methyl Acetate	ND	20	3.2	ug/l	
108-87-2	Methylcyclohexane	ND	20	2.4	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	4.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	20	7.4	ug/l	
75-09-2	Methylene chloride	6.1	8.0	4.0	ug/l	J
100-42-5	Styrene	ND	4.0	1.9	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.0	2.6	ug/l	
127-18-4	Tetrachloroethene	1210 [c]	50	28	ug/l	
108-88-3	Toluene	2.5	4.0	2.0	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	4.0	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	4.0	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	4.0	2.1	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	4.0	2.1	ug/l	
79-01-6	Trichloroethene	9.3	4.0	2.1	ug/l	
75-69-4	Trichlorofluoromethane	ND	8.0	1.6	ug/l	
75-01-4	Vinyl chloride	ND	4.0	2.1	ug/l	
	m,p-Xylene	10.4	4.0	3.1	ug/l	
95-47-6	o-Xylene	2.9	4.0	2.4	ug/l	J
1330-20-7	Xylene (total)	13.3	4.0	2.4	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%	99%	80-120%
17060-07-0	1,2-Dichloroethane-D4	108%	102%	80-120%
2037-26-5	Toluene-D8	104%	106%	80-120%
460-00-4	4-Bromofluorobenzene	108%	96%	82-114%

(a) Dilution required due to high concentration of target compound. (pH = 4)Sample pH did not satisfy field preservation criteria.
(b) (pH = 4)Sample pH did not satisfy field preservation criteria.
(c) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z_4_11212022		
Lab Sample ID:	JD56097-4	**Date Sampled:**	11/21/22
Matrix:	AQ - Ground Water	**Date Received:**	11/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	4D123875.D	1	12/01/22 05:49	NH	n/a	n/a	V4D5498
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	145	10	3.1	ug/l	
71-43-2	Benzene	0.54	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	636	10	2.7	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	0.75	1.0	0.60	ug/l	J
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	3.4	5.0	2.0	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z_4_11212022		
Lab Sample ID:	JD56097-4	**Date Sampled:**	11/21/22
Matrix:	AQ - Ground Water	**Date Received:**	11/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	1.9	2.0	1.0	ug/l	J
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.56	ug/l	
108-88-3	Toluene	1.5	1.0	0.49	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.52	ug/l	
	m,p-Xylene	2.7	1.0	0.78	ug/l	
95-47-6	o-Xylene	0.90	1.0	0.59	ug/l	J
1330-20-7	Xylene (total)	3.6	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	88%		80-120%
17060-07-0	1,2-Dichloroethane-D4	96%		80-120%
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	104%		82-114%

(a) (pH = 4)Sample pH did not satisfy field preservation criteria.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z_5_11212022		
Lab Sample ID:	JD56097-5	**Date Sampled:**	11/21/22
Matrix:	AQ - Ground Water	**Date Received:**	11/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	4D123876.D	1	12/01/22 06:17	NH	n/a	n/a	V4D5498
Run #2 [a]	L350263.D	10	12/02/22 16:28	NH	n/a	n/a	VL10604

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	103	10	3.1	ug/l	
71-43-2	Benzene	0.52	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	901 [b]	100	27	ug/l	
75-15-0	Carbon disulfide	0.64	2.0	0.46	ug/l	J
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	0.80	1.0	0.76	ug/l	J
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	0.61	1.0	0.60	ug/l	J
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	3.1	5.0	2.0	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z_5_11212022		
Lab Sample ID:	JD56097-5	**Date Sampled:**	11/21/22
Matrix:	AQ - Ground Water	**Date Received:**	11/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	2.6	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	0.63	1.0	0.56	ug/l	J
108-88-3	Toluene	1.1	1.0	0.49	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	0.59	1.0	0.52	ug/l	J
	m,p-Xylene	2.0	1.0	0.78	ug/l	
95-47-6	o-Xylene	0.64	1.0	0.59	ug/l	J
1330-20-7	Xylene (total)	2.6	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	88%	103%	80-120%
17060-07-0	1,2-Dichloroethane-D4	95%	103%	80-120%
2037-26-5	Toluene-D8	100%	101%	80-120%
460-00-4	4-Bromofluorobenzene	105%	98%	82-114%

(a) (pH = 4)Sample pH did not satisfy field preservation criteria.
(b) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z_6_11212022		
Lab Sample ID:	JD56097-6	**Date Sampled:**	11/21/22
Matrix:	AQ - Ground Water	**Date Received:**	11/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	4D123877.D	1	12/01/22 06:45	NH	n/a	n/a	V4D5498
Run #2 [a]	L350258.D	10	12/02/22 14:33	NH	n/a	n/a	VL10604

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	112	10	3.1	ug/l	
71-43-2	Benzene	0.87	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	966 [b]	100	27	ug/l	
75-15-0	Carbon disulfide	1.4	2.0	0.46	ug/l	J
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	0.69	1.0	0.60	ug/l	J
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	2.9	5.0	2.0	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z_6_11212022		
Lab Sample ID:	JD56097-6	**Date Sampled:**	11/21/22
Matrix:	AQ - Ground Water	**Date Received:**	11/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	1.3	2.0	1.0	ug/l	J
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	0.95	1.0	0.56	ug/l	J
108-88-3	Toluene	2.4	1.0	0.49	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.52	ug/l	
	m,p-Xylene	6.0	1.0	0.78	ug/l	
95-47-6	o-Xylene	1.6	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	7.6	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	88%	101%	80-120%
17060-07-0	1,2-Dichloroethane-D4	95%	104%	80-120%
2037-26-5	Toluene-D8	99%	104%	80-120%
460-00-4	4-Bromofluorobenzene	104%	97%	82-114%

