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March 31, 2022

Mr. Douglas MacNeal
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Groundwater Monitoring Event Report - 2021 Q4
Ithaca Court Street Former MGP Site - OU-2
Ithaca, New York
NYSDEC Site: 7-55-008

Dear Mr. MacNeal,

On behalf of New York State Electric and Gas (NYSEG), AECOM USA, Inc. (AECOM) is pleased to present this Groundwater Monitoring Event (GME) report for the former Ithaca Court Street Manufactured Gas Plant (MGP) Operable Unit 2 (OU-2) site in Ithaca, New York (the "Site"). **Figure 1** attached shows the Site Location Plan.

This correspondence documents the findings of the GME completed over the period December 6 – 9, 2021 (2021 Q4 GME) which was undertaken in accordance with the Draft Site Management Plan (SMP; AECOM, 2019). In addition, Site engineering controls were assessed during the Annual Inspection completed at the time of the 2021 Q4 GME.

Results from the 2021 Q4 GME will be incorporated into the ongoing groundwater monitoring dataset in accordance with the requirements of the Draft SMP.

1. Background

The NYSEG Ithaca site is divided into two operable units (OUs). Operable Unit 1 (OU-1) consists of the former MGP parcel, surrounding sidewalks, and the location of the former tar duct structures under West Court Street from the site to North Meadow Street. Operable Unit 2 (OU-2) consists of any areas outside of the OU-1 boundary that may have been impacted by the migration of MGP residuals directly from OU-1 historical operations.

The primary constituents of concern at the Site are benzene, toluene, ethylbenzene, and xylenes (BTEX), polycyclic aromatic hydrocarbons (PAHs) and cyanide. The Site has undergone extensive remedial investigation and numerous interim remedial measures and remedial actions including excavations and historical structure removal have been completed. A history of the remedial investigations and actions completed at the Site is provided in the Draft SMP.

The Draft SMP was submitted to the New York State Department of Environmental Conservation (NYSDEC) in October 2019 and is pending approval. The Draft SMP outlines the monitoring requirements for the Site which include quarterly groundwater monitoring for 15 locations across the Site for two years (September 2020 – September 2022) to establish baseline conditions and to evaluate the potential for seasonal fluctuations in constituent concentrations. From year three through year five (October 2022 – October 2025), only wells containing MGP-related constituents at concentrations greater than the applicable water quality standards and guidance values will be sampled quarterly. The remaining wells will be sampled annually.

The 2021 Q4 GME is the fifth GME to be completed since submission of the Draft SMP to NYSDEC in October 2019.

2. Scope of Work

The scope of work completed for the 2021 Q4 GME included the following:

- On December 6, 2021, Site-wide water level gauging was completed at the wells specified for monitoring by the Draft SMP and all additional well locations where access was possible. This effort was to assess water levels across the broader monitoring well network. Groundwater monitoring well locations are presented in **Figure 2** attached.
- Each well was gauged for the presence of non-aqueous phase liquid (NAPL) using an oil-water interface probe.
- Over the period December 7 – 9, 2021, a total of 15 groundwater monitoring wells (MW-C11, MW-C12, MW-C16, MW-22S, MW-23S, MW-24S, MW-25S, MW-28S, MW-31S, MW-33S, MW-40, MW-45S, MW-46S, MW-47S, and MW-48S) were sampled in accordance with the Draft SMP. It is noted that monitoring well MW-33S was incorrectly labeled MW-36S on the purge forms, chain of custody, and laboratory reports.
- The following groundwater sampling activities were conducted:
  - Water level measurements were taken at each well prior to purging and sampling.
  - Each well was purged and sampled using low-stress (low flow) groundwater sampling methods by use of a peristaltic pump. Select wells ran dry during the purging process, namely, MW-25S, MW-45S, and MW-47S. These wells were each left for various amounts of time to recharge and were then sampled upon the field team's return.
  - Field parameters, including temperature, pH, dissolved oxygen (DO), oxidation/reduction potential (ORP), specific conductivity, drawdown, and turbidity, were monitored and documented prior to sample collection. The following stabilization criteria were met for each parameter before sampling:
    - Temperature ±3%
    - pH ±1.0 unit
    - DO ±10%
    - ORP ±10mV
    - Specific Conductivity ±3%
    - Drawdown <0.3 feet
  - Groundwater purge and sampling forms are provided in Appendix A.
  - All wastewater generated during sampling (purge water and decontamination fluids) was containerized in 55-gallon steel drums for off-Site disposal.
- Quality control samples were collected including one for every 20 field samples taken. Quality control samples consisted of a field duplicate, a matrix spike, a matrix spike duplicate, and an equipment blank. Based on the number of wells to be sampled (15), one set of quality control samples were required. A trip blank was sent daily with each set of VOC samples. Quality control samples were analyzed for BTEX, PAHs and total cyanide.
- Groundwater samples were shipped on December 7 and 8, 2021 via courier to Eurofins TestAmerica in Buffalo, New York for laboratory analysis. On December 9, 2021 groundwater samples were dropped off by AECOM at the Eurofins Test America service center in Albany, New York, to be shipped to Eurofins Test America in Buffalo, New York for laboratory analysis.

All activities were conducted in accordance with the SMP (AECOM, 2019) and Work Plan (AECOM, 2020a) that was submitted to, and approved by, the NYSDEC on September 1, 2020.

Further to the above, in response to the recommendation provided in the AECOM document titled *Subject: Groundwater Monitoring Event Report – September/October 2020 Ithaca Court Street Former MGP Site – OU-2, Ithaca, New York*, dated December 17, 2020 (AECOM, 2020b) regarding the removal of sediments and residual solids to the extent practicable in select wells, this was completed following sampling at monitoring wells MW-45S and MW-48S.

The Annual Inspection of engineering controls was also completed at the time of the 2021 Q4 GME. Refer **Section 3.0** for details.

3. Annual Inspection

3.1 Engineered Cover System

OU-1 Gas Plant site areas, OU-1 Markles Flats area, OU-1 Wooden Duct Removal area, OU-2 Washington Street IRM area, OU-2 Wooden Duct removal areas west of North Meadow Street, OU-2 Excavation Area 1A, and OU-2 Excavation Area 1B were excavated and backfilled with certified clean fill and/or clean gravel. Portions of these excavation areas were also restored with impermeable paving. The combination of paving and the clean fill cover, referred to as an engineered cover system, act as a barrier between the remaining contamination that may be present at depths below the remedial excavation extent. The engineered cover system prevents direct exposure of humans and ecology to the remaining contamination. This cover system is comprised of a minimum of 24 inches of clean soil and/or asphalt pavement and concrete-covered sidewalks.

The cover system was inspected during the 2021 Q4 GME for any indication of breach. Visual inspection revealed no signs of excavation or intrusive work within the footprint of the engineered cover system.

3.2 Monitored Natural Attenuation

Groundwater monitoring activities to assess natural attenuation have been conducted on a quarterly basis, as determined by the NYSDEC in consultation with New York State Department of Health (NYSDOH), beginning in the fourth quarter of 2020 to document if residual groundwater concentrations are found to be consistently below ambient water quality standards, the Site Standards, Criteria and Guidance (SCGs), or have become asymptotic at an acceptable level over an extended period. As required under the SMP, during the first two years, all monitoring wells will be sampled quarterly to establish baseline conditions and to evaluate the potential for seasonal fluctuations in contaminant concentrations.

Results of each event are provided to the NYSDEC under separate reports for each event. Groundwater monitoring will continue as defined in the SMP. Results, discussion and trend analysis is presented in **Section 6.0**.

4. Groundwater Gauging and Sampling Observations

A total of 38 groundwater wells were gauged, and 15 wells sampled. Well gauging data is provided in **Table 2** attached. A summary of observations is provided below:

- The general direction of groundwater flow in the shallow portion of the aquifer was to the northwest, and comparable to previous sampling events. **Figure 3** attached presents the shallow aquifer inferred groundwater surface contours. Groundwater elevation ranged from 380.70 ft (MW-23S) to 389.40 ft (MW-13S) in the shallow aquifer. The groundwater table was lower in elevation compared to the previous gauging event completed in September 2021.
- No measurable NAPL was identified in any of the gauged wells.

The following is noted regarding odors and sheen at the time of the 2021 Q4 GME:

- A product-like odor was noted when purging at well MW-23S. Sheen has been noted at this well before, which may be attributed to the noted odor.
- An organic-like odor (i.e., decaying material) was noted at well MW-24S while purging. Organic-like odor has been noted at this well during previous sampling events. Trace amounts of sheen was observed on the purge water surface.
- A sulfur-like odor was noted at well MW-28S while purging. During the previous Q3 2021 sampling event, a damp (decomposing) odor was noted, which is assumed to be similar.

- A product-like odor and sheen were both noted at well MW-46S while purging. Sheen and product-like odors have been noted at this well during previous sampling events.
- A metallic-like odor was noted at well MW-48S while purging. Various odors have been noted at this well previously.

The following additional observations were made:

- White flecks were observed in the purge water at well MW-23S and MW-31S. White flecks have not previously been observed in the purge water at these wells.
- Well MW-40 was noted to be in poor condition. The concrete pad around the curb box is broken and heaved above ground surface.

5. Analytical Laboratory Analyses

All groundwater samples were analyzed for:

- BTEX: United States Environmental Protection Agency (USEPA) SW846 Method 8260C
- PAHs: USEPA SW846 Method 8270D Low Level and USEPA SW846 Method 8270E in Selected Ion Monitoring (SIM) Mode
- Total cyanide: USEPA SW846 Method 9012B
- Monitored Natural Attenuation (MNA) parameters:
  - Nitrate and Nitrite: MCAWW Method 353.2 (Nitrate by calculation)
  - Ammonia: USEPA MCAWW Method 350.1
  - Total Iron: USEPA SW846 Method 6010C
  - Ferrous Iron: Standard Method 3500-Fe D
  - Sulfate: USEPA MCAWW Method 300.0
  - Methane: USEPA Method RSK-175
  - Total Alkalinity: Standard Method 2320B

The laboratory prepared a complete NYSDEC ASP Category B data delivery package for the requested analysis. **Appendix B** contains the full laboratory report obtained from Eurofins Test America Laboratory.

6. Discussion of Analytical Results

Samples were collected from all 15 wells as required by the Draft SMP. The groundwater sample results were validated by an AECOM chemist, and all data have been determined to be usable and no data points were rejected. A full copy of the Data Usability Summary Report (DUSR) is provided in **Appendix C**.

Results of analysis have been screened against the NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 *Ambient Water Quality Standards and Guidance Values* (AWQS/GV) for water class GA. **Table 3** and **Table 4** attached provides a summary of the analytical results screened against the AWQS/GV. Also included in **Table 3** and **Table 4** are the results of the previous analyses for reference.

Observed MGP-constituent trends are either stable or unable to be determined with the exception of:

- Ethylbenzene at monitoring well MW-48S which is noted to have a decreasing trend, and at monitoring well MW-23S with a probable decreasing trend.
- Toluene at monitoring well MW-48S which is noted to have a decreasing trend.
- Total xylenes at monitoring well MW-48S which is noted to have a probable decreasing trend.

Refer to **Section 7.0** for additional discussion regarding trends.

An overview of the groundwater analytical results from this GME is provided below, and **Figure 4** summarizes groundwater exceedances for BTEX, PAHs and total cyanide.

6.1 Benzene, Toluene, Ethylbenzene, Xylenes (BTEX)

A total of four out of 15 sampled wells (MW-C12, MW-23S, MW-46S and MW-48S) reported concentrations of BTEX above the AWQS/GV for at least one compound.

Monitoring well MW-C12, located on North Plain Street in the vicinity of the in-situ chemical oxidation (ISCO) remedial action area, reported a benzene exceedance. The other three wells reporting BTEX compounds above the AWQS/GV are located to the west of the Site in the Washington Street area. The extent of BTEX impacts across the monitoring well network is consistent with the previous GME with the addition of a toluene exceedance at monitoring well MW-46S.

On comparison with the data obtained at the time of the previous GME, the following is noted:

- Reported benzene and ethylbenzene concentrations at monitoring well MW-C12 were lower compared to the previous GME.
- Reported BTEX concentrations at monitoring well MW-23S were lower compared to the previous GME.
- Reported BTEX concentrations at monitoring well MW-46S have increased since the previous GME.
- Reported benzene, ethylbenzene, and xylene concentrations at monitoring well MW-48S were comparable to the previous GME.
- Monitoring wells MW-C11, MW-C16, MW-22S, MW-24S, MW-25S, MW-28S, MW-31S, MW-33S, MW-40S, MW-45S, and MW-47S continue to report BTEX concentrations below the AWQS/GV consistent with previous monitoring events.

6.2 Polycyclic Aromatic Hydrocarbons (PAHs)

A total of seven out of 15 sampled wells reported concentrations of PAHs above the AWQS/GV for at least one compound, namely; MW-C12 (acenaphthene), MW-C16 (benzo(a)anthracene), MW-23S (acenaphthene, naphthalene, benzo(a)anthracene), MW-40 (benzo(a)anthracene), MW-46S (naphthalene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, indeno(1,2,3-cd)pyrene), MW-47S (benzo(a)anthracene, benzo(b)fluoranthene), and MW-48S (acenaphthene, naphthalene, benzo(a)anthracene).

Two of the wells with exceedances are located in the North Plain Street ISCO area (MW-C12 and MW-C16), and the other wells (MW-23S, MW-40, MW-46S, MW-47S, and MW-48S) are located to the west of the Site in the Washington Street area. The extent of PAH impacts and detectable PAH constituents across the monitoring well network is consistent with the previous GME.

On comparison with the data obtained at the time of the previous GME, the following is noted where concentrations are reported above the AWQS/GV at the time of this current GME:

- Acenaphthene concentrations:
  - Decreased at monitoring wells MW-C12 and MW-23S.
  - Increased at monitoring wells MW-46S and MW-48S.
- Naphthalene concentrations:
  - Decreased at monitoring well MW-40.
  - Increased at monitoring wells MW-23S, MW-46S, and MW-48S.

- Benzo(a)anthracene concentrations:
  - Decreased at monitoring wells MW-C16 and MW-48S.
  - Increased at monitoring well MW-46S.
  - Not detected at monitoring wells MW-23S, MW-40, MW-47S during previous GME; however, the reporting limit was greater than the reported concentration this GME.
- Benzo(a)pyrene concentration was only reported above the AWQS/GV this GME at monitoring well MW-46S and at a higher concentration then the previous GME.
- Benzo(b)fluoranthene concentration was only reported above the AWQS/GV this GME at monitoring wells MW-46S and MW-47S. At MW-46S the reported concentration was higher than the previous GME and at MW-47S the reported concentration was lower than the previous GME.
- Concentrations of benzo(k)fluoranthene and indeno(1,2,3-cd)pyrene were only reported above the AWQS/GV this GME at monitoring well MW-46S. The reported concentrations were higher than the previous GME.

PAHs were either not detected above the laboratory reporting limit or detected at concentrations below applicable AWQS/GV at monitoring wells MW-C11, MW-22S, MW-24S, MW-25S, MW-28S, MW-31S, MW-33S, and MW-45S.

6.3 Total Cyanide

The reported concentration of total cyanide at monitoring well MW-22S was above the AWQS/GV at the time of the 2021 Q4 GME. Total cyanide has previously been reported above the AWQS/GV at this location. Since the previous GME, the reported total cyanide concentration at MW-22S decreased from 0.47 milligrams/Liter (mg/L) to 0.38 mg/L.

Total cyanide was not detected above the laboratory reporting limit or reported at concentrations below the AWQS/GV at all other monitoring well locations.

6.4 Monitored Natural Attenuation (MNA) Parameters

Several groundwater parameters including sulfate, ammonia, nitrate, alkalinity, ferrous iron and methane were analyzed to inform the assessment of MNA. **Table 4** presents the MNA results, and the following is noted:

- Sulphate concentrations ranged from <2mg/L (MW 46S) to 2,910 mg/L (MW-C11).
- Ammonia concentrations ranged from <0.02 mg/L (MW-22S) to 7.3 mg/L (MW-C11).
- Nitrate concentrations ranged from 0.025 mg/L (MW-C11) to 6.7 mg/L (MW-22S).
- Alkalinity concentrations ranged from 170 mg/L (MW-40) to 840 mg/L (MW-C11).
- Ferrous iron concentrations ranged from 0.088 mg/L (MW-C11) to 0.29 mg/L (MW-47S).
- Methane concentrations ranged from <4.0 mg/L) MW-25S) to 17,000 mg/L (MW-46S).
- Consistent with the previous GME:
  - Sulphate was reported at concentrations above the AWQS/GV at MW-C11 and MW-C16.
  - Ammonia was reported above the AWQS/GV at monitoring wells MW-C11, MW-46S and MW-47S.
  - Iron was detected at all locations at concentrations higher than the AWQS/GV, excluding monitoring wells MW-22S, MW-24S and MW-25S. Iron is not a constituent of concern at the Site, and these concentrations are likely naturally occurring.
  - Methane was detected across the groundwater monitoring well network which may indicate the presence of biological activity at the Site. The presence of methane at concentrations above concentrations reported at wells that are not impacted (i.e., MW-24S) further indicates the occurrence for biological activity.
- ORP ranged from -122.2 MeV (MW-48S) to 230.5 MeV (MW-24S) and DO ranged from 0.16 mg/L (MW-C12 and MW-48S) to 5.05 mg/L (MW-25S).

On average across all sampled wells, ORP and DO concentrations increased from 16.7 MeV to 58.8 MeV and 0.53 mg/L to 0.96 mg/L respectively. As ORP increases as MNA parameters are depleted from the system, the noted increase in ORP (and DO) may be indicative of the presence of an oxidating agent and a decrease in pollution in the environment.

7. Mann-Kendall Analysis

Mann-Kendall trend analysis has been completed for constituents of concern, namely, benzene, ethylbenzene, toluene, xylenes, acenaphthene, naphthalene and total cyanide at MW-C11 (ISCO remediation area), MW-C12 (ISCO remediation area), MW-C16 (ISCO remediation area), MW-22S (down-inferred hydraulic gradient of source area), MW-23S (down-inferred hydraulic gradient of source area), MW-46S (down-inferred hydraulic gradient of source area) and MW-48S (down-inferred hydraulic gradient of source area).

Mann-Kendall trend analysis has also been completed for select MNA parameters, namely, sulfate, methane, nitrate, and dissolved oxygen. Data obtained from GMEs completed since June 2016 are included in the dataset. For the purpose of the Mann-Kendall analysis, where analytes were reported as not detected, the concentration has been entered as the laboratory reporting limit.

Table 1 below provides an overview of the Mann-Kendall analysis.

Table 1. Mann-Kendall Analysis Overview

Parameter	Mann-Kendall Analysis
Benzene	• Concentrations at MW-23S and MW-48S are stable. • Concentrations at MW-C12 are decreasing. • No trend observed at MW-C11, MW-C16, MW-22S, and MW-46S.
Ethylbenzene	• Concentrations at MW-23S and MW-48S is decreasing. • No trend was observed at MW-C11, MW-C12, MW-C16, MW-22S, and MW-46S.
Toluene	• Concentration at MW-48S is decreasing. • Concentrations at MW-C12, MW-23S and MW-46S are stable. • No trend observed at MW-C11, MW-C16, and MW-22S.
Total xylenes	• Concentration at MW-22S and MW-48S are stable. • Concentrations at MW-23S are decreasing. • No trend observed at MW-C11, MW-C12, MW C-16 and MW-46S.
Acenaphthene	• Concentrations atMW-22S and MW-23S are stable. • Concentrations at MW-C11 are probably decreasing. • No trend observed at MW-C12, MW-C16, MW-46S, and MW-48S.
Naphthalene	• Concentrations at MW-22S are stable. • Concentrations at MW-C11 are decreasing. • No trend observed at MW-C12, MW-C16,MW-23S, MW-46S and MW-48S
Total cyanide	• Concentrations at MW-C11, MW-C12, and MW-22S are stable. • No trend observed at MW-C16, MW-23S, MW-46S and MW-48S.
Total sulfate	• Concentrations at MW-C16, MW-22S, and MW-48S are stable. • Concentrations at MW-C12 are decreasing. • Concentrations at MW-46S are probably decreasing. • No trend observed at MW-C11 and MW-23S.
Methane	• Concentrations at MW-48S are decreasing. • Concentrations at MW-C12 and MW-23S are stable. • No trend observed at MW-C11, MW-C16, MW-22S and MW-46S.
Nitrate	• Concentrations at MW-C16, MW-22S, and MW-23S are stable. • No trend observed at MW-C11, MW-C12, MW-46S, and MW-48S.
Dissolved oxygen	• Concentration at MW-23S is decreasing. • Concentrations at MW-C11, MW-C12, MW-C16, and MW-22S are stable.

Parameter	Mann-Kendall Analysis
	• No trend is observed at MW-46S and MW-48S.

Mann-Kendall analysis for constituents of concern and MNA parameters are provided in **Appendix D**.

8. Removal of Sediment and Residual Solids

Monitoring wells MW-45S and MW-48S were subject to additional pumping following sampling to remove sediment and residual solids to the extent practicable. This was undertaken in response to the recommendation provided in AECOM, 2020b to improve the hydraulic connection between the well and the surrounding geological material.

A peristaltic pump was deployed in each well and each well was surged and pumped until dry. Approximately 1.0 and 2.0 gallons were removed from MW-45S and MW-48S, respectively. No odor or sheen was observed during this additional pumping. Sedimentation observed during pumping was initially high and progressively decreased until the water was observed to have very little sediment.

As a result of the additional pumping, no additional depth was gained at monitoring well MW-45S and 0.03 feet was gained in monitoring well MW-48S.

It is noted that this activity was undertaken following sampling as use of the peristaltic pump prior to sampling may disturb the water column and potentially impact analytical results.

9. Conclusions and Recommendations

Based on the results of the 2021 Q4 GME, the following conclusions are provided:

- Consistent with the previous GME, MGP-related constituents were either not detected above the laboratory reporting limit or detected at concentrations below applicable AWQS/GV at MW-C11, MW-24S, MW-25S, MW-28S, MW-31S, MW-33S, and MW-45S.
- Select MGP-related constituents were reported above the applicable AWQS/GV at MW-C12, MW-C16, MW-22S, MW-23S, MW-40, MW-46S, MW-47S and MW-48S.
- Whilst both decreasing and increasing concentrations of select MGP-related constituents were reported at locations with concentrations above the AWQS/GV, namely, MW-C12, MW-C16, MW-22S, MW-23S, MW-40, MW-46S, MW-47S and MW-48S, the extent of impact and constituent signature across the monitoring well network is consistent with the previous GME.
- Based on the Mann-Kendall analysis dataset, benzene at MW-C12, ethylbenzene at MW-23S and MW-48S, naphthalene at MW-C11, total xylenes at MW-23S, and toluene at MW-48S are noted to have decreasing trends. Acenaphthene at MW-C11 exhibits probable decreasing trend. All other observed MGP-constituent trends are either stable or unable to be determined.

The following is recommended:

- In accordance with the Draft SMP, it is recommended that additional data be collected to further assess seasonal fluctuations and inform an appraisal of MGP-constituent concentrations and MNA trends at the Site. Groundwater sampling at the 15 specified well locations will continue to be monitored on the schedule outlined in the Draft SMP.
- The concrete collar at MW-40 be repaired as soon as practicable.

Should you have any questions regarding this correspondence, please contact Melissa Saunders at melissa.saunders@aecom.com.

Sincerely,

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Tamara Raby, AECOM

Enclosures

Figures
Figure 1: Site Location Plan
Figure 2: Monitoring Well Location Plan
Figure 3: Shallow Aquifer Groundwater Contour Plan – December 2021
Figure 4: Groundwater Exceedance Plan – BTEX, PAHs and Total Cyanide – December 2021

Tables
Table 2: Groundwater Gauging Details
Table 3: BTEX, PAHs and Total Cyanide
Table 4: Monitored Natural Attenuation and Field Parameters

Appendices
Appendix A: Groundwater Sampling Purge Forms
Appendix B: Analytical Laboratory Report
Appendix C: Data Usability Summary Report
Appendix D: Mann-Kendall Analysis

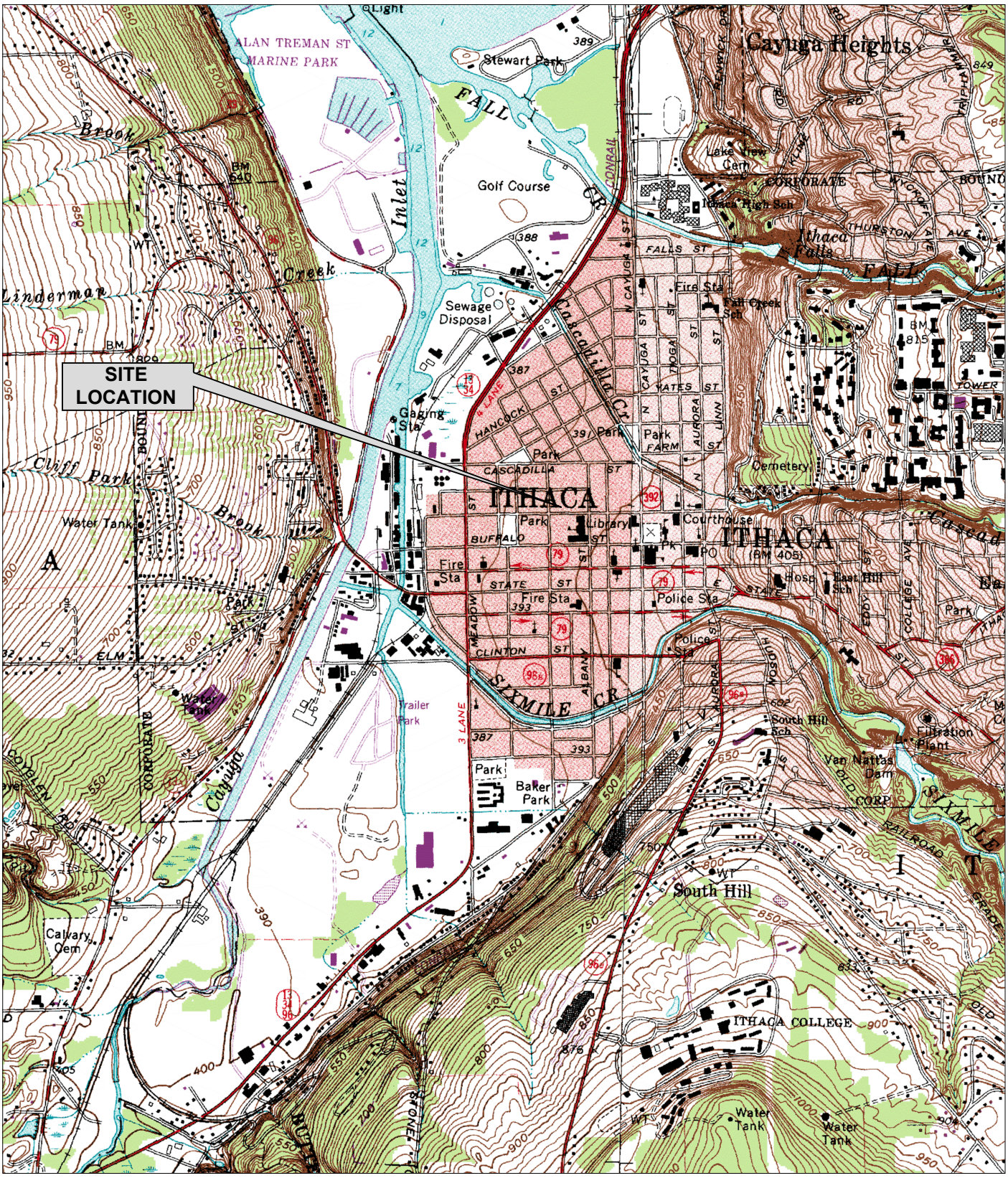
References

AECOM, 2019. *Site Management Plan, Ithaca Court Street Former MGP Site, Ithaca, Tompkins County, New York, NYSDEC Site #7-55-008*.

AECOM, 2020a. *Work Plan, Groundwater Monitoring Event, September 2020, Ithaca Court Street Former MGP Site-OU-2, Ithaca New York.*

AECOM, 2020b. *Subject: Groundwater Monitoring Event Report – September/October 2020 Ithaca Court Street Former MGP Site – OU-2, Ithaca, New York*.

Figures



MAP REFERENCE:
IMAGE SHOWN FROM U.S.G.S.7.5 MINUTE QUADRANGLE, ITHACA - WEST AND EAST SERIES

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NEW YORK STATE ELECTRIC & GAS CORP.
FORMER COURT STREET MGP SITE - OU-2
ITHACA, NEW YORK
Project No.: 60615225 Date: MARCH 2022

SITE LOCATION PLAN

AECOM

Figure: 1

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NEW YORK STATE ELECTRIC & GAS CORP.
FORMER COURT STREET MGP SITE - OU-2
ITHACA, NEW YORK
Project No.: 60615225 Date: MARCH 2022

MONITORING WELL LOCATION PLAN

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Figure: 2

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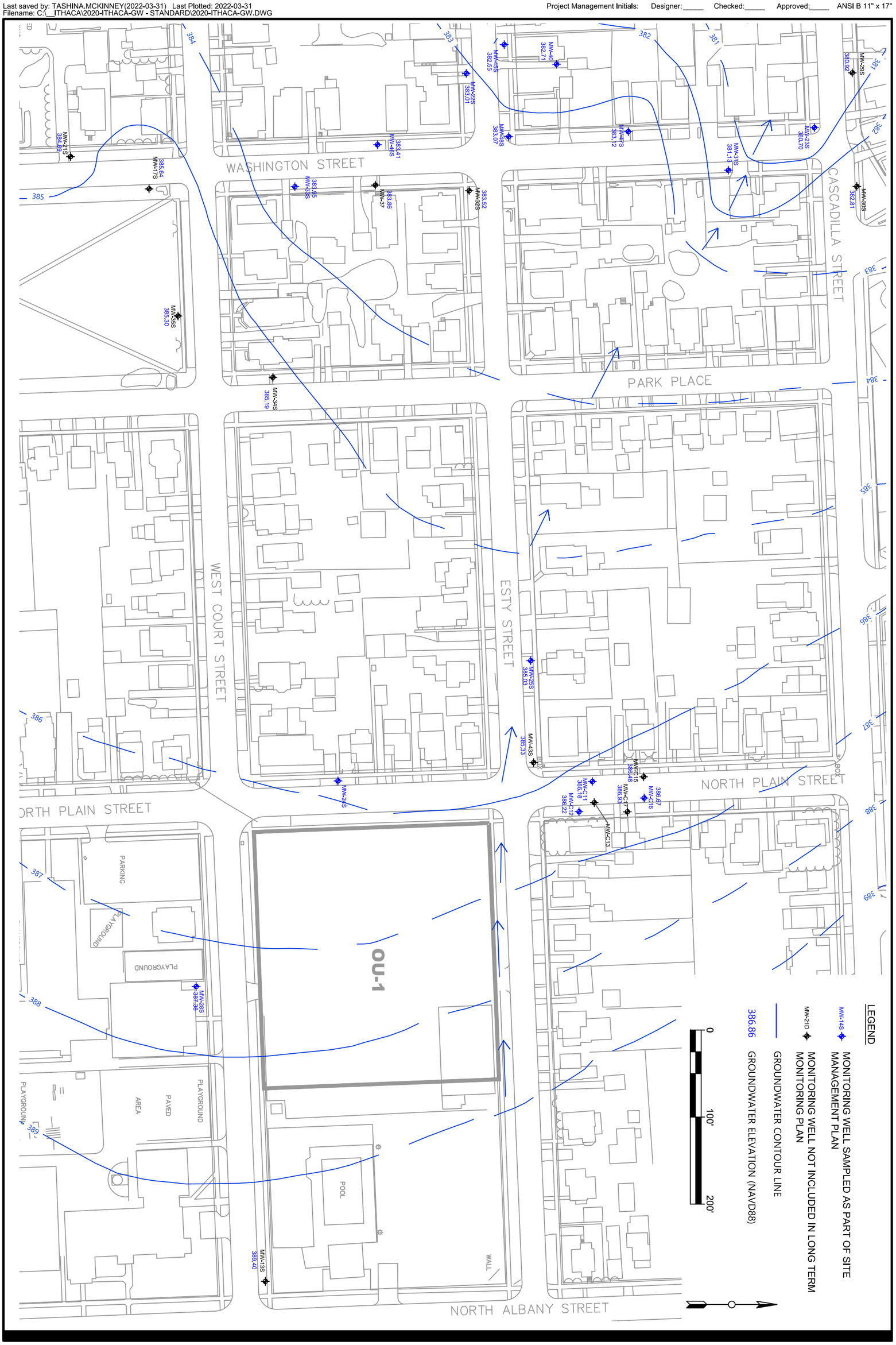
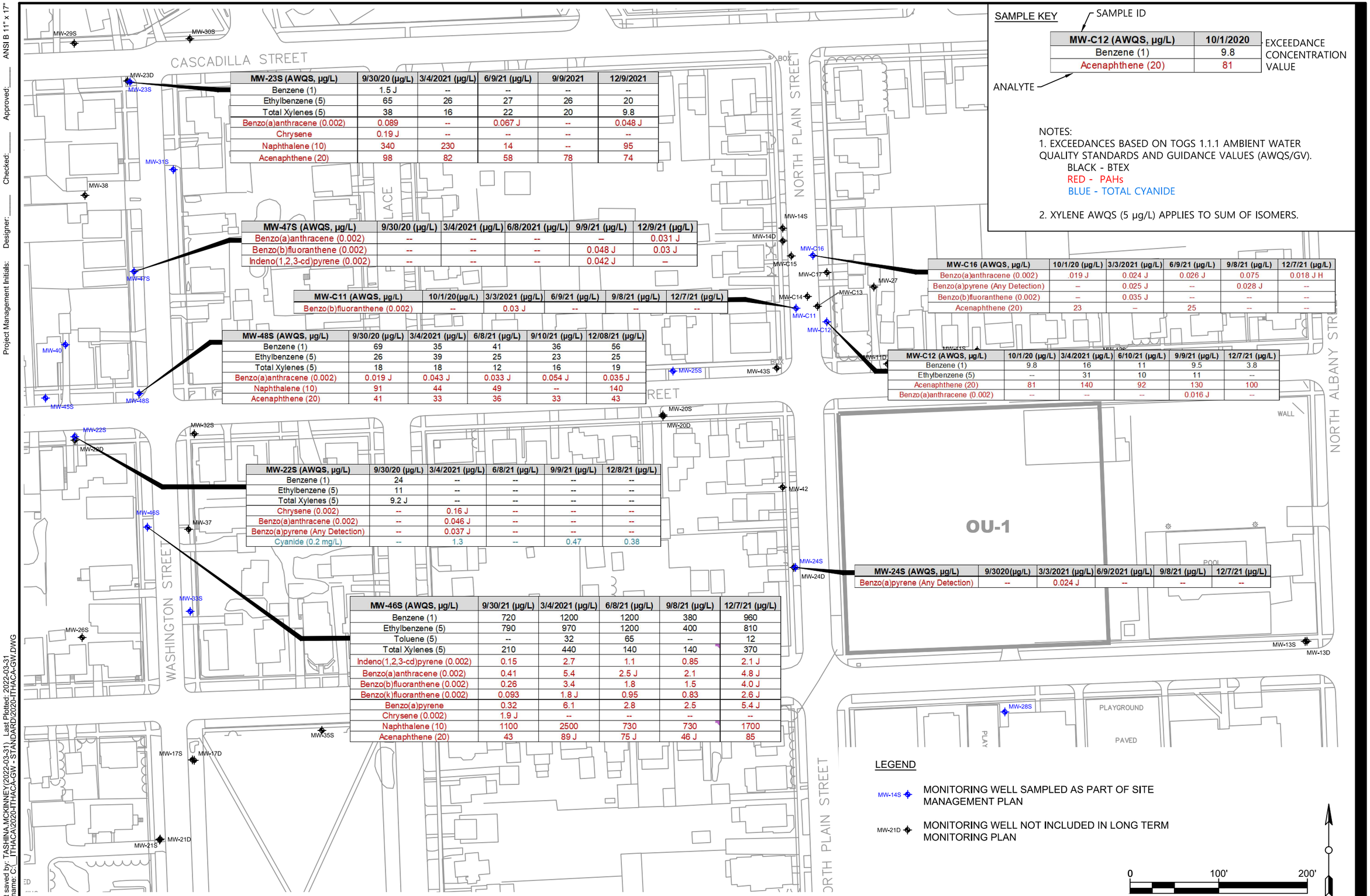


NEW YORK STATE ELECTRIC & GAS CORP.
FORMER COURT STREET MGP SITE - OU-2
ITHACA, NEW YORK
Project No.: 60615225 Date: MARCH 2022

SHALLOW AQUIFER GROUNDWATER CONTOUR PLAN - DECEMBER 2021

AECOM

Figure: 3



SAMPLE KEY

SAMPLE ID

MW-C12 (AWQS, µg/L)	10/1/2020
Benzene (1)	9.8
Acenaphthene (20)	81

EXCEEDANCE CONCENTRATION VALUE

ANALYTE

NOTES:
1. EXCEEDANCES BASED ON TOGS 1.1.1 AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES (AWQS/GV).
BLACK - BTEX
RED - PAHs
BLUE - TOTAL CYANIDE

2. XYLENE AWQS (5 µg/L) APPLIES TO SUM OF ISOMERS.

MW-23S (AWQS, µg/L)	9/30/20 (µg/L)	3/4/2021 (µg/L)	6/9/21 (µg/L)	9/9/2021	12/9/2021
Benzene (1)	1.5 J	--	--	--	--
Ethylbenzene (5)	65	26	27	26	20
Total Xylenes (5)	38	16	22	20	9.8
Benzo(a)anthracene (0.002)	0.089	--	0.067 J	--	0.048 J
Chrysene	0.19 J	--	--	--	--
Naphthalene (10)	340	230	14	--	95
Acenaphthene (20)	98	82	58	78	74

MW-47S (AWQS, µg/L)	9/30/20 (µg/L)	3/4/2021 (µg/L)	6/8/2021 (µg/L)	9/9/21 (µg/L)	12/9/21 (µg/L)
Benzo(a)anthracene (0.002)	--	--	--	--	0.031 J
Benzo(b)fluoranthene (0.002)	--	--	--	0.048 J	0.03 J
Indeno(1,2,3-cd)pyrene (0.002)	--	--	--	0.042 J	--

MW-C11 (AWQS, µg/L)	10/1/20(µg/L)	3/3/2021 (µg/L)	6/9/21 (µg/L)	9/8/21 (µg/L)	12/7/21 (µg/L)
Benzo(b)fluoranthene (0.002)	--	0.03 J	--	--	--

MW-48S (AWQS, µg/L)	9/30/20 (µg/L)	3/4/2021 (µg/L)	6/8/21 (µg/L)	9/10/21 (µg/L)	12/08/21 (µg/L)
Benzene (1)	69	35	41	36	56
Ethylbenzene (5)	26	39	25	23	25
Total Xylenes (5)	18	18	12	16	19
Benzo(a)anthracene (0.002)	0.019 J	0.043 J	0.033 J	0.054 J	0.035 J
Naphthalene (10)	91	44	49	--	140
Acenaphthene (20)	41	33	36	33	43

MW-C16 (AWQS, µg/L)	10/1/20 (µg/L)	3/3/2021 (µg/L)	6/9/21 (µg/L)	9/8/21 (µg/L)	12/7/21 (µg/L)
Benzo(a)anthracene (0.002)	.019 J	0.024 J	0.026 J	0.075	0.018 J H
Benzo(a)pyrene (Any Detection)	--	0.025 J	--	0.028 J	--
Benzo(b)fluoranthene (0.002)	--	0.035 J	--	--	--
Acenaphthene (20)	23	--	25	--	--

MW-C12 (AWQS, µg/L)	10/1/20 (µg/L)	3/4/2021 (µg/L)	6/10/21 (µg/L)	9/9/21 (µg/L)	12/7/21 (µg/L)
Benzene (1)	9.8	16	11	9.5	3.8
Ethylbenzene (5)	--	31	10	11	--
Acenaphthene (20)	81	140	92	130	100
Benzo(a)anthracene (0.002)	--	--	--	0.016 J	--

MW-22S (AWQS, µg/L)	9/30/20 (µg/L)	3/4/2021 (µg/L)	6/8/21 (µg/L)	9/9/21 (µg/L)	12/8/21 (µg/L)
Benzene (1)	24	--	--	--	--
Ethylbenzene (5)	11	--	--	--	--
Total Xylenes (5)	9.2 J	--	--	--	--
Chrysene (0.002)	--	0.16 J	--	--	--
Benzo(a)anthracene (0.002)	--	0.046 J	--	--	--
Benzo(a)pyrene (Any Detection)	--	0.037 J	--	--	--
Cyanide (0.2 mg/L)	--	1.3	--	0.47	0.38

MW-24S (AWQS, µg/L)	9/3020(µg/L)	3/3/2021 (µg/L)	6/9/2021 (µg/L)	9/8/21 (µg/L)	12/7/21 (µg/L)
Benzo(a)pyrene (Any Detection)	--	0.024 J	--	--	--

MW-46S (AWQS, µg/L)	9/30/21 (µg/L)	3/4/2021 (µg/L)	6/8/21 (µg/L)	9/8/21 (µg/L)	12/7/21 (µg/L)
Benzene (1)	720	1200	1200	380	960
Ethylbenzene (5)	790	970	1200	400	810
Toluene (5)	--	32	65	--	12
Total Xylenes (5)	210	440	140	140	370
Indeno(1,2,3-cd)pyrene (0.002)	0.15	2.7	1.1	0.85	2.1 J
Benzo(a)anthracene (0.002)	0.41	5.4	2.5 J	2.1	4.8 J
Benzo(b)fluoranthene (0.002)	0.26	3.4	1.8	1.5	4.0 J
Benzo(k)fluoranthene (0.002)	0.093	1.8 J	0.95	0.83	2.6 J
Benzo(a)pyrene	0.32	6.1	2.8	2.5	5.4 J
Chrysene (0.002)	1.9 J	--	--	--	--
Naphthalene (10)	1100	2500	730	730	1700
Acenaphthene (20)	43	89 J	75 J	46 J	85

