Semi-Annual Groundwater Monitoring Report
May 2024
Town and Country Dry Cleaners Site (828149)
Brighton, New York

Work Assignment No. D009806-34

Prepared for

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LIST OF ACRONYMS AND ABBREVIATIONS

µg/L	Microgram(s) per liter
AWQGV	Ambient Water Quality Guidance Values
AWQS	Ambient Water Quality Standards
COC	Contaminant of Concern
DCE	Dichloroethene
EA	EA Engineering and Geology, P.C.
EPA	U.S. Environmental Protection Agency
MACTEC	MACTEC Engineering and Consulting, P.C.
mg/L	Milligram(s) per liter
MNA	Monitored natural attenuation
ng/L	Nanogram(s) per liter
No.	Number
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
PCE	Tetrachloroethene
PFAS	Per- and polyfluoroalkyl substances
PFOS	Perfluorooctanesulfonic acid
PFOA	Perfluorooctanoic acid
SCO	Soil cleanup objective
Site	Town and Country Dry Cleaners Site
TCE	Trichloroethene
VOC	Volatile organic compound

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1. BACKGROUND

The New York State Department of Environmental Conservation (NYSDEC) tasked EA Engineering and Geology, P.C. (EA) under Work Assignment Number (No.) D009806-34 to perform site management activities, including annual groundwater sampling, at the Town and Country Dry Cleaners Site (NYSDEC Site No. 828149). This Groundwater Monitoring Report documents site management activities conducted in May 2024. Activities were completed in accordance with the applicable guidelines and requirements of NYSDEC.

The Site is located at 2308 and 2310 Monroe Avenue, in the town of Brighton, Monroe County, New York (**Figures 1 and 2**). The Site has operated as a dry cleaning and laundry facility from 1969 to 2021. The primary dry-cleaning solvent, tetrachloroethene (PCE), was used from 1969 to May 2011, when its use was reportedly discontinued. PCE was observed as high as 38,000 milligrams per kilogram. The contaminants of concern (COCs) include PCE, trichloroethene (TCE), cis-1,2-dichloroethene (DCE), and vinyl chloride, which are associated with the historic use as a dry cleaning facility.

1.1 SITE DESCRIPTION

The Site is located at 2308 and 2310 Monroe Avenue in the town of Brighton, Monroe County. The 0.39-acre site is located in a mixed commercial/residential area on the northeast side of the town. Most of the Site is occupied by the on-site building with a paved parking area on the north side. The on-site building is occupied by an inactive dry-cleaning business. The Site is bound by Monroe Avenue to the south, commercial properties to the west and east, and a residential neighborhood to the north (NYSDEC 2020).

1.2 PROJECT BACKGROUND

During Fall 2015, an Interim Remedial Measure (**Figure 2**) was conducted to remove the chlorinated volatile organic compound (CVOC) impacted soil immediately below and surrounding the catch basin, and to replace the unlined catch basin with a new sealed, concrete-lined catch basin (MACTEC 2016a). The catch basin was located to the northeast of the on-site building. Prior to backfilling the excavation, the bottom and sides were sprayed with a chemical oxidant, sodium permanganate, prior to backfilling.

NYSDEC issued a Record of Decision in March 2017 (NYSDEC 2017b), and the selected remedy included:

- Excavation and off-site disposal of all on-site soils which exceed the NYS SCOs for commercial use.

- Excavation and off-site disposal of all off-site soil which exceed NYS SCOs for residential use.

- In situ enhanced biodegradation to treat PCE and its associated degradation products in groundwater in an area to be determined during the remedial design.

In 2017, a Pre-Design Investigation was completed to delineate the extent of soil PCE contamination exceeding residential SCOs for the off-site property and commercial SCOs onsite. The sample results were used during the remedial design to calculate volume estimates for excavation and off-site disposal. Groundwater sample results indicated contaminant concentrations and extent were consistent with previous investigations and display limited potential for reductive dechlorination of PCE (MACTEC 2018).

In 2019, groundwater samples were collected to assess groundwater concentrations post soil removal Interim Remedial Measure (MACTEC 2019). Results indicated concentrations of PCE, TCE, cis-1,2-DCE, and vinyl chloride above Class GA NYS Ambient Water Quality Standards (AWQS) (NYSDEC 1993). Concentrations of PCE detected in groundwater in May 2019 were generally lower than historical values. The highest concentrations of PCE were observed adjacent to and downgradient of the IRM removal area at MW-1 (2,000 micrograms per liter [µg/L]), MW-2 (63,000 µg/L), MW-13 (2,400 µg/L) and DP-14 (8,100 µg/L). Two wells near the IRM removal area, MW-2B (20 µg/L) and DP-16 (300 µg/L) had concentrations of PCE slightly higher than historic values.

In 2021, NYSDEC performed a soil removal action to remove remaining on-site soil with COCs above commercial use SCOs and to remove off-site soil with COCs above residential SCOs. The soil remedial action removed the largest source of groundwater contamination. This soil removal action generally met the objectives, although some contamination exceeding SCOs for commercial use remain at depth on the north edge of the property where further excavation was not possible or practical because of excavation sloping requirements (MACTEC 2023).

The site is managed under a draft site management plan (SMP) with groundwater sampling conducted semi-annually for VOCs (EA 2024). The monitoring well network consists of 25 wells that are analyzed for VOCs and 4 of those wells are analyzed for geochemical parameters and dissolved gases to evaluate monitored natural attenuation (MNA) of the VOC plume.