(a) (pH = 4)Sample pH did not satisfy field preservation criteria.
(b) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW ONLY_11212022		
Lab Sample ID:	JD56097-7	**Date Sampled:**	11/21/22
Matrix:	AQ - Ground Water	**Date Received:**	11/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L350260.D	1	12/02/22 15:19	NH	n/a	n/a	VL10604
Run #2	4D123869.D	10	12/01/22 02:58	NH	n/a	n/a	V4D5498

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.1	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.7	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	5.2	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	58.1	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW ONLY_11212022		
Lab Sample ID:	JD56097-7	**Date Sampled:**	11/21/22
Matrix:	AQ - Ground Water	**Date Received:**	11/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	4.1	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	402 [a]	10	5.6	ug/l	
108-88-3	Toluene	ND	1.0	0.49	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	4.6	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.52	ug/l	
	m,p-Xylene	ND	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%	95%	80-120%
17060-07-0	1,2-Dichloroethane-D4	107%	108%	80-120%
2037-26-5	Toluene-D8	107%	102%	80-120%
460-00-4	4-Bromofluorobenzene	95%	109%	82-114%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z_2_11212022		
Lab Sample ID:	JD56097-8	**Date Sampled:**	11/21/22
Matrix:	AQ - Ground Water	**Date Received:**	11/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	4D123878.D	1	12/01/22 07:14	NH	n/a	n/a	V4D5498
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	129	10	3.1	ug/l	
71-43-2	Benzene	0.50	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	540	10	2.7	ug/l	
75-15-0	Carbon disulfide	1.9	2.0	0.46	ug/l	J
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	1.3	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	2.0	5.0	2.0	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	Z_2_11212022		
Lab Sample ID:	JD56097-8	**Date Sampled:**	11/21/22
Matrix:	AQ - Ground Water	**Date Received:**	11/21/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	1487 First Avenue, NY, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	1.5	2.0	1.0	ug/l	J
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	1.2	1.0	0.56	ug/l	
108-88-3	Toluene	1.5	1.0	0.49	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.52	ug/l	
	m,p-Xylene	4.4	1.0	0.78	ug/l	
95-47-6	o-Xylene	1.4	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	5.8	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	88%		80-120%
17060-07-0	1,2-Dichloroethane-D4	96%		80-120%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	102%		82-114%

(a) (pH = 4)Sample pH did not satisfy field preservation criteria.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

Page 1 of 1

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.sgs.com/ehsusa

EHSA-QAC-0023-04-FORM-Standard COC

FED-EX Tracking #
Bottle Order Control # BW-111722-45
SGS Quote #
SGS Job # JD56097

Client / Reporting Information

Company Name: Langan Engineering
Street Address: 300 Kimball Dr.
City: Parsippany State: NJ Zip: 07054
Project Contact: Amita Oka E-mail: aoka@langan.com
Phone #: 609-252-5519
Sampler(s) Name(s): AO/XY/EP Phone #:

Project Information

Project Name: 1487 First Av
Street: 1487 First Av
City: NY State: NY
Project #: 100963701
Client Purchase Order #:
Project Manager: Beth Stopen
Attention:

Billing Information (if different from Raport to)

Company Name:
Street Address:
City: State: Zip:

Requested Analysis

VOC

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED - Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB - Equipment Blank; RB - Rinse Blank; TB - Trip Blank

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Grab (G) Comp (C)	Source Chlorinated (Y/N)	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	NONE	DI Water	MEOH	ENCORE	pH Check (Lab Use Only)	LAB USE ONLY
1	C-1-11212022		11/2/2022		AO/XY	C	Y		2	X								X	VIIOS
2	C-2-11212022								2	X								X	
3	C-3-11212022								2	X								X	
~~4~~	~~C-4-11212022~~								~~2~~	X								X	
8	2-2-11212022								2	X								X	
	2-3-11212022								2	X								X	
4	2-4-11212022								2	X								X	
5	2-5-11212022								2	X								X	
6	2-6-11212022								2	X								X	
7	GW only-11212022								2	X								X	

Turn Around Time (Business Days)

Approved By (SGS PM): / Date:

- [ ] 10 Business Days
- [ ] 5 Business Days
- [ ] 3 Business Days*
- [ ] 2 Business Days*
- [ ] 1 Business Day*
- [ ] Other

All data available via Lablink

* Approval needed for 1-3 Business Day TAT

Deliverable

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] NJ Reduced (Level 3)
- [ ] Full Tier I (Level 4)
- [ ] Commercial "C"
- [ ] NJ DKQP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] MA MCP Criteria
- [ ] CT RCP Criteria
- [ ] State Forms
- [ ] EDD Format
- [ ] DOD-QSM5

Commercial "A" = Results only; Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Supply 2x40ml Vials per sample

SGS COURIER

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by:	Date / Time:	Received By:
1	Xin Yi	11/21/22 15:00	
2		11/21/22 18:11	
3			
4			
5			

Custody Seal # — Intact / Not Intact / Absent

Therm ID: — See Sample Receipt Summary — On Ice — Cooler Temp. °C: 2.4°C

SGS Sample Receipt Summary

Job Number: JD56097 **Client:** LANGAN ENGINEERING & ENVIRONMENT **Project:** 1487 FIRST AVENUE, NY, NY

Date / Time Received: 11/21/2022 6:11:00 PM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (2.4);

Cooler Temps (Corrected) °C: Cooler 1: (2.4);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:			
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control _Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 231619 pH 12+: 203117A Other: (Specify)

Comments
1). Did not received sample "Z-3_11212022", Instead Recevied "Z-2_11212022" Please confirm

2.) No collection time on the COC please confirm.