LEGEND

MW-14S — MONITORING WELL SAMPLED AS PART OF SITE MANAGEMENT PLAN

MW-21D — MONITORING WELL NOT INCLUDED IN LONG TERM MONITORING PLAN

0 100' 200'

AECOM

Figure: 4

GROUNDWATER EXCEEDANCE PLAN
BTEX, PAHs AND TOTAL CYANIDE
DECEMBER 2021

NEW YORK STATE ELECTRIC & GAS CORP.
FORMER COURT STREET MGP SITE - OU-2
ITHACA, NEW YORK
Project No.: 60615225 Date: MARCH 2022

ANSI B 11" x 17"
Approved:___
Checked:___
Designer:___
Project Management Initials:

Last saved by: TASHINA.MCKINNEY(2022-03-31) Last Plotted: 2022-03-31
Filename: C:_ITHACA\2020-ITHACA-GW - STANDARD\2020-ITHACA-GW.DWG

AECOM

Tables

Table 2: Groundwater Gauging Details
2021 Q4 Groundwater Monitoring Event
Ithaca Court Street Former MGP Site - OU2
Ithaca, New York

Well ID	Date Gauged	Total Depth[1] (ft bTOC)	Sump Interval (ft bTOC)	Screen Interval (ft bTOC)	Depth to Water (ft bTOC)	Depth to Water (ft bgs)	Water Elevation	NAPL Observed (Y/N)	NAPL Thickness (ft)	Well Inspection and Sampling Notes
SMP Monitoring Plan Locations - Gauged and Sampled										
MW - C11	9/28/2020	17.30	17 - 15	15 - 10	5.01	5.53	NA	N	NA	Full of water, cracked road box; Gray cloudy water initially noted during purging.
	3/2/2021	17.23	17 - 15	15 - 10	5.14	5.66	386.00	N	NA	Well in good condition. Water observed to be tinted and a gasoline (petroleum-like) odor was noted during purging. No sheen was observed. Approx. 5 gallons removed post-sampling to remove previously noted sedimentation/residual solids^ before well ran dry.
	6/7/2021	17.21	17 - 15	15 - 10	5.39	5.66	385.75	N	NA	Well in good condition. Purge water clear, and no odor or sheen noted.
	9/7/2021	17.28	17 - 15	15 - 10	5.35	5.87	385.79	N	NA	Well in good condition. Lots of mud underneath the well cap. Purge water clear, and no odor or sheen noted.
	12/6/2021	15.38	17 - 15	15 - 10	4.96	5.48	386.18	N	NA	Fine condition, no odor or sheen observed. Was scheduled to be redeveloped at the end of the GME, but a vehicle was parked over it and access was restricted.
MW - C12	9/28/2020	17.21	17 - 15	15 - 10	6.64	6.85	385.56	N	NA	Good condition; Water clear during purging.
	3/2/2021	17.62	17 - 15	15 - 10	5.65	5.86	386.55	N	NA	Well in good condition. Water observed to be tinted and a gasoline/sweet (petroleum-like) odor noted during purging. No sheen observed.
	6/7/2021	17.22	17 - 15	15 - 10	6.09	6.30	386.11	N	NA	Well in good condition. Purge water clear, and no odor or sheen noted.
	9/7/2021	17.22	17 - 15	15 - 10	6.14	6.35	386.06	N	NA	Good condition. No sheen observed. Sulfur-like odor was noted during well purging. YSI technical difficulties, so team purged 3 well volumes before sampling. MS+MSD collected.
	12/6/2021	17.21	17 - 15	15 - 10	5.98	6.19	386.22	N	NA	Fine condition, no odor or sheen observed.
MW - C16	9/28/2020	15.98	16 - 14	14 - 9	6.65	6.87	384.66	N	NA	Well surface seal cracked, very hard to open, rusted bolts; Slight MGP odor noted during sampling, black sludge in bottom of well at commencement of purging and became clear, slight sheen observed on purge water.
	3/2/2021	15.95	16 - 14	14 - 9	3.54	3.76	387.77	N	NA	Dedicated tubing was rusty (likely iron accumulation). Purged water was tinted yellow/brown. No odor or sheen noted. Dedicated tubing to be replaced.
	6/7/2021	15.94	16 - 14	14 - 9	4.62	4.84	386.69	N	NA	Well in good condition. Purge water clear, and no odor or sheen noted.
	9/7/2021	15.87	16 - 14	14 - 9	5.16	5.38	386.15	N	NA	Good condition. Faint MGP-like odor noted during gauging and purging. Black specs seen in purge water. No sheen observed.
	12/6/2021	16.07	16 - 14	14 - 9	4.64	4.86	386.67	N	NA	Fine condition, no odor or sheen observed.
MW - 22S	9/29/2020	13.10	--	14 - 4	5.10	5.51	382.05	N	NA	Good condition; Water clear during purging.
	3/2/2021	13.64	--	14 - 4	2.84	2.43	383.90	N	NA	Well located in a flower bed and in good condition. Purge water clear, and no odor or sheen noted.
	6/7/2021	13.61	--	14 - 4	4.08	4.49	382.66	N	NA	Well located in a flower bed and in good condition. Purge water clear with slight particulate suspension, and no odor or sheen noted.
	9/7/2021	13.68	--	14 - 4	4.20	4.61	382.54	N	NA	Good condition. No odor or sheen noted.
	12/6/2021	13.65	--	14 - 4	3.73	4.14	383.01	N	NA	Fine condition, no odor or sheen observed.
MW - 23S	9/29/2020	13.70	--	14 - 4	6.80	7.40	380.22	N	NA	Good condition; Water clear during purging, solvent-like odor noted during sampling.
	3/2/2021	13.69	--	14 - 4	6.22	6.82	380.80	N	NA	Well in good condition. Purge water clear, and no odor or sheen noted.
	6/7/2021	13.65	--	14 - 4	6.34	6.94	380.68	N	NA	Well in good condition. Purge water clear, and no odor or sheen noted. Well has very good recharge.
	9/7/2021	13.68	--	14 - 4	6.41	7.01	380.61	N	NA	Good condition. No odor noted. Small amount of sheen observed on the surface of purge water. YSI technical difficulties, so team purged 3 well volumes before sampling.
	12/6/2021	13.67	--	14 - 4	6.32	6.92	380.70	N	NA	Fine condition. White flakes observed in the purged water. Product-like odor observed while purging.
MW - 24S	9/28/2020	13.50	--	14 - 4	7.23	NC	NC	N	NA	Top of PVC casing bent/crushed; Water clear during purging.
	3/2/2021	13.71	--	14 - 4	5.54	NC	NC	N	NA	Well in good condition. Purge water clear, and no odor or sheen noted.
	6/7/2021	13.66	--	14 - 4	6.31	NC	NC	N	NA	Well in good condition. Purge water cleared up, faint organic odor detected, no sheen detected.
	9/7/2021	13.45	--	14 - 4	6.77	NC	NC	N	NA	Located in garden in roadside verge, access restricted due to vegetation. Poor condition, missing bolts and PVC bent. Organic-like odor noted during gauging and purging. No sheen observed.
	12/6/2021	13.98	--	14 - 4	6.56	NC	NC	N	NA	Fine Condition. No sheen observed. Odor of decaying material observed while purging.
MW - 25S	9/28/2020	9.40	--	10 - 3	7.12	7.34	384.10	N	NA	Partially overgrown with grass, good condition; Water clear during purging.
	3/2/2021	9.72	--	10 - 3	5.29	5.51	385.93	N	NA	Purge water initially tinted brown and became clear. No odor or sheen noted. Well ran dry on 3/3/21, allowed to recharge before being sampled 3/4/21.
	6/7/2021	9.71	--	10 - 3	6.43	6.65	384.79	N	NA	Purge water clear, no sheen or odors detected. Well has very poor recharge. Short spikes in tubidity were seen throughout the sampling process, possibly due to low water level.
	9/7/2021	9.70	--	10 - 3	6.53	6.75	384.69	N	NA	Good condition. Only one bolt. No odor or sheen noted. Well ran dry during purging and was allowed to recharge prior to sampling.
	12/6/2021	9.73	--	10 - 3	6.19	6.41	385.03	N	NA	Fine condition, no odor or sheen observed. Ran dry and was sampled at a later time.
MW - 28S	9/28/2020	19.80	--	20 - 7	8.23	8.77	386.94	N	NA	Good condition; Water clear during purging.
	3/2/2021	19.65	--	20 - 7	7.65	8.19	387.52	N	NA	Well in good condition. Purge water clear, and no odor or sheen noted.
	6/7/2021	19.50	--	20 - 7	7.78	8.32	387.39	N	NA	Well in good condition. Purge water clear, and no odor or sheen noted.
	9/7/2021	19.55	--	20 - 7	7.78	8.32	387.39	N	NA	Good condition. Damp (decomposing) odor noted when gauging. No odor or sheen noted during purging.
	12/6/2021	19.54	--	20 - 7	7.79	8.33	387.38	N	NA	Fine condition, sulfur-like odor observed while purging. No sheen observed.
MW - 31S	9/29/2020	11.30	--	12 - 4	7.45	7.76	380.47	N	NA	Good condition; Gray cloudy water initially noted during purging.
	3/2/2021	11.34	--	12 - 4	6.61	6.92	381.31	N	NA	Well in good condition. Initial heavy silt during purging and became clear. No odor or sheen noted. Approx. 5 gallons removed post-sampling to remove previously noted sedimentation/residual solids^ before well ran dry.
	6/7/2021	11.53	--	12 - 4	6.81	7.12	381.11	N	NA	Well in good condition. Purge water clear, and no odor or sheen noted.
	9/7/2021	11.55	--	12 - 4	6.95	7.26	380.97	N	NA	Good condition. No odor or sheen noted. YSI technical difficulties, so team purged 3 well volumes before sampling.
	12/6/2021	11.62	--	12 - 4	6.79	7.10	381.13	N	NA	Fine condition. White flakes observed in the purged water. No odor noted.
MW - 33S*	9/29/2020	9.52	--	10 - 2.5	6.89	7.16	380.66	N	NA	Good condition; Rust-colored water initially noted during purging.
	3/2/2021	9.51	--	10 - 2.5	2.08	2.35	385.47	N	NA	Well in good condition. Very rusty water (likely iron accumulation) near bottom of screen and no odor or sheen noted. Approx. 5 gallons removed post-sampling to remove previously noted sedimentation/residual solids^ before well ran dry.
	6/7/2021	9.48	--	10 - 2.5	4.33	4.60	383.22	N	NA	Well in good condition. Purge water initially tan and cleared towards end of purge, no odor or sheen noted.
	9/7/2021	9.47	--	10 - 2.5	4.33	4.60	383.22	N	NA	Good condition. Rust-like substance on the well casing and tubing. No sheen or odor noted.
	12/6/2021	9.51	--	10 - 2.5	3.60	3.87	383.95	N	NA	Fine condition, no odor or sheen observed.

Table 2: Groundwater Gauging Details
2021 Q4 Groundwater Monitoring Event
Ithaca Court Street Former MGP Site - OU2
Ithaca, New York

Well ID	Date Gauged	Total Depth[1] (ft bTOC)	Sump Interval (ft bTOC)	Screen Interval (ft bTOC)	Depth to Water (ft bTOC)	Depth to Water (ft bgs)	Water Elevation	NAPL Observed (Y/N)	NAPL Thickness (ft)	Well Inspection and Sampling Notes
MW - 40	9/29/2020	8.30	--	9 -3	6.71	7.11	380.28	N	NA	Good condition; Light brown cloudy water initially noted during purging.
	3/2/2021	8.39	--	9 -3	3.09	3.49	383.90	N	NA	Well in good condition. Purge water initially brown and then clear. A 'cleaning supply' (chemical-like) odor was noted and no sheen observed. Approx. 5 gallons removed post-sampling to remove previously noted sedimentation/residual solids^ before well ran dry.
	6/7/2021	9.38	--	9 - 3	4.99	5.39	382.00	N	NA	Concrete pad loose. Purge water clear, and no odor or sheen noted.
	9/7/2021	8.36	--	9 - 3	5.05	5.45	381.94	N	NA	Located in driveway of private property. Concrete collar is broken. No odor or sheen noted. Repair concrete collar as soon as practicable.
	12/6/2021	8.37	--	9 - 3	4.28	4.68	382.71	N	NA	Poor condition, no odor or sheen observed.
MW - 45S	9/29/2020	17.00	15 - 14	14 - 4	5.25	5.56	381.45	N	NA	Good condition; Gray cloudy water initially noted during purging.
	3/2/2021	14.72	15 - 14	14 - 4	3.39	3.70	383.31	N	NA	Well in good condition. Purge water initially brown and then clear. Some rusty particulate (likely iron accumulation) was observed 5 minutes into purging. No odor or sheen noted. Approx. 5 gallons removed post-sampling to remove previously noted sedimentation/residual solids^ before well ran dry.
	6/7/2021	14.68	15 - 14	14 - 4	4.74	5.05	381.96	N	NA	Well in good condition. Purge water clear, and no odor or sheen noted. Approx. 3.5 gallons were purged for redevelopment at the end of the sampling event.
	9/7/2021	14.85	15 - 14	14 - 4	4.55	4.86	382.15	N	NA	Good condition. No odor or sheen noted. Very poor recharge rate, ran dry during purging and allowed to recharge prior to completion of sampling. Re-developed following sampling, 0.07 feet of depth gained (14.78 - 14.85 ft bTOC).
	12/6/2021	19.80	15 - 14	14 - 4	4.15	4.46	382.55	N	NA	Fine condition, no odor or sheen observed. Ran dry and was sampled at a later time. An attempt to removed sediments and residual solids was made at the end of the GME, no additional depth was gained.
MW - 46S	9/29/2020	16.70	--	18 - 8	5.01	5.38	382.60	N	NA	Good condition; Water clear during purging.
	3/2/2021	17.02	--	18 - 8	3.66	4.03	383.55	N	NA	Well in good condition. Purge water tinted light brown and rust particulate (likely iron accumulation) observed. Slight sulfur odor noted. No sheen noted.
	6/7/2021	16.78	--	18 - 8	4.13	4.50	383.08	N	NA	Well in good condition. Purge water clear, and no odor or sheen noted.
	9/7/2021	16.88	--	18 - 8	4.34	4.71	382.87	N	NA	Good condition. A brown substance was left of the interface probe after gauging. Slight organic/product-like odor observed during gauging and sampling. Sheen was observed in purge water. Dup-1 collected.
	12/6/2021	16.88	--	18 - 8	3.80	4.17	383.41	N	NA	Fine condition. Product like odor indicated during gauging. Sheen observed on purge water
MW - 47S	9/29/2020	14.50	--	15 - 5	5.01	5.33	382.44	N	NA	Good condition; Gray cloudy water initially noted during purging.
	3/2/2021	14.69	--	15 - 5	3.87	4.19	383.58	N	NA	Well head rusted. Purge water was clear with rust particulates (likely iron accumulation). No odor or sheen was noted.
	6/7/2021	14.64	--	15 - 5	4.67	4.99	382.78	N	NA	Well in good condition. Purge water clear, no odor detected, sheen was noted during purging for one interval, and was not observed again.
	9/7/2021	14.65	--	15 - 5	4.75	5.07	382.70	N	NA	Good condition. Black particulates observed in purge water. No odor noted. YSI technical difficulties, so team purged 3 well volumes before sampling. Well went dry and was allowed to recharge before sampling.
	12/6/2021	14.86	--	15 - 5	4.33	4.65	383.12	N	NA	Fine condition, no odor or sheen observed. Ran dry and was sampled at a later time.
MW - 48S	9/29/2020	14.30	15 - 14	14 - 4	4.12	4.42	382.73	N	NA	Good condition; Gray/black cloudy water initially noted during purging and odor noted during sampling.
	3/2/2021	13.24	15 - 14	14 - 4	3.51	3.81	383.34	N	NA	Well in good condition. Purge water initially cloudy and then clear. A slight sulfur odor was noted at the commencement of purging. No sheen was noted. Approx. 5 gallons removed post-sampling to remove previously noted sedimentation/residual solids^ before well ran dry.
	6/7/2021	13.20	15 - 14	14 - 4	3.98	4.28	382.87	N	NA	Well in good condition. Purge water clear, and no odor or sheen noted. Approx. 2.5 gallons were purged for redevelopment at the end of the sampling event.
	9/7/2021	13.38	15 - 14	14 - 4	3.88	4.18	382.97	N	NA	Good condition. Faint organic-like (clay) odor noted during gauging. Product-like odor observed during first few minutes of purging. No sheen observed. Re-developed following sampling, 0.09 feet of depth gained. (13.39 - 13.48 ft bTOC).
	12/6/2021	13.52	15 - 14	14 - 4	3.78	4.08	383.07	N	NA	Fine condition, sheen observed. Metallic-like odor observed during purging. An attempt to remove sediments and residual solids was made at the end of the GME, 0.03ft of depth was gained.
Additional Locations - Gauged Only										
MW - C13	9/28/2020	14.39	16 - 14	14 - 9	7.46	7.87	383.63	N	NA	Good condition
	3/2/2021	15.98	16 - 14	14 - 9	5.21	5.62	385.88	N	NA	Good condition
	9/7/2021	15.94	--	--	5.53	5.94	385.56	N	NA	Well collar sunk and full of sediment.
	12/6/2021	14.00	--	--	5.56	5.97	385.53	N	NA	Well collar sunk and full of sediment.
MW - C15	3/2/2021	17.84	--	--	5.29	5.52	385.79	N	NA	Good condition
	6/7/2021	17.79	--	16 - 11	4.98	5.21	386.10	N	NA	Good condition
	9/7/2021	17.80	--	16 - 11	5.20	5.43	385.88	N	NA	Good condition. Lots of mud buildup under the well cap.
	12/6/2021	17.74	--	16 - 11	4.60	4.83	386.48	N	NA	Good condition. Lots of mud buildup under the well cap.
MW - C17	3/2/2021	15.13	--	--	3.89	4.08	388.12	N	NA	Good condition
	6/7/2021	17.11	--	15 - 10	5.40	5.59	386.61	N	NA	Good condition
	9/7/2021	10.00	--	15 - 10	5.78	5.97	386.23	N	NA	Good condition.
	12/6/2021	17.03	--	15 - 10	5.08	5.27	386.93	N	NA	Good condition.
MW - 13S	9/28/2020	14.39	--	15 - 5	7.46	7.78	388.68	N	NA	In grass along curb, good condition
	3/2/2021	13.46	--	15 - 5	6.79	7.11	389.45	N	NA	Good condition
	6/7/2021	14.33	--	15 - 5	6.75	7.07	389.49	N	NA	Good condition
	9/7/2021	14.42	--	15 - 5	6.88	7.20	389.36	N	NA	Good condition. Bolt holes stripped.
	12/6/2021	14.46	--	15 - 5	6.84	7.16	389.40	N	NA	Good condition. Bolt holes stripped.
MW - 13D	6/7//2021	39.79	--	40 - 30	6.19	6.61	389.95	N	NA	Good condition
	9/7/2021	39.75	--	40 - 30	6.20	6.62	389.94	N	NA	Grown over by grass.
	12/6/2021	39.74	--	40 - 30	6.03	6.45	390.11	N	NA	Grown over by grass.
MW - 14S	9/28/2020	9.59	--	10 - 3	7.56	NC	NC	N	NA	Good condition
	3/2/2021	9.46	--	10 - 3	4.24	NC	NC	N	NA	Good condition
	6/7/2021	9.47	--	10 - 3	4.46	NC	NC	N	NA	Good condition
	9/7/2021	9.50	--	10 - 3	5.93	NC	NC	N	NA	Good condition.
	12/6/2021	9.50	--	10 - 3	5.15	NC	NC	N	NA	Good condition.
MW - 14D	3/2/2021	33.31	--	--	4.76	NC	NC	N	NA	Good condition
	6/7/2021	33.84	--	--	4.83	NC	NC	N	NA	Good condition
	9/7/2021	33.25	--	34 - 24	4.83	NC	NC	N	NA	Good condition.
	12/6/2021	33.18	--	34 - 24	4.59	NC	NC	N	NA	Good condition.
MW - 17S	3/2/2021	8.35	--	--	1.08	1.53	386.77	N	NA	PVC shifted, difficult to remove plug and measure. PVC under steel collar.
	6/7/2021	8.35	--	9 - 4	2.87	3.32	384.98	N	NA	PVC shifted, difficult to remove plug and measure. PVC under steel collar.
	9/7/2021	29.5	--	9 - 4	2.60	3.05	385.25	N	NA	PVC is bent and stuck under steel collar. No ability to seal the PVC with a plug.
	12/6/2021	8.41	--	9 - 4	2.21	2.66	385.64	N	NA	PVC is bent and stuck under steel collar. No ability to seal the PVC with a plug.

Table 2: Groundwater Gauging Details
2021 Q4 Groundwater Monitoring Event
Ithaca Court Street Former MGP Site - OU2
Ithaca, New York

Well ID	Date Gauged	Total Depth[1] (ft bTOC)	Sump Interval (ft bTOC)	Screen Interval (ft bTOC)	Depth to Water (ft bTOC)	Depth to Water (ft bgs)	Water Elevation	NAPL Observed (Y/N)	NAPL Thickness (ft)	Well Inspection and Sampling Notes
MW - 17D	3/2/2021	29.48	--	--	1.87	2.17	386.04	N	NA	PVC shifted, difficult to remove plug and measure. PVC under steel collar.
	6/7/2021	29.46	--	30 - 20	2.79	3.09	385.12	N	NA	PVC shifted, difficult to remove plug and measure. PVC under steel collar.
	9/7/2021	8.37	--	30 - 20	2.69	2.99	385.22	N	NA	PVC is bent and stuck under steel collar. No ability to seal the PVC with a plug.
	12/6/2021	29.55	--	30 - 20	2.04	2.34	385.87	N	NA	PVC is bent and stuck under steel collar. No ability to seal the PVC with a plug.
MW - 20S	9/28/2020	14.47	--	15 - 5	6.40	NC	NC	N	NA	Good condition
	3/2/2021	14.49	--	15 - 5	5.28	NC	NC	N	NA	Good condition, slight sulfur odor noted.
	6/7/2021	14.46	--	15 - 5	5.78	NC	NC	N	NA	Good condition, slight sulfur odor noted during gauging.
	9/7/2021	14.42	--	15 - 5	5.91	NC	NC	N	NA	Good condition, product-like odor.
	12/6/2021	14.42	--	15 - 5	5.68	NC	NC	N	NA	Good condition, product-like odor.
MW - 20D	9/28/2020	18.29	--	34 - 24	5.72	NC	NC	N	NA	Good condition
	3/2/2021	33.45	--	34 - 24	4.60	NC	NC	N	NA	Good condition
	6/7/2021	33.36	--	34 - 24	4.87	NC	NC	N	NA	Good condition
	9/7/2021	33.37	--	34 - 24	4.65	NC	NC	N	NA	Good condition.
	12/6/2021	33.38	--	34 - 24	5.45	NC	NC	N	NA	Good condition.
MW - 21S	9/29/2020	9.35	--	10 - 5	5.21	5.56	383.10	N	NA	Good condition
	3/2/2021	9.47	--	10 - 5	3.30	3.65	385.01	N	NA	Good condition
	6/7/2021	9.46	--	10 - 5	3.80	4.15	384.51	N	NA	Good condition
	9/7/2021	9.42	--	10 - 5	3.71	4.06	384.60	N	NA	Good condition.
	12/6/2021	9.49	--	10 - 5	3.51	3.86	384.80	N	NA	Good condition.
MW - 21D	9/29/2020	29.68	--	30 - 20	4.40	4.95	NA	N	NA	Good condition
	3/2/2021	29.42	--	30 - 20	2.11	2.66	386.03	N	NA	Good condition
	6/7/2021	29.42	--	30 - 20	3.13	3.68	385.01	N	NA	Good condition
	9/7/2021	29.47	--	30 - 20	2.95	3.50	385.19	N	NA	Good condition.
	12/6/2021	29.51	--	30 - 20	2.48	3.03	385.66	N	NA	Good condition.
MW - 22D	3/2/2021	29.08	--	--	2.99	2.51	383.72	N	NA	Well located in flower bed. Good condition
	6/7/2021	29.72	--	30 - 20	3.61	4.09	383.10	N	NA	Well located in flower bed, good condition.
	9/7/2021	29.02	--	30 - 20	3.58	4.06	383.13	N	NA	Good condition.
	12/6/2021	29.03	--	30 - 20	3.31	3.79	383.40	N	NA	Good condition.
MW - 23D	3/2/2021	29.34	--	--	3.86	6.25	386.67	N	NA	Good condition
	6/7/2021	29.33	--	30 - 20	4.96	5.35	387.57	N	NA	Good condition
	9/7/2021	29.35	--	30 - 20	4.86	5.25	387.67	N	NA	Good condition.
	12/6/2021	29.27	--	30 - 20	5.65	6.04	386.88	N	NA	Good condition.
MW - 24D	3/2/2021	32.65	--	--	4.29	NC	NC	N	NA	Cover not bolted down. Good condition
	6/7/2021	32.68	--	--	4.58	NC	NC	N	NA	Cover not bolted down, good condition
	9/7/2021	32.68	--	34 - 24	4.37	NC	NC	N	NA	Located in garden in roadside verge, access restricted due to vegetation.
	12/6/2021	32.69	--	34 - 24	4.12	NC	NC	N	NA	Located in garden in roadside verge, access restricted due to vegetation.
MW - 27	9/28/2020	8.86	--	10 - 3	7.22	7.66	384.56	N	NA	Directly in front of garage, good condition
	3/2/2021	8.87	--	10 - 3	2.14	2.58	389.64	N	NA	Good condition
	6/7/2021	8.86	--	10 - 3	5.64	6.08	386.14	N	NA	Good condition
	9/7/2021	8.85	--	10 - 3	5.50	5.94	386.28	N	NA	Good condition. Located on private property.
	12/6/2021	NM	--	10 - 3	NM	NM	NA	N	NA	Property Owner not home to grant access.
MW - 29S	9/29/2020	12.06	--	--	8.15	8.47	379.19	N	NA	Good condition
	3/2/2021	12.08	--	--	4.42	4.74	382.92	N	NA	Good condition
	6/7/2021	12.01	--	--	6.70	7.02	380.64	N	NA	Good condition
	9/7/2021	12.03	--	12 - 2.5	5.71	6.03	381.63	N	NA	Good condition.
	12/6/2021	12.04	--	12 - 2.5	6.42	6.74	380.92	N	NA	Good condition.
MW - 30S	9/29/2020	9.81	--	12 - 2.5	7.00	7.23	381.01	N	NA	Good condition
	3/2/2021	9.95	--	12 - 2.5	4.89	5.12	383.12	N	NA	Good condition
	6/7/2021	9.96	--	12 - 2.5	5.55	5.78	382.46	N	NA	Good condition
	9/7/2021	9.92	--	12 - 2.5	5.59	5.82	382.42	N	NA	Good condition.
	12/6/2021	9.94	--	12 - 2.5	5.20	5.43	382.81	N	NA	Good condition.
MW - 32S	9/29/2020	9.59	--	--	5.40	5.81	381.61	N	NA	Only 1 bolt
	3/2/2021	9.47	--	--	3.15	3.56	383.86	N	NA	Good condition
	6/7/2021	9.47	--	10 - 4	3.94	4.35	383.07	N	NA	Good condition
	9/7/2021	9.57	--	10 - 4	3.88	4.29	383.13	N	NA	Good condition.
	12/6/2021	9.56	--	10 - 4	3.49	3.90	383.52	N	NA	Good condition.
MW - 34S	9/29/2020	9.80	--	--	7.35	7.77	381.96	N	NA	Good condition
	3/2/2021	9.64	--	--	2.96	3.38	386.35	N	NA	Good condition
	6/7/2021	9.52	--	--	4.48	4.90	384.83	N	NA	Good condition
	9/7/2021	9.62	--	10 - 3	4.74	5.16	384.57	N	NA	Good condition.
	12/6/2021	9.69	--	10 - 3	4.12	4.54	385.19	N	NA	Good condition.
MW - 35S	9/29/2020	4.00	--	8 - 3	Dry	Dry	NA	N	NA	Good condition, well dry, note reduced well depth from initial 8ft
	3/2/2021	4.16	--	8 - 3	2.52	3.07	386.28	N	NA	Good condition
	6/7/2021	4.28	--	8 - 3	4.27	4.82	384.53	N	NA	Good condition; Reduced well depth compared to original installation depth.
	9/7/2021	NM	--	8 - 3	4.10	4.65	384.70	N	NA	Unable to measure depth of well due to a suspected bend in the PVC.
	12/6/2021	4.30	--	8 - 3	3.50	4.05	385.30	N	NA	Suspected blockage in well at about 4.30 feet bgs
MW - 37	3/2/2021	7.80	--	--	2.37	2.96	384.72	N	NA	Good condition
	6/7/2021	7.80	--	8 - 3	3.59	4.18	383.50	N	NA	Good condition
	9/7/2021	7.78	--	8 - 3	3.50	4.09	383.59	N	NA	Good condition.
	12/6/2021	7.82	--	8 - 3	3.23	3.82	383.86	N	NA	Good condition.
MW - 38S	6/7/2021	14.18	--	8 - 3	7.64	7.96	380.52	N	NA	Good condition
	9/7/2021	NM	--	8 - 3	NM	NM	NA	N	NA	Not accessed as resident was not contactable at the time of gauging to obtain permission to access.
	12/6/2021	NM	--	8 - 3	NM	NM	NA	N	NA	Not accessed as resident was not contactable at the time of gauging to obtain permission to access.
MW - 41S	6/7/2021	16.82	--	9 - 3	6.68	7.00	386.16	N	NA	Good condition
	9/7/2021	10.8	--	9 - 3	6.68	7.00	386.16	N	NA	Good condition. Located on private property.
	12/6/2021	NM	--	9 - 3	NM	NM	NA	N	NA	Vehicle located on well, owner of property refused to move the vehicle.

Table 2: Groundwater Gauging Details
2021 Q4 Groundwater Monitoring Event
Ithaca Court Street Former MGP Site - OU2
Ithaca, New York

Well ID	Date Gauged	Total Depth[1] (ft bTOC)	Sump Interval (ft bTOC)	Screen Interval (ft bTOC)	Depth to Water (ft bTOC)	Depth to Water (ft bgs)	Water Elevation	NAPL Observed (Y/N)	NAPL Thickness (ft)	Well Inspection and Sampling Notes
MW - 42	9/28/2020	14.20	--	--	7.26	7.73	385.12	N	NA	Good condition
	3/2/2021	14.11	--	--	5.89	6.36	386.49	N	NA	Good condition
	6/7/2021	11.27	--	--	6.80	7.27	385.58	N	NA	Good condition
	9/7/2021	11.25	--	12 - 3	6.70	7.17	385.68	N	NA	Good condition.
	12/6/2021	NM	--	12 - 3	NM	NM	NA	N	NA	Owner of property not home to grant access
MW - 43S	9/28/2020	14.30	--	15 - 5	6.71	7.12	384.82	N	NA	Good condition
	3/2/2021	14.29	--	15 - 5	5.82	6.23	385.71	N	NA	Good condition
	6/7/2021	14.26	--	15 - 5	6.32	6.73	385.21	N	NA	Good condition
	9/7/2021	14.47	--	15 - 5	6.33	6.74	385.20	N	NA	Good condition.
	12/6/2021	14.31	--	15 - 5	6.20	6.61	385.33	N	NA	Good condition.

Notes:
* - MW-33S was mislabeled as MW-36S during the 2021 Q4 GME on field forms, chain of custody, and lab report.
1. Measured at the time of gauging
2. ft bTOC- feet below top of casing
3. ft bgs - feet below ground surface
4. NM - Not measured
5. -- Information not available.
6. NC - Not calculated as ground surface elevation data not available
7. NA - Not applicable

Table 3: BTEX, PAHs and Total Cyanide
2021 Q4 Groundwater Monitoring Event
Ithaca Court Street Former MGP Site - OU2
Ithaca, New York

Sample ID	Laboratory Report Number	Sample Date	BTEX µg/L				PAHs µg/L																Cyanide (mg/L)
			Benzene	Ethylbenzene	Toluene	Xylenes, Total	Acenaphthene	Acenaphthylene	Anthracene	Chrysene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(g,h,i) perylene	Benzo(k) fluoranthene	Dibenzo(a,h) anthracene	Indeno(1,2,3-cd)pyrene	Cyanide, Total
AWQS/GV[1]			1	5	5	5	20	NS	50	0.002	50	50	10	50	50	0.002	Any Detection	0.002	NS	0.002	NS	0.002	**0.2**
MW-C11	2149189	6/7/2016	**20.9**	**128**	**11.1**	**51**	**2.4**	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	**111**	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	**0.027 J**
	175904	10/1/2020	1 U	1 U	1 U	2 U	**3.6**	**0.53 J**	2.4 U	2.4 U	2.4 U	2.4 U	4.8 U	0.95 U	2.4 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.010 U
	181652	3/3/2021	4 U	4 U	4 U	8 U	**1.3 J**	6 U	10 U	10 U	10 U	10 U	20 U	4 U	10 U	0.05 U	0.05 U	**0.03 J**	0.05 U	0.05 UJ	0.05 U	0.05 U	**0.040**
DUP (MW-C11)	181652	3/3/2021	4 U	4 U	4 U	8 U	**1.4 J**	6 U	10 U	10 U	10 U	10 U	20 U	4 U	10 U	**0.021 J**	**0.032 J**	**0.055**	**0.044 J**	0.05 UJ	0.05 U	**0.043 J**	**0.033**
	185822	6/9/2021	2 U	2 U	2 U	4 U	**1.5 J**	6 U	10 U	10 U	10 U	10 U	20 U	4 U	10 U	0.05 UJ	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.017**
	189279	9/8/2021	2 U	2 U	2 U	4 U	**0.91**	0.11 J+, 1	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.2 U	0.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.015**
MW-C11	193156	12/7/2021	2 U	2 U	2 U	4 U	**1.2**	**0.15 J**	0.49 U	0.49 U	0.49 U	0.49 U	0.98 U	0.20 U	0.49 U	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	**0.024**
MW-C12	2149189	6/7/2016	**61.6**	**383**	1 U	**16.8**	**56.7**	1.4 U	1.4 U	1.4 U	1.4 U	**5.4**	**180 J**	**2.9**	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	**0.016**
	175904	10/1/2020	**9.8**	1 U	1 U	2 U	**81**	**1.0**	**0.096 J**	0.48 U	0.48 U	**10**	**0.19 J**	**0.90**	0.48 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.016**
	181652	3/4/2021	**16**	**31**	1 U	1.9 J	**140**	**1.4**	**0.23 J**	0.5 U	0.5 U	**18**	**0.35 J**	**2.3**	0.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.010**
	185894	6/10/2021	**11**	**10**	1 U	2 U	**92**	6 U	10 U	10 U	10 U	**13**	20 U	4 U	10 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.017 J+**
	189373	9/9/2021	**9.5**	**11**	1 U	2 U	**130**	6 U	10 U	10	10 U	**16**	20 U	4 U, bl	10 U	**0.016 J**	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.013**
	193156	12/7/2021	**3.8**	**0.91 J**	1 U	2 U	**100**	**1.2 J**	10 U	10 U	10 U	**13**	21 U	4.1 U	10 U	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	**0.014**
MW-C16	2149189	6/7/2016	1 U	1 U	1 U	3 U	**3.2**	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	**0.007 J**
	175904	10/1/2020	**0.82 J**	2 U	2 U	4 U	**23**	5.7 U	9.5 U	9.5 U	9.5 U	**3.1 J**	19 U	3.8 U	9.5 U	**0.019 J**	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.009 J**
	181652	3/3/2021	4 U	4 U	4 U	8 U	**15**	6 U	10 U	10 U	10 U	**2.7 J**	20 U	4 U	10 U	**0.024 J**	**0.025 J**	**0.035 J**	0.05 U	0.05 UJ	0.05 U	0.05 U	**0.010**
	185822	6/9/2021	2 U	**2**	2 U	4 U	**25**	6 U	10 U	10 U	10 U	**6 J**	20 U	4 U	10 U	**0.026 J**	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.0077 J**
	189279	9/8/2021	2 U	2 U	2 U	4 U	**16**	**0.39 J**	**0.17 J**	2.5 U	**0.61 J**	**2.8**	5 U	1 U, bl	**0.82 J**	**0.075**	**0.028 J**	0.05 U	**0.056**	0.05 U	0.05 U	0.05 U	**0.0056 J**
	193156	12/7/2021	2 U	2 U	2 U	4 U	**16**	**0.33 J**	2.6 U	2.6 U	**0.41 J**	**2.2 J**	5.1 U	**0.33 J**	**0.56 J**	**0.018 J**	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	**0.011**
MW-22S	2150102	6/9/2016	1 U	1 U	1 U	3 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	**0.540**
	175829	9/30/2020	**24**	**11**	10 U	**9.2 J**	**2.4**	0.29 U	0.48 U	0.48 U	0.48 U	**0.058 J**	**0.83 J**	0.19 U	0.48 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.076**
DUP (MW-22S)	175829	9/30/2020	**21**	**11**	**0.51 J**	**8.6**	**3.2**	0.29 U	0.48 U	0.48 U	0.48 U	**0.095 J**	**0.82 J**	0.19 U	0.48 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.092**
	181652	3/4/2021	1 U	1 U	1 U	2 U	0.5 U	**0.13 J**	**0.052 J**	**0.16 J**	**0.19 J**	0.5 U	1 U	0.2 U	**0.29 J**	**0.046 J**	**0.037 J**	0.05 U	0.05 U	0.05 UJ	0.05 U	0.05 U	**1.3**
	185758	6/8/2021	1 U	**1**	**1**	**2**	0.48 U	0.29 U	0.48 U	0.48 U	0.48 U	0.48 U	**0.068 J**	0.19 U	0.48 U	0.05 UJ	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.06 J**
	189373	9/9/2021	1 U	1 U	1 U	2 U	**0.048 J**	0.3 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.097 J**	0.2 U	0.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.47**
MW-22S	193210	12/8/2021	1 U	1 U	1 U	2 U	0.52 U	0.31 U	0.52 U	0.52 U	0.52 U	0.52 U	1 U	0.21 U	**0.1 J**	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ	0.05 UJ	**0.38**
MW-23S	2150484	6/10/2016	5 U	**82.4**	5 U	**58.9**	**68.8**	1.4 U	**3.8**	1.4 U	**1.8**	**18**	1.4 U	**10.7**	**2.6**	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.005 U
	175829	9/30/2020	**1.5 J**	**65**	2 U	**38**	**98**	**1.9**	**6.5**	**0.19 J**	**3.0**	**26**	**340**	**26**	**4.4**	**0.089**	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.010 U
	181652	3/4/2021	2 U	**26**	2 U	**16**	**82**	15 U	**3.5 J**	25 U	25 U	**17 J**	**230**	**15**	25 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ	0.05 U	0.05 U	**0.005 J**
	185822	6/9/2021	**1.1 J**	**27**	**1.3 J**	**22**	**58**	15 U	**5.8 J**	25 U	25 U	**17 J**	**14 J**	**22**	25 U	**0.067 J**	0.05 U	0.05 U	0.05 U	0.05 UJ	0.05 U	0.05 U	**0.0072 J**
	189373	9/9/2021	**1.4 J**	**26**	2 U	**20**	**78**	3 U	**5.7**	5 U	**2.5 J**	**21**	**5.2 J**	**22**	**3.2 J**	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.0052 J**
	193309	12/9/2021	4 U	**20**	4 U	**9.8**	**74**	6 U	**3.9 J**	10 U	**2.4 J**	**17**	**95**	**20**	**2.7 J**	**0.048 J**	0.05 U	0.05 U	0.05 U	0.05 UJ	0.05 UJ	0.0100 U
MW-24S	2149634	6/8/2016	1 U	1 U	1 U	3 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	0.005 U
	175904	10/1/2020	1 U	1 U	1 U	2 U	**0.046 J**	0.29 U	0.48 U	0.48 U	0.48 U	0.48 U	0.96 U	0.19 U	0.48 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.010 U
	181652	3/3/2021	1 U	1 U	1 U	2 U	0.5 U	0.3 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.2 U	0.5 U	0.05 U	**0.024 J**	0.05 U	0.05 U	0.05 UJ	0.05 U	0.05 U	0.010 U
	185822	6/9/2021	1 U	1 U	1 U	2 U	0.5 U	0.3 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.2 U	0.5 U	0.05 UJ	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.0091 J**
	189279	9/8/2021	1 U	1 U	1 U	2 U	0.48 U	0.29 U	0.48 U	0.48 U	0.48 U	0.48 U	0.95 U	0.19 U	0.48 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.0100 U
	193156	12/7/2021	1 U	1 U	1 U	2 U	0.49 U	0.29 U	0.49 U	0.49 U	0.49 U	0.49 U	0.98 U	0.2 U	0.49 U	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.0100 U
MW-25S	2149634	6/8/2016	1 U	1 U	1 U	3 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	**0.018 J**
	175904	10/1/2020	1 U	1 U	1 U	2 U	0.48 U	0.29 U	0.48 U	0.48 U	0.48 U	0.48 U	0.95 U	0.19 U	0.48 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	**0.026**
	181652	3/4/2021	0.5 U	0.3 U	0.3 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.2 U	0.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ	0.05 U	0.05 U	**0.026**
	185822	6/9/2021	1 U	1 U	1 U	1 U	0.5 U	0.3 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.2 U	0.5 U	0.05 UJ	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.015**
	289279	9/8/2021	1 U	1 U	1 U	2 U	0.49 U	0.29 U	0.49 U	0.49 U	0.49 U	0.49 U	0.97 U	0.19 U	0.49 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.021**
	193210	12/8/2021	2 U	2 U	2 U	4 U	0.51 U	0.3 U	0.51 U	0.51 U	0.51 U	0.51 U	1 U	0.2 U	0.51 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ	0.05 UJ	**0.022**
MW-28S	2149634	6/8/2016	1 U	1 U	1 U	3 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.005 U
	175904	10/1/2020	1 U	1 U	1 U	2 U	0.48 U	0.29 U	0.48 U	0.48 U	0.48 U	0.48 U	0.96 U	0.19 U	0.48 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.010 U
	181652	3/3/2021	1 U	1 U	1 U	2 U	0.5 U	0.3 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.2 U	0.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ	0.05 U	0.05 U	0.010 U
	185822	6/9/2021	1 U	1 U	1 U	2 U	0.5 U	0.3 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.02 U	0.5 U	0.05 UJ	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.009 J**
	189279	9/8/2021	1 U	1 U	1 U	2 U	0.51 U	0.31 U	0.51 U	0.51 U	0.51 U	0.51 U	1 U	0.2 U	0.51 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.010 U
DUP (MW-28S)	193156	12/7/2021	1 U	1 U	1 U	2 U	0.48 U	0.29 U	0.48 U	0.48 U	0.48 U	0.48 U	0.95 U	0.19 U	0.48 U	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.010 U
MW-28S	193156	12/7/2021	1 U	1 U	1 U	2 U	0.54 U	0.33 U	0.54 U	0.54 U	0.54 U	0.54 U	1.1 U	0.22 U	0.54 U	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.010 U
MW-31S	2150484	6/10/2016	1 U	1 U	1 U	3 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	0.005 U
	175829	9/30/2020	1 U	1 U	1 U	2 U	0.48 U	0.29 U	0.48 U	0.48 U	0.48 U	0.48 U	0.95 U	0.19 U	0.48 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.006 J**
	181652	3/4/2021	1 U	1 U	1 U	2 U	0.5 U	0.3 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.2 U	0.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ	0.05 U	0.05 U	0.010 U
	185758	6/8/2021	1 U	1 U	1 U	2 U	0.48 U	0.29 U	0.48 U	0.48 U	0.48 U	0.48 U	0.95 U	0.190 U	0.48 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.010 U
DUP (MW-31S)	185758	6/8/2021	1 U	1 U	1 U	2 U	0.48 U	0.29 U	0.48 U	0.48 U	0.48 U	0.48 U	0.95 U	0.190 U	0.48 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.010 U
	189429	9/10/2021	1 U	1 U	1 U	2 U	0.5 U	0.3 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.200 U	0.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.010 U
MW-31S	193210	12/8/2021	1 U	1 U	1 U	2 U	0.51 U	0.31 U	0.51 U	0.51 U	0.51 U	0.51 U	1 U	0.200 U	0.51 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ	0.05 UJ	**0.005 J**
MW-33S*	2150102	6/9/2016	1 U	1 U	1 U	3 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.005 U
	175829	9/30/2020	1 U	1 U	1 U	2 U	0.48 U	0.29 U	0.48 U	0.48 U	0.48 U	0.48 U	**0.10 J**	0.19 U	0.48 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.007 J**
	181652	3/4/2021	1 U	1 U	1 U	2 U	0.5 U	0.3 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.2 U	0.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ	0.05 U	0.05 U	0.010 U
	185758	6/8/2021	1 U	1 U	1 U	2 U	0.48 U	0.29 U	0.48 U	0.48 U	0.48 U	0.48 U	**0.22 J**	0.19 U	0.48 U	0.05 UJ	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.010 U
	189279	9/8/2021	1 U	1 U	1 U	2 U	0.48 U	0.29 U	0.48 U	0.48 U	0.48 U	0.48 U	0.95 U	0.19 U	0.48 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.010 U
	193156	12/7/2021	1 U	1 U	1 U	2 U	**0.25 J**	0.33 U	**0.095 J**	0.54 U	**0.11 J**	**0.11 J**	1.1 U	**0.27**	**0.12 J**	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.010 U
MW-40	2150484	6/9/2016	1 U	1 U	1 U	3 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	0.005 U
	175829	9/30/2020	1 U	1 U	1 U	2 U	0.48 U	0.29 U	0.48 U	0.48 U	0.48 U	0.48 U	**0.61 J**	0.19 U	0.48 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.010 U
	181652	3/4/2021	1 U	1 U	1 U	2 U	0.5 U	0.3 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.2 U	0.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ	0.05 U	0.05 U	0.010 U
	185758	6/8/2021	1 U	1 U	1 U	2 U	0.48 U	0.29 U	0.48 U	0.48 U	0.48 U	0.48 U	0.95 U	0.119 U	0.48 U	0.05 UJ	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.0100 U
	189373	9/9/2021	1 U	1 U	1 U	2 U	0.5 U	0.3 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.25 J**	0.2 U	0.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.0066 J**
	193210	12/8/2021	1 U	1 U	1 U	2 U	0.5 U	0.3 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.2 U	0.5 U	**0.037 J**	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ	0.05 UJ	0.0100 U