1.3 OBJECTIVES

Monitoring well inspections and groundwater sampling were conducted in May 2024 to characterize the current groundwater plume to evaluate the contaminant trends of VOCs that have impacted the site groundwater.

1.4 REPORT ORGANIZATION

A summary of the May 2024 inspection and groundwater sampling activities is provided in Section 2. Analytical results are presented in Section 3. Conclusion and recommendations are discussed in Section 4.

The following are provided as appendices:

- **Appendix A—**Field Forms
- **Appendix B—**Daily Inspection Report
- **Appendix C—**Data Validation Report
- **Appendix D—**Trend Evaluation Graphs

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2. FIELD INVESTIGATION

Field activities included monitoring well assessments/inspections, groundwater gauging, and sampling of the existing monitoring well network (**Table 1**). Field forms from the inspection and sample collection events are provided in **Appendix A**. Groundwater monitoring was conducted according to the SMP (EA 2024).

2.1 MONITORING WELL ASSESSMENTS

During the sampling event, EA located 19 of the 25 on-site and off-site wells, 4 of which could not be sampled. Monitoring wells MW-02B, MW-3, DP-11, DP-12, DP-14, and GEMW-1 were not found. Monitoring well MW-3 was mistaken for injection well IW-1 that was installed during the Interim Remedial Measure. Any mention of MW-3 in the field forms and Daily Inspection Reports is actually IW-1. Four monitoring wells (MW-8, MW-10, DP-16, and MW-16B) were unable to be sampled for the following various reasons. Monitoring wells MW-8 and MW-10 were dry. The condition of DP-16 and MW-16B indicated that the wells were abandoned and sealed. In addition, MW-1 contained asphalt inside the well casing, and the polyvinyl chloride piping was open to the asphalt. Three wells (MW-1, MW-2, and IW-1) had damaged J-plugs replaced. In addition, DP-17, DP-18, and MW-19B require additional screws/bolts, which will be replaced at the next sampling event. The Daily Inspection Reports can be found in **Appendix B**.

2.2 GROUNDWATER GAUGING

Groundwater sampling during this event included per-and polyfluoroalkyl substances (PFAS) sampling at all wells; therefore, a site-wide gauging event was performed at the end of the sampling event to prevent PFAS contamination from non-dedicated equipment prior to sampling. All wells returned to static condition after sampling was complete and prior to the site-wide gauging event. Based on the May 2024 gauging data, both overburden and shallow bedrock groundwater at the Site flows in an east-southeast direction (**Figures 3 and 4**).

2.3 GROUNDWATER SAMPLING

VOC samples were collected from 16 wells, which includes IW-1 and 15 of the 25 wells listed in the SMP. As mentioned previously, monitoring well MW-3 was mistaken for injection well IW-1 after laboratory results were already obtained. The samples collected are summarized in **Table 2**. The 16 wells included 10 on-site and 6 off-site wells sampled using a peristaltic pump and the low flow sampling procedures. GEMW-2 was purged dry, and samples were collected upon recharge. MW-1 was purged dry, and samples were collected upon recharge with high turbidity throughout sampling. MW-08 and MW-10 were assumed dry, and samples were not collected. DP-10 and DP-18 were struggling to produce water from purge start, but samples were collected after 27 and 30 minutes of purging, respectively. The remaining wells in the network were sampled over the course of the 2-day event. All VOC samples were submitted for Environmental Protection Agency (EPA) Method 8260D.

Seven monitoring wells (DP-10, DP-15, DP-18, DP-20, IW-1, MW-1, and MW-13) were also sampled for PFAS via U.S. EPA Method 1633 and 1,4-Dioxane Method 8270 SIM.

Three wells (IW-1, MW-1, and MW-13) representing the source and downgradient areas were sampled for MNA parameters, including the following:

- Ethane, Ethene, Methane, and Carbon Dioxide by Method RSK-175
- Manganese and Iron by EPA Method 6010
- Chloride and Sulfide by SM4500
- Alkalinity by SM2320
- Sulfate and Nitrate by Method 300.0
- Total Organic Carbon by Method 415

2.4 LABORATORY ANALYSIS

Samples were submitted to SGS North America Inc of Dayton, New Jersey. Laboratory results were validated by Environmental Data Services, LTD in accordance with NYSDEC Division of Environmental Remediation −10 validation guidelines. Laboratory analytical results are available upon request. A Data Usability Summary Report is provided in **Appendix C**. Data were determined to be usable as qualified during data validation. No data were rejected, and analytical results for samples collected were considered valid and usable with qualifications as noted in the Data Usability Summary Report.

3. GROUNDWATER SAMPLING RESULTS

Results are discussed separately for each of the contaminants analyzed and presented in **Tables 3 through 6**. Analytical results for the May 2024 sampling effort are provided on **Figures 5 and 6**.

3.1 VOLATILE ORGANIC COMPOUND RESULTS

The following sections detail the PCE, trichloroethene (TCE), and *cis*-1,2-dichloroethene (DCE) results in onsite and offsite monitoring wells. Vinyl chloride was not detected in any of the monitoring well samples.