3.) Collection date written on COC is 11/2/2022, please confirm

Responded to by: Beth Stopen Response Date: 11/22/22

1) Please proceed with running -8 "Z-2_11212022" for V8260TCL20.
2) Collection times are: -1 at 11:00, -2 at 11:05, -3 at 11:10, 4 at 11:20, 5 at 11:25, -6 at 11:30, -7 at 11:35, -8 at 11:15.
3) All samples collected 11/21/2022.
Per Xin, Yin

JD56097: Chain of Custody
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MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: JD56097
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4D5498-MB	4D123864.D	1	12/01/22	NH	n/a	n/a	V4D5498

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD56097-1, JD56097-2, JD56097-3, JD56097-4, JD56097-5, JD56097-6, JD56097-7, JD56097-8

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.1	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.7	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	

Method Blank Summary

Job Number: JD56097
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4D5498-MB	4D123864.D	1	12/01/22	NH	n/a	n/a	V4D5498

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD56097-1, JD56097-2, JD56097-3, JD56097-4, JD56097-5, JD56097-6, JD56097-7, JD56097-8

CAS No.	Compound	Result	RL	MDL	Units	Q
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.56	ug/l	
108-88-3	Toluene	ND	1.0	0.49	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.72	1.0	0.50	ug/l	J
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.52	ug/l	
	m,p-Xylene	ND	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	95%	80-120%
17060-07-0	1,2-Dichloroethane-D4	106%	80-120%
2037-26-5	Toluene-D8	102%	80-120%
460-00-4	4-Bromofluorobenzene	109%	82-114%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JD56097
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL10604-MB	L350252.D	1	12/02/22	NH	n/a	n/a	VL10604

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD56097-1, JD56097-3, JD56097-5, JD56097-6, JD56097-7

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.1	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.7	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	

Method Blank Summary

Job Number: JD56097
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL10604-MB	L350252.D	1	12/02/22	NH	n/a	n/a	VL10604

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD56097-1, JD56097-3, JD56097-5, JD56097-6, JD56097-7

CAS No.	Compound	Result	RL	MDL	Units	Q
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.56	ug/l	
108-88-3	Toluene	ND	1.0	0.49	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.52	ug/l	
	m,p-Xylene	ND	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	101%	80-120%
17060-07-0	1,2-Dichloroethane-D4	105%	80-120%
2037-26-5	Toluene-D8	105%	80-120%
460-00-4	4-Bromofluorobenzene	98%	82-114%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Blank Spike Summary

Job Number: JD56097
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4D5498-BS	4D123862.D	1	11/30/22	NH	n/a	n/a	V4D5498

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD56097-1, JD56097-2, JD56097-3, JD56097-4, JD56097-5, JD56097-6, JD56097-7, JD56097-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	200	300	150	27-175
71-43-2	Benzene	50	50.1	100	80-115
74-97-5	Bromochloromethane	50	49.0	98	83-122
75-27-4	Bromodichloromethane	50	53.3	107	82-119
75-25-2	Bromoform	50	48.7	97	77-135
74-83-9	Bromomethane	50	49.9	100	40-162
78-93-3	2-Butanone (MEK)	200	232	116	61-150
75-15-0	Carbon disulfide	50	47.6	95	64-130
56-23-5	Carbon tetrachloride	50	48.7	97	75-127
108-90-7	Chlorobenzene	50	50.6	101	80-115
75-00-3	Chloroethane	50	56.9	114	56-144
67-66-3	Chloroform	50	47.6	95	75-116
74-87-3	Chloromethane	50	52.8	106	41-153
110-82-7	Cyclohexane	50	49.8	100	66-129
96-12-8	1,2-Dibromo-3-chloropropane	50	49.2	98	69-134
124-48-1	Dibromochloromethane	50	50.5	101	81-123
106-93-4	1,2-Dibromoethane	50	50.2	100	67-138
95-50-1	1,2-Dichlorobenzene	50	51.0	102	81-117
541-73-1	1,3-Dichlorobenzene	50	50.2	100	81-115
106-46-7	1,4-Dichlorobenzene	50	48.2	96	80-114
75-71-8	Dichlorodifluoromethane	50	55.8	112	43-152
75-34-3	1,1-Dichloroethane	50	51.6	103	75-125
107-06-2	1,2-Dichloroethane	50	52.0	104	73-117
75-35-4	1,1-Dichloroethene	50	46.6	93	70-124
156-59-2	cis-1,2-Dichloroethene	50	45.3	91	80-120
156-60-5	trans-1,2-Dichloroethene	50	46.1	92	77-121
78-87-5	1,2-Dichloropropane	50	53.7	107	79-121
10061-01-5	cis-1,3-Dichloropropene	50	51.6	103	83-123
10061-02-6	trans-1,3-Dichloropropene	50	53.6	107	83-122
100-41-4	Ethylbenzene	50	51.1	102	78-116
76-13-1	Freon 113	50	47.7	95	68-134
591-78-6	2-Hexanone	200	218	109	66-136
98-82-8	Isopropylbenzene	50	49.9	100	78-121
79-20-9	Methyl Acetate	50	50.6	101	60-143
108-87-2	Methylcyclohexane	50	50.5	101	71-123
1634-04-4	Methyl Tert Butyl Ether	50	49.4	99	76-123

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD56097
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4D5498-BS	4D123862.D	1	11/30/22	NH	n/a	n/a	V4D5498

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD56097-1, JD56097-2, JD56097-3, JD56097-4, JD56097-5, JD56097-6, JD56097-7, JD56097-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	200	208	104	73-134
75-09-2	Methylene chloride	50	49.0	98	73-123
100-42-5	Styrene	50	49.5	99	81-125
79-34-5	1,1,2,2-Tetrachloroethane	50	52.4	105	73-126
127-18-4	Tetrachloroethene	50	46.9	94	73-119
108-88-3	Toluene	50	49.6	99	79-116
87-61-6	1,2,3-Trichlorobenzene	50	46.7	93	63-137
120-82-1	1,2,4-Trichlorobenzene	50	48.0	96	68-135
71-55-6	1,1,1-Trichloroethane	50	49.3	99	76-124
79-00-5	1,1,2-Trichloroethane	50	53.5	107	83-117
79-01-6	Trichloroethene	50	51.2	102	80-118
75-69-4	Trichlorofluoromethane	50	54.3	109	67-134
75-01-4	Vinyl chloride	50	56.0	112	52-146
	m,p-Xylene	100	100	100	79-119
95-47-6	o-Xylene	50	50.5	101	81-119
1330-20-7	Xylene (total)	150	151	101	80-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	96%	80-120%
17060-07-0	1,2-Dichloroethane-D4	103%	80-120%
2037-26-5	Toluene-D8	99%	80-120%
460-00-4	4-Bromofluorobenzene	109%	82-114%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD56097
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL10604-BS	L350250.D	1	12/02/22	NH	n/a	n/a	VL10604