Table 3: BTEX, PAHs and Total Cyanide
2021 Q4 Groundwater Monitoring Event
Ithaca Court Street Former MGP Site - OU2
Ithaca, New York

			BTEX µg/L				PAHs µg/L																Cyanide (mg/L)
Sample ID	**Laboratory Report Number**	**Sample Date**	Benzene	Ethylbenzene	Toluene	Xylenes, Total	Acenaphthene	Acenaphthylene	Anthracene	Chrysene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(g,h,i) perylene	Benzo(k) fluoranthene	Dibenzo(a,h) anthracene	Indeno(1,2,3-cd)pyrene	Cyanide, Total
MW-45S	2150484	6/9/2016	1 U	1 U	1 U	3 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.005 U
	175829	9/30/2020	1 U	1 U	1 U	2 U	**0.0360 J**	0.29 U	0.48 U	0.48 U	0.48 U	0.48 U	**0.20 J**	0.19 U	**0.10 J**	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.007 J**
	181652	3/3/2021	1 U	1 U	1 U	2 U	0.5 U	0.3 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.2 U	0.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.010 U
	185758	6/8/2021	1 U	1 U	1 U	2 U	0.48 U	0.29 U	0.48 U	0.48 U	0.48 U	0.48 U	0.95 U	0.19 U	0.48 U	0.05 UJ	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.0100 U
	189373	9/9/2021	1 U	1 U	1 U	2 U	0.5 U	0.3 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	**0.2 U, bl**	0.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.0077 J**
	193309	12/9/2021	1 U	1 U	1 U	2 U	**0.1 J**	0.3 U	**0.067 J**	0.5 U	**0.08 J**	**0.058 J**	1 U	**0.24**	**0.12 J**	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ	0.05 UJ	**0.0063 J**
MW-46S	2150102	6/9/2016	**358**	**428**	**29.5**	**307**	**34.9**	**3.2**	**1.8**	1.5 U	1.5 U	**8.3**	**954**	**7.1**	**1.9**	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.005 U
	175829	9/30/2020	**720**	**790**	20 U	**210**	**43**	**2.8 J**	**2.2 J**	**1.9 J**	**2.3 J**	**9.7**	**1100**	**7.6**	**3.8 J**	**0.41**	**0.32**	**0.26**	**0.15**	**0.093**	**0.045 J**	**0.15**	0.010 U
	181652	3/4/2021	**1200**	**970**	**32**	**440**	**89 J**	**12 J**	**8.2 J**	100 U	100 U	**20 J**	**2500**	**14 J**	**22 J**	**5.4**	**6.1**	**3.4**	**2.6**	**1.8 J**	**0.95**	**2.7**	0.010 U
	185758	6/8/2021	**1200**	**1200**	**65**	**580**	**75 J**	57 U	95 U	95 U	95 U	**16 J**	**2200**	38 U	95 U	**2.5 J**	**2.8**	**1.8**	**1.1**	**0.95**	**0.34**	**1.1**	**0.012 J+**
	189373	9/9/2021	**380 J**	**400 J**	20 U	**140**	**46 J**	30 U	**6.5 J**	50 U	50 U	**14 J**	**730**	**20 U, bl**	50 U	**2.1**	**2.5**	**1.5**	**0.95**	**0.83**	**0.29**	**0.85**	0.010 U
DUP (MW-46S)	189373	9/9/2021	**550 J**	**550 J**	20 U	**170**	**61**	30 U	**4.7 J**	50 U	50 U	**16 J**	**890**	**20 U, bl**	50 U	**2.2**	**2.6**	**1.5**	**0.89**	**0.95**	**0.19**	**0.85**	0.010 U
MW-46S	193156	12/7/2021	**960**	**810**	**12**	**370**	**85**	**8.6 J**	56 U	56 U	56 U	**19 J**	**1700**	22 U	**14 J**	**4.8 J**	**5.4 J**	**4.0 J**	**2.4 J**	**2.6 J**	**0.58 J**	**2.1 J**	**0.0066 J**
MW-47S	2150484	6/9/2016	1 U	1 U	1 U	3 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.005 UJ
	175829	9/30/2020	1 U	1 U	1 U	2 U	**0.75 J**	1.5 U	2.5 U	2.5 U	2.5 U	2.5 U	**1.6 J**	1.0 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.010 U
	181652	3/4/2021	1 U	1 U	1 U	2 U	**0.91 J**	1.5 U	2.5 U	2.5 U	2.5 U	2.5 U	5.0 U	1.00 U	2.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ	0.05 U	0.05 U	0.010 U
	185758	6/8/2021	1 U	1 U	1 U	2 U	**0.84 J**	1.4 U	2.4 U	2.4 U	2.4 U	2.4 U	4.8 U	0.95 U	2.4 U	**0.016 J**	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.010 J+**
	189373	9/9/2021	1 U	1 U	1 U	2 U	**0.81**	0.3 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.096 J**	0.20 U	0.5 U	0.05 U	0.053 U	**0.048 J**	**0.048 J**	0.05 U	0.05 U	**0.042 J**	**0.010**
	193309	12/9/2021	1 U	1 U	1 U	2 U	**1.1**	0.3 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.11 J**	0.20 U	0.5 U	**0.031 J**	0.05 U	**0.03 J**	0.05 U	0.05 U	0.05 UJ	0.05 UJ	**0.012**
MW-48S	2150102	6/9/2016	**174**	**275**	5 U	**31.7**	**32.7**	1.6 U	**1.6**	1.6 U	1.6 U	**7.6**	**16.4**	**6.9**	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.005 U
	175829	9/30/2020	**69**	**26**	2 U	**18**	**41**	**1.5**	**1.4**	0.48 U	**0.72**	**3.9**	**91**	**4.6**	**0.90**	**0.019 J**	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.010 U
	181652	3/3/2021	**35**	**39**	2 U	**18**	**33**	**1.4**	**1.4**	0.5 U	**0.61**	**4**	**44**	**5.1**	**0.76**	**0.043 J**	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.010 U
	185758	6/8/2021	**41**	**25**	1 U	**12**	**36**	**1.3 J**	**1.7 J**	4.8 U	**0.8 J**	**3.7 J**	**49**	**5.5**	**0.83 J**	**0.033 J**	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.010 U
	189429	9/10/2021	**36**	**23**	1 U	**16**	**33**	**0.66 J**	**1.3 J**	5.0 U	**0.88 J**	**4.4 J**	10 U	**3.1**	**0.94 J**	**0.054**	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.010 U
	193210	12/8/2021	**56**	**25**	1 U	**19**	**43**	**1.3 J**	**1.5 J**	5.1 U	5.1 U	**4.7 J**	**140**	**5.4**	**0.83 J**	**0.035 J**	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ	0.05 UJ	**0.0054 J**
Equipment Blank	175904	10/1/2020	1 U	1 U	1 U	2 U	0.49 U	0.29 U	0.49 U	0.49 U	0.49 U	0.49 U	0.97 U	0.2 U	0.49 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.010 U
	181652	3/3/2021	1 U	1 U	1 U	2 U	0.5 U	0.3 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.2 U	0.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.010 U
	185894	6/10/2021	1 U	1 U	1 U	2 U	0.5 U	0.3 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.2 U	0.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.0055 J**
	189373	9/9/2021	1 U	1 U	1 U	2 U	0.5 U	0.3 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.2 U	0.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.010 U
	193210	12/8/2021	1 U	1 U	1 U	2 U	0.5 U	0.3 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.2 U	0.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ	0.05 UJ	0.010 U
Trip Blank	181652	3/3/2021	1 U	1 U	1 U	2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	185758	6/8/2021	1 U	1 U	1 U	2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	185822	6/9/2021	1 U	1 U	1 U	2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	189279	9/8/2021	1 U	1 U	1 U	2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	189373	9/9/2021	1 U	1 U	1 U	2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	189429	9/10/2021	1 U	1 U	1 U	2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	193156	12/7/2021	1 U	1 U	1 U	2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	193210	12/8/2021	1 U	1 U	1 U	2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
* - MW-33S was mislabled as MW-36S during the 2021 Q4 GME.
1. Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values (AWQS/GV) for water class GA.
2. **Bold**- Analyte was detected in laboratory analysis
3. Highlight- Analyte was detected above the AWQS/GV
4. Xylene AWQS (5 µg/L) applies to the sum of isomers
5. NS - No Standard
6. U - Not detected above laboratory reporting limit.
7. J - Result is estimated, detection was below the reporting limit but above the method detection limit.
8. UJ- The analyte was analyzed for, but was not detected. The reported quantitation limit is approximated and may be inaccurate or imprecise.
9. J+ - The result is an estimated quantity and may be biased high.
10. NA - Not Analyzed
11. *+ - LCS and/or LCSD is outside acceptance limits, high biased.
12. F1 - MS and/or MSD recovery exceeds control limits.
13. F2 - MS/MSD RPD exceeds control limits
14. bl - laboratory blank contamination
15. B - Compound was found in the blank and sample.
16. H - Sample was prepped or analyzed beyond the specified holding time.

AECOM

Table 4: Monitored Natural Attenuation and Field Parameters
2021 Q4 Groundwater Monitoring Event
Ithaca Court Street Former MGP Site - OU2
Ithaca, New York

			MNA Parameters									Field Parameters				
Sample ID	**Laboratory Report Number**	**Sample Date**	Sulfate (mg/L)	Ammonia (mg/L)	Nitrate + Nitrite as N (mg/L)	Nitrite as N (mg/L)	Nitrate as N (mg/L)	Alkalinity, Total (mg/L)	Ferrous Iron (mg/L)	Iron (mg/L)	Methane (µg/L)	pH (pH units)	Turbidity (NTU)	ORP (MeV)	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)
AWQS/GV[1]			250	2	10	1	10	NS	NS	0.3	NS	NS	NS	NS	NS	NS
MW-C11	175904	10/1/2020	**121**	**0.54**	**0.024 J**	0.05 U	**0.024 J**	**404**	0.10 U	**4.7**	**98**	6.93	9.81	-87.9	2.29	0.2
	181652	3/3/2021	**1880**	**3.4**	--	--	0.05 U	**700**	**0.17 J**	**13.6**	**460**	6.68	42.1	-109.4	7.333	0.39
	185822	6/9/2021	**3300**	**6.9**	--	--	**0.024 J**	**830**	**0.08 J**	**26.8**	**380**	7.10	7.81	-164.4	7.9	0.11
	189279	9/8/2021	**979**	**1.7**	--	--	**0.027 J**	**616**	0.10 UJ, h	**9.7**	**150**	10.31	1.8	-26.9	4.53	0.31
	193156	12/7/2021	**2910**	**7.3**	--	--	**0.025 J**	**840**	**0.088 J**	**24.4**	**470**	7.07	8.49	-115.2	5.83	0.19
MW-C12	175904	10/1/2020	**238**	**2.5**	0.05 U	0.05 U	0.05 U	**605**	0.10 U	**2.8**	**1000**	7.11	5.00	-108.5	1.72	0.21
	181652	3/4/2021	**214**	**1.5**	--	--	0.05 U	**538**	0.10 UJ	**2.1**	**820**	6.98	4.76	-109.4	1.116	0.39
	185894	6/10/2021	**237**	**1.6**	--	--	**0.023 J**	**502**	0.10 UJ	**2.5**	**620**	7.30	1.06	-138.9	1.28	0.12 J+
	189373	9/9/2021	**198**	**1.1**	--	--	**0.025 J**	**493**	0.10 UJ, h	**2.0**	**770**	10.60	9.61	-50.1	1.241	0.22
	193156	12/7/2021	**171**	**1.4**	--	--	**0.078**	**481**	0.10 U	**1.6**	**740**	7.27	2.34	-83.4	1.15	0.16
MW-C16	175904	10/1/2020	**1320**	**0.77**	**0.055**	**0.021 J**	**0.034 J**	**563**	**0.28 J**	**25.8**	**380**	6.94	15.9	-124.3	3.57	0.4
	181652	3/3/2021	**1470**	**0.58**	--	--	0.05 U	**615**	0.10 UJ	**25.8**	**11**	6.93	61.8	-75.2	3.914	1.4
	185822	6/9/2021	**1650**	**1.1**	--	--	**0.041 J**	**625**	**0.27 J**	**32.9**	**20**	7.06	25	-156.6	3.63	0.35
	189279	9/8/2021	**1240**	**0.5**	--	--	**0.038 J**	**499**	**0.088 J**	**22.9**	**11**	6.93	14.8	-72	2.81	0.46
	193156	12/7/2021	**1200**	**0.47**	--	--	**0.023 J**	**532**	**0.15**	**23.6**	**26**	7.01	22.9	-117.0	3.23	0.24
MW-22S	175829	9/30/2020	10 U	**3.4**	**0.025 J**	0.05 U	**0.025 J**	**343**	**0.37 J**	**7.7**	**7500**	6.77	1.40	-73.1	0.85	0.39
	181652	3/4/2021	**58.3**	0.02 U	--	--	**18.8**	**190**	0.10 UJ	**0.73**	4.0 U	6.52	3.72	14.5	0.731	5.62
	185758	6/8/2021	**46.7**	0.02 U	--	--	**9.2**	**209**	0.10 UJ	**0.27**	4.0 U	8.66	2.75	222.1	0.73	3.05
	189373	9/9/2021	**22.6**	0.02 U	--	--	**3.2**	**266**	0.10 UJ, h	**0.30**	**96.0**	6.61	5.28	279.8	0.81	1.62
	193210	12/8/2021	**40.7**	0.02 U	--	--	**6.7**	**269**	0.10 UJ	**0.26**	**6.1**	6.51	4.28	197.3	0.738	0.79
MW-23S	175829	9/30/2020	**4.1 J**	**1.1**	**0.36**	0.05 U	**0.36**	**238**	**0.19 J**	**1.8**	**3100**	6.87	6.95	-63.7	0.69	1.08
	181652	3/4/2021	**5.8 J**	**1.1**	--	--	**0.33**	**234**	0.10 UJ	**1.9**	**2900**	7.02	9.17	-53.1	0.666	0.81
	185822	6/9/2021	**7.5 J**	**0.54**	--	--	**0.2**	**228**	0.10 UJ	**1.3**	**2500**	6.73	0.28	-29.5	0.99	0.66
	189373	9/9/2021	**6.4**	**0.65**	--	--	**0.26**	**236**	0.10 UJ, h	**1.1**	**2000**	8.35	4.13	-20.9	0.693	0.36
	193309	12/9/2021	**5.3 J**	**0.88**	--	--	**0.25**	**255**	0.10 UJ	**1.6**	**4600**	6.80	9.03	-75.7	0.940	0.38
MW-24S	175904	10/1/2020	**0.87 J**	**2.7**	**0.30**	**0.021 J**	**0.28**	**301**	**0.12 J**	**29.4**	**1400**	6.91	45.9	-135.6	0.95	0.32
	181652	3/3/2021	**39.6**	0.02 U	--	--	**1.8**	**317**	0.10 UJ	**1.8**	4.0 U	7.10	34.3	79.8	0.986	6.85
	185822	6/9/2021	**37.5**	**0.03**	--	--	**0.13**	**352**	0.10 UJ	**0.24**	4.0 U	7.72	3.21	82.4	1.28	0.72
	189279	9/8/2021	**38**	0.02 U	--	--	**0.65**	**358**	0.10 UJ, h	**0.19**	4.0 U	6.87	6.24	126.1	1.23	0.68
	193156	12/7/2021	**37.2**	**0.047**	--	--	**0.11**	**383**	0.10 U	**0.24**	**680**	7.19	12.8	230.5	1.101	0.84
MW-25S	175904	10/1/2020	**121**	**0.52**	0.05 U	**0.020 J**	0.05 U	**550**	**0.15 J**	**6.5**	**30**	6.89	5.05	-40.6	3.51	0.3
	181652	3/4/2021	**206**	0.02 UJ	--	--	**0.12**	**616**	0.10 UJ	**1.5**	4.0 U	6.83	5.97	29.1	3.183	2.97
	185822	6/9/2021	**171**	0.02 U	--	--	**0.055**	**566**	0.10 UJ	**48.9**	4.0 U	7.15	1.46	94.0	3.68	1.2
	189279	9/8/2021	**133**	**0.39**	--	--	**0.041 J**	**545**	0.10 UJ, h	**1.3**	**25.0**	7.95	13	-30.4	3.843	0.53
	193210	12/8/2021	**184**	**0.067**	--	--	**0.22**	**568**	0.10 UJ	**0.25**	4.0 U	6.93	29.4	230.1	3.19	5.05
MW-28S	175904	10/1/2020	10 U	**0.88**	**0.031 J**	**0.022 J**	0.050 U	**271**	**0.10 J**	**1.8**	**4000**	7.47	0.76	-134.4	0.79	0.28
	181652	3/3/2021	**14.4**	**0.88**	--	--	**0.13**	**260**	0.10 UJ	**1.5**	**3900**	7.58	8.80	-91.8	0.692	0.37
	185822	6/9/2021	**9.5 J**	**0.67**	--	--	**0.32**	**275**	0.10 UJ	**1.8**	**3000**	7.56	2.69	-129.7	0.97	0.13
	189279	9/8/2021	**9.3 J**	**0.82**	--	--	**0.07**	**259**	0.10 UJ, h	**1.6**	**3900**	7.58	2.18	-95.2	0.71	0.28
	193156	12/7/2021	**9.7**	**0.86**	--	--	**0.099**	**269**	0.10 U	**1.7**	**3300**	7.73	6.88	108.5	0.737	1.41
MW-31S	175829	9/30/2020	**10.2**	**0.096**	**0.025 J**	0.05 U	**0.025 J**	**303**	**0.086 J**	**1.5**	**580**	6.52	10.1	-11.4	0.67	0.52
	181652	3/4/2021	**16.3**	**0.051**	--	--	**0.18**	**258**	0.10 UJ	**0.39**	**36**	6.91	21.2	18.3	0.549	0.98
	185758	6/8/2021	**17.9**	**0.014 J**	--	--	**0.025 J**	**260**	**0.12 J**	**0.27**	**130**	6.92	0.97	9.2	0.54	0.27
	189429	9/10/2021	**14.5**	**0.045 J+, bl**	--	--	**0.021 J**	**281**	**0.17 J,h**	**0.44**	**230**	7.7	2.04	-20.4	0.681	0.34
	193210	12/8/2021	**10.3**	**0.078**	--	--	0.05 U	**293**	0.10 UJ	**0.49**	**320**	6.83	4.24	-3.4	0.510	0.34

MW-33S*	175829	9/30/2020	**21.2**	**3.9**	**0.049 J**	**0.022 J**	**0.027 J**	**421**	**0.64 J**	**20.9**	**190**	6.88	4.23	-108.2	0.92	0.77
	181652	3/4/2021	**44.9**	**0.09**	--	--	**0.22**	**364**	0.10 UJ	**0.97**	**1.7 J**	7.33	57.2	55.1	0.849	7.16
	185758	6/8/2021	**43.4**	**0.83**	--	--	**0.02 J**	**407**	0.10 UJ	**1.8**	**16**	9.38	4.74	-29.6	1.02	1.15
	189279	9/8/2021	**21.9**	**1.1**	--	--	0.05 U	**419**	0.10 UJ, h	**8.6**	**78**	6.82	5.42	-23.3	1.46	0.3
	193156	12/7/2021	**34.3**	**0.50**	--	--	**0.060**	**456**	0.10 U	**4.2**	**30**	7.22	15.4	198.0	1.445	0.88
MW-40	175829	9/30/2020	**3.6**	**10.1**	**0.14**	0.05 U	**0.14**	**217**	**0.13 J**	**20.4**	**950**	6.44	60.1	-70.1	0.376	0.44
	181652	3/4/2021	**13.9**	**0.11**	--	--	**0.52**	**147**	0.10 UJ	**2.5**	**5.5**	6.39	4.99	28.6	0.314	1.12
	185758	6/8/2021	**9.3**	**0.45**	--	--	0.05 U	**156**	0.10 U UJ	**2.3**	**110**	6.70	0.91	-25.5	0.304	0.11
	189373	9/9/2021	**9**	**0.2**	--	--	**1**	**194**	**0.13 J, h**	**1.1**	**29**	6.31	2.61	22.2	0.325	0.82
	193210	12/8/2021	**6.3**	**0.18**	--	--	0.05 U	**170**	0.10 UJ	**2.4**	**150**	6.35	8.1	217.1	0.282	0.23
MW-45S	175829	9/30/2020	10 U	**3.4**	**0.098**	0.05 U	**0.098**	**377**	**0.21 J**	**30.1**	**5800**	6.70	57.2	-81.7	1.08	0.5
	181652	3/3/2021	**11.2**	**0.44**	NA	0.055	**0.055**	**365**	0.10 UJ	**10.4**	**24**	6.72	53.2	-20.5	0.861	1.39
	185758	6/8/2021	**6.9 J**	**0.85**	--	--	0.05 U	**405**	0.10 UJ	**10.7**	**370**	6.98	26.3	-37.6	1.21	0.37
	189373	9/9/2021	**4.2 J**	**1.5**	--	--	0.05 U	**484**	0.10 UJ, h	**18.9**	**1300**	6.81	9.76	-98.7	1.26	0.47
	193309	12/9/2021	**10.9**	**4**	--	--	**0.12**	**429**	0.10 UJ	**4.2**	**3400**	6.32	145	230.1	1045	2.30
MW-46S	175829	9/30/2020	**12.7**	**3.6**	**0.049 J**	0.05 U	**0.049 J**	**342**	**0.086 J**	**7.0**	**7900**	6.75	4.72	-89.9	1.06	0.32
	181652	3/4/2021	10 U	**5**	--	--	0.05 U	**356**	**0.20 J**	**10.7**	**13000**	6.78	54.3	-89.9	0.60	0.49
	185758	6/8/2021	10 U	**3.3**	--	--	0.05 U	**336**	0.10 UJ	**8.3**	**11000**	7.08	8.00	-155.6	0.68	0.18
	189373	9/9/2021	10 U	**5.3**	--	--	0.05 U	**321**	0.10 UJ, h	**6.9**	**12000**	6.88	12.90	-94	0.73	0.22
	193156	12/7/2021	2 U	**4.3**	--	--	0.05 U	**325**	**0.19**	**8.7**	**17000**	7.22	15.8	119.5	0.690	1.12
MW-47S	175829	9/30/2020	**17.8**	**7.6**	**0.14**	0.05 U	**0.14**	**305**	**0.092 J**	**40.6**	**8300**	6.47	47.8	-114.1	0.84	0.12
	181652	3/4/2021	**7.5 J**	**4.6**	--	--	0.05 U	**292**	0.10 UJ	**14.8**	**12000**	7.07	33.2	-131.8	0.819	0.52
	185758	6/8/2021	10 U	**8.5**	--	--	0.05 U	**303**	0.10 UJ	**15.4**	**13000**	6.79	78.2	-144.7	0.75	0.01
	189373	9/9/2021	5.8 J	**6.6**	--	--	0.05 U	246	**0.12 J, h**	**5.8**	**2600**	9.43	--	-43.5	0.84	1.2
	193309	12/9/2021	**12.8**	**3.4**	--	--	0.05 U	**295**	**0.29 J**	**6.1**	**3400**	7.16	156	-131.7	0.760	0.28
MW-48S	175829	9/30/2020	40 U	**2.7**	0.05 U	0.05 U	0.05 U	**396**	0.10 U J	**6.9**	**5000**	7.08	10	-114.6	3.33	0.38
	181652	3/3/2021	**12.1 J**	**1.4**	--	--	**0.036 J**	**376**	0.10 U J	**3.4**	**3100**	7.21	7.67	-83.3	1.678	0.84
	185758	6/8/2021	40 U	**1.4**	--	--	0.050 U	**338**	0.10 UJ	**5.8**	**3000**	8.41	9.8	-135.1	3.32	7.7
	189429	9/10/2021	20 U	**1.7**	--	--	0.050 U	**373**	0.10 UJ, h	**4.5**	**2800**	7.02	3.19	-102.8	3.89	0.21
	193210	12/8/2021	20 U	**1.9**	--	--	0.050 U	**396**	0.10 UJ	**4.5**	**1900**	7.27	3.07	-122.2	2.54	0.16

Notes:

* - MW-33S was mislabled as MW-36S during the 2021 Q4 GME.

1. Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values (AWQS/GV) for water class GA.
2. **Bold**- Analyte was detected in laboratory analysis
3. Highlight- Highlight- Analyte was detected above the AWQS/GV
4. NS - No Standard
5. -- Not Analyzed
6. U- Not detected above laboratory reporting limit.
7. J - Result is estimated, detection was below the reporting limit but above the method detection limit.
8. UJ- The analyte was analyzed for, but was not detected. The reported quantitation limit is approximated and may be inaccurate or imprecise.
9. MNA - Monitored Natural Attenuation
10. ORP - Oxidation Reduction Potential
11. J+ - The result is an estimated quantity but may be biased high.
12. HF - Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
13. ^+ - Continuing Calibration Verification (CCV) is outside acceptance limits, high biased.
14. bl - laboratory blank contamination
15. h - Holding times
16. B - Compound was found in the blank and sample.
17. F1 - MS and/or MSD recovery exceeds control limits.

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Appendix A - Groundwater Sampling Purge Forms

Monitoring Well Purging / Sampling Form

Project Name and Number: NYSEG - Ithaca - 60615225

Monitoring Well Number: MW-C11 Date: 12/7/21

Samplers: Chris French

Sample Number: MW-C11 Be721 QA/QC Collected? - MS/MSD

Purging / Sampling Method: Low flow W/ dedicated tubing

1. L = Well Depth:	15.38	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Depth to Water:	5.64	feet
4. C = Column of Water in Well:	9.74	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	≈ 1.59	gal
6. 3(V) = Target Purge Volume	≈ 4.76	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using NTU + YSI

Parameter	Units	Readings						
Time	24 hr	1202	1207	1212	1217	1222	1227	1232
Water Level (0.33)	feet	5.64	6.08	6.12	6.16	6.20	6.22	6.22
Volume Purged	gal	0	0.35	0.70	≈ 1.0	1.3	1.6	1.85
Flow Rate	mL/min	225	225	225	225	225	225	225
Turbidity (+/- 10%)	NTU	305	287	32.5	19.2	14.5	8.68	8.98
Dissolved Oxygen (+/- 10%)	%	13.5	10.0	1.9	2.2	2.0	1.7	1.7
Dissolved Oxygen (+/- 10%)	mg/L	1.45	1.06	0.19	0.22	0.20	0.18	0.17
Eh / ORP (+/- 10)	MeV	-27.7	-28.7	-94.9	-101.5	-104.9	-108.2	-109.9
Specific Conductivity (+/- 3%)	mS/cm[c]	0.70	0.72	8.35	8.19	7.91	7.71	7.98
Conductivity (+/- 3%)	mS/cm	0.52	0.56	6.52	6.39	6.17	6.02	5.84
pH (+/- 0.1)	pH unit	8.01	7.68	7.06	7.09	7.12	7.08	7.00
Temp (+/- 0.5)	C°	12.1	13.0	13.6	13.5	13.5	13.6	13.6
Color	Visual	Dark Grey	Dark Grey	Cloudy	Black flecks	Black flecks	Black flecks	Black flecks
Odor	Olfactory	none	none	none	none	none	none	none

Comments: Sampled @ 1247

Monitoring Well Purging / Sampling Form

Project Name and Number: NYSEG - Ithaca - 60615225

Monitoring Well Number: MW-C11 Date: 12/7/21

Samplers: Chris French

Sample Number: MW-C11 120721 QA/QC Collected? - MS/MSD

Purging / Sampling Method: Low flow W/ dedicated tubing

1. L = Well Depth:	15.38	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Depth to Water:	5.64	feet
4. C = Column of Water in Well:	9.74	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	≈1.59	gal
6. 3(V) = Target Purge Volume	≈4.79	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using NTU + YSI

Parameter	Units	Readings						
Time	24 hr	1237	1242	1247				
Water Level (0.33)	feet	6.22	6.22	6.22				
Volume Purged	gal	2.1	2.35	2.7				
Flow Rate	mL/min	225	225	225				
Turbidity (+/- 10%)	NTU	8.26	8.68	8.49				
Dissolved Oxygen (+/- 10%)	%	1.8	1.8	1.9				
Dissolved Oxygen (+/- 10%)	mg/L	0.19	0.18	0.19				
Eh / ORP (+/- 10)	MeV	-111.5	-113.4	-115.2				
Specific Conductivity (+/- 3%)	mS/cm[c]	7.39	7.48	7.47				
Conductivity (+/- 3%)	mS/cm	5.77	5.83	5.83				
pH (+/- 0.1)	pH unit	7.05	7.07	7.07				
Temp (+/- 0.5)	C°	13.5	13.5	13.5				
Color	Visual	clear	clear	clear				
Odor	Olfactory	none	none	none				

Comments: Sampled @ 1247

Monitoring Well Purging / Sampling Form

Project Name and Number: NYSEG - Ithaca - 60615225

Monitoring Well Number: ~~MW-12~~ MW-C12 Date: 12/7/21

Samplers: Chris French

Sample Number: MW-C12 - 120721 QA/QC Collected? - No

Purging / Sampling Method: Low flow W/ dedicated tubing

1. L = Well Depth:	17.21	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Depth to Water:	6.47	feet
4. C = Column of Water in Well:	10.74	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	1.75	gal
6. 3(V) = Target Purge Volume	5.25	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using NTU + YSI

Parameter	Units	Readings						
Time	24 hr	1425	1430	1435	1440	1445	1450	1455
Water Level (0.33)	feet	6.47	6.55	6.61	6.65	6.68	6.70	6.70
Volume Purged	gal	0	0.2	0.55	0.75	1.0	1.25	1.5
Flow Rate	mL/min	190	190	190	190	190	190	190
Turbidity (+/- 10%)	NTU	5.87	4.93	5.33	5.53	2.86	2.24	2.51
Dissolved Oxygen (+/- 10%)	%	8.8	5.0	5.4	5.2	2.7	2.1	1.7
Dissolved Oxygen (+/- 10%)	mg/L	0.90	0.52	0.56	0.53	0.28	0.22	0.18
Eh / ORP (+/- 10)	MeV	-89.7	-78.9	-72.4	-69.3	-74.3	-77.5	-80.2
Specific Conductivity (+/- 3%)	mS/cm[c]	2.36	1.97	1.65	1.59	1.54	1.48	1.47
Conductivity (+/- 3%)	mS/cm	1.84	1.54	1.30	1.26	1.21	1.17	1.15
pH (+/- 0.1)	pH unit	7.20	7.23	7.31	7.30	7.27	7.27	7.27
Temp (+/- 0.5)	C°	13.6	13.8	13.8	13.9	13.8	13.9	13.8
Color	Visual	clear	clear	clear	clear	clear	clear	clear
Odor	Olfactory	none	none	none	none	none	none	none

Comments: Sampled @ 1505

Monitoring Well Purging / Sampling Form

Project Name and Number: NYSEG - Ithaca - 60615225

Monitoring Well Number: MW-C12 Date: 12/7/21

Samplers: Chris French

Sample Number: MW-C12 120721 QA/QC Collected? - No

Purging / Sampling Method: Low flow W/ dedicated tubing

1. L = Well Depth:	17.21	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Depth to Water:	6.47	feet
4. C = Column of Water in Well:	10.74	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	1.75	gal
6. 3(V) = Target Purge Volume	5.25	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using NTU + YSI

Parameter	Units	Readings						
Time	24 hr	1500	1505					
Water Level (0.33)	feet	6.70	6.70					
Volume Purged	gal	~~1.75~~ 1.75	≥ 2.0					
Flow Rate	mL/min	190	190					
Turbidity (+/- 10%)	NTU	2.61	2.34					
Dissolved Oxygen (+/- 10%)	%	1.6	1.5					
Dissolved Oxygen (+/- 10%)	mg/L	0.17	0.16					
Eh / ORP (+/- 10)	MeV	-80.8	-83.4					
Specific Conductivity (+/- 3%)	mS/cm[c]	1.46	1.46					
Conductivity (+/- 3%)	mS/cm	1.15	1.15					
pH (+/- 0.1)	pH unit	7.27	7.27					
Temp (+/- 0.5)	C°	13.7	13.9					
Color	Visual	clear	clear					
Odor	Olfactory	none	none					

Comments: Sampled @ 1505

Monitoring Well Purging / Sampling Form

Project Name and Number: NYSEG - Ithaca - 60615225

Monitoring Well Number: MW-C16 Date: 12/7/21

Samplers: Chris French

Sample Number: MW-C16 12 QA/QC Collected? - No

Purging / Sampling Method: Low flow W/ dedicated tubing

1. L = Well Depth:	16.07	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Depth to Water:	4.89	feet
4. C = Column of Water in Well:	11.18	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	1.82	gal
6. 3(V) = Target Purge Volume	5.47	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using NTU + YSI

Parameter	Units	Readings						
Time	24 hr	0935	0940	0945	0950	0955	1000	1005
Water Level (0.33)	feet	4.89	5.88	6.72	7.05	7.32	7.61	7.77
Volume Purged	gal	0	0.2	0.35	0.5	0.7	0.85	1.0
Flow Rate	mL/min	185	185	130	130	130	130	130
Turbidity (+/- 10%)	NTU	86.6	68.8	170	160	150	132	114
Dissolved Oxygen (+/- 10%)	%	5.1	3.4	3.4	3.4	3.3	3.3	3.3
Dissolved Oxygen (+/- 10%)	mg/L	0.53	0.34	0.35	0.35	0.34	0.34	0.34
Eh / ORP (+/- 10)	MeV	-149.2	-126.1	-103.5	-97.9	-94.5	-93.8	-94.4
Specific Conductivity (+/- 3%)	mS/cm[c]	6.00	4.23	2.12	1.99	1.98	2.09	2.16
Conductivity (+/- 3%)	mS/cm	4.61	3.30	1.64	1.54	1.53	1.62	1.69
pH (+/- 0.1)	pH unit	7.31	7.11	7.13	7.12	7.09	7.07	7.07
Temp (+/- 0.5)	C°	13.2	13.7	13.3	13.3	13.2	13.2	13.4
Color	Visual	Dark Grey	Black flecks	Dark Grey	Dark Grey	Dark Grey	Grey	Grey
Odor	Olfactory	None	None	none	none	none	none	none

Comments: Sampled @ 1110

Monitoring Well Purging / Sampling Form

Project Name and Number: NYSEG - Ithaca - 60615225

Monitoring Well Number: MW-C16 Date: 12/7/21

Samplers: Chris French

Sample Number: MW-C16 120721 QA/QC Collected? No

Purging / Sampling Method: Low flow W/ dedicated tubing

1. L = Well Depth:	16.07	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Depth to Water:	9.89	feet
4. C = Column of Water in Well:	11.18	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	1.82	gal
6. 3(V) = Target Purge Volume	5.47	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using NTU + YSI

Parameter	Units	Readings						
Time	24 hr	1010	1015	1020	1025	1030	1035	1040
Water Level (0.33)	feet	8.06	8.36	8.81	9.10	9.32	9.50	9.49
Volume Purged	gal	1.2	1.4	1.7	2.0	2.2	2.45	2.75
Flow Rate	mL/min	130	180	180	180	180	180	180
Turbidity (+/- 10%)	NTU	100●	88.6	73.6	64.7	59.4	58.3	46.7
Dissolved Oxygen (+/- 10%)	%	3.1	2.9	2.8	2.8	2.8	2.7	2.5
Dissolved Oxygen (+/- 10%)	mg/L	0.32	0.30	0.29	0.29	0.28	0.28	0.26
Eh / ORP (+/- 10)	MeV	-96.6	-98.9	-102.1	-104.8	-106.6	-108.8	-111.3
Specific Conductivity (+/- 3%)	mS/cm[c]	2.29	2.44	2.89	2.88	3.11	3.27	3.56
Conductivity (+/- 3%)	mS/cm	1.79	1.92	2.29	2.28	2.47	2.59	2.83
pH (+/- 0.1)	pH unit	7.06	7.04	7.03	7.03	7.02	7.03	7.02
Temp (+/- 0.5)	C°	13.5	13.9	14.0	14.1	14.1	14.1	14.2
Color	Visual	cloudy	cloudy	cloudy	cloudy	cloudy	cloudy	cloudy
Odor	Olfactory	none	none	none	none	none	none	none

Comments: Sampled @ 1110

Monitoring Well Purging / Sampling Form

Project Name and Number: NYSEG - Ithaca - 60615225

Monitoring Well Number: MW-C16 Date: 12/7/21

Samplers: Chris French

Sample Number: MW-C16 120721 QA/QC Collected? - No

Purging / Sampling Method: Low flow W/ dedicated tubing

1. L = Well Depth:	16.07	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Depth to Water:	4.89	feet
4. C = Column of Water in Well:	11.18	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	1.82	gal
6. 3(V) = Target Purge Volume	5.47	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using NTU + YSI

Parameter	Units	Readings					
Time	24 hr	1045	1050	1055	1100	1105	1110
Water Level (0.33)	feet	9.49	9.49	9.49	9.49	9.49	9.49
Volume Purged	gal	3.0	3.3	3.5	3.7	4.0	4.3
Flow Rate	mL/min	180	180	180	180	180	180
Turbidity (+/- 10%)	NTU	42.4	35.8	28.4	24.3	24.0	22.9
Dissolved Oxygen (+/- 10%)	%	2.5	2.4	2.4	2.4	2.4	2.4
Dissolved Oxygen (+/- 10%)	mg/L	0.26	0.25	0.24	0.24	0.24	0.24
Eh / ORP (+/- 10)	MeV	-112.0	-113.3	-114.7	-115.5	-116.7	-117.0
Specific Conductivity (+/- 3%)	mS/cm[c]	369	3.87	4.04	405	4.05	4.06
Conductivity (+/- 3%)	mS/cm	2.93	3.07	3.22	3.22	3.22	3.23
pH (+/- 0.1)	pH unit	7.01	7.01	7.01	7.01	7.01	7.01
Temp (+/- 0.5)	C°	14.2	14.3	14.3	14.2	14.2	14.2
Color	Visual	cloudy	cloudy	cloudy	clear	clear	clear
Odor	Olfactory	none	none	none	none	none	none