3.1.1 Volatile Organic Compound Results in Onsite Monitoring Wells

PCE was detected onsite in seven overburden wells and one bedrock well. All seven overburden wells had concentrations exceeding NYS AWQS of 5 µg/L. PCE in onsite bedrock well MW-13B was not detected above standards. Detected concentrations ranged from 66.8 µg/L (GEMW-2) to 1,730 µg/L (IW-1) in overburden wells. The four wells with the greatest concentrations of PCE were overburden wells DP-10, MW-1, MW-13, and IW-1, with concentrations of 887 µg/L, 907 µg/L, 1,160 µg/L, and 1,730 µg/L, respectively. The extent of PCE in groundwater is presented on **Figures 7 and 8**.

TCE concentrations were detected onsite in seven overburden wells and one bedrock well. Results from 6 overburden monitoring wells (DP-10, DP-15, IW-1, MW-01, MW-02, and MW-13) exceed AWQS of 5 µg/L. TCE in onsite bedrock well MW-13B was not detected above standards. Detected concentrations ranged from 0.82 µg/L (GEMW-2) to 89.5 µg/L (MW-13) in onsite overburden wells. The extent of TCE in groundwater is presented on **Figures 9 and 10**.

Cis-1,2-DCE was detected equal to or exceeding AWQS of 5 µg/L onsite in six overburden wells and one bedrock well. Concentrations ranged from 19 µg/L (MW-2) to 182 µg/L (IW-1) in onsite overburden wells. *Cis*-1,2-DCE was detected at a concentration of 5 µg/L in bedrock well MW-13B. The overburden wells containing *cis*-1,2-DCE concentrations above AWQS include DP-10, DP-15, MW-1, MW-2, IW-1, and MW-13. The extent of *cis*-1,2-DCE in groundwater is presented on **Figure 11**.

3.1.2 Volatile Organic Compound Results in Offsite Monitoring Wells

PCE was detected offsite in three overburden wells and two bedrock wells. Only overburden well DP-19 (41.8 µg/L) and bedrock well MW-19B (10.5 µg/L) had concentrations exceeding NYS AWQS of 5 µg/L. The extent of PCE in groundwater is presented on **Figures 7 and 8**.

TCE concentrations were detected offsite in two overburden wells and one bedrock well. Only overburden well DP-19 (10.6 µg/L) and bedrock well MW-19B (7.5 µg/L) had concentrations exceeding NYS AWQS of 5 µg/L. The extent of TCE in groundwater is presented on **Figures 9 and 10**.

Cis-1,2-DCE was detected offsite in two overburden wells and one bedrock wells. Only overburden well DP-19 (12.3 µg/L) and bedrock well MW-19B (16 µg/L) had concentrations exceeding NYS AWQS of 5 µg/L. The extent of *cis*-1,2-DCE in groundwater is presented on **Figure 11**.

The behavior of the plume appears to be stable, because the sentinel well concentrations remain the same during the last 3 sample events. The plume appears to be well bounded, except for the southern extent (i.e., south of DP-19 and MW-19B). A summary of sampling results for VOCs can be found on **Figure 4**. Historical analytical results for VOC concentrations are presented in **Tables 3 and 4**.

3.2 EMERGING CONTAMINANTS RESULTS

The groundwater samples for 7 overburden wells were analyzed for PFAS via EPA Method 1633 and 1,4-dioxane via EPA Method 8270 SIM. Results indicated concentrations of perfluorooctanesulfonic acid (PFOS), perfluorooctanoic acid (PFOA), and perfluorohexanesulfonic acid exceed the Ambient Water Quality Guidance Values (AWQGV). PFOS was detected in 4 wells (DP-10, DP-15, MW-1, and MW-13) above the AWQGV of 2.7 nanograms per liter (ng/L) with concentrations ranging from 11.2 to 86.5 ng/L. PFOA was detected in 3 wells (DP-10, DP-15, and MW-13) above the AWQGV of 6.7 ng/L with concentrations ranging from 12.7 to 28 ng/L. Results for 1,4-dioxane indicated not detected concentrations. Analytical results for PFAS from the 2024 sampling effort are presented in **Table 5** and on **Figure 6**. The May 2024 laboratory reports are presented in **Appendix C**.

3.3 MONITORED NATURAL ATTENUATION PARAMETERS

Groundwater samples from three wells (IW-1, MW-1, and MW-13) were analyzed for MNA parameters to evaluate the likelihood that anerobic biodegradation of chlorinated VOCs is occurring within groundwater. The analytical results of the MNA parameters are provided in **Table 6**. The EPA screening tool was used to complete preliminary screening for anaerobic degradation processes (**Table 7**). The screening tool uses field parameters and analytical data to determine the potential for biological reductive dechlorination at the Site. EA utilized the screening assessment to further evaluate current site conditions. Following is the scoring rationale:

- 0–5 indicates *inadequate* evidence for anaerobic biodegradation
- 6–14 indicates *limited* evidence for anaerobic biodegradation
- 15–20 indicates *adequate* evidence for anaerobic biodegradation
- >20 indicates *strong* evidence for anaerobic biodegradation.

The three wells sampled for natural attenuation parameters were used to determine the potential for reductive dechlorination at the Site. Scores range from 6 to 10 with 100 percent falling into 6 to 14 bracket. Based on the EPA screening tool, the evidence of anaerobic biodegradation is limited.