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD56097-1, JD56097-3, JD56097-5, JD56097-6, JD56097-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	200	222	111	27-175
71-43-2	Benzene	50	47.0	94	80-115
74-97-5	Bromochloromethane	50	53.5	107	83-122
75-27-4	Bromodichloromethane	50	52.1	104	82-119
75-25-2	Bromoform	50	55.0	110	77-135
74-83-9	Bromomethane	50	52.8	106	40-162
78-93-3	2-Butanone (MEK)	200	232	116	61-150
75-15-0	Carbon disulfide	50	46.3	93	64-130
56-23-5	Carbon tetrachloride	50	48.7	97	75-127
108-90-7	Chlorobenzene	50	52.2	104	80-115
75-00-3	Chloroethane	50	46.5	93	56-144
67-66-3	Chloroform	50	52.4	105	75-116
74-87-3	Chloromethane	50	43.8	88	41-153
110-82-7	Cyclohexane	50	47.4	95	66-129
96-12-8	1,2-Dibromo-3-chloropropane	50	59.7	119	69-134
124-48-1	Dibromochloromethane	50	51.3	103	81-123
106-93-4	1,2-Dibromoethane	50	53.5	107	67-138
95-50-1	1,2-Dichlorobenzene	50	54.9	110	81-117
541-73-1	1,3-Dichlorobenzene	50	54.1	108	81-115
106-46-7	1,4-Dichlorobenzene	50	53.1	106	80-114
75-71-8	Dichlorodifluoromethane	50	50.3	101	43-152
75-34-3	1,1-Dichloroethane	50	47.9	96	75-125
107-06-2	1,2-Dichloroethane	50	48.2	96	73-117
75-35-4	1,1-Dichloroethene	50	49.7	99	70-124
156-59-2	cis-1,2-Dichloroethene	50	47.7	95	80-120
156-60-5	trans-1,2-Dichloroethene	50	49.8	100	77-121
78-87-5	1,2-Dichloropropane	50	48.9	98	79-121
10061-01-5	cis-1,3-Dichloropropene	50	52.0	104	83-123
10061-02-6	trans-1,3-Dichloropropene	50	52.7	105	83-122
100-41-4	Ethylbenzene	50	46.9	94	78-116
76-13-1	Freon 113	50	47.8	96	68-134
591-78-6	2-Hexanone	200	211	106	66-136
98-82-8	Isopropylbenzene	50	49.8	100	78-121
79-20-9	Methyl Acetate	50	50.0	100	60-143
108-87-2	Methylcyclohexane	50	46.6	93	71-123
1634-04-4	Methyl Tert Butyl Ether	50	52.8	106	76-123

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD56097
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL10604-BS	L350250.D	1	12/02/22	NH	n/a	n/a	VL10604

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD56097-1, JD56097-3, JD56097-5, JD56097-6, JD56097-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	200	214	107	73-134
75-09-2	Methylene chloride	50	48.7	97	73-123
100-42-5	Styrene	50	49.4	99	81-125
79-34-5	1,1,2,2-Tetrachloroethane	50	56.4	113	73-126
127-18-4	Tetrachloroethene	50	50.0	100	73-119
108-88-3	Toluene	50	48.9	98	79-116
87-61-6	1,2,3-Trichlorobenzene	50	60.6	121	63-137
120-82-1	1,2,4-Trichlorobenzene	50	59.6	119	68-135
71-55-6	1,1,1-Trichloroethane	50	49.9	100	76-124
79-00-5	1,1,2-Trichloroethane	50	51.3	103	83-117
79-01-6	Trichloroethene	50	50.2	100	80-118
75-69-4	Trichlorofluoromethane	50	50.2	100	67-134
75-01-4	Vinyl chloride	50	46.3	93	52-146
	m,p-Xylene	100	95.6	96	79-119
95-47-6	o-Xylene	50	49.8	100	81-119
1330-20-7	Xylene (total)	150	145	97	80-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	103%	80-120%
17060-07-0	1,2-Dichloroethane-D4	95%	80-120%
2037-26-5	Toluene-D8	93%	80-120%
460-00-4	4-Bromofluorobenzene	99%	82-114%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD56097
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD56146-5MS	4D123870.D	1	12/01/22	NH	n/a	n/a	V4D5498
JD56146-5MSD	4D123871.D	1	12/01/22	NH	n/a	n/a	V4D5498
JD56146-5 [a]	4D123865.D	1	12/01/22	NH	n/a	n/a	V4D5498

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD56097-1, JD56097-2, JD56097-3, JD56097-4, JD56097-5, JD56097-6, JD56097-7, JD56097-8