Comments: Sampled @ 1110

Monitoring Well Purging / Sampling Form

Project Name and Number: NYSEG - Ithaca - 60615225

Monitoring Well Number: MW-22S Date: 12/8/21

Samplers: PM

Sample Number: MW-22S-120821 QA/QC Collected? ✓

Purging / Sampling Method: Low flow W/ dedicated tubing

1. L = Well Depth:	13.65	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Depth to Water:	3.83	feet
4. C = Column of Water in Well:	9.82	feet
5. V = Volume of Water in Well = C(3.14159)(0.5D)^2(7.48)	= 1.6	gal
6. 3(V) = Target Purge Volume	= 4.80	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using NTU + YSI

Parameter	Units	Readings						
Time	24 hr	0815	0820	0825	0830	0835	0840	0845
Water Level (0.33)	feet	3.83	3.90	4.02	4.05	4.10	4.10	4.11
Volume Purged	gal	0	0.15	0.30	0.50	0.75	1.00	1.25
Flow Rate	mL/min	150	150	150	150	150	150	150
Turbidity (+/- 10%)	NTU	6.77	6.38	5.92	4.01	3.26	3.53	4.28
Dissolved Oxygen (+/- 10%)	%	72.6	20.7	10.1	8.5	8.0	7.7	7.5
Dissolved Oxygen (+/- 10%)	mg/L	7.47	2.18	1.08	0.94	0.85	0.82	0.79
Eh / ORP (+/- 10)	MeV	231.9	213.2	207.8	205.8	202.4	199.5	197.3
Specific Conductivity (+/- 3%)	mS/cm^c	1.039	0.991	0.979	0.977	0.978	0.738	0.977
Conductivity (+/- 3%)	mS/cm	6.75	0.741	0.734	0.735	0.737	0.977	0.738
pH (+/- 0.1)	pH unit	5.71	6.25	6.39	6.45	6.47	6.50	6.51
Temp (+/- 0.5)	C°	10.1	11.8	11.5	12.0	12.1	12.2	12.2
Color	Visual	Clear	clear	clear	clear	Clear	clear	clear
Odor	Olfactory	/	/	/	/	/	/	/

Comments: pump on @ 0810

sampled 0845

Monitoring Well Purging / Sampling Form

Project Name and Number: NYSEG - Ithaca - 60615225

Monitoring Well Number: MW-235 Date: 12/9/21

Samplers: Chris French

Sample Number: MW-235 120921 QA/QC Collected? - No

Purging / Sampling Method: Low flow W/ dedicated tubing

1. L = Well Depth:		feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Depth to Water:	6.33	feet
4. C = Column of Water in Well:		feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$		gal
6. 3(V) = Target Purge Volume		gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using NTU + YSI

Parameter	Units	Readings						
Time	24 hr	0830	0835	0840	0845	0850	0855	0900
Water Level (0.33)	feet	6.39	6.39	6.39	6.39	6.39	6.39	6.39
Volume Purged	gal	0	0.3	0.5	0.8	1.05	1.3	1.6
Flow Rate	mL/min	225	225	200	200	200	200	200
Turbidity (+/- 10%)	NTU	78.0	90.7	29.6	24.0	16.8	11.8	9.68
Dissolved Oxygen (+/- 10%)	%	9.2	4.3	3.6	3.4	3.5	3.6	3.4
Dissolved Oxygen (+/- 10%)	mg/L	1.06	0.46	0.39	0.36	0.38	0.39	0.37
Eh / ORP (+/- 10)	MeV	14.4	-89.7	-88.6	-86.9	-83.2	-79.4	-77.4
Specific Conductivity (+/- 3%)	mS/cm[c]	1.58	1.41	1.40	1.34	1.30	1.28	1.26
Conductivity (+/- 3%)	mS/cm	1.10	1.05	1.04	1.01	0.98	0.95	0.95
pH (+/- 0.1)	pH unit	6.65	6.80	6.81	6.80	6.80	6.79	6.78
Temp (+/- 0.5)	C°	9.5	11.7	11.9	12.0	11.9	11.7	11.9
Color	Visual	Cloudy	Cloudy	White flecks	White flecks	Clear	Clear	Clear
Odor	Olfactory	Petrol like	Petrol like					

Comments: Sampled @ 0910

Monitoring Well Purging / Sampling Form

Project Name and Number: NYSEG - Ithaca - 60615225

Monitoring Well Number: MW-235 Date: 12/9/21

Samplers: Chris French

Sample Number: MW-235 120921 QA/QC Collected? - No

Purging / Sampling Method: Low flow W/ dedicated tubing

1. L = Well Depth:		feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Depth to Water:	6.37	feet
4. C = Column of Water in Well:		feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$		gal
6. 3(V) = Target Purge Volume		gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using NTU + YSI

Parameter	Units	Readings						
Time	24 hr	0905	0910					
Water Level (0.33)	feet	6.37	6.37					
Volume Purged	gal	1.85	2.1					
Flow Rate	mL/min	200	200					
Turbidity (+/- 10%)	NTU	9.31	9.03					
Dissolved Oxygen (+/- 10%)	%	3.6	3.5					
Dissolved Oxygen (+/- 10%)	mg/L	0.39	0.38					
Eh / ORP (+/- 10)	MeV	-76.6	-75.7					
Specific Conductivity (+/- 3%)	mS/cm[c]	1.26	1.25					
Conductivity (+/- 3%)	mS/cm	0.94	0.94					
pH (+/- 0.1)	pH unit	6.80	6.80					
Temp (+/- 0.5)	C°	12.0	12.1					
Color	Visual	Clear	Clear					
Odor	Olfactory	Petrol like	Petrol like					

Comments: Sampled @ 0910

Monitoring Well Purging / Sampling Form

Project Name and Number: NYSEG - Ithaca - 60615225

Monitoring Well Number: MW-24S. Date: 12/7/21

Samplers: PM

Sample Number: MW-24S-120721 QA/QC Collected? ✓

Purging / Sampling Method: Low flow W/ dedicated tubing

1. L = Well Depth:	13.98	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Depth to Water:	6.86	feet
4. C = Column of Water in Well:	5.12	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	0.83	gal
6. 3(V) = Target Purge Volume	≈ 2.5	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using NTU + YSI

Parameter	Units	Readings						
Time	24 hr	0940	0945	0950	0955	1000	1005	1010
Water Level (0.33)	feet	6.86	7.33	7.82	8.13	8.25	8.65	8.70
Volume Purged	gal	0	0.10	0.25	0.40	0.75	1.00	1.25
Flow Rate	mL/min	150	150	150	150	150	150	150
Turbidity (+/- 10%)	NTU	31.4	48.6	19.0	19.1	14.5	16.4	13.7
Dissolved Oxygen (+/- 10%)	%	66.1	[illegible]	41.2	34.6	27.6	20.3	16.2
Dissolved Oxygen (+/- 10%)	mg/L	6.65	4.90	4.15	3.53	2.81	2.07	1.63
Eh / ORP (+/- 10)	MeV	197.0	220.4	225.7	226.2	270.8	226.6	228.6
Specific Conductivity (+/- 3%)	mS/cm[c]	1.250	1.303	1.327	1.330	1.336	1.346	1.356
Conductivity (+/- 3%)	mS/cm	0.957 7.57	10.4[illegible]	1.058	1.057	1.063	1.072	1.085
pH (+/- 0.1)	pH unit		7.40	7.29	7.28	7.26	7.24	7.21
Temp (+/- 0.5)	C°	14.4	14.6	14.4	14.2	14.3	14.3	14.5
Color	Visual	Cloudy	Cloudy	Cloudy	Clear	Clear	Clear	clear
Odor	Olfactory	decay	✓	✓	✓	✓	✓	✓

Comments: pump on @ 0935
- Smell of decaying material "dead things" noted @ 0940

Monitoring Well Purging / Sampling Form

Project Name and Number: NYSEG - Ithaca - 60615225

Monitoring Well Number: MW-24S, Date: 12/7/21

Samplers: PM

Sample Number: MW-24S-120721 QA/QC Collected? ✓

Purging / Sampling Method: Low flow W/ dedicated tubing

1. L = Well Depth:	13.98	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Depth to Water:	6.86	feet
4. C = Column of Water in Well:	5.12	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	0.83	gal
6. 3(V) = Target Purge Volume	≈ 2.50	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using NTU + YSI

Parameter	Units	Readings ✓						
Time	24 hr	1015	1020	1025	1030			
Water Level (0.33)	feet	8.82	8.95	9.10	9.15			
Volume Purged	gal	● 1.50	1.85	2.00	2.25			
Flow Rate	mL/min	150	150	150	150			
Turbidity (+/- 10%)	NTU	12.6	11.6	12.2	12.8			
Dissolved Oxygen (+/- 10%)	%	12.8	10.3	9.4	8.3			
Dissolved Oxygen (+/- 10%)	mg/L	1.30	1.04	0.95	0.84			
Eh / ORP (+/- 10)	MeV	222.8	228.2	228.4	230.5			
Specific Conductivity (+/- 3%)	mS/cm[c]	1.356	1.360	13.65	1.365			
Conductivity (+/- 3%)	mS/cm	1.083	1.087	1.096	1.101			
pH (+/- 0.1)	pH unit	7.21	7.20	7.20	7.19			
Temp (+/- 0.5)	C°	14.4	14.5	14.7	14.7			
Color	Visual	Clear	Clr	Clr	Clr			
Odor	Olfactory	—	—	—	—			

Comments: • Small amount of sheen observed @ 1020 on surface of purgewater.

Sampled @ 1030

Monitoring Well Purging / Sampling Form

Project Name and Number: NYSEG - Ithaca - 60615225

Monitoring Well Number: MW-255 Date: 12/7/21

Samplers: Chris French

Sample Number: MW-255 120821 QA/QC Collected? - No

Purging / Sampling Method: Low flow W/ dedicated tubing

1. L = Well Depth:	9.73	feet	
2. D = Riser Diameter (I.D.):	0.17	feet	
3. W = Depth to Water:	6.47	feet	
4. C = Column of Water in Well:	3.26	feet	
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	≈ 0.53	gal	
6. 3(V) = Target Purge Volume	≈ 1.60	gal	

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using NTU + YSI

Parameter	Units	Readings						
Time	24 hr	0805	0810	0815	0820	0825	0830	0835
Water Level (0.33)	feet	6.47	6.87	7.37	7.65	8.03	8.27	8.63
Volume Purged	gal	0	0.2	0.6	0.75	1.1	1.4	1.75
Flow Rate	mL/min	150	175	200	210	210	210	220
Turbidity (+/- 10%)	NTU	19.1	16.3	15.0	14.2	9.35	3.13	57.4
Dissolved Oxygen (+/- 10%)	%	29.3	20.0	14.3	10.0	9.0	7.7	8.1
Dissolved Oxygen (+/- 10%)	mg/L	2.51	2.02	1.46	1.02	0.92	0.78	0.82
Eh / ORP (+/- 10)	MeV	186.3	189.1	165.6	148.0	153.2	155.2	60.0
Specific Conductivity (+/- 3%)	mS/cm[c]	4.36	4.90	9.92	4.91	4.90	4.39	4.90
Conductivity (+/- 3%)	mS/cm	3.41	3.45	3.48	3.48	3.48	3.48	3.49
pH (+/- 0.1)	pH unit	6.99	6.99	6.98	6.97	6.97	6.97	6.96
Temp (+/- 0.5)	C°	13.5	13.8	13.9	13.9	14.0	14.1	14.2
Color	Visual	Clear	Clear	Clear	Clear	Clear	Clear	Black flecks
Odor	Olfactory	none	none	none	none	none	none	none

Comments: Purged dry at 0847, 12/7/21
Grab Sampled on 12/8/21 @ 0800

Monitoring Well Purging / Sampling Form

Project Name and Number: NYSEG - Ithaca - 60615225

Monitoring Well Number: MW-255 Date: 12/7/21

Samplers: Chris French

Sample Number: MW-255 120821 QA/QC Collected? - No

Purging / Sampling Method: Low flow W/ dedicated tubing

1. L = Well Depth:	9.73	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Depth to Water:	6.47	feet
4. C = Column of Water in Well:	3.26	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	≈0.53	gal
6. 3(V) = Target Purge Volume	≈1.60	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using NTU + YSI

Parameter	Units	12/8/21 Readings						
Time	24 hr	0840	0845	0800				
Water Level (0.33)	feet	9.01	9.52	7.49				
Volume Purged	gal	2.0	2.3	0				
Flow Rate	mL/min	220	220	N/A				
Turbidity (+/- 10%)	NTU	3.34	23.8	24.4				
Dissolved Oxygen (+/- 10%)	%	9.0	8.9	95.9				
Dissolved Oxygen (+/- 10%)	mg/L	0.91	0.89	5.05				
Eh / ORP (+/- 10)	MeV	91.2	70.1	230.1				
Specific Conductivity (+/- 3%)	mS/cm[c]	4.39	4.36	4.44				
Conductivity (+/- 3%)	mS/cm	3.49	3.48	3.19				
pH (+/- 0.1)	pH unit	6.97	6.99	6.93				
Temp (+/- 0.5)	C°	14.2	14.4	10.5				
Color	Visual	clear	clear	clear				
Odor	Olfactory	none	none	none				

Comments: Purged dry at 0847, 12/7/21
Grab Sampled on 12/8/21 @ 0800

Monitoring Well Purging / Sampling Form

Project Name and Number: NYSEG - Ithaca - 60615225

Monitoring Well Number: MW-28S Date: 12/7/21

Samplers: PM

Sample Number: MW-28S-120721 QA/QC Collected? - Dup-1

Purging / Sampling Method: Low flow W/ dedicated tubing

1. L = Well Depth:	19.54	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Depth to Water:	7.75	feet
4. C = Column of Water in Well:	11.79	feet
5. V = Volume of Water in Well = C(3.14159)(0.5D)^2(7.48)	≈ 1.92	gal
6. 3(V) = Target Purge Volume	≈ 5.77	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using NTU + YSI

Parameter	Units	Readings						
Time	24 hr	0810	0815	0820	0825	0830	0835	0840
Water Level (0.33)	feet	7.75	7.80	7.85	7.85	7.85	7.85	7.85
Volume Purged	gal	0	0.10	0.25	0.38	0.50	0.60	0.75
Flow Rate	mL/min	150	150	150	150	150	150	150
Turbidity (+/- 10%)	NTU	6.55	6.82	6.85	6.72	6.96	6.86	6.88
Dissolved Oxygen (+/- 10%)	%	60.6	29.5	15.5	14.7	13.7	13.6	13.9
Dissolved Oxygen (+/- 10%)	mg/L	5.95	3.00	1.57	1.48	1.38	1.37	1.41
Eh / ORP (+/- 10)	MeV	211.5	196.0	158.7	148.7	124.3	116.4	108.5
Specific Conductivity (+/- 3%)	mS/cm^c	0.895	0.900	0.903	0.904	0.907	0.911	0.921
Conductivity (+/- 3%)	mS/cm	0.705	0.715	0.720	0.721	0.727	0.730	0.737
pH (+/- 0.1)	pH unit	7.63	7.63	7.68	7.71	7.72	7.72	7.73
Temp (+/- 0.5)	C°	14.0	14.2	14.4	14.5	14.6	14.6	14.6
Color	Visual	Clear	Clear	Clear	Clear	Clear	Clear	Clear
Odor	Olfactory	Sulfur						

Comments: Pump on @ 0810
- Slight Sulfur Smell @ 0810
- Sampled @ 0840

☆ Dup-1 - 120721 here

Monitoring Well Purging / Sampling Form

Project Name and Number: NYSEG - Ithaca - 60615225

Monitoring Well Number: MW-315 Date: 12/8/21

Samplers: CF

Sample Number: MW-315 120821 QA/QC Collected? - No

Purging / Sampling Method: Low flow W/ dedicated tubing

1. L = Well Depth:	11.62	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Depth to Water:	6.85	feet
4. C = Column of Water in Well:	4.77	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	≈ 0.78	gal
6. 3(V) = Target Purge Volume	≈ 2.33	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using NTU + YSI

Parameter	Units	Readings						
Time	24 hr	1132	1137	1142	1147	1152	1157	1202
Water Level (0.33)	feet	6.85	6.85	6.85	6.85	6.85	6.85	6.85
Volume Purged	gal	0	0.25	0.45	0.6	0.8	1.05	1.3
Flow Rate	mL/min	200	200	180	150	150	175	175
Turbidity (+/- 10%)	NTU	110	53.7	42.0	22.2	9.41	7.46	4.95
Dissolved Oxygen (+/- 10%)	%	6.5	3.3	3.2	3.1	3.7	3.2	3.2
Dissolved Oxygen (+/- 10%)	mg/L	0.71	0.35	0.35	0.34	0.40	0.35	0.35
Eh / ORP (+/- 10)	MeV	-25.0	-12.2	-6.5	-0.5	0.9	-1.4	-2.0
Specific Conductivity (+/- 3%)	mS/cm[c]	0.72	0.69	0.68	0.68	0.68	0.68	0.68
Conductivity (+/- 3%)	mS/cm	0.52	0.51	0.51	0.51	0.51	0.51	0.51
pH (+/- 0.1)	pH unit	7.18	6.91	6.88	6.86	6.84	6.84	6.83
Temp (+/- 0.5)	C°	11.2	11.7	11.7	11.7	11.6	11.6	11.5
Color	Visual	milky/white	white flecks	white flecks	clear	clear	clear	clear
Odor	Olfactory	none	none	None	None	None	none	none

Comments: Sampled @ 1212

Monitoring Well Purging / Sampling Form

Project Name and Number: NYSEG - Ithaca - 60615225

Monitoring Well Number: MW-315 Date: 12/8/21

Samplers: Chris French

Sample Number: MW-315 120821 QA/QC Collected? - No

Purging / Sampling Method: Low flow W/ dedicated tubing

1. L = Well Depth:	11.62	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Depth to Water:	6.85	feet
4. C = Column of Water in Well:	4.77	feet
5. V = Volume of Water in Well = C(3.14159)(0.5D)^2(7.48)	= 6.78	gal
6. 3(V) = Target Purge Volume	= 2.34	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using NTU + YSI

Parameter	Units	Readings						
Time	24 hr	1207	1212					
Water Level (0.33)	feet	6.85	6.85					
Volume Purged	gal	1.5	1.75					
Flow Rate	mL/min	180	180					
Turbidity (+/- 10%)	NTU	4.62	4.24					
Dissolved Oxygen (+/- 10%)	%	3.2	3.1					
Dissolved Oxygen (+/- 10%)	mg/L	0.35	0.34					
Eh / ORP (+/- 10)	MeV	-3.2	-3.4					
Specific Conductivity (+/- 3%)	mS/cm^c	0.68	0.68					
Conductivity (+/- 3%)	mS/cm	0.51	0.51					
pH (+/- 0.1)	pH unit	6.82	6.83					
Temp (+/- 0.5)	C°	11.8	11.8					
Color	Visual	Clear	Clear					
Odor	Olfactory	none	none					

Comments: Sampled @ 1212

Monitoring Well Purging / Sampling Form

Project Name and Number: NYSEG - Ithaca - 60615225

Monitoring Well Number: MW-36S Date: 12/7/21

TMR - This is monitoring well MW-33S.

Samplers: PM

Sample Number: MW-36S-120721 QA/QC Collected? —

Purging / Sampling Method: Low flow W/ dedicated tubing

1. L = Well Depth:	9.51	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Depth to Water:	3.80	feet
4. C = Column of Water in Well:	5.71	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	= 0.93	gal
6. 3(V) = Target Purge Volume	≈ 2.80	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using NTU + YSI

Parameter	Units	Readings							
Time	24 hr	1305	YSI	1310	1315	1320	1325	1330	1335
Water Level (0.33)	feet	3.80	Problems	4.32	4.58	4.68	4.79	4.96	5.02
Volume Purged	gal	0		0.50	0.75	1.00	1.25	1.50	2.00
Flow Rate	mL/min	200		200	200	200	201	200	200
Turbidity (+/- 10%)	NTU	57.0		48.3	31.6	23.7	21.5	18.2	16.0
Dissolved Oxygen (+/- 10%)	%	16.7		12.0	12.7	14.6	12.8	8.8	7.8
Dissolved Oxygen (+/- 10%)	mg/L	1.81		1.31	1.36	2.11	1.36	0.95	0.82
Eh / ORP (+/- 10)	MeV	238.7		229.0	227.5	218.8	211.8	203.5	198.7
Specific Conductivity (+/- 3%)	mS/cm[c]	1.730		1.939	1.942	1.937	1.937	1.948	1.956
Conductivity (+/- 3%)	mS/cm	1.276		1.433	1.435	1.440	1.440	1.444	1442
pH (+/- 0.1)	pH unit	7.34		7.29	7.27	7.25	7.24	7.22	7.23
Temp (+/- 0.5)	C°	11.1		11.4	11.4	11.5	11.6	11.6	11.6
Color	Visual			Clear	clear	Clear	Clear	Clear	Clear
Odor	Olfactory	—		—	—	—	—	—	—

Comments: Pump on @ 1300

• YSI wasn't working properly @ 1307 had to shut down and restart.

Monitoring Well Purging / Sampling Form

Project Name and Number: NYSEG - Ithaca - 60615225

Monitoring Well Number: MW-36S Date: 12/7/21

Samplers: PM TMR - This is monitoring well MW-33S.

Sample Number: MW-36S-120721 QA/QC Collected? -

Purging / Sampling Method: Low flow W/ dedicated tubing

1. L = Well Depth:	9.51	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Depth to Water:	3.80	feet
4. C = Column of Water in Well:	5.71	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	0.93	gal
6. 3(V) = Target Purge Volume	2.80	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using NTU + YSI

Parameter	Units	✓ Readings						
Time	24 hr	1340						
Water Level (0.33)	feet	5.11						
Volume Purged	gal	2.25						
Flow Rate	mL/min	200						
Turbidity (+/- 10%)	NTU	15.4						
Dissolved Oxygen (+/- 10%)	%	8.1						
Dissolved Oxygen (+/- 10%)	mg/L	0.88						
Eh / ORP (+/- 10)	MeV	198						
Specific Conductivity (+/- 3%)	mS/cm^c	1.934						
Conductivity (+/- 3%)	mS/cm	1.445						
pH (+/- 0.1)	pH unit	7.22						
Temp (+/- 0.5)	C°	11.9						
Color	Visual	CLEAR						
Odor	Olfactory							

Comments: Sampled @ 1340

Monitoring Well Purging / Sampling Form

Project Name and Number: NYSEG - Ithaca - 60615225

Monitoring Well Number: MW-40 Date: 12/8/21

Samplers: PM

Sample Number: MW-40-120821 QA/QC Collected? -

Purging / Sampling Method: Low flow W/ dedicated tubing

1. L = Well Depth:	8.37.	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Depth to Water:	4.28	feet
4. C = Column of Water in Well:	4.09	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	≈ 0.64	gal
6. 3(V) = Target Purge Volume	≈ 2.00	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using NTU + YSI ✓

Parameter	Units	Readings						
Time	24 hr	1225	1230	1235	1240	1245	1250	1255.
Water Level (0.33)	feet	4.29	4.69	4.70.	4.70	4.70	4.70.	4.71
Volume Purged	gal	0	0.15	0.30	0.45	0.75	1.00	1.50
Flow Rate	mL/min	150	150	150	150	150	150	150
Turbidity (+/- 10%)	NTU	180	60.0	20.3	14.3	12.5	10.2	8.1
Dissolved Oxygen (+/- 10%)	%	4.0	2.6	3.1	2.5	2.3	2.3	2.1
Dissolved Oxygen (+/- 10%)	mg/L	0.44	0.29	0.35	0.28	0.26	0.27	0.23
Eh / ORP (+/- 10)	MeV	164.7	180.6	201.6	207.7	213.3	214.0	217.1
Specific Conductivity (+/- 3%)	mS/cm[c]	0.4916	0.451	0.402	0.401	0.394	0.393	0.385
Conductivity (+/- 3%)	mS/cm	0.358	0.327	0.292	0.291	0.284	0.286	0.282
pH (+/- 0.1)	pH unit	6.93	6.63	6.65	6.47	6.41	6.40	6.35
Temp (+/- 0.5)	C°	10.8	10.6	10.6	10.6	10.7	10.9	10.6
Color	Visual	Cloudy	Cloudy	Cloudy	Clear	Clear	Clear	Clear
Odor	Olfactory	/	/	/	/	/	/	/

Comments: Pump on @ 1220

Sampled @ 1255

Monitoring Well Purging / Sampling Form

Project Name and Number: NYSEG - Ithaca - 60615225

Monitoring Well Number: MW-45S Date: 12/8/21

Samplers: PR

Sample Number: MW-45S - ~~120821~~ 120921 QA/QC Collected? -

Purging / Sampling Method: Low flow W/ dedicated tubing

1. L = Well Depth:		feet
2. D = Riser Diameter (I.D.):		feet
3. W = Depth to Water:	4.28	feet
4. C = Column of Water in Well:		feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$		gal
6. 3(V) = Target Purge Volume		gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using NTU + YSI

Parameter	Units	Readings						
Time	24 hr	1030	1035	1040	1045	1050	1055	1100
Water Level (0.33)	feet	4.28	5.25	5.98	6.55	6.83	7.56	8.18
Volume Purged	gal	0	0.15	0.40	0.60	0.75	1.00	1.25
Flow Rate	mL/min	150	150	150	150	150	150	150
Turbidity (+/- 10%)	NTU	25.3	24.4	23.5	22.2	20.4	20.2	20.2
Dissolved Oxygen (+/- 10%)	%	19.1	7.7	5.5	5.1	4.6	4.5	4.2
Dissolved Oxygen (+/- 10%)	mg/L	1.77	0.80	0.57	0.53	0.49	0.46	0.43
Eh / ORP (+/- 10)	MeV	199.6	207.4	217.0	218.9	216.5	217.3	207.3
Specific Conductivity (+/- 3%)	mS/cm[c]	1.419	1.455	1.462	1459	1453	1453	1448
Conductivity (+/- 3%)	mS/cm	1.098	1.132	1.139	1136	1133	1132	1129
pH (+/- 0.1)	pH unit	6.75	6.71	6.71	6.71	6.72	6.71	6.72
Temp (+/- 0.5)	C°	13.0	13.3	13.4	13.4	13.5	13.4	13.5
Color	Visual	Cloudy	Cloudy	Cloudy	Cloudy	Cloudy	Cloudy	Cloudy
Odor	Olfactory							

Comments: pump on @ 1020

Monitoring Well Purging / Sampling Form

Project Name and Number: NYSEG - Ithaca - 60615225

Monitoring Well Number: MW-45 S Date: 12/8/21

Samplers:

Sample Number: MW-45S - ~~120821~~ 120921 QA/QC Collected? ✓

Purging / Sampling Method: Low flow W/ dedicated tubing

1. L = Well Depth:		feet
2. D = Riser Diameter (I.D.):		feet
3. W = Depth to Water:	4.28	feet
4. C = Column of Water in Well:		feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$		gal
6. 3(V) = Target Purge Volume	3 x 5.7	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using NTU + YSI

Parameter	Units	Readings						
Time	24 hr	1705	1710	1715	1720	1125	1130	1135
Water Level (0.33)	feet	8.77	9.18	9.66	9.89	10.52	10.85	~~11.34~~
Volume Purged	gal	1.50	1.75	2.00	2.25	2.50	2.75	3.00
Flow Rate	mL/min	150	150	150	150	160	138	200
Turbidity (+/- 10%)	NTU	50.6	83.4	98.2	127	148	163	146
Dissolved Oxygen (+/- 10%)	%	3.9	3.6	3.6	3.6	3.7	3.7	4.2
Dissolved Oxygen (+/- 10%)	mg/L	0.4	0.38	0.37	0.36	0.36	038	0.43
Eh / ORP (+/- 10)	MeV	203.8	200/851	193.8	185.6	172.2	169.5	165.8
Specific Conductivity (+/- 3%)	mS/cm[c]	1453	1460	1463	1470	1480	1498	1502
Conductivity (+/- 3%)	mS/cm	1134	1142	1146	1156	1170	1180	1152
pH (+/- 0.1)	pH unit	6.71	6.72	6.72	6.71	6.71	6.70	6.68
Temp (+/- 0.5)	C°	13.5	13.6	13.7	13.8	13.9	13.7	14.1
Color	Visual	Clear	Clear	Clear	Clear	Clear	Clear	Clear
Odor	Olfactory	✓	✓	✓	✓	✓	✓	✓

Comments:

Monitoring Well Purging / Sampling Form

Project Name and Number: NYSEG - Ithaca - 60615225

Monitoring Well Number: MW-455 Date: 12/8/21

Samplers:

Sample Number: MW-455 - ~~120821~~ 120921 QA/QC Collected? ✓

Purging / Sampling Method: Low flow W/ dedicated tubing

1. L = Well Depth: _____ feet
2. D = Riser Diameter (I.D.): _____ feet
3. W = Depth to Water: _____ feet
4. C = Column of Water in Well: _____ feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$ _____ gal
6. 3(V) = Target Purge Volume _____ gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using NTU + YSI

0800 — on 12/9/21

Parameter	Units	Readings						
Time	24 hr	1240	1241	1250	1255	~~0800~~		
Water Level (0.33)	feet	11.89	12.75			4.35		
Volume Purged	gal	3.25	3.50	3.65		D		
Flow Rate	mL/min	200	200	200		—		
Turbidity (+/- 10%)	NTU	205	~~282~~			145		
Dissolved Oxygen (+/- 10%)	%	4.2	4.1	3.3		20.3		
Dissolved Oxygen (+/- 10%)	mg/L	0.42	0.42	0.33		2.32		
Eh / ORP (+/- 10)	MeV	158.1	149.2	149.0		230.1		
Specific Conductivity (+/- 3%)	mS/cm[c]	1508	1519	1518		1515		
Conductivity (+/- 3%)	mS/cm	1200	1209	1206		1045		
pH (+/- 0.1)	pH unit	6.70	6.70	6.70		6.32		
Temp (+/- 0.5)	C°	14.3	14.3	14.4		8.8		
Color	Visual	Cloudy	Cloudy	Cloudy		Cloudy		
Odor	Olfactory	/	/	/		/		

Comments: ~~Re~~ Sampled @ 0800 on 12/9

Ran dry @ 13.78 ft

Turby Was too Short, will Sample on 12/9

Monitoring Well Purging / Sampling Form

Project Name and Number: NYSEG - Ithaca - 60615225

Monitoring Well Number: MW-165 Date: 12/7/21

Samplers: PM

Sample Number: MW-165 - 120721 QA/QC Collected? ✓

Purging / Sampling Method: Low flow W/ dedicated tubing

1. L = Well Depth:	16.88	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Depth to Water:	4.30	feet
4. C = Column of Water in Well:	12.58	feet
5. V = Volume of Water in Well = C(3.14159)(0.5D)^2(7.48)	≈ 2.05	gal
6. 3(V) = Target Purge Volume	≈ 6.15	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using NTU + YSI

Parameter	Units	Readings						
Time	24 hr	1135	1140	1145	1150	1155	1200	1205
Water Level (0.33)	feet	4.30	4.36	4.38	4.38	4.39	4.39	4.38
Volume Purged	gal	0	0.25	0.50	1.00	1.25	1.50	1.75
Flow Rate	mL/min	250	250	250	250	250	250	250
Turbidity (+/- 10%)	NTU	40.8	32.6	25.7	20.0	17.2	16.4	15.8
Dissolved Oxygen (+/- 10%)	%	7.5	5.2	4.4	5.6	13.0	12.1	11.0
Dissolved Oxygen (+/- 10%)	mg/L	0.78	0.54	0.45	0.60	1.37	1.22	1.12
Eh / ORP (+/- 10)	MeV	151.2	147.3	143.0	137.8	127.6	122.4	119.5
Specific Conductivity (+/- 3%)	mS/cm^c	0.834	0.830	0.844	0.864	0.876	0.877	0.884
Conductivity (+/- 3%)	mS/cm	0.649	0650	0.658	0.672	0.684	0.686	0.680
pH (+/- 0.1)	pH unit	7.43	7.36	7.30	7.27	7.25	7.24	7.22
Temp (+/- 0.5)	C°	1335	13.6	13.5	13.4	13.5	13.6	13.5
Color	Visual	Sheen	Sheen	Sheen	Cloudy	Clear	Clear	Clear
Odor	Olfactory	Organic	Product.	Product.	Product.	Product	Product	Product

Comments: pump on @ 1130
heavy Organic/product like odor, heavy sheens observed
Sampled @ 1205

Monitoring Well Purging / Sampling Form

Project Name and Number: NYSEG - Ithaca - 60615225

Monitoring Well Number: MW-475 Date: 12/8/21

Samplers: Chris French

Sample Number: MW-475 120821 QA/QC Collected? - No

Purging / Sampling Method: Low flow W/ dedicated tubing

1. L = Well Depth:		feet
2. D = Riser Diameter (I.D.):		feet
3. W = Depth to Water:		feet
4. C = Column of Water in Well:		feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$		gal
6. 3(V) = Target Purge Volume		gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using NTU + YSI

Parameter	Units	Readings						
Time	24 hr	1415	1420	1425	1430	1435	1440	1445
Water Level (0.33)	feet	4.69	5.62	6.42	7.32	8.03	8.65	9.53
Volume Purged	gal	0	0.3	0.75	1.1	1.25	1.35	1.6
Flow Rate	mL/min	250	250	250	250	125	125	150
Turbidity (+/- 10%)	NTU	69.2	32.3	32.4	35.0	128	176	190
Dissolved Oxygen (+/- 10%)	%	1.3	1.1	1.4	1.5	1.9	2.6	2.4
Dissolved Oxygen (+/- 10%)	mg/L	0.14	0.11	0.14	0.15	0.20	0.28	0.25
Eh / ORP (+/- 10)	MeV	-101.5	-117.3	-121.2	-122.5	-122.5	-125.7	-129.3
Specific Conductivity (+/- 3%)	mS/cm[c]	0.87	0.90	0.91	0.92	0.95	0.97	0.99
Conductivity (+/- 3%)	mS/cm	0.66	0.69	0.70	0.71	0.72	0.74	0.76
pH (+/- 0.1)	pH unit	7.22	7.16	7.15	7.13	7.12	7.13	7.15
Temp (+/- 0.5)	C°	12.4	12.9	13.1	13.2	12.7	12.7	12.9
Color	Visual	cloudy	cloudy	cloudy	cloudy	Grey	Grey	Grey
Odor	Olfactory	None	none	None	none	none	none	none

Comments:

Monitoring Well Purging / Sampling Form

Project Name and Number: NYSEG - Ithaca - 60615225

Monitoring Well Number: MW-475 Date: 12/8/21

Samplers: Chris French

Sample Number: MW-475 120921 QA/QC Collected? - No

Purging / Sampling Method: Low flow W/ dedicated tubing

1. L = Well Depth:	_____	feet
2. D = Riser Diameter (I.D.):	_____	feet
3. W = Depth to Water:	_____	feet
4. C = Column of Water in Well:	_____	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	_____	gal
6. 3(V) = Target Purge Volume	_____	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using NTU + YSI

Parameter	Units	Readings					12/9
Time	24 hr	1450	1455	1500	1505		0900
Water Level (0.33)	feet	11.28	11.21	11.05	13.14		4.68
Volume Purged	gal	2.0	2.3	2.5	2.8		—
Flow Rate	mL/min	250	250	250	250		
Turbidity (+/- 10%)	NTU	133	135	126	156		100
Dissolved Oxygen (+/- 10%)	%	2.3	2.2	2.4	2.6		34.2
Dissolved Oxygen (+/- 10%)	mg/L	0.24	0.23	0.25	0.28		3.85
Eh / ORP (+/- 10)	MeV	-131.7	-133.2	-133.0	-131.7		
Specific Conductivity (+/- 3%)	mS/cm[c]	0.99	0.99	0.99	0.98		1.347
Conductivity (+/- 3%)	mS/cm	0.77	0.77	0.77	0.76		0.957
pH (+/- 0.1)	pH unit	7.17	7.17	7.17	7.16		6.73
Temp (+/- 0.5)	C°	13.3	13.2	13.4	13.4		6.9
Color	Visual	Brown	Grey	Grey	Grey		Clear,
Odor	Olfactory	none	none	none	None		

Comments: Purged dry @ 1508, 12/8/21

— Sampled on 12/9/21 @ 0900

Monitoring Well Purging / Sampling Form

Project Name and Number: NYSEG - Ithaca - 60615225

Monitoring Well Number: MW-485 Date: 12/8/21

Samplers: Chris French

Sample Number: MW-485 120821 QA/QC Collected? - No

Purging / Sampling Method: Low flow W/ dedicated tubing

1. L = Well Depth:	13.49	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Depth to Water:	3.78	feet
4. C = Column of Water in Well:	9.71	feet
5. V = Volume of Water in Well = C(3.14159)(0.5D)^2(7.48)	≈ 1.58	gal
6. 3(V) = Target Purge Volume	≈ 4.75	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using NTU + YSI

Parameter	Units	Readings							
Time	24 hr	0930	0935	0940	0945	0950	0955	1000	1005
Water Level (0.33)	feet	3.78	3.95	3.99	4.00	4.02	4.02	4.02	4.02
Volume Purged	gal	0	0.25	~~0.5~~ 0.5	0.75	1.0	1.25	1.5	1.75
Flow Rate	mL/min	225	225	225	225	200	200	200	200
Turbidity (+/- 10%)	NTU	13.6	11.1	9.25	6.74	4.45	3.46	2.50	3.07
Dissolved Oxygen (+/- 10%)	%	2.8	1.7	1.5	1.6	2.1	1.6	1.5	1.5
Dissolved Oxygen (+/- 10%)	mg/L	0.30	0.19	0.16	0.17	0.22	0.17	0.15	0.16
Eh / ORP (+/- 10)	MeV	-109.5	-114.0	-116.8	-117.8	-120.3	-121.4	-121.9	-122.2
Specific Conductivity (+/- 3%)	mS/cm^c	2.86	2.91	~~2.27~~ 3.00	3.05	3.20	3.25	3.27	3.32
Conductivity (+/- 3%)	mS/cm	2.14	2.20	2.27	2.32	2.46	2.50	2.51	2.54
pH (+/- 0.1)	pH unit	7.27	7.26	7.25	7.26	7.26	7.27	7.27	7.27
Temp (+/- 0.5)	C°	11.9	12.2	12.4	12.4	12.9	12.8	12.8	12.9
Color	Visual	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear
Odor	Olfactory	none	none	none	none	Metallic	Metallic	Metallic	metallic

Comments: Sampled @ 1005

Appendix B – Analytical Laboratory Reports

Appendix C - Data Usability Summary Report

AECOM

Data Usability Summary Report

NYSEG/Ithaca Court Street Former MGP Site
Groundwater Sampling Event

NYSEG

Project number: 606732676

February 16, 2022

Delivering a better world

Quality information

Prepared by	Verified by
	
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Table of Contents

Appendices

Tables

Executive Summary

Overview

Data validation was performed by Ann Marie Kropovitch of AECOM-Buffalo on three data packages from Eurofins TestAmerica (ETA-Buffalo), 10 Hazelwood Drive, Amherst, NY 14228-2298 for the analysis of groundwater samples collected on December 7-9, 2021 at the NYSEG/Ithaca Court Street former manufactured gas plant (MGP) site.

The following analytical methods were requested on the chain-of-custody (CoC) records.

- Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX) by USEPA SW-846 Method 8260C
- Polynuclear Aromatic Hydrocarbons (PAHs) by USEPA SW-846 Method 8270D Low-Level and USEPA SW-846 Method 8270E in Selected Ion Monitoring (SIM) Mode
- Methane by USEPA Method RSK-175
- Total Iron by USEPA SW-846 Method 6010C
- General Chemistry
  - Total Cyanide by USEPA SW-846 Method 9012B
  - Sulfate by USEPA MCAWW Method 300.0
  - Ammonia by USEPA MCAWW Method 350.1
  - Nitrate and Nitrite by MCAWW Method 353.2 (Nitrate by Calculation)
  - Total Alkalinity by Standard Method 2320B
  - Ferrous Iron by Standard Method 3500 FE D

The PAH determinations using GC/MS in SIM mode were performed at the ETA-Edison, NJ facility. The data were evaluated for conformance to method specifications and qualifiers were applied using the

USEPA Region 2 SOPs and the validation criteria set forth in the USEPA National Functional Guidelines for Organic Superfund Methods Data Review, EPA-540-R-20-005, November 2020 and USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review, EPA-542-R-20-006, November 2020, as they apply to the analytical methods employed.

Field duplicate relative percent difference (RPD) review and applicable control limits were taken from the USEPA Region I Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses, December 1996 and USEPA Region I Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses, June 1988.

The samples were processed, and the results were reported under three SDGs 480-193156-1, 480-189210-1, and 480-193309-1. Table 1 provides a sample submittal list with the field IDs cross-referenced with the ETA- Buffalo IDs.

Sample MW-33S-120721 was mislabeled as MW-36S-120721 by the field sampler. The sample ID has been corrected in this DUSR and on the laboratory forms.

Table 1 Sample Submittals – NYSEG/Ithaca Former MGP Groundwater

Field ID	Laboratory ID	QC	Matrix	Date Sampled
MW-46S-120721	480-193156-1		Groundwater	12/07/21 12:05
MW-24S-120721	480-193156-2		Groundwater	12/07/21 10:30
MW-28S-120721	480-193156-3		Groundwater	12/07/21 08:40
DUP-1-120721	480-193156-4	MW-28S-120721	Groundwater (QC)	12/07/21 08:40
MW-33S-120721	480-193156-5		Groundwater	12/07/21 13:40
MW-C16-120721	480-193156-6		Groundwater	12/07/21 11:10
MW-C11-120721	480-193156-7	MS/MSD	Groundwater	12/07/21 12:47
MW-C12-120721	480-193156-8		Groundwater	12/07/21 15:05
TRIP BLANK-120721	480-193156-9	trip blank	Aqueous (QC)	12/07/21 00:00
MW-40-120821	480-193210-1		Groundwater	12/08/21 12:55
MW-31S 120821	480-193210-2		Groundwater	12/08/21 12:12
MW-48S 120821	480-193210-3		Groundwater	12/08/21 10:05
MW-25S 120821	480-193210-4		Groundwater	12/08/21 08:00
MW-22S 120821	480-193210-5		Groundwater	12/08/21 08:45
EQUIP.BLANK-120821	480-193210-6	rinsate blank	Aqueous (QC)	12/08/21 14:15
TRIP BLANK-120821	480-193210-7	trip blank	Aqueous (QC)	12/08/21 00:00
MW-45S-120921	480-193309-1		Groundwater	12/09/21 08:00
MW-47S-120921	480-193309-2		Groundwater	12/09/21 09:00
MW-23S-120921	480-193309-3		Groundwater	12/09/21 09:10

Summary

Data quality for the organic analyses was evaluated by reviewing the following parameters: holding times, GC/MS tuning and performance standards, internal standards, initial and continuing calibrations, matrix spike/matrix spike duplicates (MS/MSD), surrogate recoveries, laboratory control standards (LCSs), laboratory blanks, laboratory and field duplicates, compound identification, and compound quantitation.