A closer inspection of the geochemistry data provides the limiting factors of the biodegradation process. Degradation of organic contaminants in groundwater is accomplished by biochemical oxidation reactions where one compound (i.e., electron donor) loses electrons and is oxidized and the other compound (i.e., electron acceptor) receives electrons and is reduces. The compound that is reduced (i.e., receives or gains electrons) is termed as a terminal electron acceptor. Oxygen, nitrate, ferric iron, and sulfate minerals in the aquifer can serve as the terminal electron acceptors, and the presence of these terminal electron acceptors provides a better understanding of the limiting factors of biodegradation. Dissolved oxygen is the most preferred terminal electron acceptor relative to others used by microorganisms for the biodegradation of the contaminants. Since dissolved oxygen is greater than 0.5 milligram per liter (mg/L) for 2 of the 3 wells (**Table 6**), the predominant microbial process is aerobic biodegradation. Nitrate is the next most preferred terminal electron acceptor after dissolved oxygen. The presence of nitrate less than 1 mg/L in 2 of the 3 wells indicates denitrification is occurring. Ferric iron is used as a terminal electron acceptor during anerobic biodegradation of organic carbon. The presence of Iron II greater than 1 mg/L in 1 of the 3 wells indicates Iron III reduction is occurring. Sulfate can be used as a terminal electron acceptor for anerobic degradation of organic contaminants. The presence of sulfate greater than 20 mg/L for 1 of 3 wells indicated sulfate reduction is occurring.

In summary, IW-1 and MW-13 exhibit signs of aerobic respiration and denitrification, while MW-1 exhibits signs of iron III and sulfate reduction. The limiting factors for biodegradation appear to be variable for these 3 wells.

3.4 TREND EVALUATION

The Mann-Kendall test was used to statistically evaluate trends for PCE, TCE, and *cis*-1,2-DCE concentrations over time in 13 representative wells (DP-10, DP-15, DP-18, DP-19, DP-21, GEMW-02, MW-01, MW-02, MW-03, MW-13, MW-13B, MW-19B, and MW-21B). The Mann-Kendall Test is a non-parametric test that can be used to define the stability of a solute plume (i.e., stable, diminishing, or expanding) based on concentration trends at individual wells. To evaluate plume stability, four or more independent sampling events are required.

The following steps comprise the Mann-Kendall Test:

- ***Step 1—Well Data***: Contaminant concentrations are entered for each sampling event. Only those events for which numeric or non-detect values are available are included. In the event of a non-detect value, one-half the laboratory reporting limit was used for previous sampling events.

- ***Step 2—Data Comparisons***: Compare data sequentially, comparing sample event 1 to sample events 2 through n, then sampling event 2 to sampling events 3 through n, etc. Each row is filled with a 1, 0, or -1 as follows:

  — Concentration of Event xi > Event 1: Enter +1
  — Concentration of Event xi = Event 1: Enter 0
  — Concentration of Event xi < Event 1: Enter -1

Where: n = total number of sampling events
x_i = value of given sample event, with I = 2 to n

All rows are completed in the same manner until all sampling events are included.

- ***Step 3— Mann-Kendall Statistic:*** Each row is then summed (e.g., 0+0+-1+-1+0 = -2) and the sum is recorded in the far right-hand column. The right-hand column is then summed to get the total sum. This total value represents the Mann-Kendall Statistic "S" for the data from an individual well.

- ***Step 4—Determine Probability p:*** A probability table in EPA (1998) was used to determine the probability p.

- ***Step 5—Hypothesis Testing:*** The null hypothesis (no trend) was tested against the alternative hypotheses; H1 (upward trend) and H2 (downward trend). A 95 percent confidence interval was used for hypothesis testing.

A Mann-Kendall trend analysis was performed for overburden and bedrock monitoring wells with data from the 7 most recent sampling events from July 2013 to May 2024. Contaminant concentrations were analyzed for representative wells screened in both aquifers. The following wells were selected because they have data available from the greatest number of sampling events:

- Overburden Wells – DP-10, DP-15, DP-18, DP-19, DP-21, GEMW-02, MW-01, MW-02, MW-03, and MW-13.

- Bedrock Wells – MW-13B, MW-19B, and MW-21B.

Over the 11-year span, the trend analysis indicated that most wells are either stable or decreasing in concentrations of PCE, TCE, and *cis*-1,2-DCE. Overburden well DP-19 indicated an increasing trend for PCE, TCE, and *cis*-1,2-DCE. Bedrock well MW-13B indicated a probably increasing trend for TCE and an increasing trend for *cis*-1,2-DCE. Several wells showed no trend for any of the analytes. Results of the Mann-Kendall Analyses are presented in **Appendix D** and are summarized in the following sections. The Mann-Kendall Analysis utilized historical data that are presented in **Tables 3, 4, and 6**.

3.4.1 PCE Concentration Trends

In the overburden aquifer, PCE concentrations are decreasing in DP-15, GEMW-02, MW-01, MW-02, MW-03, and MW-13; increasing in DP-19; and stable in DP-21. Other select wells (DP-10 and DP-18) do not show a concentration trend.

In the bedrock aquifer, PCE concentration trends are stable in MW-13B and MW-21B. No trend was identified in MW-19B.

3.4.2 TCE Concentration Trends

In the overburden aquifer, TCE concentrations are decreasing in DP-15, GEMW-02, MW-01, MW-02, MW-03, and MW-13; increasing in DP-19; and stable in DP-10. Monitoring well DP-18 did not show a concentration trend for TCE.