CAS No.	Compound	JD56146-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		200	162	81	200	165	83	2	22-134/19
71-43-2	Benzene	ND		50	50.0	100	50	49.7	99	1	49-137/12
74-97-5	Bromochloromethane	ND		50	45.7	91	50	45.5	91	0	78-122/12
75-27-4	Bromodichloromethane	ND		50	51.9	104	50	51.7	103	0	76-121/12
75-25-2	Bromoform	ND		50	48.0	96	50	48.0	96	0	70-133/13
74-83-9	Bromomethane	ND		50	37.1	74	50	40.5	81	9	27-164/38
78-93-3	2-Butanone (MEK)	ND		200	174	87	200	178	89	2	52-137/17
75-15-0	Carbon disulfide	ND		50	3.4	7* [b]	50	9.4	19* [b]	94* [b]	54-136/16
56-23-5	Carbon tetrachloride	ND		50	49.4	99	50	49.2	98	0	70-132/13
108-90-7	Chlorobenzene	ND		50	50.3	101	50	50.4	101	0	68-123/12
75-00-3	Chloroethane	ND		50	55.7	111	50	54.7	109	2	48-152/17
67-66-3	Chloroform	ND		50	46.3	93	50	46.2	92	0	68-120/13
74-87-3	Chloromethane	ND		50	47.0	94	50	45.2	90	4	35-156/18
110-82-7	Cyclohexane	ND		50	50.4	101	50	49.5	99	2	53-146/14
96-12-8	1,2-Dibromo-3-chloropropane	ND		50	48.6	97	50	49.9	100	3	63-134/16
124-48-1	Dibromochloromethane	ND		50	48.8	98	50	48.8	98	0	75-122/12
106-93-4	1,2-Dibromoethane	ND		50	47.6	95	50	47.6	95	0	63-134/12
95-50-1	1,2-Dichlorobenzene	ND		50	50.0	100	50	50.6	101	1	74-119/12
541-73-1	1,3-Dichlorobenzene	ND		50	49.8	100	50	49.9	100	0	75-117/12
106-46-7	1,4-Dichlorobenzene	ND		50	47.8	96	50	48.0	96	0	72-117/12
75-71-8	Dichlorodifluoromethane	ND		50	52.2	104	50	50.7	101	3	34-163/16
75-34-3	1,1-Dichloroethane	ND		50	51.1	102	50	50.5	101	1	68-129/13
107-06-2	1,2-Dichloroethane	ND		50	50.1	100	50	49.4	99	1	66-120/13
75-35-4	1,1-Dichloroethene	ND		50	45.7	91	50	45.4	91	1	59-133/15
156-59-2	cis-1,2-Dichloroethene	ND		50	45.1	90	50	45.1	90	0	52-140/12
156-60-5	trans-1,2-Dichloroethene	ND		50	45.6	91	50	45.4	91	0	70-125/13
78-87-5	1,2-Dichloropropane	ND		50	52.7	105	50	52.2	104	1	73-124/12
10061-01-5	cis-1,3-Dichloropropene	ND		50	51.3	103	50	51.1	102	0	75-125/13
10061-02-6	trans-1,3-Dichloropropene	ND		50	52.4	105	50	52.2	104	0	75-122/12
100-41-4	Ethylbenzene	ND		50	52.0	104	50	52.0	104	0	37-144/12
76-13-1	Freon 113	ND		50	46.8	94	50	46.4	93	1	61-142/14
591-78-6	2-Hexanone	ND		200	195	98	200	197	99	1	56-132/16
98-82-8	Isopropylbenzene	ND		50	51.2	102	50	51.0	102	0	71-126/13
79-20-9	Methyl Acetate	ND		50	45.0	90	50	45.7	91	2	51-139/18
108-87-2	Methylcyclohexane	ND		50	52.6	105	50	52.2	104	1	59-137/16
1634-04-4	Methyl Tert Butyl Ether	ND		50	45.9	92	50	45.6	91	1	66-124/12

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD56097
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD56146-5MS	4D123870.D	1	12/01/22	NH	n/a	n/a	V4D5498
JD56146-5MSD	4D123871.D	1	12/01/22	NH	n/a	n/a	V4D5498
JD56146-5 [a]	4D123865.D	1	12/01/22	NH	n/a	n/a	V4D5498

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD56097-1, JD56097-2, JD56097-3, JD56097-4, JD56097-5, JD56097-6, JD56097-7, JD56097-8

CAS No.	Compound	JD56146-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		200	208	104	200	210	105	1	65-135/14
75-09-2	Methylene chloride	ND		50	46.8	94	50	46.4	93	1	66-125/14
100-42-5	Styrene	ND		50	48.3	97	50	48.0	96	1	71-133/12
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	52.0	104	50	53.2	106	2	68-127/14
127-18-4	Tetrachloroethene	ND		50	49.0	98	50	48.8	98	0	58-132/13
108-88-3	Toluene	ND		50	49.7	99	50	49.8	100	0	46-139/12
87-61-6	1,2,3-Trichlorobenzene	ND		50	44.4	89	50	46.2	92	4	57-136/17
120-82-1	1,2,4-Trichlorobenzene	ND		50	45.8	92	50	47.0	94	3	61-137/16
71-55-6	1,1,1-Trichloroethane	ND		50	50.0	100	50	49.7	99	1	67-132/13
79-00-5	1,1,2-Trichloroethane	ND		50	50.9	102	50	51.1	102	0	75-120/12
79-01-6	Trichloroethene	0.64	J	50	50.7	100	50	50.3	99	1	56-136/12
75-69-4	Trichlorofluoromethane	ND		50	56.4	113	50	55.3	111	2	61-145/16
75-01-4	Vinyl chloride	ND		50	54.0	108	50	53.1	106	2	41-156/16
	m,p-Xylene	ND		100	101	101	100	101	101	0	32-151/12
95-47-6	o-Xylene	ND		50	51.1	102	50	50.8	102	1	50-139/12
1330-20-7	Xylene (total)	ND		150	152	101	150	152	101	0	38-147/12

CAS No.	Surrogate Recoveries	MS	MSD	JD56146-5	Limits
1868-53-7	Dibromofluoromethane	95%	95%	94%	80-120%
17060-07-0	1,2-Dichloroethane-D4	103%	102%	107%	80-120%
2037-26-5	Toluene-D8	100%	99%	102%	80-120%
460-00-4	4-Bromofluorobenzene	107%	108%	110%	82-114%