Inorganic data quality was evaluated by reviewing the following parameters: holding times, matrix spikes, initial calibrations, continuing calibration verification standard recoveries, contract required detection limit standard recoveries, laboratory control samples, ICP interference check sample recoveries, ICP serial dilution results, field and laboratory duplicates, laboratory blanks, and analyte quantitation.

All data have been determined to be useable for the purpose of assessing the presence/absence and quantitative concentrations of the compounds and analytes in the media tested (i.e., groundwater) with the qualifications described below. No data points were rejected. Completeness of 100% was achieved for this data set. This is within the goal of 90-100% and is acceptable.

A glossary of data qualifier and reason code definitions are included in Appendix A of this report. The data qualifier summaries are attached as Appendix B of this report.

Each noncompliance with specific data usability criteria that required data qualification is discussed below. Support documentation for data qualifications was included in Appendix C of this report.

1. Benzene, Toluene, Ethyl Benzene, and Total Xylenes

1.1 Reporting and Detection Limits

Samples MW-C11-120721, MW-C16-120721, and MW-25S-120821 required analysis at an initial two-fold dilution to minimize the matrix interference that caused purge and trap foaming to occur. The initial dilution elevated reporting limits (RLs) and method detection limits (MDLs). The surrogate recoveries were within the quality control limits. No data qualifications were required.

Samples MW-46S-120721 and MW-23S-120921 required analysis at an initial dilution to bring the target compound concentration(s) into the calibration range. The initial dilution elevated the RLs and MDLs. The surrogate recoveries were within the quality control limits. No data qualifications were required.

2. Polynuclear Aromatic Hydrocarbons

2.1 Holding Time:

The following samples were extracted outside of the holding time for the 8270 SIM analysis due to a Fed-ex shipping delay: MW-46S-120721, MW-24S-120721, MW-28S-120721, DUP-1-120721, MW-33S-120721, MW-C16-120721, MW-C11-120721, and MW-C12-120721. All SIM results in these samples have been qualified ‘J’ or ‘UJ’ due to the HT exceedance.

2.2 Blank Contamination:

Naphthalene was detected in the low-level method blank MB 480-608154/1-A at an estimated concentration of 0.0654 J µg/L. The naphthalene results for associated samples MW-C11-120721 and MW-33S-120721 were less than the RL and were qualified ‘U’, as undetected at the RL, because of laboratory contamination. The other associated samples were either non-detect for naphthalene or had a result that exceeded the RL, no qualification was required for those samples.

Phenanthrene was detected in the low-level method blank MB 480-608429/1-A at an estimated concentration of 0.0774 J µg/L. The phenanthrene results for associated sample MW-47S-120921 was less than the RL and was qualified ‘U,’ as undetected at the RL, because of laboratory contamination. The remaining associated samples were greater than the RL and did not required qualification.

2.3 Matrix Spike Recoveries:

Sample MW-C11-120721 was designated in the field to be processed as a quality control sample, that is, as the MS/MSD. The %R of dibenzo(a,h)anthracene in the 8270 SIM analysis was slightly below the lower QC limit in the MS/MSD. All %Rs were acceptable in the laboratory control sample (LCS). No qualification has been added to the sample results.

2.4 Reporting and Detection Limit

Sample MW-46S-120721 for SIM analysis was analyzed at a dilution of 5x due to elevated levels of the target compounds. The RLs and MDLs were elevated as required.

Several low-level GC/MS samples required analysis at an initial dilution to bring the target compound concentration(s) into the calibration range as identified below. The RLs and MDLs were elevated as required.

Sample ID	Dilution
MW-46S-120721	100
MW-C12-120721	20
MW-23S-120921	20
MW-C16-120721	5
MW-48S 120821	10

2.5 Surrogate Recoveries:

The %R of surrogate 2-fluorobiphenyl in the 8270 SIM analysis was greater than the upper QC limit in the following samples: MW-24S-120721, MW-28S-120721, DUP-1-120721, MW-33S-120721, MW-C11-120721, MW-C12-120721, MW-40-120821, MW-31S-120821, MW-48S-120821, MW-25S120821, MW-22S-120821, MW-45S-120921, MW-47S-120921, and EQUIP BLANK-120821. The USEPA National Functional Guidelines permit one surrogate per fraction (i.e., base/neutral, or organic acid) to be nonconforming, so long as the recovery was greater than 10%. No data qualification was required.

2.6 Calibration:

The percent differences (%D) between the initial calibration (ICAL) average relative response factors (RRF) and the RRFs in the 8270 SIM continuing calibration (CCAL) standards were greater than 20% for SVOCs indeno(1,2,3-cd)pyrene and dibenzo(a,h)anthracene and showed a decreasing response (low bias). Since associated samples MW-46S-120721, MW-24S-120721, MW-28S-120721, DUP-1-120721, MW-33S-120721, MW-C16-120721, MW-C11-120721, and MW-C12-120721 were previously qualified J or UJ due to the holding time exceedance, no further qualification was added to the sample results.

The %D between the ICAL average RRF and the RRFs in the 8270 SIM CCAL standards were greater than 20% for SVOCs indeno(1,2,3-cd)pyrene and dibenzo(a,h)anthracene and showed a decreasing response (low bias). The results for these compounds in associated samples EQUIP.BLANK-120821, MW-22S 120821, MW-25S 120821, MW-31S 120821, MW-40-120821, MW-48S 120821, MW-45S-120921, MW-47S-120921, and MW-23S-120921 have been qualified ‘UJ’

3. Methane

3.1 Dilutions

Samples MW-24S-120721, MW-28S-120721, MW-46S-120721, MW-C11-120721, MW-C12-120721, MW-48S 120821, MW-23S-120921, MW-45S-120921, and MW-47S-120921 required analysis at an initial dilution to bring the methane concentration into the calibration range. The initial dilution elevated the RLs and MDLs. No data qualifications were required.

4. Total Iron

No QC deviations were identified in the data packages. No data qualification was required.

5. General Chemistry

5.1 Holding Time:

Ferrous iron samples MW-22S-120821, MW-25S-120821, MW-31S-120821, MW-40-120821, MW-48S-120821, MW-45S-120921, MW-47S-120921, and MW-23S-120921 were analyzed beyond the method holding time of 24 hours. Ferrous iron should be performed as a field test. The detected ferrous iron results were qualified ‘J,’ and the non-detects were qualified ‘UJ’ due to the holding time exceedance.

5.2 Matrix Spike Recoveries:

The % R of ammonia was less than the lower QC limit in the MS performed on sample MW-36S-120721. Since the %R was within the acceptable limits in the validation guidelines (i.e., 80-120%) no qualification has been added to the sample results.

5.3 Dilutions:

Samples MW-C11-120721, MW-C12-120721, MW-C16-120721, MW-31S 120821, MW-48S 120821, MW-25S 120821, and MW-22S 120821 were diluted for sulfate (Method 300.0) to bring the results into the calibration range or sample matrix effects (presence of non-target compounds). The dilution elevated the RLs and MDLs.

6. Field Duplicate Precision

A field duplicate (FD) sample was collected at MW-28S-120721. All compounds were non-detect in the sample and field duplicate.

The laboratory did not analyze the FD for all the parameters that the parent sample was analyzed for. The FD was only analyzed for VOCs, SVOCs, and total cyanide. The laboratory indicated the bottles for the other parameters (i.e., alkalinity, ammonia, ferrous iron, methane, nitrate, and sulfate) were not received for the field duplicate sample.

7. Notes

Matrix spike and matrix spike duplicates, laboratory duplicates, and ICP serial dilutions that were performed on non-project samples were not evaluated because matrix similarity to project samples could not be assumed.

Positive results less than the RL, but greater than the MDL were qualified “J,” as estimated concentrations, due to increased uncertainty near the detection limit. These “J” qualifiers were maintained in the data validation. Sample results reported between the MDL and RL are usable as estimated values with an unknown directional bias.

Sample Custody: Sample identifications, sample dates, and sample times on the chain of custody matched those found in the laboratory data package. The chain of custody was signed and dated, and proper chain of command was followed from field to laboratory with the following exception.

The laboratory did not receive all of the sample bottles as indicated on the COC for the field duplicate sample.

Appendix A Glossary of Data Qualifiers and Reason Codes

A.1 Glossary of Data Qualifiers

U The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.

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

UJ The analyte was analyzed for but was not detected. The reported quantitation limit is approximated and may be inaccurate or imprecise.

J+ The result is an estimated quantity but may be biased high. J- The result is an estimated quantity but may be biased low.

R The data are unusable. The sample results are rejected due to serious deficiencies in the ability to meet quality control criteria. The presence or absence of the analyte cannot be verified.

N (Organics) The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tentative identification.

NJ (Organics) The analysis indicates the presence of an analyte that has been tentatively identified and the associated numerical value represents its approximate concentration.

A.2 Glossary of Data Qualifiers Reason Codes

a Tracer recovery (radiochemical data only)
bc Breakdown check standard issue
be Equipment blank contamination
bf Field blank contamination
bl Laboratory blank contamination
bm Missing Blank Information
bt Trip Blank contamination
c Calibration issue
cl Clean-up standard recovery
cp Insufficient in growth (radiochemical data only)
cr Chromatographic resolution
d Reporting limit raised due to chromatographic interference
e Ether interference
fd Field duplicate RPDs
g Chromatographic pattern match issue h Holding times
i Internal standard areas
ii Injection internal standard area or retention time exceedance
k Estimated Maximum Possible Concentrations
l LCS recoveries
lc Labeled compound recovery
ld Laboratory duplicate RPDs (matrix duplicate, MSD, LCSD)
m Matrix spike recovery
nb Negative laboratory blank contamination (nondetect results only)
p False positive due to contamination during shipping
q Quantitation issue
r Dual column RPD
rp Re-extraction precision issue [PAHs only]

rt	SIM ions not within + 2 seconds
rv	(Air/Soil Gas) Residual vacuum pressure less than 1" Hg.
s	Surrogate recovery
sp	Sample preparation issue
su	Evidence of ion suppression
t	Temperature Preservation Issue
u	High combined sample result uncertainty (radiochemical data only)
v	Compound identification issue
x	Low % solids
y	Serial dilution results

Appendix B Data Qualification Summaries

Client Sample ID: MW-46S-120721
Lab Sample ID: 480-193156-1

Date Collected: 12/07/21 12:05
Matrix: Water

Date Received: 12/08/21 08:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**960**		10	4.1	ug/L			12/08/21 18:13	10
Ethylbenzene	**810**		10	7.4	ug/L			12/08/21 18:13	10
Toluene	**12**		10	5.1	ug/L			12/08/21 18:13	10
Xylenes, Total	**370**		20	6.6	ug/L			12/08/21 18:13	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*77 - 120*		*12/08/21 18:13*	*10*
4-Bromofluorobenzene (Surr)	*105*		*73 - 120*		*12/08/21 18:13*	*10*
Dibromofluoromethane (Surr)	*114*		*75 - 123*		*12/08/21 18:13*	*10*
Toluene-d8 (Surr)	*99*		*80 - 120*		*12/08/21 18:13*	*10*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**85**		56	4.0	ug/L		12/09/21 09:18	12/09/21 23:42	100
Acenaphthylene	**8.6**	**J**	33	6.2	ug/L		12/09/21 09:18	12/09/21 23:42	100
Anthracene	ND		56	3.8	ug/L		12/09/21 09:18	12/09/21 23:42	100
Chrysene	ND		56	8.2	ug/L		12/09/21 09:18	12/09/21 23:42	100
Fluoranthene	ND		56	8.9	ug/L		12/09/21 09:18	12/09/21 23:42	100
Fluorene	**19**	**J**	56	6.4	ug/L		12/09/21 09:18	12/09/21 23:42	100
Naphthalene	**1700**		110	7.1	ug/L		12/09/21 09:18	12/09/21 23:42	100
Phenanthrene	ND		22	6.9	ug/L		12/09/21 09:18	12/09/21 23:42	100
Pyrene	**14**	**J**	56	8.4	ug/L		12/09/21 09:18	12/09/21 23:42	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*113*		*37 - 120*	*12/09/21 09:18*	*12/09/21 23:42*	*100*
Nitrobenzene-d5 (Surr)	*76*		*26 - 120*	*12/09/21 09:18*	*12/09/21 23:42*	*100*
p-Terphenyl-d14	*100*		*64 - 127*	*12/09/21 09:18*	*12/09/21 23:42*	*100*

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	**2.4**	**J**	0.050	0.035	ug/L		12/15/21 19:33	12/16/21 19:37	1
Benzo[k]fluoranthene	**2.6**	**J**	0.050	0.028	ug/L		12/15/21 19:33	12/16/21 19:37	1
Dibenz(a,h)anthracene	**0.58**	**J**	0.050	0.020	ug/L		12/15/21 19:33	12/16/21 19:37	1
Indeno[1,2,3-cd]pyrene	**2.1**	**J**	0.050	0.036	ug/L		12/15/21 19:33	12/16/21 19:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*156*	*S1+*	*25 - 131*	*12/15/21 19:33*	*12/16/21 19:37*	*1*
Nitrobenzene-d5 (Surr)	*88*		*54 - 134*	*12/15/21 19:33*	*12/16/21 19:37*	*1*

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	**4.8**	**J**	0.25	0.078	ug/L		12/15/21 19:33	12/17/21 00:40	5
Benzo[a]pyrene	**5.4**	**J**	0.25	0.11	ug/L		12/15/21 19:33	12/17/21 00:40	5
Benzo[b]fluoranthene	**4.0**	**J**	0.25	0.12	ug/L		12/15/21 19:33	12/17/21 00:40	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*59*		*25 - 131*	*12/15/21 19:33*	*12/17/21 00:40*	*5*
Nitrobenzene-d5 (Surr)	*81*		*54 - 134*	*12/15/21 19:33*	*12/17/21 00:40*	*5*

Client Sample ID: MW-46S-120721
Lab Sample ID: 480-193156-1

Date Collected: 12/07/21 12:05
Matrix: Water
Date Received: 12/08/21 08:00

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**17000**		1800	440	ug/L			12/10/21 11:20	440

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**8.7**		0.050	0.019	mg/L		12/08/21 12:15	12/08/21 22:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		2.0	0.35	mg/L			12/13/21 22:43	1
Ammonia	**4.3**		0.10	0.045	mg/L			12/09/21 07:47	5
Cyanide, Total	**0.0066**	**J**	0.010	0.0050	mg/L		12/10/21 11:24	12/10/21 12:02	1
Nitrate as N	ND		0.050	0.020	mg/L			12/08/21 14:21	1
Alkalinity, Total	**325**		5.0	0.79	mg/L			12/14/21 14:00	1
Ferrous Iron	**0.19**		0.10	0.075	mg/L			12/08/21 19:00	1

Client Sample ID: MW-24S-120721
Lab Sample ID: 480-193156-2

Date Collected: 12/07/21 10:30
Matrix: Water
Date Received: 12/08/21 08:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.41	ug/L			12/08/21 18:36	1
Ethylbenzene	ND		1.0	0.74	ug/L			12/08/21 18:36	1
Toluene	ND		1.0	0.51	ug/L			12/08/21 18:36	1
Xylenes, Total	ND		2.0	0.66	ug/L			12/08/21 18:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*77 - 120*		*12/08/21 18:36*	*1*
4-Bromofluorobenzene (Surr)	*105*		*73 - 120*		*12/08/21 18:36*	*1*
Dibromofluoromethane (Surr)	*114*		*75 - 123*		*12/08/21 18:36*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*12/08/21 18:36*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.49	0.035	ug/L		12/09/21 09:18	12/10/21 00:09	1
Acenaphthylene	ND		0.29	0.055	ug/L		12/09/21 09:18	12/10/21 00:09	1
Anthracene	ND		0.49	0.033	ug/L		12/09/21 09:18	12/10/21 00:09	1
Chrysene	ND		0.49	0.073	ug/L		12/09/21 09:18	12/10/21 00:09	1
Fluoranthene	ND		0.49	0.078	ug/L		12/09/21 09:18	12/10/21 00:09	1
Fluorene	ND		0.49	0.057	ug/L		12/09/21 09:18	12/10/21 00:09	1
Naphthalene	ND		0.98	0.063	ug/L		12/09/21 09:18	12/10/21 00:09	1
Phenanthrene	ND		0.20	0.061	ug/L		12/09/21 09:18	12/10/21 00:09	1
Pyrene	ND		0.49	0.075	ug/L		12/09/21 09:18	12/10/21 00:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*114*		*37 - 120*	*12/09/21 09:18*	*12/10/21 00:09*	*1*
Nitrobenzene-d5 (Surr)	*90*		*26 - 120*	*12/09/21 09:18*	*12/10/21 00:09*	*1*
p-Terphenyl-d14	*97*		*64 - 127*	*12/09/21 09:18*	*12/10/21 00:09*	*1*

Client Sample ID: MW-24S-120721
Lab Sample ID: 480-193156-2
Date Collected: 12/07/21 10:30
Matrix: Water
Date Received: 12/08/21 08:00

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND	UJ	0.050	0.016	ug/L		12/15/21 19:33	12/16/21 19:58	1
Benzo[a]pyrene	ND	UJ	0.050	0.022	ug/L		12/15/21 19:33	12/16/21 19:58	1
Benzo[b]fluoranthene	ND	UJ	0.050	0.024	ug/L		12/15/21 19:33	12/16/21 19:58	1
Benzo[g,h,i]perylene	ND	UJ	0.050	0.035	ug/L		12/15/21 19:33	12/16/21 19:58	1
Benzo[k]fluoranthene	ND	UJ	0.050	0.028	ug/L		12/15/21 19:33	12/16/21 19:58	1
Dibenz(a,h)anthracene	ND	UJ	0.050	0.020	ug/L		12/15/21 19:33	12/16/21 19:58	1
Indeno[1,2,3-cd]pyrene	ND	UJ	0.050	0.036	ug/L		12/15/21 19:33	12/16/21 19:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*151*	*S1+*	*25 - 131*	*12/15/21 19:33*	*12/16/21 19:58*	*1*
Nitrobenzene-d5 (Surr)	*99*		*54 - 134*	*12/15/21 19:33*	*12/16/21 19:58*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**680**		88	22	ug/L			12/10/21 11:39	22

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.24**		0.050	0.019	mg/L		12/08/21 12:15	12/08/21 22:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**37.2**		2.0	0.35	mg/L			12/13/21 22:57	1
Ammonia	**0.047**		0.020	0.0090	mg/L			12/09/21 06:44	1
Cyanide, Total	ND		0.010	0.0050	mg/L		12/10/21 11:24	12/10/21 12:04	1
Nitrate as N	**0.11**		0.050	0.020	mg/L			12/08/21 15:14	1
Alkalinity, Total	**383**		5.0	0.79	mg/L			12/14/21 14:08	1
Ferrous Iron	ND		0.10	0.075	mg/L			12/08/21 19:00	1

Client Sample ID: MW-28S-120721
Lab Sample ID: 480-193156-3
Date Collected: 12/07/21 08:40
Matrix: Water
Date Received: 12/08/21 08:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.41	ug/L			12/08/21 18:59	1
Ethylbenzene	ND		1.0	0.74	ug/L			12/08/21 18:59	1
Toluene	ND		1.0	0.51	ug/L			12/08/21 18:59	1
Xylenes, Total	ND		2.0	0.66	ug/L			12/08/21 18:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*77 - 120*		*12/08/21 18:59*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*12/08/21 18:59*	*1*
Dibromofluoromethane (Surr)	*110*		*75 - 123*		*12/08/21 18:59*	*1*
Toluene-d8 (Surr)	*91*		*80 - 120*		*12/08/21 18:59*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.54	0.039	ug/L		12/09/21 09:18	12/10/21 00:37	1
Acenaphthylene	ND		0.33	0.061	ug/L		12/09/21 09:18	12/10/21 00:37	1
Anthracene	ND		0.54	0.037	ug/L		12/09/21 09:18	12/10/21 00:37	1

Client Sample ID: MW-28S-120721
Lab Sample ID: 480-193156-3
Date Collected: 12/07/21 08:40
Matrix: Water
Date Received: 12/08/21 08:00

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	ND		0.54	0.080	ug/L		12/09/21 09:18	12/10/21 00:37	1
Fluoranthene	ND		0.54	0.087	ug/L		12/09/21 09:18	12/10/21 00:37	1
Fluorene	ND		0.54	0.063	ug/L		12/09/21 09:18	12/10/21 00:37	1
Naphthalene	ND		1.1	0.070	ug/L		12/09/21 09:18	12/10/21 00:37	1
Phenanthrene	ND		0.22	0.067	ug/L		12/09/21 09:18	12/10/21 00:37	1
Pyrene	ND		0.54	0.083	ug/L		12/09/21 09:18	12/10/21 00:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*114*		*37 - 120*	*12/09/21 09:18*	*12/10/21 00:37*	*1*
Nitrobenzene-d5 (Surr)	*94*		*26 - 120*	*12/09/21 09:18*	*12/10/21 00:37*	*1*
p-Terphenyl-d14	*110*		*64 - 127*	*12/09/21 09:18*	*12/10/21 00:37*	*1*

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND	UJ	0.050	0.016	ug/L		12/15/21 19:33	12/16/21 14:19	1
Benzo[a]pyrene	ND	UJ	0.050	0.022	ug/L		12/15/21 19:33	12/16/21 14:19	1
Benzo[b]fluoranthene	ND	UJ	0.050	0.024	ug/L		12/15/21 19:33	12/16/21 14:19	1
Benzo[g,h,i]perylene	ND	UJ	0.050	0.035	ug/L		12/15/21 19:33	12/16/21 14:19	1
Benzo[k]fluoranthene	ND	UJ	0.050	0.028	ug/L		12/15/21 19:33	12/16/21 14:19	1
Dibenz(a,h)anthracene	ND	UJ	0.050	0.020	ug/L		12/15/21 19:33	12/16/21 14:19	1
Indeno[1,2,3-cd]pyrene	ND	UJ	0.050	0.036	ug/L		12/15/21 19:33	12/16/21 14:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*138*	*S1+*	*25 - 131*	*12/15/21 19:33*	*12/16/21 14:19*	*1*
Nitrobenzene-d5 (Surr)	*98*		*54 - 134*	*12/15/21 19:33*	*12/16/21 14:19*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**3300**		88	22	ug/L			12/10/21 11:58	22

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**1.7**		0.050	0.019	mg/L		12/08/21 12:15	12/08/21 22:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**9.7**		2.0	0.35	mg/L			12/13/21 23:11	1
Ammonia	**0.86**		0.020	0.0090	mg/L			12/09/21 06:45	1
Cyanide, Total	ND		0.010	0.0050	mg/L		12/10/21 11:24	12/10/21 12:05	1
Nitrate as N	**0.099**		0.050	0.020	mg/L			12/08/21 15:16	1
Alkalinity, Total	**269**		5.0	0.79	mg/L			12/14/21 14:14	1
Ferrous Iron	ND		0.10	0.075	mg/L			12/08/21 19:00	1

Client Sample ID: DUP-1-120721
Lab Sample ID: 480-193156-4
Date Collected: 12/07/21 08:40
FD of MW-28S-120721-20211207
Matrix: Water
Date Received: 12/08/21 08:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.41	ug/L			12/08/21 19:22	1
Ethylbenzene	ND		1.0	0.74	ug/L			12/08/21 19:22	1

Client Sample ID: DUP-1-120721
Lab Sample ID: 480-193156-4
Date Collected: 12/07/21 08:40
Matrix: Water
Date Received: 12/08/21 08:00

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		1.0	0.51	ug/L			12/08/21 19:22	1
Xylenes, Total	ND		2.0	0.66	ug/L			12/08/21 19:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*77 - 120*		*12/08/21 19:22*	*1*
4-Bromofluorobenzene (Surr)	*104*		*73 - 120*		*12/08/21 19:22*	*1*
Dibromofluoromethane (Surr)	*110*		*75 - 123*		*12/08/21 19:22*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*12/08/21 19:22*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.48	0.034	ug/L		12/09/21 09:18	12/10/21 01:04	1
Acenaphthylene	ND		0.29	0.053	ug/L		12/09/21 09:18	12/10/21 01:04	1
Anthracene	ND		0.48	0.032	ug/L		12/09/21 09:18	12/10/21 01:04	1
Chrysene	ND		0.48	0.070	ug/L		12/09/21 09:18	12/10/21 01:04	1
Fluoranthene	ND		0.48	0.076	ug/L		12/09/21 09:18	12/10/21 01:04	1
Fluorene	ND		0.48	0.055	ug/L		12/09/21 09:18	12/10/21 01:04	1
Naphthalene	ND		0.95	0.061	ug/L		12/09/21 09:18	12/10/21 01:04	1
Phenanthrene	ND		0.19	0.059	ug/L		12/09/21 09:18	12/10/21 01:04	1
Pyrene	ND		0.48	0.072	ug/L		12/09/21 09:18	12/10/21 01:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*119*		*37 - 120*	*12/09/21 09:18*	*12/10/21 01:04*	*1*
Nitrobenzene-d5 (Surr)	*94*		*26 - 120*	*12/09/21 09:18*	*12/10/21 01:04*	*1*
p-Terphenyl-d14	*112*		*64 - 127*	*12/09/21 09:18*	*12/10/21 01:04*	*1*

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND	UJ	0.050	0.016	ug/L		12/15/21 19:33	12/16/21 14:40	1
Benzo[a]pyrene	ND	UJ	0.050	0.022	ug/L		12/15/21 19:33	12/16/21 14:40	1
Benzo[b]fluoranthene	ND	UJ	0.050	0.024	ug/L		12/15/21 19:33	12/16/21 14:40	1
Benzo[g,h,i]perylene	ND	UJ	0.050	0.035	ug/L		12/15/21 19:33	12/16/21 14:40	1
Benzo[k]fluoranthene	ND	UJ	0.050	0.028	ug/L		12/15/21 19:33	12/16/21 14:40	1
Dibenz(a,h)anthracene	ND	UJ	0.050	0.020	ug/L		12/15/21 19:33	12/16/21 14:40	1
Indeno[1,2,3-cd]pyrene	ND	UJ	0.050	0.036	ug/L		12/15/21 19:33	12/16/21 14:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*140*	*S1+*	*25 - 131*	*12/15/21 19:33*	*12/16/21 14:40*	*1*
Nitrobenzene-d5 (Surr)	*94*		*54 - 134*	*12/15/21 19:33*	*12/16/21 14:40*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0050	mg/L		12/10/21 11:24	12/10/21 12:09	1

Client Sample ID: MW-33S-120721
Lab Sample ID: 480-193156-5
Date Collected: 12/07/21 13:40
Matrix: Water
Date Received: 12/08/21 08:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.41	ug/L			12/08/21 19:45	1

Client Sample ID: MW-33S-120721
Lab Sample ID: 480-193156-5

Date Collected: 12/07/21 13:40
Matrix: Water
Date Received: 12/08/21 08:00

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		1.0	0.74	ug/L			12/08/21 19:45	1
Toluene	ND		1.0	0.51	ug/L			12/08/21 19:45	1
Xylenes, Total	ND		2.0	0.66	ug/L			12/08/21 19:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*77 - 120*		*12/08/21 19:45*	*1*
4-Bromofluorobenzene (Surr)	*104*		*73 - 120*		*12/08/21 19:45*	*1*
Dibromofluoromethane (Surr)	*110*		*75 - 123*		*12/08/21 19:45*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*12/08/21 19:45*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**0.25**	**J**	0.54	0.039	ug/L		12/09/21 09:18	12/10/21 01:31	1
Acenaphthylene	ND		0.33	0.061	ug/L		12/09/21 09:18	12/10/21 01:31	1
Anthracene	**0.095**	**J**	0.54	0.037	ug/L		12/09/21 09:18	12/10/21 01:31	1
Chrysene	ND		0.54	0.080	ug/L		12/09/21 09:18	12/10/21 01:31	1
Fluoranthene	**0.11**	**J**	0.54	0.087	ug/L		12/09/21 09:18	12/10/21 01:31	1
Fluorene	**0.11**	**J**	0.54	0.063	ug/L		12/09/21 09:18	12/10/21 01:31	1
Naphthalene	**ND**	**U**	1.1	0.070	ug/L		12/09/21 09:18	12/10/21 01:31	1
Phenanthrene	**0.27**		0.22	0.067	ug/L		12/09/21 09:18	12/10/21 01:31	1
Pyrene	**0.12**	**J**	0.54	0.083	ug/L		12/09/21 09:18	12/10/21 01:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*107*		*37 - 120*	*12/09/21 09:18*	*12/10/21 01:31*	*1*
Nitrobenzene-d5 (Surr)	*86*		*26 - 120*	*12/09/21 09:18*	*12/10/21 01:31*	*1*
p-Terphenyl-d14	*98*		*64 - 127*	*12/09/21 09:18*	*12/10/21 01:31*	*1*

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND	UJ	0.050	0.016	ug/L		12/15/21 19:33	12/16/21 15:01	1
Benzo[a]pyrene	ND	UJ	0.050	0.022	ug/L		12/15/21 19:33	12/16/21 15:01	1
Benzo[b]fluoranthene	ND	UJ	0.050	0.024	ug/L		12/15/21 19:33	12/16/21 15:01	1
Benzo[g,h,i]perylene	ND	UJ	0.050	0.035	ug/L		12/15/21 19:33	12/16/21 15:01	1
Benzo[k]fluoranthene	ND	UJ	0.050	0.028	ug/L		12/15/21 19:33	12/16/21 15:01	1
Dibenz(a,h)anthracene	ND	UJ	0.050	0.020	ug/L		12/15/21 19:33	12/16/21 15:01	1
Indeno[1,2,3-cd]pyrene	ND	UJ	0.050	0.036	ug/L		12/15/21 19:33	12/16/21 15:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*137*	*S1+*	*25 - 131*	*12/15/21 19:33*	*12/16/21 15:01*	*1*
Nitrobenzene-d5 (Surr)	*93*		*54 - 134*	*12/15/21 19:33*	*12/16/21 15:01*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**30**		4.0	1.0	ug/L			12/09/21 17:59	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**4.2**		0.050	0.019	mg/L		12/08/21 12:15	12/08/21 22:41	1

Client Sample ID: MW-33S-120721
Lab Sample ID: 480-193156-5
Date Collected: 12/07/21 13:40
Matrix: Water
Date Received: 12/08/21 08:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**34.3**		2.0	0.35	mg/L			12/13/21 23:26	1
Ammonia	**0.50**		0.020	0.0090	mg/L			12/09/21 06:50	1
Cyanide, Total	ND		0.010	0.0050	mg/L		12/10/21 11:24	12/10/21 12:11	1
Nitrate as N	**0.060**		0.050	0.020	mg/L			12/08/21 15:17	1
Alkalinity, Total	**456**		5.0	0.79	mg/L			12/14/21 14:23	1
Ferrous Iron	ND		0.10	0.075	mg/L			12/08/21 19:00	1

Client Sample ID: MW-C16-120721
Lab Sample ID: 480-193156-6
Date Collected: 12/07/21 11:10
Matrix: Water
Date Received: 12/08/21 08:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0	0.82	ug/L			12/08/21 20:08	2
Ethylbenzene	ND		2.0	1.5	ug/L			12/08/21 20:08	2
Toluene	ND		2.0	1.0	ug/L			12/08/21 20:08	2
Xylenes, Total	ND		4.0	1.3	ug/L			12/08/21 20:08	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*77 - 120*		*12/08/21 20:08*	*2*
4-Bromofluorobenzene (Surr)	*104*		*73 - 120*		*12/08/21 20:08*	*2*
Dibromofluoromethane (Surr)	*111*		*75 - 123*		*12/08/21 20:08*	*2*
Toluene-d8 (Surr)	*95*		*80 - 120*		*12/08/21 20:08*	*2*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**16**		2.6	0.18	ug/L		12/09/21 09:18	12/10/21 01:58	5
Acenaphthylene	**0.33**	**J**	1.5	0.29	ug/L		12/09/21 09:18	12/10/21 01:58	5
Anthracene	ND		2.6	0.17	ug/L		12/09/21 09:18	12/10/21 01:58	5
Chrysene	ND		2.6	0.38	ug/L		12/09/21 09:18	12/10/21 01:58	5
Fluoranthene	**0.41**	**J**	2.6	0.41	ug/L		12/09/21 09:18	12/10/21 01:58	5
Fluorene	**2.2**	**J**	2.6	0.30	ug/L		12/09/21 09:18	12/10/21 01:58	5
Naphthalene	ND		5.1	0.33	ug/L		12/09/21 09:18	12/10/21 01:58	5
Phenanthrene	**0.33**	**J**	1.0	0.32	ug/L		12/09/21 09:18	12/10/21 01:58	5
Pyrene	**0.56**	**J**	2.6	0.39	ug/L		12/09/21 09:18	12/10/21 01:58	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*111*		*37 - 120*	*12/09/21 09:18*	*12/10/21 01:58*	*5*
Nitrobenzene-d5 (Surr)	*84*		*26 - 120*	*12/09/21 09:18*	*12/10/21 01:58*	*5*
p-Terphenyl-d14	*83*		*64 - 127*	*12/09/21 09:18*	*12/10/21 01:58*	*5*

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	**0.018**	**J**	0.050	0.016	ug/L		12/15/21 19:33	12/16/21 15:22	1
Benzo[a]pyrene	ND	UJ	0.050	0.022	ug/L		12/15/21 19:33	12/16/21 15:22	1
Benzo[b]fluoranthene	ND	UJ	0.050	0.024	ug/L		12/15/21 19:33	12/16/21 15:22	1
Benzo[g,h,i]perylene	ND	UJ	0.050	0.035	ug/L		12/15/21 19:33	12/16/21 15:22	1
Benzo[k]fluoranthene	ND	UJ	0.050	0.028	ug/L		12/15/21 19:33	12/16/21 15:22	1
Dibenz(a,h)anthracene	ND	UJ	0.050	0.020	ug/L		12/15/21 19:33	12/16/21 15:22	1
Indeno[1,2,3-cd]pyrene	ND	UJ	0.050	0.036	ug/L		12/15/21 19:33	12/16/21 15:22	1

Client Sample ID: MW-C16-120721
Lab Sample ID: 480-193156-6
Date Collected: 12/07/21 11:10
Matrix: Water
Date Received: 12/08/21 08:00

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*130*		*25 - 131*	*12/15/21 19:33*	*12/16/21 15:22*	*1*
Nitrobenzene-d5 (Surr)	*90*		*54 - 134*	*12/15/21 19:33*	*12/16/21 15:22*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**26**		4.0	1.0	ug/L			12/10/21 12:17	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**23.6**		0.050	0.019	mg/L		12/08/21 12:15	12/08/21 22:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**1200**		40.0	7.0	mg/L			12/13/21 23:40	20
Ammonia	**0.47**		0.020	0.0090	mg/L			12/09/21 06:53	1
Cyanide, Total	**0.011**		0.010	0.0050	mg/L		12/10/21 11:24	12/10/21 12:12	1
Nitrate as N	**0.023**	**J**	0.050	0.020	mg/L			12/08/21 14:28	1
Alkalinity, Total	**532**		5.0	0.79	mg/L			12/14/21 14:31	1
Ferrous Iron	**0.15**		0.10	0.075	mg/L			12/08/21 19:00	1

Client Sample ID: MW-C11-120721
Lab Sample ID: 480-193156-7
Date Collected: 12/07/21 12:47
Matrix: Water
Date Received: 12/08/21 08:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0	0.82	ug/L			12/08/21 20:31	2
Ethylbenzene	ND		2.0	1.5	ug/L			12/08/21 20:31	2
Toluene	ND		2.0	1.0	ug/L			12/08/21 20:31	2
Xylenes, Total	ND		4.0	1.3	ug/L			12/08/21 20:31	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*77 - 120*		*12/08/21 20:31*	*2*
4-Bromofluorobenzene (Surr)	*103*		*73 - 120*		*12/08/21 20:31*	*2*
Dibromofluoromethane (Surr)	*112*		*75 - 123*		*12/08/21 20:31*	*2*
Toluene-d8 (Surr)	*97*		*80 - 120*		*12/08/21 20:31*	*2*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**1.2**		0.49	0.035	ug/L		12/09/21 09:18	12/09/21 23:14	1
Acenaphthylene	**0.15**	**J**	0.29	0.055	ug/L		12/09/21 09:18	12/09/21 23:14	1
Anthracene	ND		0.49	0.033	ug/L		12/09/21 09:18	12/09/21 23:14	1
Chrysene	ND		0.49	0.073	ug/L		12/09/21 09:18	12/09/21 23:14	1
Fluoranthene	ND		0.49	0.078	ug/L		12/09/21 09:18	12/09/21 23:14	1
Fluorene	ND		0.49	0.057	ug/L		12/09/21 09:18	12/09/21 23:14	1
Naphthalene	**ND**	**U**	0.98	0.063	ug/L		12/09/21 09:18	12/09/21 23:14	1
Phenanthrene	ND		0.20	0.061	ug/L		12/09/21 09:18	12/09/21 23:14	1
Pyrene	ND		0.49	0.075	ug/L		12/09/21 09:18	12/09/21 23:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*96*		*37 - 120*	*12/09/21 09:18*	*12/09/21 23:14*	*1*
Nitrobenzene-d5 (Surr)	*80*		*26 - 120*	*12/09/21 09:18*	*12/09/21 23:14*	*1*

Client Sample ID: MW-C11-120721
Lab Sample ID: 480-193156-7
Date Collected: 12/07/21 12:47
Matrix: Water
Date Received: 12/08/21 08:00

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
p-Terphenyl-d14	*86*		*64 - 127*	*12/09/21 09:18*	*12/09/21 23:14*	*1*

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND	UJ	0.050	0.016	ug/L		12/15/21 19:33	12/16/21 11:30	1
Benzo[a]pyrene	ND	UJ	0.050	0.022	ug/L		12/15/21 19:33	12/16/21 11:30	1
Benzo[b]fluoranthene	ND	UJ	0.050	0.024	ug/L		12/15/21 19:33	12/16/21 11:30	1
Benzo[g,h,i]perylene	ND	UJ	0.050	0.035	ug/L		12/15/21 19:33	12/16/21 11:30	1
Benzo[k]fluoranthene	ND	UJ	0.050	0.028	ug/L		12/15/21 19:33	12/16/21 11:30	1
Dibenz(a,h)anthracene	ND	UJ	0.050	0.020	ug/L		12/15/21 19:33	12/16/21 11:30	1
Indeno[1,2,3-cd]pyrene	ND	UJ	0.050	0.036	ug/L		12/15/21 19:33	12/16/21 11:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	*133*	*S1+*	*25 - 131*	*12/15/21 19:33*	*12/16/21 11:30*	*1*
Nitrobenzene-d5 (Surr)	*96*		*54 - 134*	*12/15/21 19:33*	*12/16/21 11:30*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**470**		88	22	ug/L			12/09/21 18:36	22

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**24.4**		0.050	0.019	mg/L		12/08/21 12:15	12/08/21 22:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**2910**		40.0	7.0	mg/L			12/14/21 01:05	20
Ammonia	**7.3**		0.10	0.045	mg/L			12/09/21 07:48	5
Cyanide, Total	**0.024**		0.010	0.0050	mg/L		12/10/21 11:24	12/10/21 11:58	1
Nitrate as N	**0.025**	**J**	0.050	0.020	mg/L			12/08/21 14:29	1
Alkalinity, Total	**840**		5.0	0.79	mg/L			12/14/21 14:44	1
Ferrous Iron	**0.088**	**J**	0.10	0.075	mg/L			12/08/21 19:00	1

Client Sample ID: MW-C12-120721
Lab Sample ID: 480-193156-8
Date Collected: 12/07/21 15:05
Matrix: Water
Date Received: 12/08/21 08:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**3.8**		1.0	0.41	ug/L			12/08/21 20:55	1
Ethylbenzene	**0.91**	**J**	1.0	0.74	ug/L			12/08/21 20:55	1
Toluene	ND		1.0	0.51	ug/L			12/08/21 20:55	1
Xylenes, Total	ND		2.0	0.66	ug/L			12/08/21 20:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*108*		*77 - 120*		*12/08/21 20:55*	*1*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*		*12/08/21 20:55*	*1*
Dibromofluoromethane (Surr)	*112*		*75 - 123*		*12/08/21 20:55*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*12/08/21 20:55*	*1*

Client Sample ID: MW-C12-120721
Lab Sample ID: 480-193156-8

Date Collected: 12/07/21 15:05
Matrix: Water

Date Received: 12/08/21 08:00

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**100**		10	0.74	ug/L		12/09/21 09:18	12/10/21 02:25	20
Acenaphthylene	**1.2**	**J**	6.2	1.2	ug/L		12/09/21 09:18	12/10/21 02:25	20
Anthracene	ND		10	0.70	ug/L		12/09/21 09:18	12/10/21 02:25	20
Chrysene	ND		10	1.5	ug/L		12/09/21 09:18	12/10/21 02:25	20
Fluoranthene	ND		10	1.6	ug/L		12/09/21 09:18	12/10/21 02:25	20
Fluorene	**13**		10	1.2	ug/L		12/09/21 09:18	12/10/21 02:25	20
Naphthalene	ND		21	1.3	ug/L		12/09/21 09:18	12/10/21 02:25	20
Phenanthrene	ND		4.1	1.3	ug/L		12/09/21 09:18	12/10/21 02:25	20
Pyrene	ND		10	1.6	ug/L		12/09/21 09:18	12/10/21 02:25	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*115*		*37 - 120*	*12/09/21 09:18*	*12/10/21 02:25*	*20*
Nitrobenzene-d5 (Surr)	*76*		*26 - 120*	*12/09/21 09:18*	*12/10/21 02:25*	*20*
p-Terphenyl-d14	*100*		*64 - 127*	*12/09/21 09:18*	*12/10/21 02:25*	*20*