TCE concentration in the bedrock aquifer showed a probably increasing trend found in MW-13B, and the other select wells (MW-19B and MW-21B) do not show a concentration trend.

3.4.3 *Cis*-1,2-DCE Concentration Trends

In the overburden aquifer, *cis*-1,2-DCE concentrations are decreasing in GEMW-02, MW-01, MW-02, and MW-03; probably decreasing in DP-15; increasing in DP-19; and stable in DP-18 and MW-13. Monitoring well DP-10 did not show a concentration trend for *cis*-1,2-DCE.

Concentration trends for *cis*-1,2-DCE show an increasing trend in MW-13B. No trend was identified in MW-19B and MW-21B.

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4. CONCLUSIONS AND RECOMMENDATIONS

The extent of the CVOC plume appears stable and well bounded around the source area. The Mann-Kendall trend analysis for the last 11 years (2013 to 2024) indicates that most wells are either stable or slowly decreasing in concentrations of PCE, TCE, and *cis*-1,2-DCE. Monitoring well DP-19 has a slight increasing trend from 2013 to 2024 for PCE (19 to 41.8 µg/L), TCE (4.9 to 10.6 µg/L), and *cis*-1,2-DCE (6.7 to 12.3 µg/L). In addition, MW-13B has a probably increasing trend for TCE and an increasing trend of *cis*-1,2-DCE; however, those concentrations at MW-13B did not exceed the Class GA AWQS in 2024. Although concentrations are above Class GA AWQS, the observed CVOCs are orders of magnitude below the concentrations from before the IRM and soil excavation remedial actions. It is also recommended that the site monitoring program continue at the bi-annual sampling frequency for the calendar year 2024 with the next event set to occur in the fourth quarter of 2024. For the emerging contaminant samples, it is recommended to continue monitoring the wells with concentrations of PFAS that exceed Class GA AWQGV. Those wells include DP-10, DP-15, MW-1, MW-3, and MW-13.

Although PCE daughter products TCE and *cis*-1,2-DCE are persistent in groundwater, the elevated concentrations of PCE suggest a slow process of degradation. The MNA parameters were evaluated with EPA's Biochlor Model, and the results indicated limited evidence for anerobic biodegradation. The limited biodegradation could be the result of several factors including lack of dechlorinating microbes and other factors that might inhibit the microbial growth such as a lack of terminal electron acceptors. It is recommended to implement the selected remedy of in situ enhanced biodegradation from the Record of Decision (NYSDEC 2017b) that was not previously implemented during the remedial action (MACTEC 2023). Since there is limited evidence for anerobic biodegradation, the biological breakdown of contaminants will be enhanced by the placement of a nutrient-amended carbohydrate substrate, which is expected to create sulfate-reducing and/or methanogenic conditions throughout the target treatment zone. These conditions would thus facilitate complete breakdown of chlorinated solvents.

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Tables

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Table 1. Monitoring Well Details and Gauging Data

Location ID	Targeted Unit	Northing	Easting	Ground Elevation (ft amsl)	TOC Elevation (ft amsl)	Historic Length (ft bgs)	Screen Length (ft)	DTW[1] (ft btoc)	Groundwater Elevation (ft amsl)	DTB[1] (ft btoc)	DTB (ft amsl)	Top of Screen (ft amsl)
DP-10	Overbuden	1138737.73	1422305.44	477.84	477.53	9.8	6.0	4.30	473.23	9.27	468.78	474.10
DP-11	Overbuden	1138734.19	1422359.91	478.37	478.05	12.8	8.0	--	--	--	--	473.70
DP-12	Overbuden	1138700.85	1422352.85	477.42	477.09	20.8	10.0	--	--	--	--	466.70
DP-14	Overbuden	1138717.51	1422261.09	477.14	476.82	NA	5.0	--	--	--	--	--
DP-15	Overbuden	1138744.94	1422284.51	477.25	476.98	10.1	5.0	3.50	473.48	9.39	469.38	476.98
DP-16	Overbuden	1138766.08	1422168.18	479.06	478.77	10.4	5.0	--	--	--	--	473.8
DP-17	Overbuden	1138699.91	1422092.66	479.89	479.50	16.9	10.0	6.82	472.68	16.19	463.31	473.1
DP-18	Overbuden	1138578.39	1422161.46	478.82	478.29	10.9	6.0	5.96	472.33	10.31	467.98	474.0
DP-19	Overbuden	1138532.70	1422378.17	475.49	475.15	13.3	10.0	4.55	470.6	12.96	462.19	472.3
DP-20	Overbuden	1138477.85	1422664.27	474.21	473.80	15.1	10.0	10.47	463.33	14.71	459.09	469.2
DP-21	Overbuden	1138650.76	1422923.25	468.55	468.15	10.8	8.0	6.91	461.24	10.38	457.77	465.9
GEMW-1	Overbuden	1138768.73	1422148.96	479.70	479.57	15.0	10.0	--	--	--	--	--
GEMW-2	Overbuden	1138751.76	1422130.52	480.36	480.25	15.0	10.0	8.00	472.25	14.59	465.66	470.7
MW-1	Overbuden	1138762.61	1422240.53	477.40	477.05	NA	5.0	2.85	474.2	10.88	466.17	471.2
MW-2	Overbuden	1138726.34	1422216.42	477.13	476.87	NA	5.0	4.41	472.46	22.55	454.32	459.3
MW-2B	Bedrock	1138727.39	1422222.76	477.06	476.71	23.0	5.0	--	--	--	--	458.0
MW-3	Overbuden	1138741.96	1422179.86	478.37	478.00	NA	5.0	3.33	474.67	7.62	470.38	475.4
MW-8	Overbuden	1138868.41	1422501.18	473.10	473.04	NA	5.0	9.14	463.90	9.28	--	--
MW-10	Overbuden	1138876.06	1422009.43	482.11	481.70	NA	5.0	6.97	474.73	9.57	472.13	--
MW-13	Overbuden	1138720.92	1422285.49	477.39	480.36	10.0	5.0	6.79	473.57	12.93	467.43	472.4
MW-13B	Bedrock	1138716.73	1422294.21	477.80	480.37	23.2	5.0	10.00	470.37	21.57	458.80	459.8
MW-16B	Bedrock	1138763.12	1422164.89	478.95	478.58	20.5	5.0	--	--	--	--	463.5
MW-17B	Bedrock	1138696.71	1422088.47	479.75	479.35	27.8	5.0	7.23	472.12	27.33	452.02	457.0
MW-19B	Bedrock	1138531.53	1422373.04	475.69	475.35	21.5	5.0	4.87	470.48	21.08	454.27	459.2
MW-21B	Bedrock	1138654.47	1422923.58	468.55	468.15	20.0	5.0	7.36	460.79	19.52	448.63	453.7