(a) Results reported from the HCl preserved sample. The reported result for acrolein is for screening only and cannot be used for compliance purposes.
(b) Outside control limits due to matrix interference.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD56097
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD56375-3MS	L350261.D	10	12/02/22	NH	n/a	n/a	VL10604
JD56375-3MSD	L350262.D	10	12/02/22	NH	n/a	n/a	VL10604
JD56375-3	L350265.D	10	12/02/22	NH	n/a	n/a	VL10604

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD56097-1, JD56097-3, JD56097-5, JD56097-6, JD56097-7

CAS No.	Compound	JD56375-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		2000	1240	62	2000	1230	62	1	22-134/19
71-43-2	Benzene	ND		500	432	86	500	429	86	1	49-137/12
74-97-5	Bromochloromethane	ND		500	495	99	500	490	98	1	78-122/12
75-27-4	Bromodichloromethane	ND		500	477	95	500	475	95	0	76-121/12
75-25-2	Bromoform	ND		500	495	99	500	494	99	0	70-133/13
74-83-9	Bromomethane	ND		500	316	63	500	363	73	14	27-164/38
78-93-3	2-Butanone (MEK)	ND		2000	1770	89	2000	1780	89	1	52-137/17
75-15-0	Carbon disulfide	ND		500	40.4	8* [a]	500	113	23* [a]	95* [a]	54-136/16
56-23-5	Carbon tetrachloride	ND		500	439	88	500	445	89	1	70-132/13
108-90-7	Chlorobenzene	ND		500	469	94	500	473	95	1	68-123/12
75-00-3	Chloroethane	ND		500	384	77	500	384	77	0	48-152/17
67-66-3	Chloroform	ND		500	428	86	500	429	86	0	68-120/13
74-87-3	Chloromethane	ND		500	322	64	500	326	65	1	35-156/18
110-82-7	Cyclohexane	ND		500	374	75	500	382	76	2	53-146/14
96-12-8	1,2-Dibromo-3-chloropropane	ND		500	555	111	500	553	111	0	63-134/16
124-48-1	Dibromochloromethane	ND		500	467	93	500	459	92	2	75-122/12
106-93-4	1,2-Dibromoethane	ND		500	482	96	500	477	95	1	63-134/12
95-50-1	1,2-Dichlorobenzene	ND		500	502	100	500	503	101	0	74-119/12
541-73-1	1,3-Dichlorobenzene	ND		500	490	98	500	502	100	2	75-117/12
106-46-7	1,4-Dichlorobenzene	ND		500	488	98	500	488	98	0	72-117/12
75-71-8	Dichlorodifluoromethane	ND		500	383	77	500	372	74	3	34-163/16
75-34-3	1,1-Dichloroethane	ND		500	429	86	500	432	86	1	68-129/13
107-06-2	1,2-Dichloroethane	ND		500	454	91	500	444	89	2	66-120/13
75-35-4	1,1-Dichloroethene	ND		500	407	81	500	407	81	0	59-133/15
156-59-2	cis-1,2-Dichloroethene	115		500	531	83	500	540	85	2	52-140/12
156-60-5	trans-1,2-Dichloroethene	ND		500	432	86	500	438	88	1	70-125/13
78-87-5	1,2-Dichloropropane	ND		500	443	89	500	444	89	0	73-124/12
10061-01-5	cis-1,3-Dichloropropene	ND		500	488	98	500	490	98	0	75-125/13
10061-02-6	trans-1,3-Dichloropropene	ND		500	472	94	500	477	95	1	75-122/12
100-41-4	Ethylbenzene	ND		500	428	86	500	427	85	0	37-144/12
76-13-1	Freon 113	ND		500	403	81	500	396	79	2	61-142/14
591-78-6	2-Hexanone	ND		2000	1820	91	2000	1850	93	2	56-132/16
98-82-8	Isopropylbenzene	ND		500	456	91	500	457	91	0	71-126/13
79-20-9	Methyl Acetate	ND		500	465	93	500	480	96	3	51-139/18
108-87-2	Methylcyclohexane	ND		500	424	85	500	423	85	0	59-137/16
1634-04-4	Methyl Tert Butyl Ether	ND		500	473	95	500	469	94	1	66-124/12

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD56097
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD56375-3MS	L350261.D	10	12/02/22	NH	n/a	n/a	VL10604
JD56375-3MSD	L350262.D	10	12/02/22	NH	n/a	n/a	VL10604
JD56375-3	L350265.D	10	12/02/22	NH	n/a	n/a	VL10604

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD56097-1, JD56097-3, JD56097-5, JD56097-6, JD56097-7

CAS No.	Compound	JD56375-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		2000	2010	101	2000	2020	101	0	65-135/14
75-09-2	Methylene chloride	ND		500	430	86	500	437	87	2	66-125/14
100-42-5	Styrene	ND		500	454	91	500	455	91	0	71-133/12
79-34-5	1,1,2,2-Tetrachloroethane	ND		500	511	102	500	511	102	0	68-127/14
127-18-4	Tetrachloroethene	5.9	J	500	468	92	500	460	91	2	58-132/13
108-88-3	Toluene	ND		500	438	88	500	441	88	1	46-139/12
87-61-6	1,2,3-Trichlorobenzene	ND		500	559	112	500	562	112	1	57-136/17
120-82-1	1,2,4-Trichlorobenzene	ND		500	552	110	500	549	110	1	61-137/16
71-55-6	1,1,1-Trichloroethane	ND		500	460	92	500	464	93	1	67-132/13
79-00-5	1,1,2-Trichloroethane	ND		500	458	92	500	462	92	1	75-120/12
79-01-6	Trichloroethene	1010		500	1320	62	500	1310	60	1	56-136/12
75-69-4	Trichlorofluoromethane	ND		500	431	86	500	423	85	2	61-145/16
75-01-4	Vinyl chloride	10.1		500	372	72	500	375	73	1	41-156/16
	m,p-Xylene	ND		1000	866	87	1000	871	87	1	32-151/12
95-47-6	o-Xylene	ND		500	457	91	500	460	92	1	50-139/12
1330-20-7	Xylene (total)	ND		1500	1320	88	1500	1330	89	1	38-147/12

CAS No.	Surrogate Recoveries	MS	MSD	JD56375-3	Limits
1868-53-7	Dibromofluoromethane	106%	103%	100%	80-120%
17060-07-0	1,2-Dichloroethane-D4	100%	98%	104%	80-120%
2037-26-5	Toluene-D8	92%	93%	102%	80-120%
460-00-4	4-Bromofluorobenzene	98%	99%	95%	82-114%

(a) Outside control limits due to matrix interference.