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND	UJ	0.050	0.016	ug/L		12/15/21 19:33	12/16/21 15:44	1
Benzo[a]pyrene	ND	UJ	0.050	0.022	ug/L		12/15/21 19:33	12/16/21 15:44	1
Benzo[b]fluoranthene	ND	UJ	0.050	0.024	ug/L		12/15/21 19:33	12/16/21 15:44	1
Benzo[g,h,i]perylene	ND	UJ	0.050	0.035	ug/L		12/15/21 19:33	12/16/21 15:44	1
Benzo[k]fluoranthene	ND	UJ	0.050	0.028	ug/L		12/15/21 19:33	12/16/21 15:44	1
Dibenz(a,h)anthracene	ND	UJ	0.050	0.020	ug/L		12/15/21 19:33	12/16/21 15:44	1
Indeno[1,2,3-cd]pyrene	ND	UJ	0.050	0.036	ug/L		12/15/21 19:33	12/16/21 15:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*154*	*S1+*	*25 - 131*	*12/15/21 19:33*	*12/16/21 15:44*	*1*
Nitrobenzene-d5 (Surr)	*100*		*54 - 134*	*12/15/21 19:33*	*12/16/21 15:44*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**740**		180	44	ug/L			12/09/21 18:55	44

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**1.6**		0.050	0.019	mg/L		12/08/21 12:15	12/08/21 22:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**171**		10.0	1.7	mg/L			12/14/21 01:19	5
Ammonia	**1.4**		0.020	0.0090	mg/L			12/09/21 06:55	1
Cyanide, Total	**0.014**		0.010	0.0050	mg/L		12/08/21 11:36	12/08/21 13:45	1
Nitrate as N	**0.078**		0.050	0.020	mg/L			12/08/21 14:33	1
Alkalinity, Total	**481**		5.0	0.79	mg/L			12/14/21 14:52	1
Ferrous Iron	ND		0.10	0.075	mg/L			12/08/21 19:00	1

Client Sample ID: TRIP BLANK-120721
Lab Sample ID: 480-193156-9

Date Collected: 12/07/21 00:00
Matrix: Water
Date Received: 12/08/21 08:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.41	ug/L			12/08/21 21:18	1
Ethylbenzene	ND		1.0	0.74	ug/L			12/08/21 21:18	1
Toluene	ND		1.0	0.51	ug/L			12/08/21 21:18	1
Xylenes, Total	ND		2.0	0.66	ug/L			12/08/21 21:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*77 - 120*		*12/08/21 21:18*	*1*
4-Bromofluorobenzene (Surr)	*104*		*73 - 120*		*12/08/21 21:18*	*1*
Dibromofluoromethane (Surr)	*112*		*75 - 123*		*12/08/21 21:18*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*12/08/21 21:18*	*1*

Client Sample ID: MW-40-120821
Lab Sample ID: 480-193210-1

Date Collected: 12/08/21 12:55
Matrix: Water

Date Received: 12/09/21 08:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.41	ug/L			12/10/21 03:48	1
Ethylbenzene	ND		1.0	0.74	ug/L			12/10/21 03:48	1
Toluene	ND		1.0	0.51	ug/L			12/10/21 03:48	1
Xylenes, Total	ND		2.0	0.66	ug/L			12/10/21 03:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*77 - 120*		*12/10/21 03:48*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*12/10/21 03:48*	*1*
Dibromofluoromethane (Surr)	*115*		*75 - 123*		*12/10/21 03:48*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*12/10/21 03:48*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.50	0.036	ug/L		12/10/21 09:27	12/13/21 15:16	1
Acenaphthylene	ND		0.30	0.056	ug/L		12/10/21 09:27	12/13/21 15:16	1
Anthracene	ND		0.50	0.034	ug/L		12/10/21 09:27	12/13/21 15:16	1
Chrysene	ND		0.50	0.074	ug/L		12/10/21 09:27	12/13/21 15:16	1
Fluoranthene	ND		0.50	0.080	ug/L		12/10/21 09:27	12/13/21 15:16	1
Fluorene	ND		0.50	0.058	ug/L		12/10/21 09:27	12/13/21 15:16	1
Naphthalene	ND		1.0	0.064	ug/L		12/10/21 09:27	12/13/21 15:16	1
Phenanthrene	ND		0.20	0.062	ug/L		12/10/21 09:27	12/13/21 15:16	1
Pyrene	ND		0.50	0.076	ug/L		12/10/21 09:27	12/13/21 15:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*111*		*37 - 120*	*12/10/21 09:27*	*12/13/21 15:16*	*1*
Nitrobenzene-d5 (Surr)	*87*		*26 - 120*	*12/10/21 09:27*	*12/13/21 15:16*	*1*
p-Terphenyl-d14	*104*		*64 - 127*	*12/10/21 09:27*	*12/13/21 15:16*	*1*

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	**0.037**	**J**	0.050	0.016	ug/L		12/15/21 19:33	12/16/21 16:26	1
Benzo[a]pyrene	ND		0.050	0.022	ug/L		12/15/21 19:33	12/16/21 16:26	1
Benzo[b]fluoranthene	ND		0.050	0.024	ug/L		12/15/21 19:33	12/16/21 16:26	1
Benzo[g,h,i]perylene	ND		0.050	0.035	ug/L		12/15/21 19:33	12/16/21 16:26	1
Benzo[k]fluoranthene	ND		0.050	0.028	ug/L		12/15/21 19:33	12/16/21 16:26	1
Dibenz(a,h)anthracene	ND	UJ	0.050	0.020	ug/L		12/15/21 19:33	12/16/21 16:26	1
Indeno[1,2,3-cd]pyrene	ND	UJ	0.050	0.036	ug/L		12/15/21 19:33	12/16/21 16:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*133*	*S1+*	*25 - 131*	*12/15/21 19:33*	*12/16/21 16:26*	*1*
Nitrobenzene-d5 (Surr)	*91*		*54 - 134*	*12/15/21 19:33*	*12/16/21 16:26*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**150**		4.0	1.0	ug/L			12/09/21 15:28	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**2.4**		0.050	0.019	mg/L		12/10/21 08:20	12/10/21 19:39	1

Client Sample ID: MW-40-120821
Lab Sample ID: 480-193210-1
Date Collected: 12/08/21 12:55
Matrix: Water
Date Received: 12/09/21 08:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**6.3**		2.0	0.35	mg/L			12/09/21 19:11	1
Ammonia	**0.18**		0.020	0.0090	mg/L			12/10/21 09:30	1
Cyanide, Total	ND		0.010	0.0050	mg/L		12/10/21 11:24	12/10/21 12:14	1
Nitrate as N	ND		0.050	0.020	mg/L			12/09/21 13:58	1
Alkalinity, Total	**170**		5.0	0.79	mg/L			12/14/21 14:59	1
Ferrous Iron	ND	UJ	0.10	0.075	mg/L			12/17/21 15:00	1

Client Sample ID: MW-31S 120821
Lab Sample ID: 480-193210-2
Date Collected: 12/08/21 12:12
Matrix: Water
Date Received: 12/09/21 08:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.41	ug/L			12/10/21 04:11	1
Ethylbenzene	ND		1.0	0.74	ug/L			12/10/21 04:11	1
Toluene	ND		1.0	0.51	ug/L			12/10/21 04:11	1
Xylenes, Total	ND		2.0	0.66	ug/L			12/10/21 04:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*77 - 120*		*12/10/21 04:11*	*1*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*		*12/10/21 04:11*	*1*
Dibromofluoromethane (Surr)	*113*		*75 - 123*		*12/10/21 04:11*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*12/10/21 04:11*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.51	0.037	ug/L		12/10/21 09:27	12/13/21 15:43	1
Acenaphthylene	ND		0.31	0.057	ug/L		12/10/21 09:27	12/13/21 15:43	1
Anthracene	ND		0.51	0.035	ug/L		12/10/21 09:27	12/13/21 15:43	1
Chrysene	ND		0.51	0.076	ug/L		12/10/21 09:27	12/13/21 15:43	1
Fluoranthene	ND		0.51	0.082	ug/L		12/10/21 09:27	12/13/21 15:43	1
Fluorene	ND		0.51	0.059	ug/L		12/10/21 09:27	12/13/21 15:43	1
Naphthalene	ND		1.0	0.065	ug/L		12/10/21 09:27	12/13/21 15:43	1
Phenanthrene	ND		0.20	0.063	ug/L		12/10/21 09:27	12/13/21 15:43	1
Pyrene	ND		0.51	0.078	ug/L		12/10/21 09:27	12/13/21 15:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*101*		*37 - 120*	*12/10/21 09:27*	*12/13/21 15:43*	*1*
Nitrobenzene-d5 (Surr)	*83*		*26 - 120*	*12/10/21 09:27*	*12/13/21 15:43*	*1*
p-Terphenyl-d14	*97*		*64 - 127*	*12/10/21 09:27*	*12/13/21 15:43*	*1*

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.050	0.016	ug/L		12/15/21 19:33	12/16/21 16:47	1
Benzo[a]pyrene	ND		0.050	0.022	ug/L		12/15/21 19:33	12/16/21 16:47	1
Benzo[b]fluoranthene	ND		0.050	0.024	ug/L		12/15/21 19:33	12/16/21 16:47	1
Benzo[g,h,i]perylene	ND		0.050	0.035	ug/L		12/15/21 19:33	12/16/21 16:47	1
Benzo[k]fluoranthene	ND		0.050	0.028	ug/L		12/15/21 19:33	12/16/21 16:47	1
Dibenz(a,h)anthracene	ND	UJ	0.050	0.020	ug/L		12/15/21 19:33	12/16/21 16:47	1
Indeno[1,2,3-cd]pyrene	ND	UJ	0.050	0.036	ug/L		12/15/21 19:33	12/16/21 16:47	1

Client Sample ID: MW-31S 120821
Lab Sample ID: 480-193210-2

Date Collected: 12/08/21 12:12
Matrix: Water
Date Received: 12/09/21 08:00

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*138*	*S1+*	*25 - 131*	*12/15/21 19:33*	*12/16/21 16:47*	*1*
Nitrobenzene-d5 (Surr)	*97*		*54 - 134*	*12/15/21 19:33*	*12/16/21 16:47*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**320**		4.0	1.0	ug/L			12/09/21 15:47	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.49**		0.050	0.019	mg/L		12/10/21 08:20	12/10/21 19:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**10.3**		4.0	0.70	mg/L			12/09/21 19:30	2
Ammonia	**0.078**		0.020	0.0090	mg/L			12/10/21 09:31	1
Cyanide, Total	**0.0050**	**J**	0.010	0.0050	mg/L		12/10/21 11:24	12/10/21 12:15	1
Nitrate as N	ND		0.050	0.020	mg/L			12/09/21 13:59	1
Alkalinity, Total	**293**		5.0	0.79	mg/L			12/14/21 15:18	1
Ferrous Iron	ND	UJ	0.10	0.075	mg/L			12/17/21 15:00	1

Client Sample ID: MW-48S 120821
Lab Sample ID: 480-193210-3

Date Collected: 12/08/21 10:05
Matrix: Water
Date Received: 12/09/21 08:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**56**		1.0	0.41	ug/L			12/10/21 04:34	1
Ethylbenzene	**25**		1.0	0.74	ug/L			12/10/21 04:34	1
Toluene	ND		1.0	0.51	ug/L			12/10/21 04:34	1
Xylenes, Total	**19**		2.0	0.66	ug/L			12/10/21 04:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*77 - 120*		*12/10/21 04:34*	*1*
4-Bromofluorobenzene (Surr)	*109*		*73 - 120*		*12/10/21 04:34*	*1*
Dibromofluoromethane (Surr)	*104*		*75 - 123*		*12/10/21 04:34*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*12/10/21 04:34*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**43**		5.1	0.37	ug/L		12/10/21 09:27	12/13/21 16:11	10
Acenaphthylene	**1.3**	**J**	3.1	0.57	ug/L		12/10/21 09:27	12/13/21 16:11	10
Anthracene	**1.5**	**J**	5.1	0.35	ug/L		12/10/21 09:27	12/13/21 16:11	10
Chrysene	ND		5.1	0.76	ug/L		12/10/21 09:27	12/13/21 16:11	10
Fluoranthene	ND		5.1	0.82	ug/L		12/10/21 09:27	12/13/21 16:11	10
Fluorene	**4.7**	**J**	5.1	0.59	ug/L		12/10/21 09:27	12/13/21 16:11	10
Naphthalene	**140**		10	0.65	ug/L		12/10/21 09:27	12/13/21 16:11	10
Phenanthrene	**5.4**		2.0	0.63	ug/L		12/10/21 09:27	12/13/21 16:11	10
Pyrene	**0.83**	**J**	5.1	0.78	ug/L		12/10/21 09:27	12/13/21 16:11	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*99*		*37 - 120*	*12/10/21 09:27*	*12/13/21 16:11*	*10*
Nitrobenzene-d5 (Surr)	*78*		*26 - 120*	*12/10/21 09:27*	*12/13/21 16:11*	*10*

Client Sample ID: MW-48S 120821
Lab Sample ID: 480-193210-3
Date Collected: 12/08/21 10:05
Matrix: Water
Date Received: 12/09/21 08:00

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
p-Terphenyl-d14	*83*		*64 - 127*	*12/10/21 09:27*	*12/13/21 16:11*	*10*

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	**0.035**	**J**	0.050	0.016	ug/L		12/15/21 19:33	12/16/21 17:08	1
Benzo[a]pyrene	ND		0.050	0.022	ug/L		12/15/21 19:33	12/16/21 17:08	1
Benzo[b]fluoranthene	ND		0.050	0.024	ug/L		12/15/21 19:33	12/16/21 17:08	1
Benzo[g,h,i]perylene	ND		0.050	0.035	ug/L		12/15/21 19:33	12/16/21 17:08	1
Benzo[k]fluoranthene	ND		0.050	0.028	ug/L		12/15/21 19:33	12/16/21 17:08	1
Dibenz(a,h)anthracene	ND	UJ	0.050	0.020	ug/L		12/15/21 19:33	12/16/21 17:08	1
Indeno[1,2,3-cd]pyrene	ND	UJ	0.050	0.036	ug/L		12/15/21 19:33	12/16/21 17:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	*144*	*S1+*	*25 - 131*	*12/15/21 19:33*	*12/16/21 17:08*	*1*
Nitrobenzene-d5 (Surr)	*92*		*54 - 134*	*12/15/21 19:33*	*12/16/21 17:08*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**1900**		88	22	ug/L			12/09/21 16:05	22

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**4.5**		0.050	0.019	mg/L		12/10/21 08:20	12/10/21 19:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		20.0	3.5	mg/L			12/09/21 19:50	10
Ammonia	**1.9**		0.020	0.0090	mg/L			12/10/21 09:32	1
Cyanide, Total	**0.0054**	**J**	0.010	0.0050	mg/L		12/10/21 11:24	12/10/21 12:17	1
Nitrate as N	ND		0.050	0.020	mg/L			12/09/21 14:04	1
Alkalinity, Total	**396**		5.0	0.79	mg/L			12/14/21 15:25	1
Ferrous Iron	ND	UJ	0.10	0.075	mg/L			12/17/21 15:00	1

Client Sample ID: MW-25S 120821
Lab Sample ID: 480-193210-4
Date Collected: 12/08/21 08:00
Matrix: Water
Date Received: 12/09/21 08:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0	0.82	ug/L			12/10/21 04:57	2
Ethylbenzene	ND		2.0	1.5	ug/L			12/10/21 04:57	2
Toluene	ND		2.0	1.0	ug/L			12/10/21 04:57	2
Xylenes, Total	ND		4.0	1.3	ug/L			12/10/21 04:57	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*96*		*77 - 120*		*12/10/21 04:57*	*2*
4-Bromofluorobenzene (Surr)	*101*		*73 - 120*		*12/10/21 04:57*	*2*
Dibromofluoromethane (Surr)	*104*		*75 - 123*		*12/10/21 04:57*	*2*
Toluene-d8 (Surr)	*96*		*80 - 120*		*12/10/21 04:57*	*2*

Client Sample ID: MW-25S 120821
Lab Sample ID: 480-193210-4

Date Collected: 12/08/21 08:00
Matrix: Water
Date Received: 12/09/21 08:00

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.51	0.036	ug/L		12/10/21 09:27	12/13/21 16:39	1
Acenaphthylene	ND		0.30	0.057	ug/L		12/10/21 09:27	12/13/21 16:39	1
Anthracene	ND		0.51	0.034	ug/L		12/10/21 09:27	12/13/21 16:39	1
Chrysene	ND		0.51	0.075	ug/L		12/10/21 09:27	12/13/21 16:39	1
Fluoranthene	ND		0.51	0.081	ug/L		12/10/21 09:27	12/13/21 16:39	1
Fluorene	ND		0.51	0.059	ug/L		12/10/21 09:27	12/13/21 16:39	1
Naphthalene	ND		1.0	0.065	ug/L		12/10/21 09:27	12/13/21 16:39	1
Phenanthrene	ND		0.20	0.063	ug/L		12/10/21 09:27	12/13/21 16:39	1
Pyrene	ND		0.51	0.077	ug/L		12/10/21 09:27	12/13/21 16:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*103*		*37 - 120*	*12/10/21 09:27*	*12/13/21 16:39*	*1*
Nitrobenzene-d5 (Surr)	*79*		*26 - 120*	*12/10/21 09:27*	*12/13/21 16:39*	*1*
p-Terphenyl-d14	*76*		*64 - 127*	*12/10/21 09:27*	*12/13/21 16:39*	*1*

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.050	0.016	ug/L		12/15/21 19:33	12/16/21 17:29	1
Benzo[a]pyrene	ND		0.050	0.022	ug/L		12/15/21 19:33	12/16/21 17:29	1
Benzo[b]fluoranthene	ND		0.050	0.024	ug/L		12/15/21 19:33	12/16/21 17:29	1
Benzo[g,h,i]perylene	ND		0.050	0.035	ug/L		12/15/21 19:33	12/16/21 17:29	1
Benzo[k]fluoranthene	ND		0.050	0.028	ug/L		12/15/21 19:33	12/16/21 17:29	1
Dibenz(a,h)anthracene	ND	UJ	0.050	0.020	ug/L		12/15/21 19:33	12/16/21 17:29	1
Indeno[1,2,3-cd]pyrene	ND	UJ	0.050	0.036	ug/L		12/15/21 19:33	12/16/21 17:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*153*	*S1+*	*25 - 131*	*12/15/21 19:33*	*12/16/21 17:29*	*1*
Nitrobenzene-d5 (Surr)	*92*		*54 - 134*	*12/15/21 19:33*	*12/16/21 17:29*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		4.0	1.0	ug/L			12/09/21 16:24	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.25**		0.050	0.019	mg/L		12/10/21 08:20	12/10/21 19:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**184**		20.0	3.5	mg/L			12/09/21 20:09	10
Ammonia	**0.067**		0.020	0.0090	mg/L			12/10/21 09:33	1
Cyanide, Total	**0.022**		0.010	0.0050	mg/L		12/10/21 11:24	12/10/21 12:18	1
Nitrate as N	**0.22**		0.050	0.020	mg/L			12/09/21 17:02	1
Alkalinity, Total	**568**		5.0	0.79	mg/L			12/14/21 15:34	1
Ferrous Iron	ND	UJ	0.10	0.075	mg/L			12/17/21 15:00	1

Client Sample ID: MW-22S 120821
Lab Sample ID: 480-193210-5

Date Collected: 12/08/21 08:45
Matrix: Water

Date Received: 12/09/21 08:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.41	ug/L			12/10/21 05:20	1
Ethylbenzene	ND		1.0	0.74	ug/L			12/10/21 05:20	1
Toluene	ND		1.0	0.51	ug/L			12/10/21 05:20	1
Xylenes, Total	ND		2.0	0.66	ug/L			12/10/21 05:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*77 - 120*		*12/10/21 05:20*	*1*
4-Bromofluorobenzene (Surr)	*101*		*73 - 120*		*12/10/21 05:20*	*1*
Dibromofluoromethane (Surr)	*102*		*75 - 123*		*12/10/21 05:20*	*1*
Toluene-d8 (Surr)	*93*		*80 - 120*		*12/10/21 05:20*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.52	0.037	ug/L		12/10/21 09:27	12/13/21 17:06	1
Acenaphthylene	ND		0.31	0.058	ug/L		12/10/21 09:27	12/13/21 17:06	1
Anthracene	ND		0.52	0.035	ug/L		12/10/21 09:27	12/13/21 17:06	1
Chrysene	ND		0.52	0.076	ug/L		12/10/21 09:27	12/13/21 17:06	1
Fluoranthene	ND		0.52	0.082	ug/L		12/10/21 09:27	12/13/21 17:06	1
Fluorene	ND		0.52	0.060	ug/L		12/10/21 09:27	12/13/21 17:06	1
Naphthalene	ND		1.0	0.066	ug/L		12/10/21 09:27	12/13/21 17:06	1
Phenanthrene	ND		0.21	0.064	ug/L		12/10/21 09:27	12/13/21 17:06	1
Pyrene	**0.10**	**J**	0.52	0.078	ug/L		12/10/21 09:27	12/13/21 17:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*109*		*37 - 120*	*12/10/21 09:27*	*12/13/21 17:06*	*1*
Nitrobenzene-d5 (Surr)	*89*		*26 - 120*	*12/10/21 09:27*	*12/13/21 17:06*	*1*
p-Terphenyl-d14	*86*		*64 - 127*	*12/10/21 09:27*	*12/13/21 17:06*	*1*

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.050	0.016	ug/L		12/15/21 19:33	12/16/21 17:51	1
Benzo[a]pyrene	ND		0.050	0.022	ug/L		12/15/21 19:33	12/16/21 17:51	1
Benzo[b]fluoranthene	ND		0.050	0.024	ug/L		12/15/21 19:33	12/16/21 17:51	1
Benzo[g,h,i]perylene	ND		0.050	0.035	ug/L		12/15/21 19:33	12/16/21 17:51	1
Benzo[k]fluoranthene	ND		0.050	0.028	ug/L		12/15/21 19:33	12/16/21 17:51	1
Dibenz(a,h)anthracene	ND	UJ	0.050	0.020	ug/L		12/15/21 19:33	12/16/21 17:51	1
Indeno[1,2,3-cd]pyrene	ND	UJ	0.050	0.036	ug/L		12/15/21 19:33	12/16/21 17:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*132*	*S1+*	*25 - 131*	*12/15/21 19:33*	*12/16/21 17:51*	*1*
Nitrobenzene-d5 (Surr)	*90*		*54 - 134*	*12/15/21 19:33*	*12/16/21 17:51*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**6.1**		4.0	1.0	ug/L			12/09/21 16:43	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.26**		0.050	0.019	mg/L		12/10/21 08:20	12/10/21 19:54	1

Client Sample ID: MW-22S 120821
Lab Sample ID: 480-193210-5

Date Collected: 12/08/21 08:45
Matrix: Water
Date Received: 12/09/21 08:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**40.7**		4.0	0.70	mg/L			12/09/21 20:29	2
Ammonia	ND		0.020	0.0090	mg/L			12/10/21 09:34	1
Cyanide, Total	**0.38**		0.010	0.0050	mg/L		12/10/21 11:24	12/10/21 12:19	1
Nitrate as N	**6.7**		0.050	0.020	mg/L			12/09/21 17:03	1
Alkalinity, Total	**269**		5.0	0.79	mg/L			12/14/21 15:41	1
Ferrous Iron	ND	UJ	0.10	0.075	mg/L			12/17/21 15:00	1

Client Sample ID: EQUIP.BLANK-120821
Lab Sample ID: 480-193210-6

Date Collected: 12/08/21 14:15
Matrix: Water
Date Received: 12/09/21 08:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.41	ug/L			12/10/21 05:43	1
Ethylbenzene	ND		1.0	0.74	ug/L			12/10/21 05:43	1
Toluene	ND		1.0	0.51	ug/L			12/10/21 05:43	1
Xylenes, Total	ND		2.0	0.66	ug/L			12/10/21 05:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*77 - 120*		*12/10/21 05:43*	*1*
4-Bromofluorobenzene (Surr)	*105*		*73 - 120*		*12/10/21 05:43*	*1*
Dibromofluoromethane (Surr)	*108*		*75 - 123*		*12/10/21 05:43*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*12/10/21 05:43*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.50	0.036	ug/L		12/10/21 09:27	12/13/21 17:34	1
Acenaphthylene	ND		0.30	0.056	ug/L		12/10/21 09:27	12/13/21 17:34	1
Anthracene	ND		0.50	0.034	ug/L		12/10/21 09:27	12/13/21 17:34	1
Chrysene	ND		0.50	0.074	ug/L		12/10/21 09:27	12/13/21 17:34	1
Fluoranthene	ND		0.50	0.080	ug/L		12/10/21 09:27	12/13/21 17:34	1
Fluorene	ND		0.50	0.058	ug/L		12/10/21 09:27	12/13/21 17:34	1
Naphthalene	ND		1.0	0.064	ug/L		12/10/21 09:27	12/13/21 17:34	1
Phenanthrene	ND		0.20	0.062	ug/L		12/10/21 09:27	12/13/21 17:34	1
Pyrene	ND		0.50	0.076	ug/L		12/10/21 09:27	12/13/21 17:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*103*		*37 - 120*	*12/10/21 09:27*	*12/13/21 17:34*	*1*
Nitrobenzene-d5 (Surr)	*81*		*26 - 120*	*12/10/21 09:27*	*12/13/21 17:34*	*1*
p-Terphenyl-d14	*93*		*64 - 127*	*12/10/21 09:27*	*12/13/21 17:34*	*1*

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.050	0.016	ug/L		12/15/21 19:33	12/16/21 18:12	1
Benzo[a]pyrene	ND		0.050	0.022	ug/L		12/15/21 19:33	12/16/21 18:12	1
Benzo[b]fluoranthene	ND		0.050	0.024	ug/L		12/15/21 19:33	12/16/21 18:12	1
Benzo[g,h,i]perylene	ND		0.050	0.035	ug/L		12/15/21 19:33	12/16/21 18:12	1
Benzo[k]fluoranthene	ND		0.050	0.028	ug/L		12/15/21 19:33	12/16/21 18:12	1
Dibenz(a,h)anthracene	ND	UJ	0.050	0.020	ug/L		12/15/21 19:33	12/16/21 18:12	1
Indeno[1,2,3-cd]pyrene	ND	UJ	0.050	0.036	ug/L		12/15/21 19:33	12/16/21 18:12	1

Client Sample ID: EQUIP.BLANK-120821
Lab Sample ID: 480-193210-6

Date Collected: 12/08/21 14:15
Matrix: Water
Date Received: 12/09/21 08:00

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*146*	*S1+*	*25 - 131*	*12/15/21 19:33*	*12/16/21 18:12*	*1*
Nitrobenzene-d5 (Surr)	*90*		*54 - 134*	*12/15/21 19:33*	*12/16/21 18:12*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0050	mg/L		12/10/21 11:24	12/10/21 12:21	1

Client Sample ID: TRIP BLANK-120821
Lab Sample ID: 480-193210-7

Date Collected: 12/08/21 00:00
Matrix: Water
Date Received: 12/09/21 08:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.41	ug/L			12/10/21 06:06	1
Ethylbenzene	ND		1.0	0.74	ug/L			12/10/21 06:06	1
Toluene	ND		1.0	0.51	ug/L			12/10/21 06:06	1
Xylenes, Total	ND		2.0	0.66	ug/L			12/10/21 06:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*77 - 120*		*12/10/21 06:06*	*1*
4-Bromofluorobenzene (Surr)	*101*		*73 - 120*		*12/10/21 06:06*	*1*
Dibromofluoromethane (Surr)	*107*		*75 - 123*		*12/10/21 06:06*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*12/10/21 06:06*	*1*

Client Sample ID: MW-45S-120921
Lab Sample ID: 480-193309-1

Date Collected: 12/09/21 08:00
Matrix: Water

Date Received: 12/10/21 10:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.41	ug/L			12/11/21 18:13	1
Ethylbenzene	ND		1.0	0.74	ug/L			12/11/21 18:13	1
Toluene	ND		1.0	0.51	ug/L			12/11/21 18:13	1
Xylenes, Total	ND		2.0	0.66	ug/L			12/11/21 18:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*77 - 120*		*12/11/21 18:13*	*1*
4-Bromofluorobenzene (Surr)	*108*		*73 - 120*		*12/11/21 18:13*	*1*
Dibromofluoromethane (Surr)	*97*		*75 - 123*		*12/11/21 18:13*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*12/11/21 18:13*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**0.10**	**J**	0.50	0.036	ug/L		12/10/21 14:09	12/13/21 22:12	1
Acenaphthylene	ND		0.30	0.056	ug/L		12/10/21 14:09	12/13/21 22:12	1
Anthracene	**0.067**	**J**	0.50	0.034	ug/L		12/10/21 14:09	12/13/21 22:12	1
Chrysene	ND		0.50	0.074	ug/L		12/10/21 14:09	12/13/21 22:12	1
Fluoranthene	**0.080**	**J**	0.50	0.080	ug/L		12/10/21 14:09	12/13/21 22:12	1
Fluorene	**0.058**	**J**	0.50	0.058	ug/L		12/10/21 14:09	12/13/21 22:12	1
Naphthalene	ND		1.0	0.064	ug/L		12/10/21 14:09	12/13/21 22:12	1
Phenanthrene	**0.24**		0.20	0.062	ug/L		12/10/21 14:09	12/13/21 22:12	1
Pyrene	**0.12**	**J**	0.50	0.076	ug/L		12/10/21 14:09	12/13/21 22:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*117*		*37 - 120*	*12/10/21 14:09*	*12/13/21 22:12*	*1*
Nitrobenzene-d5 (Surr)	*93*		*26 - 120*	*12/10/21 14:09*	*12/13/21 22:12*	*1*
p-Terphenyl-d14	*134*	*S1+*	*64 - 127*	*12/10/21 14:09*	*12/13/21 22:12*	*1*

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.050	0.016	ug/L		12/15/21 19:33	12/16/21 18:33	1
Benzo[a]pyrene	ND		0.050	0.022	ug/L		12/15/21 19:33	12/16/21 18:33	1
Benzo[b]fluoranthene	ND		0.050	0.024	ug/L		12/15/21 19:33	12/16/21 18:33	1
Benzo[g,h,i]perylene	ND		0.050	0.035	ug/L		12/15/21 19:33	12/16/21 18:33	1
Benzo[k]fluoranthene	ND		0.050	0.028	ug/L		12/15/21 19:33	12/16/21 18:33	1
Dibenz(a,h)anthracene	ND	UJ	0.050	0.020	ug/L		12/15/21 19:33	12/16/21 18:33	1
Indeno[1,2,3-cd]pyrene	ND	UJ	0.050	0.036	ug/L		12/15/21 19:33	12/16/21 18:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*146*	*S1+*	*25 - 131*	*12/15/21 19:33*	*12/16/21 18:33*	*1*
Nitrobenzene-d5 (Surr)	*96*		*54 - 134*	*12/15/21 19:33*	*12/16/21 18:33*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**3400**		88	22	ug/L			12/13/21 01:41	22

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**4.2**		0.050	0.019	mg/L		12/15/21 08:44	12/15/21 18:14	1

Client Sample ID: MW-45S-120921
Lab Sample ID: 480-193309-1
Date Collected: 12/09/21 08:00
Matrix: Water
Date Received: 12/10/21 10:30

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**10.9**		10.0	1.7	mg/L			12/14/21 16:30	5
Ammonia	**4.0**		0.10	0.045	mg/L			12/13/21 12:28	5
Cyanide, Total	**0.0063**	**J**	0.010	0.0050	mg/L		12/13/21 13:27	12/13/21 14:27	1
Nitrate as N	**0.12**		0.050	0.020	mg/L			12/10/21 16:20	1
Alkalinity, Total	**429**		5.0	0.79	mg/L			12/14/21 17:49	1
Ferrous Iron	ND	UJ	0.10	0.075	mg/L			12/17/21 15:00	1

Client Sample ID: MW-47S-120921
Lab Sample ID: 480-193309-2
Date Collected: 12/09/21 09:00
Matrix: Water
Date Received: 12/10/21 10:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.41	ug/L			12/11/21 18:36	1
Ethylbenzene	ND		1.0	0.74	ug/L			12/11/21 18:36	1
Toluene	ND		1.0	0.51	ug/L			12/11/21 18:36	1
Xylenes, Total	ND		2.0	0.66	ug/L			12/11/21 18:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*77 - 120*		*12/11/21 18:36*	*1*
4-Bromofluorobenzene (Surr)	*101*		*73 - 120*		*12/11/21 18:36*	*1*
Dibromofluoromethane (Surr)	*95*		*75 - 123*		*12/11/21 18:36*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*12/11/21 18:36*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**1.1**		0.50	0.036	ug/L		12/10/21 14:09	12/13/21 22:40	1
Acenaphthylene	ND		0.30	0.056	ug/L		12/10/21 14:09	12/13/21 22:40	1
Anthracene	ND		0.50	0.034	ug/L		12/10/21 14:09	12/13/21 22:40	1
Chrysene	ND		0.50	0.074	ug/L		12/10/21 14:09	12/13/21 22:40	1
Fluoranthene	ND		0.50	0.080	ug/L		12/10/21 14:09	12/13/21 22:40	1
Fluorene	ND		0.50	0.058	ug/L		12/10/21 14:09	12/13/21 22:40	1
Naphthalene	**0.11**	**J**	1.0	0.064	ug/L		12/10/21 14:09	12/13/21 22:40	1
Phenanthrene	**ND**	**U**	0.20	0.062	ug/L		12/10/21 14:09	12/13/21 22:40	1
Pyrene	ND		0.50	0.076	ug/L		12/10/21 14:09	12/13/21 22:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*103*		*37 - 120*	*12/10/21 14:09*	*12/13/21 22:40*	*1*
Nitrobenzene-d5 (Surr)	*77*		*26 - 120*	*12/10/21 14:09*	*12/13/21 22:40*	*1*
p-Terphenyl-d14	*121*		*64 - 127*	*12/10/21 14:09*	*12/13/21 22:40*	*1*

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	**0.031**	**J**	0.050	0.016	ug/L		12/15/21 19:33	12/16/21 18:54	1
Benzo[a]pyrene	ND		0.050	0.022	ug/L		12/15/21 19:33	12/16/21 18:54	1
Benzo[b]fluoranthene	**0.030**	**J**	0.050	0.024	ug/L		12/15/21 19:33	12/16/21 18:54	1
Benzo[g,h,i]perylene	ND		0.050	0.035	ug/L		12/15/21 19:33	12/16/21 18:54	1
Benzo[k]fluoranthene	ND		0.050	0.028	ug/L		12/15/21 19:33	12/16/21 18:54	1
Dibenz(a,h)anthracene	ND	UJ	0.050	0.020	ug/L		12/15/21 19:33	12/16/21 18:54	1
Indeno[1,2,3-cd]pyrene	ND	UJ	0.050	0.036	ug/L		12/15/21 19:33	12/16/21 18:54	1

Client Sample ID: MW-47S-120921
Lab Sample ID: 480-193309-2
Date Collected: 12/09/21 09:00
Matrix: Water
Date Received: 12/10/21 10:30

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	145	S1+	25 - 131	12/15/21 19:33	12/16/21 18:54	1
Nitrobenzene-d5 (Surr)	92		54 - 134	12/15/21 19:33	12/16/21 18:54	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	3400		88	22	ug/L			12/13/21 02:00	22

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	6.1		0.050	0.019	mg/L		12/15/21 08:44	12/15/21 18:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	12.8		10.0	1.7	mg/L			12/14/21 16:49	5
Ammonia	3.4		0.040	0.018	mg/L			12/13/21 12:29	2
Cyanide, Total	0.012		0.010	0.0050	mg/L		12/13/21 13:27	12/13/21 14:30	1
Nitrate as N	ND		0.050	0.020	mg/L			12/10/21 15:25	1
Alkalinity, Total	295		5.0	0.79	mg/L			12/14/21 17:56	1
Ferrous Iron	0.29 J		0.10	0.075	mg/L			12/17/21 15:00	1

Client Sample ID: MW-23S-120921
Lab Sample ID: 480-193309-3
Date Collected: 12/09/21 09:10
Matrix: Water
Date Received: 12/10/21 10:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		4.0	1.6	ug/L			12/11/21 18:58	4
Ethylbenzene	20		4.0	3.0	ug/L			12/11/21 18:58	4
Toluene	ND		4.0	2.0	ug/L			12/11/21 18:58	4
Xylenes, Total	9.8		8.0	2.6	ug/L			12/11/21 18:58	4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	113		77 - 120		12/11/21 18:58	4
4-Bromofluorobenzene (Surr)	100		73 - 120		12/11/21 18:58	4
Dibromofluoromethane (Surr)	102		75 - 123		12/11/21 18:58	4
Toluene-d8 (Surr)	98		80 - 120		12/11/21 18:58	4

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Use Results from dilution

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	[illegible]	E	0.50	0.036	ug/L		12/10/21 14:09	12/13/21 23:08	1
Acenaphthylene	[illegible]		0.30	0.056	ug/L		12/10/21 14:09	12/13/21 23:08	1
Anthracene	[illegible]		0.50	0.034	ug/L		12/10/21 14:09	12/13/21 23:08	1
Chrysene	[illegible]		0.50	0.074	ug/L		12/10/21 14:09	12/13/21 23:08	1
Fluoranthene	[illegible]		0.50	0.080	ug/L		12/10/21 14:09	12/13/21 23:08	1
Fluorene	[illegible]	E	0.50	0.058	ug/L		12/10/21 14:09	12/13/21 23:08	1
Naphthalene	[illegible]	E	1.0	0.064	ug/L		12/10/21 14:09	12/13/21 23:08	1
Phenanthrene	[illegible]	E	0.20	0.062	ug/L		12/10/21 14:09	12/13/21 23:08	1
Pyrene	[illegible]		0.50	0.076	ug/L		12/10/21 14:09	12/13/21 23:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	100		37 - 120	12/10/21 14:09	12/13/21 23:08	1
Nitrobenzene-d5 (Surr)	76		26 - 120	12/10/21 14:09	12/13/21 23:08	1

Client Sample ID: MW-23S-120921
Lab Sample ID: 480-193309-3

Date Collected: 12/09/21 09:10
Matrix: Water
Date Received: 12/10/21 10:30

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
p-Terphenyl-d14	*125*		*64 - 127*	*12/10/21 14:09*	*12/13/21 23:08*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**74**		10	0.72	ug/L		12/10/21 14:09	12/14/21 15:21	20
Acenaphthylene	ND		6.0	1.1	ug/L		12/10/21 14:09	12/14/21 15:21	20
Anthracene	**3.9**	**J**	10	0.68	ug/L		12/10/21 14:09	12/14/21 15:21	20
Chrysene	ND		10	1.5	ug/L		12/10/21 14:09	12/14/21 15:21	20
Fluoranthene	**2.4**	**J**	10	1.6	ug/L		12/10/21 14:09	12/14/21 15:21	20
Fluorene	**17**		10	1.2	ug/L		12/10/21 14:09	12/14/21 15:21	20
Naphthalene	**95**		20	1.3	ug/L		12/10/21 14:09	12/14/21 15:21	20
Phenanthrene	**20**		4.0	1.2	ug/L		12/10/21 14:09	12/14/21 15:21	20
Pyrene	**2.7**	**J**	10	1.5	ug/L		12/10/21 14:09	12/14/21 15:21	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	*104*		*37 - 120*	*12/10/21 14:09*	*12/14/21 15:21*	*20*
Nitrobenzene-d5 (Surr)	*65*		*26 - 120*	*12/10/21 14:09*	*12/14/21 15:21*	*20*
p-Terphenyl-d14	*111*		*64 - 127*	*12/10/21 14:09*	*12/14/21 15:21*	*20*

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	**0.048**	**J**	0.050	0.016	ug/L		12/15/21 19:33	12/16/21 19:16	1
Benzo[a]pyrene	ND		0.050	0.022	ug/L		12/15/21 19:33	12/16/21 19:16	1
Benzo[b]fluoranthene	ND		0.050	0.024	ug/L		12/15/21 19:33	12/16/21 19:16	1
Benzo[g,h,i]perylene	ND		0.050	0.035	ug/L		12/15/21 19:33	12/16/21 19:16	1
Benzo[k]fluoranthene	ND		0.050	0.028	ug/L		12/15/21 19:33	12/16/21 19:16	1
Dibenz(a,h)anthracene	ND	UJ	0.050	0.020	ug/L		12/15/21 19:33	12/16/21 19:16	1
Indeno[1,2,3-cd]pyrene	ND	UJ	0.050	0.036	ug/L		12/15/21 19:33	12/16/21 19:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	*129*		*25 - 131*	*12/15/21 19:33*	*12/16/21 19:16*	*1*
Nitrobenzene-d5 (Surr)	*83*		*54 - 134*	*12/15/21 19:33*	*12/16/21 19:16*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**4600**		88	22	ug/L			12/13/21 02:19	22

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**1.6**		0.050	0.019	mg/L		12/15/21 08:44	12/15/21 18:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**5.3**	**J**	10.0	1.7	mg/L			12/14/21 17:07	5
Ammonia	**0.88**		0.020	0.0090	mg/L			12/13/21 09:16	1
Cyanide, Total	ND		0.010	0.0050	mg/L		12/13/21 13:27	12/13/21 14:33	1
Nitrate as N	**0.25**		0.050	0.020	mg/L			12/10/21 16:22	1
Alkalinity, Total	**255**		5.0	0.79	mg/L			12/14/21 18:03	1
Ferrous Iron	ND	UJ	0.10	0.075	mg/L			12/17/21 15:00	1

Appendix C Support Documentation

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

Syracuse #225

eurofins Environment Testing America

Client Information			
Client Contact: Mr. John Ruspantini	Sampler: Pat McHugh	Lab PM: Schove, John R	Carrier Tracking No(s):
Company: New York State Electric & Gas	Phone: 518-929-7166	E-Mail: John.Schove@Eurofinset.com	State of Origin: NY
Address: 18 Link Drive	PWSID:	COC No: 480-168295-34652.4	Page: Pg 1 of 1
City: Binghamton	Due Date Requested:		Job #:
State, Zip: NY, 13902	TAT Requested (days): Standard		
Phone: 585-484-6839(Tel)	Compliance Project: Δ Yes Δ No		
Email: jjruspantini@nyseg.com	PO #: 4505522361		
Project Name: NYSEG - Former MGP Site - Ithaca, NY	WO #: 60615225		
Site:	Project #: 48022675		
	SSOW#:		

SHORT HOLD

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270D_SIM - SVOC SIM Analytes (low level)	8260C - BTEX	8270D_LL - Low Level PAH Semivolatiles (low level SIM)	9012B - Cyanide, Total	300.0_28D - Sulfate	350.1 - Nitrogen, Ammonia	6010C - Metals - Iron	RSK_175 - Methane	Nitrate_Calc - Nitrate	2320B - Alkalinity	3500_FE_D - Iron, Ferrous	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	A	N	B	N	S	D	A	N	N	N		
MW-46S-120721	12/7/21	1205	G	Water	N	N	2	3	2	1	1	1	1	3	1	1	1	17	
MW-24S-120721	↓	1030	↓	Water	N	N	2	3	2	1	1	1	1	2	1	1	1	17	
MW-28S-120721	↓	0840	↓	Water	N	N	2	3	2	1	1	1	1	3	1	1	1	17	
Dup-1-120721	↓	0840	↓	Water	N	N	2	3	2	1	1	1	1	3	1	1	1	17	
MW-36S-120721	↓	1340	↓	Water	N	N	2	3	2	1	1	1	1	3	1	1	1	17	
MW-C16 120721	↓	1110	↓	Water	N	N	2	3	2	1	1	1	1	3	1	1	1	17	
MW-C11 120721	↓	1247	↓	Water	N	Y	6	9	6	3	1	1	1	3	1	1	1	17	
MW-C12 120721	↓	1505	↓	Water	N	N	2	3	2	1	1	1	1	3	1	1	1	17	
~~Trip Blank - 120721~~	-	-	-	Water	N	N		2										2	(Pre-Packed TB)

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples a
☐ Return To Client ☒ Disposal By Lab

Deliverable Requested: I, II, III, IV, Other (specify) Cat B.