Notes:

1. DTW and DTB was measured on 8 May 2024.

-- = Well not measured during monitoring event
amsl = Above mean sea level
btoc = Below top of casing
DTB = Depth to bottom
DTW = Depth to water
ft = Foot (feet)
ID = Identification
NA = Not applicable
TOC = Top of casing

Horizontal Coordinates reference to the New York State Plane Coordinate System, West Zone (3103) based on NAD 83 (2011).
Vertical Datum is NAVD88. Survey conducted by Prudent Engineering, dated 8/12/2013.

Table 2. Summary Of Samples Collected (May 2024)

Well ID	Sample ID	Sample Date	Sample Time	MS/MSD	Location
DP-10	828149-DP-10	5/7/2024	09:49	N	On-site
DP-15	828149-DP-15	5/7/2024	10:20	N	On-site
DP-17	828149-DP-17	5/7/2024	11:51	N	On-site
DP-18	828149-DP-18	5/7/2024	09:31	N	Off-site
DP-19	828149-DP-19	5/7/2024	12:59	N	Off-site
DP-20	828149-DP-20	5/7/2024	10:52	**Y**	Off-site
DP-21	828149-DP-21	5/7/2024	11:45	N	Off-site
GEMW-2	828149-GEMW-2	5/7/2024	14:57	N	On-site
IW-1*	828149-MW-3	5/8/2024	09:16	N	On-site
MW-1	828149-MW-1	5/8/2024	10:15	N	On-site
MW-2	828149-MW-2	5/7/2024	15:28	N	On-site
MW-13	828149-MW-13	5/8/2024	09:21	N	On-site
MW-13B	828149-MW-13B	5/8/2024	11:01	N	On-site
MW-17B	828149-MW-17B	5/7/2024	14:43	N	Off-site
MW-19B	828149-MW-19B	5/7/2024	15:06	N	Off-site
MW-21B	828149-MW-21B	5/7/2024	12:21	N	Off-site
QC Samples					
Well ID	**Sample ID**	**Sample Date**	**Sample Time**	**QC Type**	
IW-1	828149-DUP-20240508	5/8/2024	---	Field Duplicate	
NA	828149-FB-20240507.	5/7/2024	15:35	Field Blank	
NA	828149-EB-20240507	5/7/2024	15:38	Equipment Blank	
NA	828149-EB-2-20240507	5/8/2024	16:02	Equipment Blank	

Notes:

ID = Identification

MS = Matrix spike

MSD = Matrix spike duplicate

NA= Not applicable/available

QC= Quality control

* Monitoring well MW-3 was mistaken for injection well IW-1.

Table 3. Historical Bedrock VOC Analytical Results

		Location ID	MW-2B				
		Sample Name	828149-MW2B20	828149-MW2B20D	828149-MW02B020	828149-MW02B020	828149-MW02B020
		Parent Sample ID		828149-MW2B20			
		Sample Date	7/24/2013	7/24/2013	4/26/2016	10/12/2017	5/7/2019
Analyte	**NYSDEC AWQS[1]**	**Unit**	**Method SW8260**				
Acetone	50	µg/L	< 10 U	< 10 UJ	< 5 U	< 5.0 U	< 5 U
Carbon Disulfide	60	µg/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 U
Chloroform	7	µg/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 U
Cis -1,2-Dichloroethylene	5	µg/L	3.4	3	3.9	4.9	**7.4**
Tetrachloroethylene (PCE)	5	µg/L	**16**	**16**	**12**	**8.5**	**20**
Trichloroethylene (TCE)	5	µg/L	3.2	3	3.5	3.5	**6**
Vinyl Chloride	2	µg/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 U

Notes:

1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).

This table shows detected analytes only.

µg/L = Microgram(s) per liter

AWQS = Ambient water quality standards

EPA = U.S. Environmental Protection Agency

ID = Identification

J = Concentration is estimated.