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JD56097
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: V4D5463-BFB
Lab File ID: 4D123005.D
Instrument ID: GCMS4D
Injection Date: 11/08/22
Injection Time: 16:26

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.99 - 40.0% of mass 95	48667	20.0		Pass
75	30.0 - 60.0% of mass 95	112184	46.2		Pass
95	Base peak, 100% relative abundance	242752	100.0		Pass
96	5.0 - 9.0% of mass 95	16782	6.91		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	199701	82.3		Pass
175	5.0 - 9.0% of mass 174	14989	6.17	(7.51) [a]	Pass
176	95.0 - 101.0% of mass 174	195755	80.6	(98.0) [a]	Pass
177	5.0 - 9.0% of mass 176	13118	5.40	(6.70) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V4D5463-IC5463	4D123006.D	11/08/22	16:59	00:33	Initial cal 0.2
V4D5463-IC5463	4D123007.D	11/08/22	17:27	01:01	Initial cal 0.5
V4D5463-IC5463	4D123008.D	11/08/22	17:57	01:31	Initial cal 1
V4D5463-IC5463	4D123009.D	11/08/22	18:25	01:59	Initial cal 2
V4D5463-IC5463	4D123010.D	11/08/22	18:54	02:28	Initial cal 4
V4D5463-IC5463	4D123011.D	11/08/22	19:22	02:56	Initial cal 8
V4D5463-IC5463	4D123012.D	11/08/22	19:51	03:25	Initial cal 20
V4D5463-ICC5463	4D123013.D	11/08/22	20:19	03:53	Initial cal 50
V4D5463-IC5463	4D123014.D	11/08/22	20:48	04:22	Initial cal 100
V4D5463-IC5463	4D123015.D	11/08/22	21:16	04:50	Initial cal 200
V4D5463-ICV5463	4D123018.D	11/08/22	22:42	06:16	Initial cal verification 50
V4D5463-ICV5463	4D123019.D	11/08/22	23:10	06:44	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JD56097
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: V4D5498-BFB
Lab File ID: 4D123860.D
Instrument ID: GCMS4D
Injection Date: 11/30/22
Injection Time: 22:41

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.99 - 40.0% of mass 95	62469	22.3		Pass
75	30.0 - 60.0% of mass 95	132957	47.4		Pass
95	Base peak, 100% relative abundance	280661	100.0		Pass
96	5.0 - 9.0% of mass 95	19213	6.85		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	218795	78.0		Pass
175	5.0 - 9.0% of mass 174	16443	5.86	(7.52) [a]	Pass
176	95.0 - 101.0% of mass 174	216491	77.1	(98.9) [a]	Pass
177	5.0 - 9.0% of mass 176	14529	5.18	(6.71) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V4D5498-CC5463	4D123860.D	11/30/22	22:41	00:00	Continuing cal 50
V4D5498-BS	4D123862.D	11/30/22	23:38	00:57	Blank Spike
V4D5498-MB	4D123864.D	12/01/22	00:35	01:54	Method Blank
JD56146-5	4D123865.D	12/01/22	01:04	02:23	(used for QC only; not part of job JD56097)
JD56097-1	4D123866.D	12/01/22	01:32	02:51	C_1_11212022
JD56097-2	4D123867.D	12/01/22	02:01	03:20	C_2_11212022
JD56097-3	4D123868.D	12/01/22	02:30	03:49	C_3_11212022
JD56097-7	4D123869.D	12/01/22	02:58	04:17	GW ONLY_11212022
JD56146-5MS	4D123870.D	12/01/22	03:26	04:45	Matrix Spike
JD56146-5MSD	4D123871.D	12/01/22	03:55	05:14	Matrix Spike Duplicate
ZZZZZZ	4D123873.D	12/01/22	04:52	06:11	(unrelated sample)
ZZZZZZ	4D123874.D	12/01/22	05:20	06:39	(unrelated sample)
JD56097-4	4D123875.D	12/01/22	05:49	07:08	Z_4_11212022
JD56097-5	4D123876.D	12/01/22	06:17	07:36	Z_5_11212022
JD56097-6	4D123877.D	12/01/22	06:45	08:04	Z_6_11212022
JD56097-8	4D123878.D	12/01/22	07:14	08:33	Z_2_11212022
ZZZZZZ	4D123879.D	12/01/22	07:42	09:01	(unrelated sample)
ZZZZZZ	4D123880.D	12/01/22	08:11	09:30	(unrelated sample)
ZZZZZZ	4D123881.D	12/01/22	08:39	09:58	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JD56097
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: VL10602-BFB
Lab File ID: L350201.D
Instrument ID: GCMSL
Injection Date: 12/01/22
Injection Time: 00:17