Special Instructions/QC Requirements:

480-193156 Chain of Custody

Empty Kit Relinquished by:		Date:		Time:		Method of Shipment	
Relinquished by: [signature]	Date/Time: 12/7/21, 1530	Company: AECOM		Received by: [signature]		Date/Time: 12/7/21 1630	Company: ES-SVR
Relinquished by: [signature]	Date/Time: 12.7.21, 1900	Company: [illegible]		Received by: [signature]		Date/Time: 12-8-21 800	Company: TAB
Relinquished by:	Date/Time:	Company		Received by:		Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 2.0 1.9 2.1 2.2 ICE

Ver: 06/08/2021

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Schove, John R	Carrier Tracking No(s):	COC No: 480-68476.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: John.Schove@Eurofinset.com	State of Origin: New York	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - New York		Job #: 480-193156-1
Address: 777 New Durham Road, ,	Due Date Requested: 12/21/2021			
City: Edison	TAT Requested (days):			
State, Zip: NJ, 08817				
Phone: 732-549-3900(Tel) 732-549-3679(Fax)	PO #:			
Email:	WO #:			
Project Name: NYSEG - Former MGP Site - Ithaca, NY	Project #: 48022675			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270E_SIM/3510C_LVI SVOC SIM Analytes	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-46S-120721 (480-193156-1)	12/7/21	12:05 Eastern		Water			X	2	
MW-24S-120721 (480-193156-2)	12/7/21	10:30 Eastern		Water			X	2	
MW-28S-120721 (480-193156-3)	12/7/21	08:40 Eastern		Water			X	2	
DUP-1-120721 (480-193156-4)	12/7/21	08:40 Eastern		Water			X	2	
MW-36S-120721 (480-193156-5)	12/7/21	13:40 Eastern		Water			X	2	
MW-C16-120721 (480-193156-6)	12/7/21	11:10 Eastern		Water			X	2	
MW-C11-120721 (480-193156-7)	12/7/21	12:47 Eastern		Water			X	2	
MW-C11-120721 (480-193156-7MS)	12/7/21	12:47 Eastern	MS	Water			X	2	
MW-C11-120721 (480-193156-7MSD)	12/7/21	12:47 Eastern	MSD	Water			X	2	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Unknown Courier	12/10/21 1700	TA	[signature] / ViaFedEx	12/14/21 12:50	ETA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: ID#9 - 2.7=2.6/1.5=1.4

Ver: 06/08/2021

12/20/2021

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Schove, John R	Carrier Tracking No(s):	COC No: 480-68476.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: John.Schove@Eurofinset.com	State of Origin: New York	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - New York		Job #: 480-193156-1
Address: 777 New Durham Road, ,	Due Date Requested: 12/21/2021	**Analysis Requested**		**Preservation Codes:**
City: Edison	TAT Requested (days):			A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
State, Zip: NJ, 08817				M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Phone: 732-549-3900(Tel) 732-549-3679(Fax)	PO #:			Other:
Email:	WO #:			
Project Name: NYSEG - Former MGP Site - Ithaca, NY	Project #: 48022675			
Site:	SSOW#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270E_SIM/3510C_LVI SVOC SIM Analytes	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-C12-120721 (480-193156-8)	12/7/21	15:05 Eastern		Water			X	2	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For ____ Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:		Time:	Method of Shipment:	
Relinquished by: PG	Date/Time:	Company	Received by: [signature] / Via FedEx	Date/Time: 12/14/21 12:50	Company ETA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: IR#9 - 2.7=2.6/1.5=1.4		

Ver: 06/08/2021

Job Narrative
480-193156-1

Comments
No additional comments.

Receipt
The samples were received on 12/8/2021 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 1.9º C, 2.0º C, 2.1º C and 2.2º C.

GC/MS VOA
Method 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-46S-120721 (480-193156-1). Elevated reporting limits (RLs) are provided.

Method 8260C: The following volatiles samples were diluted due to foaming at the time of purging during the original sample analysis: MW-C16-120721 (480-193156-6), MW-C11-120721 (480-193156-7), MW-C11-120721 (480-193156-7[MS]) and MW-C11-120721 (480-193156-7[MSD]). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270D LL: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-46S-120721 (480-193156-1), MW-C16-120721 (480-193156-6) and MW-C12-120721 (480-193156-8). Elevated reporting limits (RLs) are provided.

Method 8270D LL: The following samples required a dilution due to the abundance of target analyte(s): MW-46S-120721 (480-193156-1) and MW-C12-120721 (480-193156-8). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method 8270E SIM: Due to a delay in the Fed Ex delivery, the folowing samples were prepped and analyzed outside of hold time: MW-46S-120721 (480-193156-1), MW-24S-120721 (480-193156-2), MW-28S-120721 (480-193156-3), DUP-1-120721 (480-193156-4), MW-33S-120721 (480-193156-5), MW-C11-120721 (480-193156-7) and MW-C12-120721 (480-193156-8).

Method 8270E SIM: The continuing calibration verification (CCV) analyzed in batch 460-819147 was outside the method criteria for the following analyte(s): Dibenz(a,h)anthracene and Indeno[1,2,3-cd]pyrene. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8270E SIM: The surrogate recovery for the blank associated with preparation batch 460-819075 and analytical batch 460-819147 was outside the upper control limits.

Method 8270E SIM: Surrogate recovery for the following samples were outside the upper control limit: MW-24S-120721 (480-193156-2), MW-28S-120721 (480-193156-3), DUP-1-120721 (480-193156-4), MW-33S-120721 (480-193156-5), MW-C11-120721 (480-193156-7) and MW-C12-120721 (480-193156-8). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method 8270E SIM: Two surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: MW-46S-120721 (480-193156-1). These results have been reported and qualified.

Method 8270E SIM: The continuing calibration verification (CCV) analyzed in batch 460-819281 was outside the method criteria for the following analyte(s): Indeno[1,2,3-cd]pyrene. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HPLC/IC
Method 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-C16-120721 (480-193156-6), MW-C11-120721 (480-193156-7) and MW-C12-120721 (480-193156-8). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC VOA
Method RSK-175: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-C11-120721 (480-193156-7) and MW-C12-120721 (480-193156-8). Elevated reporting limits (RLs) are provided.

Method RSK-175: The following samples were diluted to bring the concentration of target analytes within the calibration range:

MW-46S-120721 (480-193156-1), MW-24S-120721 (480-193156-2) and MW-28S-120721 (480-193156-3). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method SM 3500 FE D: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following samples has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: MW-46S-120721 (480-193156-1), MW-24S-120721 (480-193156-2), MW-28S-120721 (480-193156-3), MW-33S-120721 (480-193156-5), MW-C16-120721 (480-193156-6), MW-C11-120721 (480-193156-7) and MW-C12-120721 (480-193156-8).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Edison Job No.: 480-193156-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): Rtxi-5Sil M ID: 0.25(mm)

Client Sample ID	Lab Sample ID	NBZ #	FBP #
MW-46S-120721	480-193156-1	88	156 S1+
MW-46S-120721 DL	480-193156-1 DL	81	59
MW-24S-120721	480-193156-2	99	151 S1+
MW-28S-120721	480-193156-3	98	138 S1+
DUP-1-120721	480-193156-4	94	140 S1+
MW-33S-120721	480-193156-5	93	137 S1+
MW-C16-120721	480-193156-6	90	130
MW-C11-120721	480-193156-7	96	133 S1+
MW-C12-120721	480-193156-8	100	154 S1+
	MB 460-819075/1-A	96	145 S1+
	LCS 460-819075/2-A	94	125
	LCSD 460-819075/3-A	99	134 S1+
MW-C11-120721 MS	480-193156-7 MS	95	145 S1+
MW-C11-120721 MSD	480-193156-7 MSD	96	125

	QC LIMITS
NBZ = Nitrobenzene-d5 (Surr)	54-134
FBP = 2-Fluorobiphenyl	25-131

Column to be used to flag recovery values

FORM II 8270E SIM

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Edison Job No.: 480-193156-1

SDG No.:

Matrix: Water Level: Low Lab File ID: h269810.d

Lab ID: LCS 460-819075/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Benzo[a]anthracene	0.800	0.688	86	52-143	
Benzo[a]pyrene	0.800	0.752	94	43-150	
Benzo[b]fluoranthene	0.800	0.621	78	46-150	
Benzo[g,h,i]perylene	0.800	0.555	69	51-150	
Benzo[k]fluoranthene	0.800	0.814	102	44-150	
Dibenz(a,h)anthracene	0.800	0.411	51	48-150	
Indeno[1,2,3-cd]pyrene	0.800	0.419	52	44-150	

Column to be used to flag recovery and RPD values

FORM III 8270E SIM

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Edison Job No.: 480-193156-1

SDG No.:

Matrix: Water Level: Low Lab File ID: h269811.d

Lab ID: LCSD 460-819075/3-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Benzo[a]anthracene	0.800	0.751	94	9	30	52-143	
Benzo[a]pyrene	0.800	0.793	99	5	30	43-150	
Benzo[b]fluoranthene	0.800	0.670	84	8	30	46-150	
Benzo[g,h,i]perylene	0.800	0.589	74	6	30	51-150	
Benzo[k]fluoranthene	0.800	0.888	111	9	30	44-150	
Dibenz(a,h)anthracene	0.800	0.444	55	8	30	48-150	
Indeno[1,2,3-cd]pyrene	0.800	0.450	56	7	30	44-150	

Column to be used to flag recovery and RPD values

FORM III 8270E SIM

FORM III
GC/MS SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Edison Job No.: 480-193156-1

SDG No.:

Matrix: Water Level: Low Lab File ID: h269813.d

Lab ID: 480-193156-7 MS Client ID: MW-C11-120721 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Benzo[a]anthracene	0.800	ND	0.647	81	52-143	H
Benzo[a]pyrene	0.800	ND	0.644	80	43-150	H
Benzo[b]fluoranthene	0.800	ND	0.548	69	46-150	H
Benzo[g,h,i]perylene	0.800	ND	0.514	64	51-150	H
Benzo[k]fluoranthene	0.800	ND	0.698	87	44-150	H
Dibenz(a,h)anthracene	0.800	ND	0.368	46	48-150	H F1
Indeno[1,2,3-cd]pyrene	0.800	ND	0.377	47	44-150	H

Column to be used to flag recovery and RPD values

FORM III 8270E SIM

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Edison Job No.: 480-193156-1

SDG No.:

Instrument ID: CBNAMS13 Start Date: 12/16/2021 16:54

Analysis Batch Number: 819281 End Date: 12/17/2021 00:40

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVIS 460-819281/2		12/16/2021 16:54	1	C12216.D	Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 17:43	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 18:03	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 18:24	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 18:45	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 19:06	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 19:27	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 19:48	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 20:08	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 20:29	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 20:50	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 21:11	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/17/2021 00:20	1		Rtxi-5Sil MS 0.25(mm)
480-193156-1 DL	MW-46S-120721 DL	12/17/2021 00:40	5	C12231.D	Rtxi-5Sil MS 0.25(mm)

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Edison Job No.: 480-193156-1

SDG No.:

Lab Sample ID: CCVIS 460-819281/2 Calibration Date: 12/16/2021 16:54

Instrument ID: CBNAMS13 Calib Start Date: 12/08/2021 09:35

GC Column: Rtxi-5Sil MS ID: 0.25(mm) Calib End Date: 12/08/2021 11:23

Lab File ID: C12216.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5124	0.5396		211	200	5.3	20.0
N-Nitrosodimethylamine	Ave	0.6696	0.6940		104	100	3.6	20.0
Bis(2-chloroethyl)ether	Ave	1.235	1.268	0.7000	20.5	20.0	2.7	20.0
Naphthalene	Ave	1.027	1.027	0.7000	20.0	20.0	0.0	20.0
Acenaphthylene	Ave	1.854	1.798	0.9000	19.4	20.0	-3.0	20.0
Acenaphthene	Ave	1.198	1.192	0.9000	19.9	20.0	-0.6	20.0
Fluorene	Ave	1.325	1.395	0.9000	21.1	20.0	5.3	20.0
4,6-Dinitro-2-methylphenol	Ave	0.0296	0.0261	0.0100	176	200	-12.0	20.0
Hexachlorobenzene	Ave	0.2888	0.2881	0.1000	20.0	20.0	-0.2	20.0
Pentachlorophenol	QuaF		0.0379*	0.0500	65.6	100	-34.4*	20.0
Phenanthrene	Ave	1.144	1.079	0.7000	18.9	20.0	-5.7	20.0
Anthracene	Ave	0.9549	0.9692	0.7000	20.3	20.0	1.5	20.0
Fluoranthene	Ave	1.056	1.102	0.6000	20.9	20.0	4.3	20.0
Pyrene	Ave	1.577	1.599	0.6000	20.3	20.0	1.4	20.0
Benzo[a]anthracene	Ave	1.332	1.276	0.8000	19.2	20.0	-4.2	20.0
Chrysene	Ave	1.426	1.412	0.7000	19.8	20.0	-0.9	20.0
Benzo[b]fluoranthene	Ave	1.332	1.397		21.0	20.0	4.8	20.0
Benzo[k]fluoranthene	Ave	1.514	1.367	0.7000	18.1	20.0	-9.7	20.0
Benzo[a]pyrene	Ave	1.109	1.027	0.7000	18.5	20.0	-7.4	20.0
Indeno[1,2,3-cd]pyrene	Ave	1.272	0.9832	0.5000	15.5	20.0	-22.7*	20.0
Dibenz(a,h)anthracene	Ave	1.307	1.077	0.4000	16.5	20.0	-17.6	20.0
Benzo[g,h,i]perylene	Ave	1.422	1.188	0.5000	16.7	20.0	-16.5	20.0
Nitrobenzene-d5 (Surr)	Ave	0.2707	0.2994		442	400	10.6	20.0
2-Fluorobiphenyl	Ave	1.818	1.769		389	400	-2.7	20.0
2,4,6-Tribromophenol	Ave	0.1212	0.1463		483	400	20.7*	20.0
Terphenyl-d14	Ave	1.107	1.156		418	400	4.4	20.0

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Edison Job No.: 480-193156-1

SDG No.:

Instrument ID: CBNAMS9 Start Date: 12/16/2021 09:44

Analysis Batch Number: 819147 End Date: 12/16/2021 19:58

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVIS 460-819147/2		12/16/2021 09:44	1	h269807.d	Rtxi-5Sil MS 0.25(mm)
MB 460-819075/1-A		12/16/2021 10:27	1	h269809.d	Rtxi-5Sil MS 0.25(mm)
LCS 460-819075/2-A		12/16/2021 10:48	1	h269810.d	Rtxi-5Sil MS 0.25(mm)
LCSD 460-819075/3-A		12/16/2021 11:09	1	h269811.d	Rtxi-5Sil MS 0.25(mm)
480-193156-7	MW-C11-120721	12/16/2021 11:30	1	h269812.d	Rtxi-5Sil MS 0.25(mm)
480-193156-7 MS	MW-C11-120721 MS	12/16/2021 11:51	1	h269813.d	Rtxi-5Sil MS 0.25(mm)
480-193156-7 MSD	MW-C11-120721 MSD	12/16/2021 12:12	1	h269814.d	Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 12:34	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 12:55	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 13:37	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 13:58	1		Rtxi-5Sil MS 0.25(mm)
480-193156-3	MW-28S-120721	12/16/2021 14:19	1	h269820.d	Rtxi-5Sil MS 0.25(mm)
480-193156-4	DUP-1-120721	12/16/2021 14:40	1	h269821.d	Rtxi-5Sil MS 0.25(mm)
480-193156-5	MW-33S-120721	12/16/2021 15:01	1	h269822.d	Rtxi-5Sil MS 0.25(mm)
480-193156-6	MW-C16-120721	12/16/2021 15:22	1	h269823.d	Rtxi-5Sil MS 0.25(mm)
480-193156-8	MW-C12-120721	12/16/2021 15:44	1	h269824.d	Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 16:05	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 16:26	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 16:47	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 17:08	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 17:29	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 17:51	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 18:12	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 18:33	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 18:54	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 19:16	1		Rtxi-5Sil MS 0.25(mm)
480-193156-1	MW-46S-120721	12/16/2021 19:37	1	h269835.d	Rtxi-5Sil MS 0.25(mm)
480-193156-2	MW-24S-120721	12/16/2021 19:58	1	h269836.d	Rtxi-5Sil MS 0.25(mm)

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Edison Job No.: 480-193156-1

SDG No.:

Lab Sample ID: CCVIS 460-819147/2 Calibration Date: 12/16/2021 09:44

Instrument ID: CBNAMS9 Calib Start Date: 12/03/2021 15:16

GC Column: Rtxi-5Sil MS ID: 0.25(mm) Calib End Date: 12/03/2021 17:02

Lab File ID: h269807.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Lin2		0.5143		195	200	-2.5	20.0
N-Nitrosodimethylamine	Ave	0.6104	0.6363		104	100	4.2	20.0
Bis(2-chloroethyl)ether	Ave	1.096	1.145	0.7000	20.9	20.0	4.4	20.0
Naphthalene	Ave	1.062	1.028	0.7000	19.4	20.0	-3.2	20.0
Acenaphthylene	Ave	2.235	2.325	0.9000	20.8	20.0	4.0	20.0
Acenaphthene	Ave	1.077	1.073	0.9000	19.9	20.0	-0.4	20.0
Fluorene	Ave	1.081	1.072	0.9000	19.8	20.0	-0.8	20.0
4,6-Dinitro-2-methylphenol	Ave	0.0709	0.0769	0.0100	217	200	8.4	20.0
Hexachlorobenzene	Ave	0.4250	0.4236	0.1000	19.9	20.0	-0.3	20.0
Pentachlorophenol	Lin1		0.1872	0.0500	101	100	0.9	20.0
Phenanthrene	Ave	1.831	1.588	0.7000	17.3	20.0	-13.3	20.0
Anthracene	Ave	1.406	1.555	0.7000	22.1	20.0	10.6	20.0
Fluoranthene	Ave	1.406	1.482	0.6000	21.1	20.0	5.4	20.0
Pyrene	Ave	1.585	1.586	0.6000	20.0	20.0	0.0	20.0
Benzo[a]anthracene	Ave	1.361	1.305	0.8000	19.2	20.0	-4.1	20.0
Chrysene	Ave	1.472	1.364	0.7000	18.5	20.0	-7.4	20.0
Benzo[b]fluoranthene	Ave	1.574	1.288		16.4	20.0	-18.2	20.0
Benzo[k]fluoranthene	Ave	1.388	1.378	0.7000	19.9	20.0	-0.7	20.0
Benzo[a]pyrene	Ave	1.206	1.073	0.7000	17.8	20.0	-11.0	20.0
Indeno[1,2,3-cd]pyrene	Ave	1.464	1.036	0.5000	14.2	20.0	-29.2*	20.0
Dibenz(a,h)anthracene	Ave	1.553	1.064	0.4000	13.7	20.0	-31.5*	20.0
Benzo[g,h,i]perylene	Ave	1.533	1.277	0.5000	16.7	20.0	-16.7	20.0
Nitrobenzene-d5 (Surr)	Ave	0.3494	0.3646		417	400	4.3	20.0
2-Fluorobiphenyl	Ave	1.424	2.037		572	400	43.0*	20.0
2,4,6-Tribromophenol	Ave	0.3457	0.3763		435	400	8.9	20.0
Terphenyl-d14	Ave	0.9675	1.106		457	400	14.3	20.0

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-193156-1

SDG No.:

Lab File ID: W10018498.d Lab Sample ID: MB 480-608154/1-A

Matrix: Water Date Extracted: 12/09/2021 09:18

Instrument ID: HP5973W Date Analyzed: 12/09/2021 21:26

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 480-608154/2-A	W10018499.d	12/09/2021 21:53
MW-C11-120721 MS	480-193156-7 MS	W10018500.d	12/09/2021 22:20
MW-C11-120721 MSD	480-193156-7 MSD	W10018501.d	12/09/2021 22:48
MW-C11-120721	480-193156-7	W10018502.d	12/09/2021 23:14
MW-46S-120721	480-193156-1	W10018503.d	12/09/2021 23:42
MW-24S-120721	480-193156-2	W10018504.d	12/10/2021 00:09
MW-28S-120721	480-193156-3	W10018505.d	12/10/2021 00:37
DUP-1-120721	480-193156-4	W10018506.d	12/10/2021 01:04
MW-33S-120721	480-193156-5	W10018507.d	12/10/2021 01:31
MW-C16-120721	480-193156-6	W10018508.d	12/10/2021 01:58
MW-C12-120721	480-193156-8	W10018509.d	12/10/2021 02:25

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-193156-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 480-608154/1-A

Matrix: Water Lab File ID: W10018498.d

Analysis Method: 8270D LL Date Collected:

Extract. Method: 3510C Date Extracted: 12/09/2021 09:18

Sample wt/vol: 1000(mL) Date Analyzed: 12/09/2021 21:26

Con. Extract Vol.: 1(mL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 608229 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
83-32-9	Acenaphthene	ND		0.50	0.036
208-96-8	Acenaphthylene	ND		0.30	0.056
120-12-7	Anthracene	ND		0.50	0.034
218-01-9	Chrysene	ND		0.50	0.074
206-44-0	Fluoranthene	ND		0.50	0.080
86-73-7	Fluorene	ND		0.50	0.058
91-20-3	Naphthalene	0.0654	J	1.0	0.064
85-01-8	Phenanthrene	ND		0.20	0.062
129-00-0	Pyrene	ND		0.50	0.076

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	119		37-120
4165-60-0	Nitrobenzene-d5 (Surr)	95		26-120
1718-51-0	p-Terphenyl-d14	121		64-127

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-193156-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 608669	Date: 12/13/2021 23:54										
300.0	480-193156-6	Sulfate	1200		mg/L						
300.0	480-193156-6 MS	Sulfate	2067		mg/L	1000	87	80-120			
Batch ID: 608125	Date: 12/09/2021 06:51										
350.1	480-193156-5	Ammonia	0.50		mg/L						F1
350.1	480-193156-5 MS	Ammonia	0.668		mg/L	0.200	82	90-110			F1
Batch ID: 608047	Date: 12/08/2021 13:46	Prep Batch: 608004	Date: 12/08/2021 11:36								
9012B	480-193156-8	Cyanide, Total	0.014		mg/L						
9012B	480-193156-8 MS	Cyanide, Total	0.108		mg/L	0.100	94	90-110			
Batch ID: 608396	Date: 12/10/2021 11:59	Prep Batch: 608385	Date: 12/10/2021 11:24								
9012B	480-193156-7	Cyanide, Total	0.024		mg/L						
9012B	480-193156-7 MS	Cyanide, Total	0.120		mg/L	0.100	96	90-110			
Batch ID: 608111	Date: 12/08/2021 19:00										
SM 3500 FE D	480-193156-1	Ferrous Iron	0.19		mg/L						HF
SM 3500 FE D	480-193156-1 MS	Ferrous Iron	1.04		mg/L	1.00	84	70-130			
Batch ID: 608111	Date: 12/08/2021 19:00										
SM 3500 FE D	480-193156-6	Ferrous Iron	0.15		mg/L						HF
SM 3500 FE D	480-193156-6 MS	Ferrous Iron	1.17		mg/L	1.00	101	70-130			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

Syracuse #225

eurofins | Environment Testing America

Client Information	Sampler: Pat McHugh	Lab PM: Schove, John R	Carrier Tracking No(s):	COC No: 480-168295-34652.3
Client Contact: Mr. John Ruspantini	Phone: 518-929-7166	E-Mail: John.Schove@Eurofinset.com	State of Origin: NY	Page: Page 3 of 4
Company: New York State Electric & Gas	PWSID:			Job #:
Address: 18 Link Drive	Due Date Requested:			
City: Binghamton	TAT Requested (days): Standard			
State, Zip: NY, 13902	Compliance Project: Δ Yes Δ No			
Phone: 585-484-6839(Tel)	PO #: 4505522361			
Email: jjruspantini@nyseg.com	WO #: 60615225			
Project Name: NYSEG - Former MGP Site - Ithaca, NY	Project #: 48022675			
Site:	SSOW#:			

SHORT HOLD

Analysis Requested

Preservation Codes:

480-193210 Chain of Custody

K - EDTA
L - EDA
Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270D_SIM - SVOC SIM Analytes (Low Level SIM)	8260C - BTEX	8270D_LL - Low Level PAH Semivolatiles (Low Level SIM)	9012B - Cyanide, Total	300.0_28D - Sulfate	350.1 - Nitrogen, Ammonia	6010C - Metals - Iron	RSK_175 - Methane	Nitrate_Calc - Nitrate	2320B - Alkalinity	3500_FE_D - Iron, Ferrous		Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	A	N	B	N	S	D	A	N	N	N			
MW-40-120821	12/8/21	1255	G	Water	N	N	2	3	2	1	1	1	1	3	1	1	1		17	
MW-31S 120821		1212		Water	N	N	1													
MW-48S 120821		1005		Water	N	N														
MW-25S 120821		0800		Water	N	N														
MW-22S-120821		0845		Water	N	N														
Equip. Blank-120821		1415		Water	N	N					-	-	-	-	-	-	-		8	
Trip Blank-120821	—	—	—	Water	N	N	-	2	-	-	-	-	-	-	-	-	-		2	Pre Packed TB
				Water																
				Water																
				Water																
				Water																

RC 12-8-21

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) Cat B.

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: Pat McHugh	Date/Time: 12/8/21, 1530	Company: AECOM	Received by:	Date/Time: 12/8/21 1530	Company: ES SVK
Relinquished by: RC 12/9/21	Date/Time: 12-8-21, 1600	Company: Eyn	Received by:	Date/Time: 12/9/21 0800	Company: TAB
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: #1 2.4, 2.1, 3.0

Ver: 06/08/2021

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Schove, John R	Carrier Tracking No(s):	COC No: 480-68479.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: John.Schove@Eurofinset.com	State of Origin: New York	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - New York		Job #: 480-193210-1
Address: 777 New Durham Road, ,	Due Date Requested: 12/22/2021			
City: Edison	TAT Requested (days):			
State, Zip: NJ, 08817				
Phone: 732-549-3900(Tel) 732-549-3679(Fax)	PO #:			
Email:	WO #:			
Project Name: NYSEG - Former MGP Site - Ithaca, NY	Project #: 48022675			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270E_SIM/3510C_LVI SVOC SIM Analytes	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-40-120821 (480-193210-1)	12/8/21	12:55 Eastern		Water			X	2	
MW-31S 120821 (480-193210-2)	12/8/21	12:12 Eastern		Water			X	2	
MW-48S 120821 (480-193210-3)	12/8/21	10:05 Eastern		Water			X	2	
MW-25S 120821 (480-193210-4)	12/8/21	08:00 Eastern		Water			X	2	
MW-22S 120821 (480-193210-5)	12/8/21	08:45 Eastern		Water			X	2	
EQUIP.BLANK-120821 (480-193210-6)	12/8/21	14:15 Eastern		Water			X	2	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[illegible]	12/10/21 1700	TA	FedEx/ViaFedEx	12/14/21 12:50	ETA
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: ID#9 - 2.7=2.6/1.5=1.4

Ver: 06/08/2021

Job Narrative
480-193210-1

Comments
No additional comments.

Receipt
The samples were received on 12/9/2021 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 2.4º C, 2.8º C and 3.0º C.

GC/MS VOA
Method 8260C: The following volatiles sample was diluted due to foaming at the time of purging during the original sample analysis: MW-25S 120821 (480-193210-4). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270D LL: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-48S 120821 (480-193210-3). Elevated reporting limits (RLs) are provided.

Method 8270D LL: QC Samples for Preparation batch 480-608366 were not spiked for acid surrogates: Phenol-d5 (Surr), 2-Fluorophenol (Surr) and 2,4,6-Tribromophenol (Surr). These surrogates are not associated with any target analytes for the associated job, therefore the data has been reported.

Method 8270E SIM: The continuing calibration verification (CCV) analyzed in batch 460-819147 was outside the method criteria for the following analyte(s): Dibenz(a,h)anthracene and Indeno[1,2,3-cd]pyrene. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8270E SIM: The surrogate recovery for the blank associated with preparation batch 460-819075 and analytical batch 460-819147 was outside the upper control limits.

Method 8270E SIM: Two surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following samples contained an allowable number of surrogate compounds outside limits: MW-40-120821 (480-193210-1), MW-31S 120821 (480-193210-2), MW-48S 120821 (480-193210-3), MW-25S 120821 (480-193210-4), MW-22S 120821 (480-193210-5) and EQUIP.BLANK-120821 (480-193210-6). These results have been reported and qualified.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HPLC/IC
Method 300.0: The following sample was diluted due to the nature of the sample matrix: MW-31S 120821 (480-193210-2). Elevated reporting limits (RLs) are provided.

Method 300.0: The following samples were diluted due to the abundance of non-target analytes: MW-48S 120821 (480-193210-3), MW-25S 120821 (480-193210-4) and MW-22S 120821 (480-193210-5). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC VOA
Method RSK-175: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-48S 120821 (480-193210-3). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method SM 3500 FE D: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following samples has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: MW-40-120821 (480-193210-1), MW-31S 120821 (480-193210-2), MW-48S 120821 (480-193210-3), MW-25S 120821 (480-193210-4) and MW-22S 120821 (480-193210-5).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 480-608366.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Edison Job No.: 480-193210-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): Rtxi-5Sil M ID: 0.25(mm)

Client Sample ID	Lab Sample ID	NBZ #	FBP #
MW-40-120821	480-193210-1	91	133 S1+
MW-31S 120821	480-193210-2	97	138 S1+
MW-48S 120821	480-193210-3	92	144 S1+
MW-25S 120821	480-193210-4	92	153 S1+
MW-22S 120821	480-193210-5	90	132 S1+
EQUIP.BLANK-120821	480-193210-6	90	146 S1+
	MB 460-819075/1-A	96	145 S1+
	LCS 460-819075/2-A	94	125
	LCSD 460-819075/3-A	99	134 S1+

	QC LIMITS
NBZ = Nitrobenzene-d5 (Surr)	54-134
FBP = 2-Fluorobiphenyl	25-131

Column to be used to flag recovery values

FORM II 8270E SIM

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Edison Job No.: 480-193210-1

SDG No.:

Instrument ID: CBNAMS9 Start Date: 12/16/2021 09:44

Analysis Batch Number: 819147 End Date: 12/16/2021 19:58

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVIS 460-819147/2		12/16/2021 09:44	1	h269807.d	Rtxi-5Sil MS 0.25(mm)
MB 460-819075/1-A		12/16/2021 10:27	1	h269809.d	Rtxi-5Sil MS 0.25(mm)
LCS 460-819075/2-A		12/16/2021 10:48	1	h269810.d	Rtxi-5Sil MS 0.25(mm)
LCSD 460-819075/3-A		12/16/2021 11:09	1	h269811.d	Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 11:30	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 11:51	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 12:12	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 12:34	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 12:55	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 13:37	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 13:58	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 14:19	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 14:40	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 15:01	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 15:22	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 15:44	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 16:05	1		Rtxi-5Sil MS 0.25(mm)
480-193210-1	MW-40-120821	12/16/2021 16:26	1	h269826.d	Rtxi-5Sil MS 0.25(mm)
480-193210-2	MW-31S 120821	12/16/2021 16:47	1	h269827.d	Rtxi-5Sil MS 0.25(mm)
480-193210-3	MW-48S 120821	12/16/2021 17:08	1	h269828.d	Rtxi-5Sil MS 0.25(mm)
480-193210-4	MW-25S 120821	12/16/2021 17:29	1	h269829.d	Rtxi-5Sil MS 0.25(mm)
480-193210-5	MW-22S 120821	12/16/2021 17:51	1	h269830.d	Rtxi-5Sil MS 0.25(mm)
480-193210-6	EQUIP.BLANK-120821	12/16/2021 18:12	1	h269831.d	Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 18:33	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 18:54	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 19:16	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 19:37	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 19:58	1		Rtxi-5Sil MS 0.25(mm)

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Edison Job No.: 480-193210-1

SDG No.:

Lab Sample ID: CCVIS 460-819147/2 Calibration Date: 12/16/2021 09:44

Instrument ID: CBNAMS9 Calib Start Date: 12/03/2021 15:16

GC Column: Rtxi-5Sil MS ID: 0.25(mm) Calib End Date: 12/03/2021 17:02

Lab File ID: h269807.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Lin2		0.5143		195	200	-2.5	20.0
N-Nitrosodimethylamine	Ave	0.6104	0.6363		104	100	4.2	20.0
Bis(2-chloroethyl)ether	Ave	1.096	1.145	0.7000	20.9	20.0	4.4	20.0
Naphthalene	Ave	1.062	1.028	0.7000	19.4	20.0	-3.2	20.0
Acenaphthylene	Ave	2.235	2.325	0.9000	20.8	20.0	4.0	20.0
Acenaphthene	Ave	1.077	1.073	0.9000	19.9	20.0	-0.4	20.0
Fluorene	Ave	1.081	1.072	0.9000	19.8	20.0	-0.8	20.0
4,6-Dinitro-2-methylphenol	Ave	0.0709	0.0769	0.0100	217	200	8.4	20.0
Hexachlorobenzene	Ave	0.4250	0.4236	0.1000	19.9	20.0	-0.3	20.0
Pentachlorophenol	Lin1		0.1872	0.0500	101	100	0.9	20.0
Phenanthrene	Ave	1.831	1.588	0.7000	17.3	20.0	-13.3	20.0
Anthracene	Ave	1.406	1.555	0.7000	22.1	20.0	10.6	20.0
Fluoranthene	Ave	1.406	1.482	0.6000	21.1	20.0	5.4	20.0
Pyrene	Ave	1.585	1.586	0.6000	20.0	20.0	0.0	20.0
Benzo[a]anthracene	Ave	1.361	1.305	0.8000	19.2	20.0	-4.1	20.0
Chrysene	Ave	1.472	1.364	0.7000	18.5	20.0	-7.4	20.0
Benzo[b]fluoranthene	Ave	1.574	1.288		16.4	20.0	-18.2	20.0
Benzo[k]fluoranthene	Ave	1.388	1.378	0.7000	19.9	20.0	-0.7	20.0
Benzo[a]pyrene	Ave	1.206	1.073	0.7000	17.8	20.0	-11.0	20.0
Indeno[1,2,3-cd]pyrene	Ave	1.464	1.036	0.5000	14.2	20.0	-29.2*	20.0
Dibenz(a,h)anthracene	Ave	1.553	1.064	0.4000	13.7	20.0	-31.5*	20.0
Benzo[g,h,i]perylene	Ave	1.533	1.277	0.5000	16.7	20.0	-16.7	20.0
Nitrobenzene-d5 (Surr)	Ave	0.3494	0.3646		417	400	4.3	20.0
2-Fluorobiphenyl	Ave	1.424	2.037		572	400	43.0*	20.0
2,4,6-Tribromophenol	Ave	0.3457	0.3763		435	400	8.9	20.0
Terphenyl-d14	Ave	0.9675	1.106		457	400	14.3	20.0

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

pany
#224

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Pat McIntyre	Lab PM: Schove, John R	Carrier Tracking No(s):	COC No: 480-168295-34652.1
Client Contact: Mr. John Ruspantini	Phone: 518-929-7166	E-Mail: John.Schove@Eurofinset.com	State of Origin: NY	Page: Page 1 of 4
Company: New York State Electric & Gas	PWSID:			Job #:
Address: 18 Link Drive	Due Date Requested:			
City: Binghamton	TAT Requested (days): Standard,			
State, Zip: NY, 13902	Compliance Project: Δ Yes Δ No			
Phone: 585-484-6839(Tel)	PO #: 4505522361			
Email: jjruspantini@nyseg.com	WO #: 60615225			
Project Name: NYSEG - Former MGP Site - Ithaca, NY	Project #: 48022675			
Site:	SSOW#:			

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270D_SIM - SVOC SIM Analytes (low-level SVOC)	8260C - BTEX	8270D_LL - Low Level PAH Semivolatiles (low-level SVOC)	9012B - Cyanide, Total	300.0_28D - Sulfate	350.1 - Nitrogen, Ammonia	6010C - Metals - Iron	RSK_175 - Methane	Nitrate_Calc - Nitrate	2320B - Alkalinity	3500_FE_D - Iron, Ferrous	Total Number of containers	Special Instructions/Note:
				Preservation Code:	X	X	N	A	N	B	N	S	D	A	N	N	N	X	
MW-45S - 120921	12/9/21	0800	G	Water	N	N	2	1	2	1	1	1	1	3	1	1	1	17	
MW-47S - 120921	↓	0900	↓	Water	N	N	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	
MW-23S - 120921	↓	0910	↓	Water	N	N	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	
				Water															
				Water															
				Water															
				Water															
				Water															
				Water															
				Water															
				Water															

12/9/21

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

480-193309 Chain of Custody

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, (Other) (specify) Cat B.

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:		Method of Shipment:	
Relinquished by: Chris Fisher	Date/Time: 12/9/21 1335	Company: AECOM	Received by: Karl Fasler	Date/Time: 12/9/21 1335	Company: Eurofins
Relinquished by: Karl Fasler	Date/Time: 12/9/21 1700	Company: Eurofins	Received by: [signature]	Date/Time: 12/10/21 10:30	Company: TAB
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: #1 2.8, 3.2		

Ver: 06/08/2021

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Schove, John R	Carrier Tracking No(s):	COC No: 480-68509.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: John.Schove@Eurofinset.com	State of Origin: New York	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - New York		Job #: 480-193309-1
Address: 777 New Durham Road, ,	Due Date Requested: 12/23/2021			
City: Edison	TAT Requested (days):			
State, Zip: NJ, 08817				
Phone: 732-549-3900(Tel) 732-549-3679(Fax)	PO #:			
Email:	WO #:			
Project Name: NYSEG - Former MGP Site - Ithaca, NY	Project #: 48022675			
Site:	SSOW#:			

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA

M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270E_SIM/3510C_LVI SVOC SIM Analytes	Total Number of containers	Special Instructions/Note:
				Preservation Code:					
MW-45S-120921 (480-193309-1)	12/9/21	08:00 Eastern		Water			X	2	
MW-47S-120921 (480-193309-2)	12/9/21	09:00 Eastern		Water			X	2	
MW-23S-120921 (480-193309-3)	12/9/21	09:10 Eastern		Water			X	2	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:	Time:		Method of Shipment:	
Relinquished by: [signature]	Date/Time: 12/10/21 1700	Company: TA	Received by: [signature] / Via FedEx	Date/Time: 12/14/21 12:50	Company: ETA	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: IR#9 - 2.7=2.6/1.5=1.4			

Ver: 06/08/2021

Job Narrative
480-193309-1

Comments
No additional comments.

Receipt
The samples were received on 12/10/2021 10:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.8º C and 3.2º C.

GC/MS VOA
Method 8260C: The following sample was diluted due to the nature of the sample matrix: MW-23S-120921 (480-193309-3). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270D LL: Three surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: MW-45S-120921 (480-193309-1). These results have been reported and qualified.

Method 8270D LL: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-23S-120921 (480-193309-3). Elevated reporting limits (RLs) are provided.

Method 8270D LL: The following sample required a dilution due to the abundance of target analytes: MW-23S-120921 (480-193309-3). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method 8270D LL: The continuing calibration verification (CCV) analyzed in batch 480-608800 was outside the method criteria for the following analyte(s): Phenol-d5 (Surr). A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8270E SIM: The continuing calibration verification (CCV) analyzed in batch 460-819147 was outside the method criteria for the following analyte(s): Dibenz(a,h)anthracene and Indeno[1,2,3-cd]pyrene. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8270E SIM: The surrogate recovery for the blank associated with preparation batch 460-819075 and analytical batch 460-819147 was outside the upper control limits.