NA = Not analyzed

NSL = No screening level available.

NYSCRR = New York Codes, Rules and Regulations

NYSDEC = New York State Department of Environmental Conservation

TOGS = Technical and Operational Guidance Series

U = Analyte not detected.

VOC = Volatile organic compounds

Bold and Shaded values indicate that the analyte meets or exceeds NYSDEC AWQS.

Table 3. Historical Bedrock VOC Analytical Results

		Location ID	MW-13B						
		Sample Name	828149-MW13B20	828149-MW013B023	828149-MW013B023	828149-MW013B023	828149-MW-13B	828149-MW-13B-20231127	828149-MW-13B-20240508
		Parent Sample ID							
		Sample Date	7/24/2013	4/28/2016	10/11/2017	5/7/2019	6/5/2023	11/27/2023	5/8/2024
Analyte	**NYSDEC AWQS[1]**	**Unit**	**Method SW8260**						
Acetone	50	µg/L	< 10 U	< 5 U	< 5.0 U	< 5 U	< 50 U	< 3.1 U	< 3.1 U
Carbon Disulfide	60	µg/L	0.34 J	< 1 U	< 1.0 U	4.1	< 5 U	< 1.8 U	< 1.8 U
Chloroform	7	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	< 2 U	< 0.50 U	< 0.50 U
Cis -1,2-Dichloroethylene	5	µg/L	0.51 J	0.93 J	2	2	**7**	4.6	**5**
Tetrachloroethylene (PCE)	5	µg/L	0.65 J	3.6	3.3	1.6	1	3	0.71 J
Trichloroethylene (TCE)	5	µg/L	0.38 J	0.73 J	1.3	1.2	1.9	2.3	1.2
Vinyl Chloride	2	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	< 2 U	< 0.52 U	< 0.52 U

Notes:

1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).

This table shows detected analytes only.

µg/L = Microgram(s) per liter

AWQS = Ambient water quality standards

EPA = U.S. Environmental Protection Agency

ID = Identification

J = Concentration is estimated.

NA = Not analyzed

NSL = No screening level available.

NYSCRR = New York Codes, Rules and Regulations

NYSDEC = New York State Department of Environmental Conservation

TOGS = Technical and Operational Guidance Series

U = Analyte not detected.

VOC = Volatile organic compounds

Bold and Shaded values indicate that the analyte meets or exceeds NYSDEC AWQS.

Table 3. Historical Bedrock VOC Analytical Results

		Location ID	MW-16B			
		Sample Name	828149-MW16B17	828149-MW016B023	828149-MW016B023	828149-MW16B023
		Parent Sample ID				
		Sample Date	7/22/2013	4/27/2016	10/10/2017	5/6/2019
Analyte	**NYSDEC AWQS[1]**	**Unit**	**Method SW8260**			
Acetone	50	µg/L	< 10 U	< 5 U	< 5.0 U	< 5 U
Carbon Disulfide	60	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U
Chloroform	7	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U
Cis -1,2-Dichloroethylene	5	µg/L	0.45 J	0.75 J	0.42 J	0.95 J
Tetrachloroethylene (PCE)	5	µg/L	0.43 J	0.63 J	0.39 J	0.95 J
Trichloroethylene (TCE)	5	µg/L	< 1 U	0.38 J	< 1.0 U	0.45 J
Vinyl Chloride	2	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U

Notes:

1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).

This table shows detected analytes only.

µg/L = Microgram(s) per liter

AWQS = Ambient water quality standards

EPA = U.S. Environmental Protection Agency

ID = Identification

J = Concentration is estimated.

NA = Not analyzed

NSL = No screening level available.

NYSCRR = New York Codes, Rules and Regulations

NYSDEC = New York State Department of Environmental Conservation

TOGS = Technical and Operational Guidance Series

U = Analyte not detected.

VOC = Volatile organic compounds

Bold and Shaded values indicate that the analyte meets or exceeds NYSDEC AWQS.

Table 3. Historical Bedrock VOC Analytical Results

		Location ID	MW-17B						
		Sample Name	828149-MW17B25	828149-MW017B018(	828149-MW017B018	828149-MW017B018(	828149-MW-17B	828149-MW-17B-20231127	828149-MW-17B-20240507
		Parent Sample ID							
		Sample Date	7/23/2013	4/26/2016	10/11/2017	5/8/2019	6/5/2023	11/27/2023	5/7/2024
Analyte	**NYSDEC AWQS[1]**	**Unit**	**Method SW8260**						
Acetone	50	µg/L	< 10 U	< 5 U	< 5.0 U	< 5 U	< 50 U	< 3.1 U	< 3.1 U
Carbon Disulfide	60	µg/L	< 1 U	< 1 U	< 1.0 U	4.5	< 5 U	< 1.8 U	< 1.8 U
Chloroform	7	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	< 2 U	< 0.50 U	< 0.50 U
Cis -1,2-Dichloroethylene	5	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.51 U	< 0.51 U
Tetrachloroethylene (PCE)	5	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.56 U	< 0.56 U
Trichloroethylene (TCE)	5	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.53 U	< 0.53 U
Vinyl Chloride	2	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	< 2 U	< 0.52 U	< 0.52 U

Notes:

1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).

This table shows detected analytes only.