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	19216	20.0		Pass
75	30.0 - 60.0% of mass 95	46347	48.3		Pass
95	Base peak, 100% relative abundance	96032	100.0		Pass
96	5.0 - 9.0% of mass 95	6524	6.79		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	69664	72.5		Pass
175	5.0 - 9.0% of mass 174	5163	5.38	(7.41) [a]	Pass
176	95.0 - 101.0% of mass 174	67269	70.0	(96.6) [a]	Pass
177	5.0 - 9.0% of mass 176	4271	4.45	(6.35) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VL10602-IC10602	L350202.D	12/01/22	00:47	00:30	Initial cal 0.2
VL10602-IC10602	L350203.D	12/01/22	01:10	00:53	Initial cal 0.5
VL10602-IC10602	L350204.D	12/01/22	01:33	01:16	Initial cal 1
VL10602-IC10602	L350205.D	12/01/22	01:56	01:39	Initial cal 2
VL10602-IC10602	L350206.D	12/01/22	02:19	02:02	Initial cal 4
VL10602-IC10602	L350207.D	12/01/22	02:42	02:25	Initial cal 8
VL10602-IC10602	L350208.D	12/01/22	03:05	02:48	Initial cal 20
VL10602-ICC10602	L350209.D	12/01/22	03:28	03:11	Initial cal 50
VL10602-IC10602	L350210.D	12/01/22	03:51	03:34	Initial cal 100
VL10602-IC10602	L350211.D	12/01/22	04:14	03:57	Initial cal 200
VL10602-ICV10602	L350214.D	12/01/22	05:23	05:06	Initial cal verification 50
VL10602-ICV10602	L350215.D	12/01/22	05:46	05:29	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JD56097
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample: VL10604-BFB
Lab File ID: L350248.D
Instrument ID: GCMSL
Injection Date: 12/02/22
Injection Time: 10:15

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	16558	18.2		Pass
75	30.0 - 60.0% of mass 95	44035	48.3		Pass
95	Base peak, 100% relative abundance	91149	100.0		Pass
96	5.0 - 9.0% of mass 95	6385	7.01		Pass
173	Less than 2.0% of mass 174	307	0.34	(0.45) [a]	Pass
174	50.0 - 120.0% of mass 95	68512	75.2		Pass
175	5.0 - 9.0% of mass 174	5229	5.74	(7.63) [a]	Pass
176	95.0 - 101.0% of mass 174	66219	72.6	(96.7) [a]	Pass
177	5.0 - 9.0% of mass 176	4378	4.80	(6.61) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VL10604-CC10602	L350248.D	12/02/22	10:15	00:00	Continuing cal 20
VL10604-BS	L350250.D	12/02/22	11:15	01:00	Blank Spike
VL10604-MB	L350252.D	12/02/22	12:01	01:46	Method Blank
ZZZZZZ	L350253.D	12/02/22	12:34	02:19	(unrelated sample)
ZZZZZZ	L350254.D	12/02/22	12:57	02:42	(unrelated sample)
ZZZZZZ	L350255.D	12/02/22	13:24	03:09	(unrelated sample)
ZZZZZZ	L350256.D	12/02/22	13:47	03:32	(unrelated sample)
JD56097-3	L350257.D	12/02/22	14:10	03:55	C_3_11212022
JD56097-6	L350258.D	12/02/22	14:33	04:18	Z_6_11212022
JD56097-1	L350259.D	12/02/22	14:56	04:41	C_1_11212022
JD56097-7	L350260.D	12/02/22	15:19	05:04	GW ONLY_11212022
JD56375-3MS	L350261.D	12/02/22	15:42	05:27	Matrix Spike
JD56375-3MSD	L350262.D	12/02/22	16:05	05:50	Matrix Spike Duplicate
JD56097-5	L350263.D	12/02/22	16:28	06:13	Z_5_11212022
ZZZZZZ	L350264.D	12/02/22	16:51	06:36	(unrelated sample)
JD56375-3	L350265.D	12/02/22	17:15	07:00	(used for QC only; not part of job JD56097)
ZZZZZZ	L350266.D	12/02/22	17:38	07:23	(unrelated sample)
ZZZZZZ	L350267.D	12/02/22	18:01	07:46	(unrelated sample)
ZZZZZZ	L350268.D	12/02/22	18:24	08:09	(unrelated sample)
ZZZZZZ	L350269.D	12/02/22	18:47	08:32	(unrelated sample)
ZZZZZZ	L350270.D	12/02/22	19:10	08:55	(unrelated sample)
ZZZZZZ	L350271.D	12/02/22	19:33	09:18	(unrelated sample)
ZZZZZZ	L350272.D	12/02/22	19:56	09:41	(unrelated sample)
ZZZZZZ	L350273.D	12/02/22	20:20	10:05	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JD56097
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Sample:	VL10604-BFB	**Injection Date:**	12/02/22
Lab File ID:	L350248.D	**Injection Time:**	10:15
Instrument ID:	GCMSL		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	L350274.D	12/02/22	20:43	10:28	(unrelated sample)

Surrogate Recovery Summary

Job Number: JD56097
Account: LANGAN Langan Engineering & Environmental
Project: 1487 First Avenue, NY, NY

Method: SW846 8260D **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JD56097-1	L350259.D	109	105	103	92
JD56097-1	4D123866.D	95	107	103	109
JD56097-2	4D123867.D	95	108	103	109
JD56097-3	L350257.D	99	102	106	96
JD56097-3	4D123868.D	96	108	104	108
JD56097-4	4D123875.D	88	96	99	104
JD56097-5	L350263.D	103	103	101	98
JD56097-5	4D123876.D	88	95	100	105
JD56097-6	L350258.D	101	104	104	97
JD56097-6	4D123877.D	88	95	99	104
JD56097-7	L350260.D	103	107	107	95
JD56097-7	4D123869.D	95	108	102	109
JD56097-8	4D123878.D	88	96	100	102
JD56146-5MS	4D123870.D	95	103	100	107
JD56146-5MSD	4D123871.D	95	102	99	108
JD56375-3MS	L350261.D	106	100	92	98
JD56375-3MSD	L350262.D	103	98	93	99
V4D5498-BS	4D123862.D	96	103	99	109
V4D5498-MB	4D123864.D	95	106	102	109
VL10604-BS	L350250.D	103	95	93	99
VL10604-MB	L350252.D	101	105	105	98

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	80-120%
S2 = 1,2-Dichloroethane-D4	80-120%
S3 = Toluene-D8	80-120%
S4 = 4-Bromofluorobenzene	82-114%