Method 8270E SIM: Two surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following samples contained an allowable number of surrogate compounds outside limits: MW-45S-120921 (480-193309-1) and MW-47S-120921 (480-193309-2). These results have been reported and qualified.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HPLC/IC
Method 300.0: The following samples were diluted due to the abundance of non-target analytes: MW-45S-120921 (480-193309-1), MW-47S-120921 (480-193309-2) and MW-23S-120921 (480-193309-3). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC VOA
Method RSK-175: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-45S-120921 (480-193309-1), MW-47S-120921 (480-193309-2) and MW-23S-120921 (480-193309-3). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method SM 3500 FE D: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following samples has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: MW-45S-120921 (480-193309-1), MW-47S-120921 (480-193309-2) and MW-23S-120921 (480-193309-3).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Edison Job No.: 480-193309-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): Rtxi-5Sil M ID: 0.25(mm)

Client Sample ID	Lab Sample ID	NBZ #	FBP #
MW-45S-120921	480-193309-1	96	146 S1+
MW-47S-120921	480-193309-2	92	145 S1+
MW-23S-120921	480-193309-3	83	129
	MB 460-819075/1-A	96	145 S1+
	LCS 460-819075/2-A	94	125
	LCSD 460-819075/3-A	99	134 S1+

	QC LIMITS
NBZ = Nitrobenzene-d5 (Surr)	54-134
FBP = 2-Fluorobiphenyl	25-131

Column to be used to flag recovery values

FORM II 8270E SIM

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Edison Job No.: 480-193309-1

SDG No.:

Instrument ID: CBNAMS9 Start Date: 12/16/2021 09:44

Analysis Batch Number: 819147 End Date: 12/16/2021 19:58

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVIS 460-819147/2		12/16/2021 09:44	1	h269807.d	Rtxi-5Sil MS 0.25(mm)
MB 460-819075/1-A		12/16/2021 10:27	1	h269809.d	Rtxi-5Sil MS 0.25(mm)
LCS 460-819075/2-A		12/16/2021 10:48	1	h269810.d	Rtxi-5Sil MS 0.25(mm)
LCSD 460-819075/3-A		12/16/2021 11:09	1	h269811.d	Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 11:30	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 11:51	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 12:12	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 12:34	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 12:55	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 13:37	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 13:58	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 14:19	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 14:40	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 15:01	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 15:22	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 15:44	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 16:05	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 16:26	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 16:47	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 17:08	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 17:29	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 17:51	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 18:12	1		Rtxi-5Sil MS 0.25(mm)
480-193309-1	MW-45S-120921	12/16/2021 18:33	1	h269832.d	Rtxi-5Sil MS 0.25(mm)
480-193309-2	MW-47S-120921	12/16/2021 18:54	1	h269833.d	Rtxi-5Sil MS 0.25(mm)
480-193309-3	MW-23S-120921	12/16/2021 19:16	1	h269834.d	Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 19:37	1		Rtxi-5Sil MS 0.25(mm)
ZZZZZ		12/16/2021 19:58	1		Rtxi-5Sil MS 0.25(mm)

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Edison Job No.: 480-193309-1

SDG No.:

Lab Sample ID: CCVIS 460-819147/2 Calibration Date: 12/16/2021 09:44

Instrument ID: CBNAMS9 Calib Start Date: 12/03/2021 15:16

GC Column: Rtxi-5Sil MS ID: 0.25(mm) Calib End Date: 12/03/2021 17:02

Lab File ID: h269807.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Lin2		0.5143		195	200	-2.5	20.0
N-Nitrosodimethylamine	Ave	0.6104	0.6363		104	100	4.2	20.0
Bis(2-chloroethyl)ether	Ave	1.096	1.145	0.7000	20.9	20.0	4.4	20.0
Naphthalene	Ave	1.062	1.028	0.7000	19.4	20.0	-3.2	20.0
Acenaphthylene	Ave	2.235	2.325	0.9000	20.8	20.0	4.0	20.0
Acenaphthene	Ave	1.077	1.073	0.9000	19.9	20.0	-0.4	20.0
Fluorene	Ave	1.081	1.072	0.9000	19.8	20.0	-0.8	20.0
4,6-Dinitro-2-methylphenol	Ave	0.0709	0.0769	0.0100	217	200	8.4	20.0
Hexachlorobenzene	Ave	0.4250	0.4236	0.1000	19.9	20.0	-0.3	20.0
Pentachlorophenol	Lin1		0.1872	0.0500	101	100	0.9	20.0
Phenanthrene	Ave	1.831	1.588	0.7000	17.3	20.0	-13.3	20.0
Anthracene	Ave	1.406	1.555	0.7000	22.1	20.0	10.6	20.0
Fluoranthene	Ave	1.406	1.482	0.6000	21.1	20.0	5.4	20.0
Pyrene	Ave	1.585	1.586	0.6000	20.0	20.0	0.0	20.0
Benzo[a]anthracene	Ave	1.361	1.305	0.8000	19.2	20.0	-4.1	20.0
Chrysene	Ave	1.472	1.364	0.7000	18.5	20.0	-7.4	20.0
Benzo[b]fluoranthene	Ave	1.574	1.288		16.4	20.0	-18.2	20.0
Benzo[k]fluoranthene	Ave	1.388	1.378	0.7000	19.9	20.0	-0.7	20.0
Benzo[a]pyrene	Ave	1.206	1.073	0.7000	17.8	20.0	-11.0	20.0
Indeno[1,2,3-cd]pyrene	Ave	1.464	1.036	0.5000	14.2	20.0	-29.2*	20.0
Dibenz(a,h)anthracene	Ave	1.553	1.064	0.4000	13.7	20.0	-31.5*	20.0
Benzo[g,h,i]perylene	Ave	1.533	1.277	0.5000	16.7	20.0	-16.7	20.0
Nitrobenzene-d5 (Surr)	Ave	0.3494	0.3646		417	400	4.3	20.0
2-Fluorobiphenyl	Ave	1.424	2.037		572	400	43.0*	20.0
2,4,6-Tribromophenol	Ave	0.3457	0.3763		435	400	8.9	20.0
Terphenyl-d14	Ave	0.9675	1.106		457	400	14.3	20.0

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-193309-1

SDG No.:

Lab File ID: W10018569.d Lab Sample ID: MB 480-608429/1-A

Matrix: Water Date Extracted: 12/10/2021 14:09

Instrument ID: HP5973W Date Analyzed: 12/13/2021 15:48

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 480-608429/2-A	W10018570.d	12/13/2021 16:16
MW-45S-120921	480-193309-1	W10018583.d	12/13/2021 22:12
MW-47S-120921	480-193309-2	W10018584.d	12/13/2021 22:40
MW-23S-120921	480-193309-3	W10018585.d	12/13/2021 23:08
MW-23S-120921 DL	480-193309-3 DL	W10018593.d	12/14/2021 15:21

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-193309-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 480-608429/1-A

Matrix: Water Lab File ID: W10018569.d

Analysis Method: 8270D LL Date Collected:

Extract. Method: 3510C Date Extracted: 12/10/2021 14:09

Sample wt/vol: 1000(mL) Date Analyzed: 12/13/2021 15:48

Con. Extract Vol.: 1(mL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 608593 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
83-32-9	Acenaphthene	ND		0.50	0.036
208-96-8	Acenaphthylene	ND		0.30	0.056
120-12-7	Anthracene	ND		0.50	0.034
218-01-9	Chrysene	ND		0.50	0.074
206-44-0	Fluoranthene	ND		0.50	0.080
86-73-7	Fluorene	ND		0.50	0.058
91-20-3	Naphthalene	ND		1.0	0.064
85-01-8	Phenanthrene	0.0774	J	0.20	0.062
129-00-0	Pyrene	ND		0.50	0.076

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	105		37-120
4165-60-0	Nitrobenzene-d5 (Surr)	83		26-120
1718-51-0	p-Terphenyl-d14	119		64-127

Kropovitch, Ann

From: Fischer, Brian <Brian.Fischer@Eurofinset.com>
Sent: Friday, February 04, 2022 8:56 AM
To: Kropovitch, Ann
Cc: Schove, John
Subject: [EXTERNAL] RE: Question 480-193156 Ithaca report

Hi Ann Marie,
There is a note in the job that we only received 8 of 17 bottles for the duplicate, MS, and MSD. Missing RSK vials and unpreserved plastics.

Thanks,

Brian Fischer

Phone: 716-504-9835

E-mail: Brian.Fischer@eurofinset.com

From: Kropovitch, Ann <ann.marie.kropovitch@aecom.com>
Sent: Thursday, February 3, 2022 5:51 PM
To: Fischer, Brian <Brian.Fischer@Eurofinset.com>
Subject: FW: Question 480-193156 Ithaca report

EXTERNAL EMAIL*

Hi Brian,

Can someone take a quick look at this and let me know. Wondering if it didn't get logged in for the same parameters or volume/bottle issue?

Thanks,
Ann Marie

From: Kropovitch, Ann
Sent: Thursday, February 03, 2022 5:48 PM
To: John Schove <John.Schove@Eurofinset.com>
Subject: Question 480-193156 Ithaca report

Hi John,

For the NYSEG Ithaca report 480-193156 it looks like the field duplicate 480-193156-4 (DUP-1-120721) didn't get analyzed for all the parameters. I seem to be missing methane and most of the wet chem. Do you know why it wasn't analyzed for the same parameters as the other samples? It looks like the COC was checked for all. Can you check into this and let me know.

Thanks,
Ann Marie

AECOM
1 John James Audubon Parkway, Suite 210
Amherst, NY

Appendix D - Mann Kendall Analysis

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	December 2021	Job ID:	60615225
Facility Name:	NYSEG - Ithaca Court Street	Constituent:	Acenaphthene
Conducted By:	Renata Porter	Concentration Units:	ug/L

Sampling Point ID:	MW-C11	MW-C12	MW-C16	MW-22S	MW-23S	MW-46S	MW-48S
Sampling Event	Sampling Date	ACENAPHTHENE CONCENTRATION (ug/L)						
1	6/7/2016	2.4	56.7	3.2	1.7	68.8	34.9	32.7
2	10/1/2020	3.6	81.0	23.0	2.4	98.0	43.0	41.0
3	3/3/2021	1.3	140.0	15.0	3.2	82.0	89.0	33.0
4	6/9/2021	1.5	92.0	25.0	0.5	58.0	75.0	36.0
5	9/8/2021	0.91	130	16.0	0.048	78.0	46.0	33.0
6	12/7/2021	1.2	100	16.0	0.52	50.0	85.0	43.0
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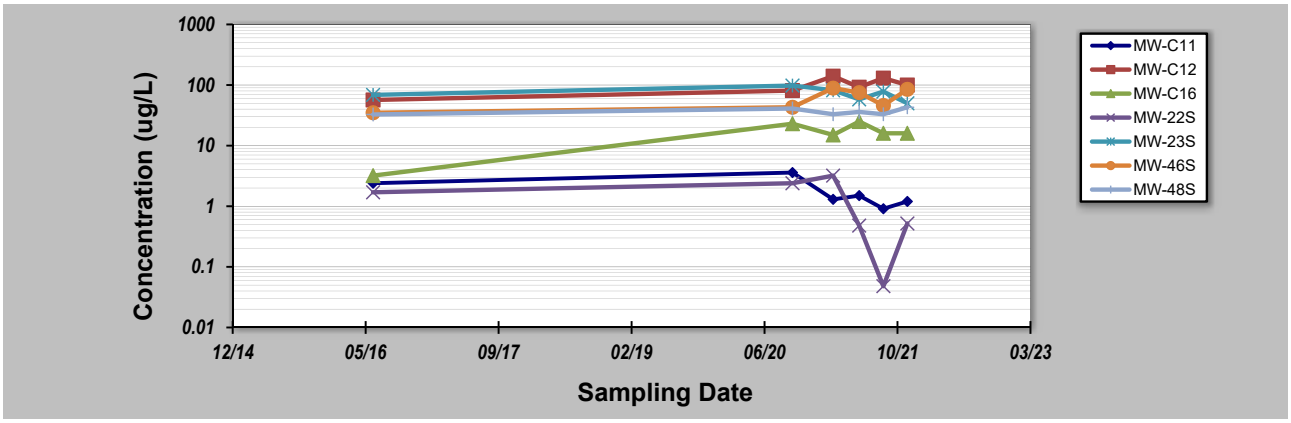
Coefficient of Variation:		0.55	0.31	0.47	0.90	0.24	0.38	0.12
Mann-Kendall Statistic (S):		-9	7	4	-5	-7	7	6
Confidence Factor:		93.2%	86.4%	70.3%	76.5%	86.4%	86.4%	81.5%
Concentration Trend:		Prob. Decreasing	No Trend	No Trend	Stable	Stable	No Trend	No Trend



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	December 2021	Job ID:	60615225
Facility Name:	NYSEG - Ithaca Court Street	Constituent:	Benzene
Conducted By:	Renata Porter	Concentration Units:	ug/L

Sampling Point ID:	MW-C11	MW-C12	MW-C16	MW-22S	MW-23S	MW-46S	MW-48S
Sampling Event	Sampling Date	BENZENE CONCENTRATION (ug/L)						
1	6/7/2016	20.9	61.6	1.0	1.0	5.0	358	174
2	10/1/2020	1.0	9.8	0.82	24.0	1.5	720	69.0
3	3/3/2021	4.0	16.0	4.0	1.0	2.0	1200	35.0
4	6/9/2021	2.0	11.0	2.0	1.0	1.1	1200	41.0
5	9/8/2021	2.0	9.5	2.0	1.0	1.4	380	36.0
6	12/7/2021	2.0	3.8	2.0	1.0	4.0	960	56.0
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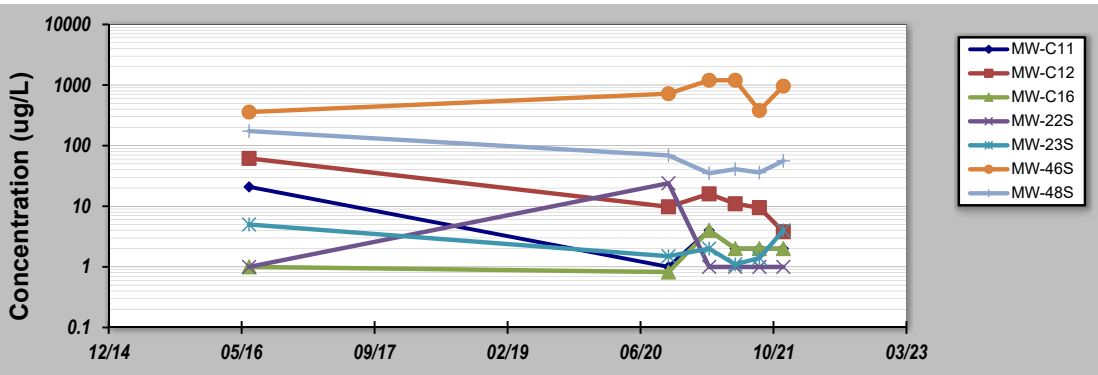
Coefficient of Variation:		1.45	1.15	0.57	1.94	0.64	0.47	0.78
Mann-Kendall Statistic (S):		-4	-11	4	-3	-3	4	-5
Confidence Factor:		70.3%	97.2%	70.3%	64.0%	64.0%	70.3%	76.5%
Concentration Trend:		No Trend	Decreasing	No Trend	No Trend	Stable	No Trend	Stable



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	December 2021	Job ID:	60615225
Facility Name:	NYSEG - Ithaca Court Street	Constituent:	Ethylbenzene
Conducted By:	Renata Porter	Concentration Units:	ug/L

Sampling Point ID:	MW-C11	MW-C12	MW-C16	MW-22S	MW-23S	MW-46S	MW-48S
Sampling Event	Sampling Date	ETHYLBENZENE CONCENTRATION (ug/L)						
1	6/7/2016	128	383	1.0	1.0	82.4	428	275
2	10/1/2020	1.0	1.0	2.0	11.0	65.0	790	26.0
3	3/3/2021	4.0	31.0	4.0	1.0	26.0	970	39.0
4	6/9/2021	2.0	10.0	2.0	1.0	27.0	1200	25.0
5	9/8/2021	2.0	11.0	2.0	1.0	26.0	400	23.0
6	12/7/2021	2.0	0.91	2.0	1.0	20.0	810	25.0
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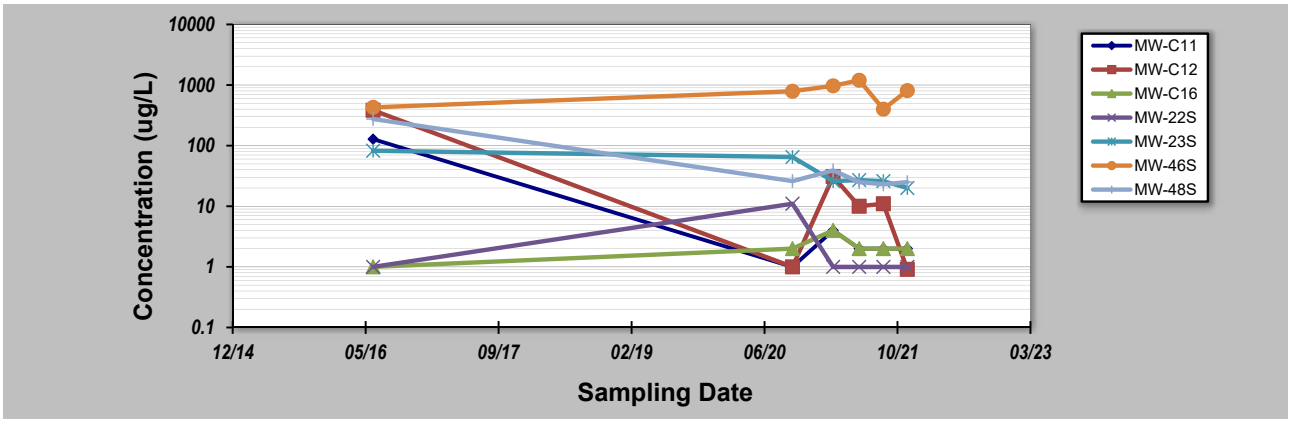
Coefficient of Variation:		2.22	2.09	0.45	1.53	0.63	0.40	1.47
Mann-Kendall Statistic (S):		-4	-7	3	-3	-12	3	-10
Confidence Factor:		70.3%	86.4%	64.0%	64.0%	98.2%	64.0%	95.2%
Concentration Trend:		No Trend	No Trend	No Trend	No Trend	Decreasing	No Trend	Decreasing



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	December 2021	Job ID:	60615225
Facility Name:	NYSEG - Ithaca Court Street	Constituent:	Naphthalene
Conducted By:	Renata Porter	Concentration Units:	ug/L

Sampling Point ID:	MW-C11	MW-C12	MW-C16	MW-22S	MW-23S	MW-46S	MW-48S
Sampling Event	Sampling Date	NAPHTHALENE CONCENTRATION (ug/L)						
1	6/7/2016	111	180	1.4	1.7	1.4	954	16.4
2	10/1/2020	4.8	0.19	19.0	0.8	340.0	1100	91.0
3	3/3/2021	20.0	0.35	20.0	1.0	230.0	2500	44.0
4	6/9/2021	20.0	20.0	20.0	0.068	14.0	2200	49.0
5	9/8/2021	1.0	20.0	5.0	0.097	5.2	730	10.0
6	12/7/2021	0.32	21	5.1	1.0	48	1700	140
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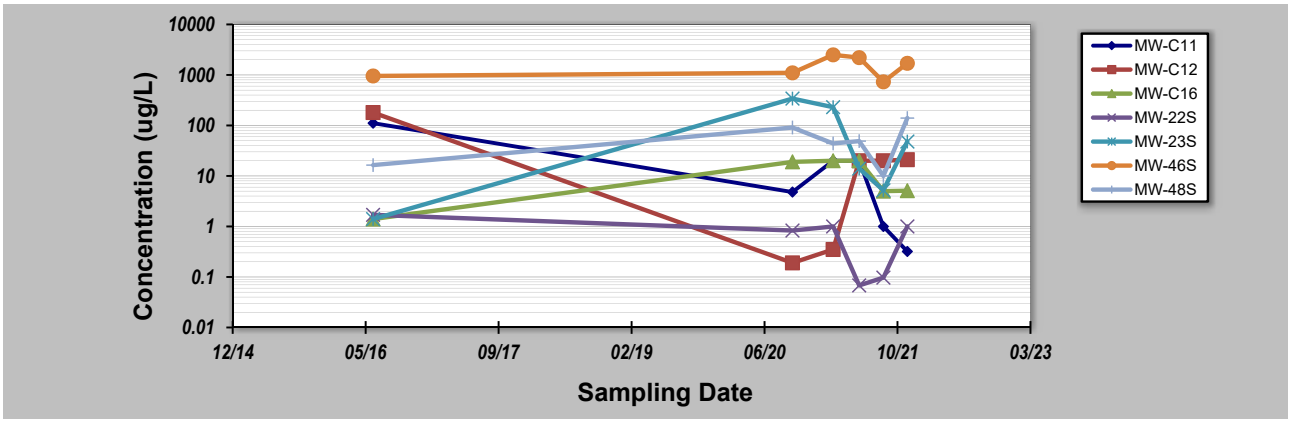
Coefficient of Variation:		1.62	1.72	0.75	0.79	1.35	0.47	0.84
Mann-Kendall Statistic (S):		-10	4	2	-4	-1	1	3
Confidence Factor:		95.2%	70.3%	57.0%	70.3%	50.0%	50.0%	64.0%
Concentration Trend:		Decreasing	No Trend	No Trend	Stable	No Trend	No Trend	No Trend



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	December 2021	Job ID:	60615225
Facility Name:	NYSEG - Ithaca Court Street	Constituent:	Toluene
Conducted By:	Renata Porter	Concentration Units:	ug/L

Sampling Point ID:	MW-C11	MW-C12	MW-C16	MW-22S	MW-23S	MW-46S	MW-48S
Sampling Event	Sampling Date	TOLUENE CONCENTRATION (ug/L)						
1	6/7/2016	11.1	1.0	1.0	1.0	5.0	29.5	5.0
2	10/1/2020	1.0	1.0	2.0	0.51	2.0	20.0	2.0
3	3/3/2021	4.0	1.0	4.0	1.0	2.0	32.0	2.0
4	6/9/2021	2.0	1.0	2.0	1.0	1.3	65.0	1.0
5	9/8/2021	2.0	1.0	2.0	1.0	2.0	20.0	1.0
6	12/7/2021	2.0	1.0	2.0	1.0	4.0	12.0	1.0
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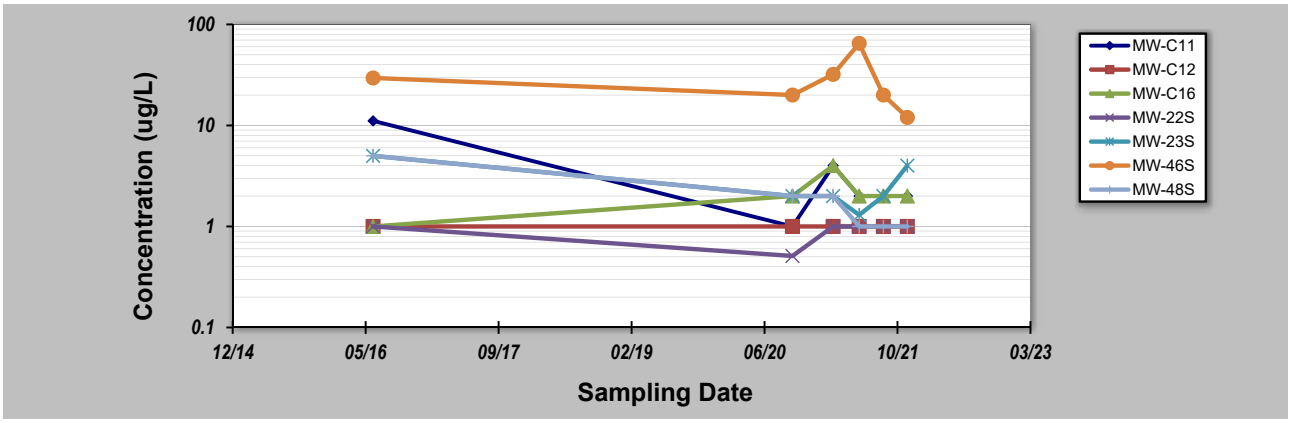
Coefficient of Variation:		1.02	0.00	0.45	0.22	0.53	0.63	0.77
Mann-Kendall Statistic (S):		-4	0	3	3	-2	-4	-11
Confidence Factor:		70.3%	39.3%	64.0%	64.0%	57.0%	70.3%	97.2%
Concentration Trend:		No Trend	Stable	No Trend	No Trend	Stable	Stable	Decreasing



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	December 2021	Job ID:	60615225
Facility Name:	NYSEG - Ithaca Court Street	Constituent:	Xylenes, Total
Conducted By:	Renata Porter	Concentration Units:	ug/L

Sampling Point ID:	MW-C11	MW-C12	MW-C16	MW-22S	MW-23S	MW-46S	MW-48S
Sampling Event	Sampling Date	XYLENES, TOTAL CONCENTRATION (ug/L)						
1	6/7/2016	51.0	16.8	3.0	3.0	58.9	307	31.7
2	10/1/2020	2.0	2.0	4.0	9.2	38.0	210	18.0
3	3/3/2021	8.0	1.9	8.0	2.0	16.0	440	18.0
4	6/9/2021	4.0	2.0	4.0	2.0	22.0	580	12.0
5	9/8/2021	4.0	2.0	4.0	2.0	20.0	140	16.0
6	12/7/2021	4.0	2.0	4.0	2.0	9.8	370	19.0
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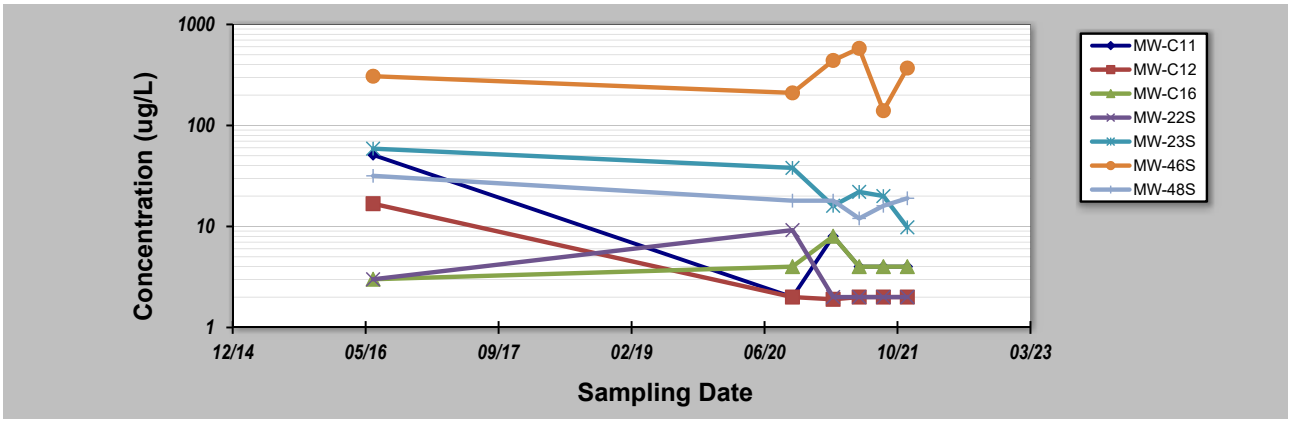
Coefficient of Variation:		1.57	1.36	0.39	0.86	0.66	0.47	0.35
Mann-Kendall Statistic (S):		-4	-3	3	-7	-11	1	-4
Confidence Factor:		70.3%	64.0%	64.0%	86.4%	97.2%	50.0%	70.3%
Concentration Trend:		No Trend	No Trend	No Trend	Stable	Decreasing	No Trend	Stable



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	December 2021	Job ID:	60615225
Facility Name:	NYSEG - Ithaca Court Street	Constituent:	Total Cyanide
Conducted By:	Renata Porter	Concentration Units:	mg/L

Sampling Point ID:	MW-C11	MW-C12	MW-C16	MW-22S	MW-23S	MW-46S	MW-48S
Sampling Event	Sampling Date	TOTAL CYANIDE CONCENTRATION (mg/L)						
1	6/7/2016	0.027	0.016	0.007	0.540	0.005	0.005	0.005
2	10/1/2020	0.010	0.016	0.009	0.076	0.010	0.010	0.010
3	3/3/2021	0.040	0.010	0.010	0.092	0.005	0.010	0.010
4	6/9/2021	0.017	0.017	0.0077	0.060	0.0072	0.012	0.010
5	9/8/2021	0.015	0.013	0.0056	0.47	0.0052	0.010	0.010
6	12/7/2021	0.024	0.014	0.011	0.38	0.01	0.0066	0.0054
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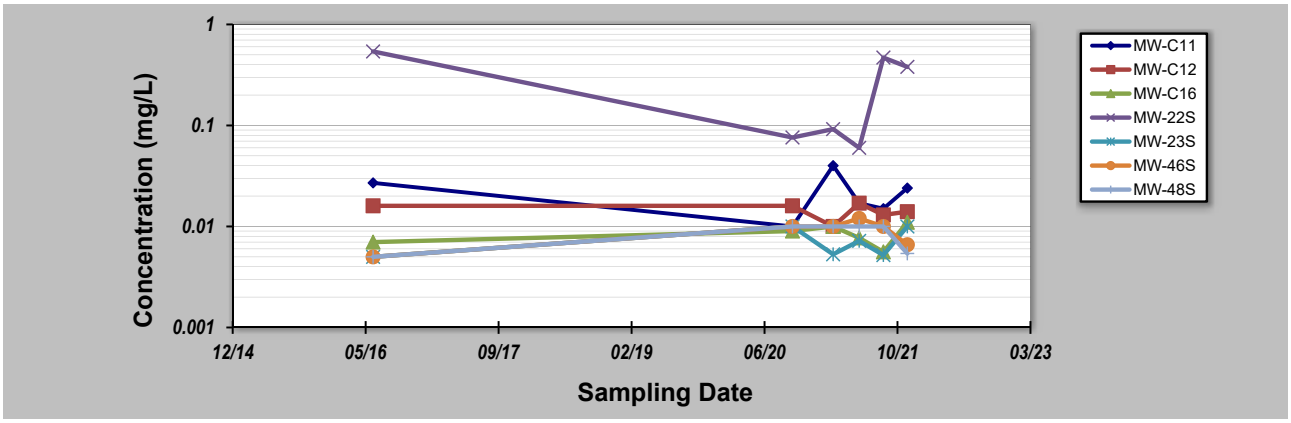
Coefficient of Variation:		0.48	0.18	0.24	0.81	0.33	0.29	0.30
Mann-Kendall Statistic (S):		-1	-2	3	-1	4	2	1
Confidence Factor:		50.0%	57.0%	64.0%	50.0%	70.3%	57.0%	50.0%
Concentration Trend:		Stable	Stable	No Trend	Stable	No Trend	No Trend	No Trend



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	December 2021	Job ID:	60615225
Facility Name:	NYSEG - Ithaca Court Street	Constituent:	Sulfate
Conducted By:	Renata Porter	Concentration Units:	mg/L

Sampling Point ID:	MW-C11	MW-C12	MW-C16	MW-22S	MW-23S	MW-46S	MW-48S
Sampling Event	Sampling Date	SULFATE CONCENTRATION (mg/L)						
1	10/1/2020	121	238	1320	10.0	4.1	12.7	40.0
2	3/3/2021	1880	214	1470	58.3	5.8	10.0	12.1
3	6/9/2021	3300	237	1650	46.7	7.5	10.0	40.0
4	9/8/2021	979	198	1240	22.6	6.4	10.0	20.0
5	12/7/2021	2910	171	1200	40.7	5.3	2.0	20.0
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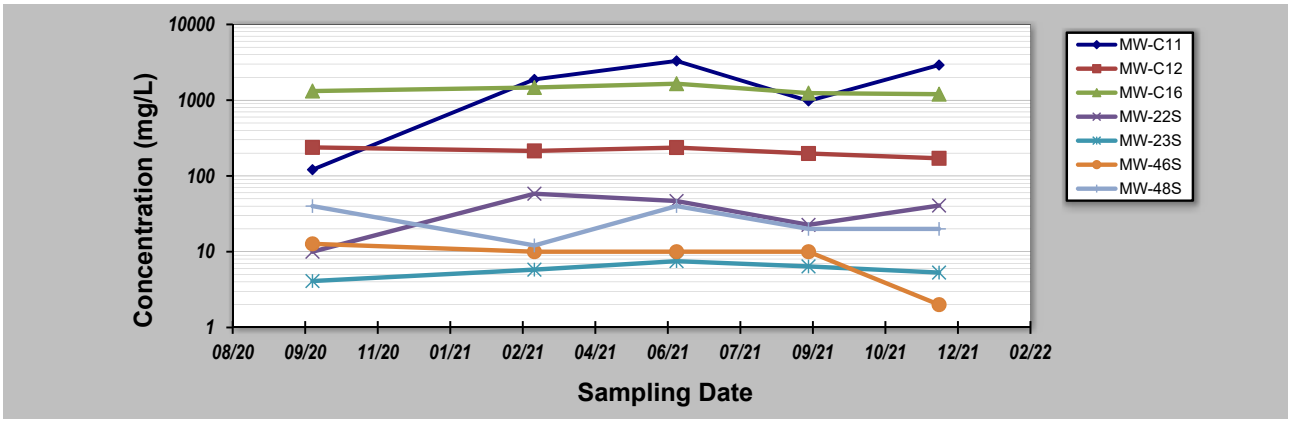
Coefficient of Variation:		0.72	0.13	0.13	0.54	0.22	0.45	0.48
Mann-Kendall Statistic (S):		4	-8	-4	0	2	-7	-2
Confidence Factor:		75.8%	95.8%	75.8%	40.8%	59.2%	92.1%	59.2%
Concentration Trend:		No Trend	Decreasing	Stable	Stable	No Trend	Prob. Decreasing	Stable



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	December 2021	Job ID:	60615225
Facility Name:	NYSEG - Ithaca Court Street	Constituent:	Methane
Conducted By:	Renata Porter	Concentration Units:	ug/L

Sampling Point ID:	MW-C11	MW-C12	MW-C16	MW-22S	MW-23S	MW-46S	MW-48S
Sampling Event	Sampling Date	METHANE CONCENTRATION (ug/L)						
1	10/1/2020	98.0	1000	380	7500	3100	7900	5000
2	3/3/2021	460	820	11.0	4.0	2900	13000	3100
3	6/9/2021	380	620	20.0	4.0	2500	11000	3000
4	9/8/2021	150	770	11.0	96.0	2000	12000	2800
5	12/7/2021	470	740	26.0	6.1	4600	17000	1900
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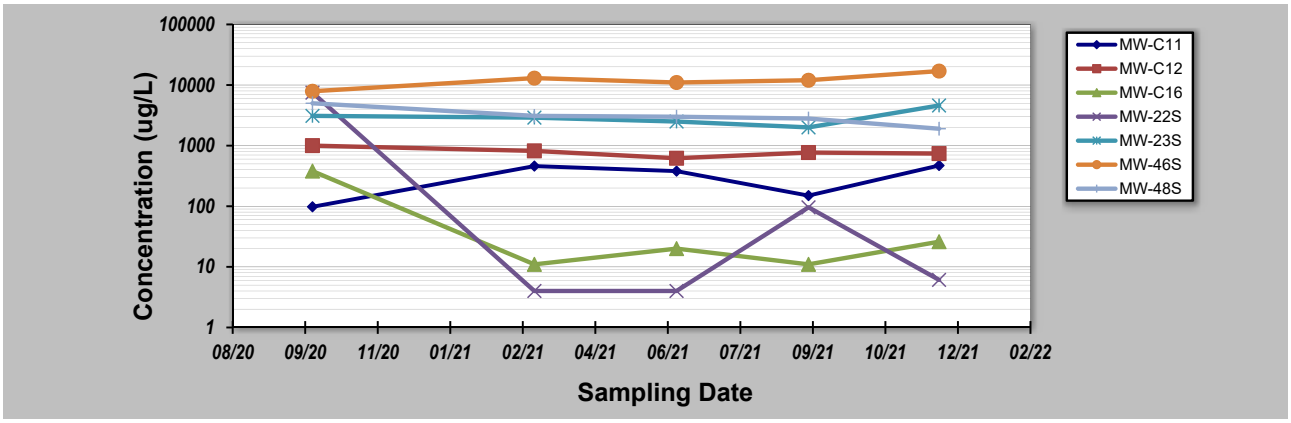
Coefficient of Variation:		0.56	0.18	1.81	2.20	0.32	0.27	0.36
Mann-Kendall Statistic (S):		4	-6	-1	-1	-2	6	-10
Confidence Factor:		75.8%	88.3%	50.0%	50.0%	59.2%	88.3%	99.2%
Concentration Trend:		No Trend	Stable	No Trend	No Trend	Stable	No Trend	Decreasing



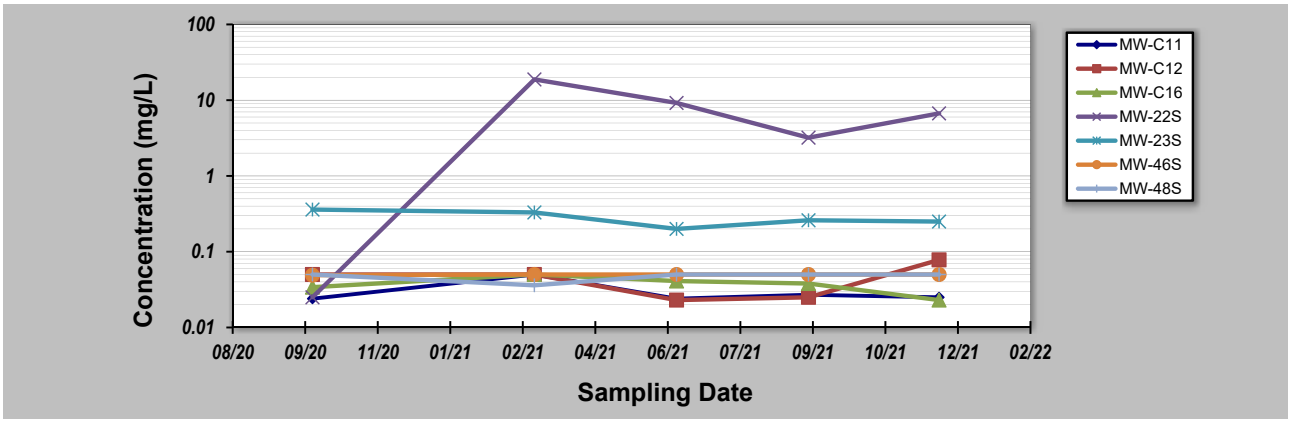
Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	December 2021	Job ID:	60615225
Facility Name:	NYSEG - Ithaca Court Street	Constituent:	Nitrate as N
Conducted By:	Renata Porter	Concentration Units:	mg/L

Sampling Point ID:	MW-C11	MW-C12	MW-C16	MW-22S	MW-23S	MW-46S	MW-48S
Sampling Event	Sampling Date	NITRATE AS N CONCENTRATION (mg/L)						
1	10/1/2020	0.024	0.050	0.0340	0.025	0.360	0.049	0.050
2	3/3/2021	0.050	0.050	0.0500	18.8	0.330	0.050	0.036
3	6/9/2021	0.024	0.023	0.0410	9.20	0.200	0.050	0.050
4	9/8/2021	0.027	0.025	0.0380	3.20	0.260	0.050	0.050
5	12/7/2021	0.025	0.078	0.0230	6.70	0.250	0.050	0.050
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.37	0.50	0.27	0.95	0.23	0.01	0.13
Mann-Kendall Statistic (S):		1	1	-4	0	-6	4	2
Confidence Factor:		50.0%	50.0%	75.8%	40.8%	88.3%	75.8%	59.2%
Concentration Trend:		No Trend	No Trend	Stable	Stable	Stable	No Trend	No Trend



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
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GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	December 2021	Job ID:	60615225
Facility Name:	NYSEG - Ithaca Court Street	Constituent:	Dissolved Oxygen
Conducted By:	Renata Porter	Concentration Units:	mg/L

Sampling Point ID:	MW-C11	MW-C12	MW-C16	MW-22S	MW-23S	MW-46S	MW-48S
Sampling Event	Sampling Date	DISSOLVED OXYGEN CONCENTRATION (mg/L)						
1	10/1/2020	0.20	0.21	0.40	0.39	1.08	0.32	0.38
2	3/3/2021	0.39	0.39	1.40	5.62	0.81	0.49	0.84
3	6/9/2021	0.11	0.12	0.35	3.05	0.66	0.18	7.70
4	9/8/2021	0.31	0.22	0.46	1.62	0.36	0.22	0.21
5	12/7/2021	0.19	0.16	0.24	0.79	0.38	1.12	0.16
6								
7								
8								
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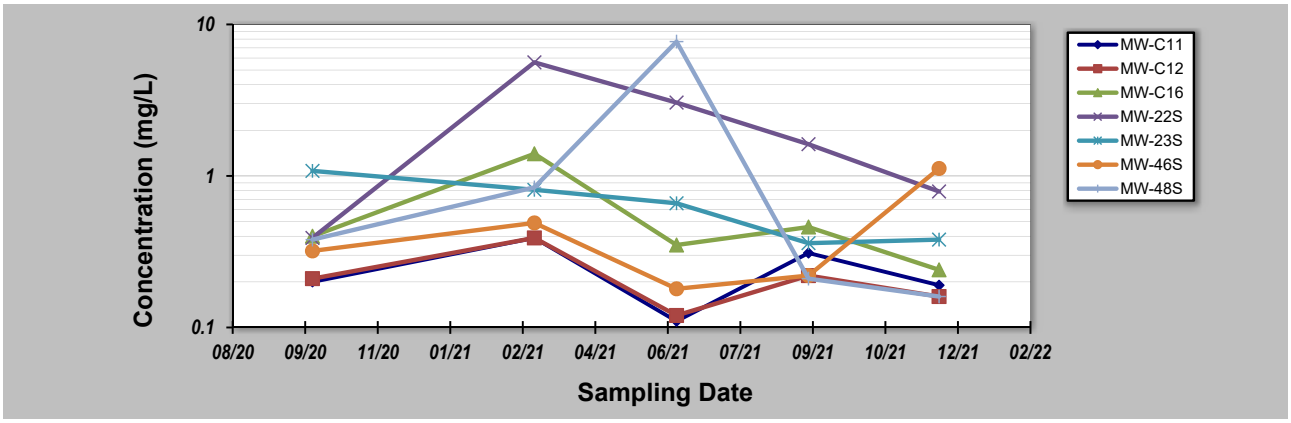
20								
Coefficient of Variation:		0.46	0.47	0.83	0.92	0.46	0.83	1.76
Mann-Kendall Statistic (S):		-2	-2	-4	-2	-8	2	-4
Confidence Factor:		59.2%	59.2%	75.8%	59.2%	95.8%	59.2%	75.8%
Concentration Trend:		Stable	Stable	Stable	Stable	Decreasing	No Trend	No Trend



Notes:

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