µg/L = Microgram(s) per liter

AWQS = Ambient water quality standards

EPA = U.S. Environmental Protection Agency

ID = Identification

J = Concentration is estimated.

NA = Not analyzed

NSL = No screening level available.

NYSCRR = New York Codes, Rules and Regulations

NYSDEC = New York State Department of Environmental Conservation

TOGS = Technical and Operational Guidance Series

U = Analyte not detected.

VOC = Volatile organic compounds

Bold and Shaded values indicate that the analyte meets or exceeds NYSDEC AWQS.

Table 3. Historical Bedrock VOC Analytical Results

		Location ID	MW-19B						
		Sample Name	828149-MW19B17	828149-MW019B025	828149-MW019B025	828149-MW019B025	828149-MW-19B	828149-MW-19B-20231128	828149-MW-19B-20240507
		Parent Sample ID							
		Sample Date	7/23/2013	4/27/2016	10/11/2017	5/8/2019	6/6/2023	11/28/2023	5/7/2024
Analyte	**NYSDEC AWQS[1]**	**Unit**	**Method SW8260**						
Acetone	50	µg/L	< 10 U	< 5 U	< 5.0 U	< 5 UJ	< 50 U	< 3.1 U	< 3.1 U
Carbon Disulfide	60	µg/L	< 1 U	< 1 UJ	< 1.0 U	< 1 UJ	< 5 U	< 1.8 U	< 1.8 U
Chloroform	7	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 UJ	0.63 J	< 0.50 U	< 0.50 U
Cis -1,2-Dichloroethylene	5	µg/L	**7.7**	**9.8**	**12**	**9.4 J**	< 1 U	**19.3**	**16**
Tetrachloroethylene (PCE)	5	µg/L	4.2	**10**	**13**	**13 J**	4.3	**12.9**	**10.5**
Trichloroethylene (TCE)	5	µg/L	4.4	**6.2**	**8.4**	**6.9 J**	< 1 U	**9.4**	**7.5**
Vinyl Chloride	2	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 UJ	< 2 U	0.82 J	< 0.52 U

Notes:

1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).

This table shows detected analytes only.

µg/L = Microgram(s) per liter

AWQS = Ambient water quality standards

EPA = U.S. Environmental Protection Agency

ID = Identification

J = Concentration is estimated.

NA = Not analyzed

NSL = No screening level available.

NYSCRR = New York Codes, Rules and Regulations

NYSDEC = New York State Department of Environmental Conservation

TOGS = Technical and Operational Guidance Series

U = Analyte not detected.

VOC = Volatile organic compounds

Bold and Shaded values indicate that the analyte meets or exceeds NYSDEC AWQS.

Table 3. Historical Bedrock VOC Analytical Results

		Location ID	MW-21B						
		Sample Name	828149-MW21B17	828149-MW021B019	828149-MW021B019	828149-MW021B019	828149-MW-21B	828149-MW-21B-20231128	828149-MW-21B-20240507
		Parent Sample ID							
		Sample Date	7/23/2013	4/27/2016	10/11/2017	5/8/2019	6/6/2023	11/28/2023	5/7/2024
Analyte	**NYSDEC AWQS[1]**	**Unit**	**Method SW8260**						
Acetone	50	µg/L	< 10 U	< 5 U	2.2 J	< 5 U	< 50 U	< 3.1 U	< 3.1 U
Carbon Disulfide	60	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	< 5 U	< 1.8 U	< 1.8 U
Chloroform	7	µg/L	0.74 J	1.5	3.4	< 1 U	< 2 U	2	< 0.50 U
Cis -1,2-Dichloroethylene	5	µg/L	< 1 U	< 1 U	< 1.0 U	0.38 J	**12**	< 0.51 U	< 0.51 U
Tetrachloroethylene (PCE)	5	µg/L	**6**	**5.7**	**8.3**	**6**	**9.2**	**6.4**	2.5
Trichloroethylene (TCE)	5	µg/L	0.62 J	0.5 J	0.73 J	0.59 J	**7.7**	< 0.53 U	< 0.53 U
Vinyl Chloride	2	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	0.71 J	< 0.52 U	< 0.52 U

Notes:

1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).

This table shows detected analytes only.

µg/L = Microgram(s) per liter

AWQS = Ambient water quality standards

EPA = U.S. Environmental Protection Agency

ID = Identification

J = Concentration is estimated.

NA = Not analyzed

NSL = No screening level available.

NYSCRR = New York Codes, Rules and Regulations

NYSDEC = New York State Department of Environmental Conservation

TOGS = Technical and Operational Guidance Series

U = Analyte not detected.

VOC = Volatile organic compounds

Bold and Shaded values indicate that the analyte meets or exceeds NYSDEC AWQS.

Table 4. Historical Overburden VOC Analytical Results

		Location ID	DP-10						
		Sample Name	828149-GW010019	828149-DP1007	828149-DP010008	828149-DP010008	828149-DP010008	828149-DP-10-20231128	828149-DP-10-20240507
		Parent Sample ID							
		Sample Date	5/22/2013	7/24/2013	4/26/2016	10/11/2017	5/8/2019	11/28/2023	5/7/2024
Analyte	**NYSDEC AWQS[1]**	**Unit**	**Method SW8260**						
1,1,1-Trichloroethane (TCA)	5	µg/L	< 1 U	1.5 J	0.5 J	1.8 J	< 1 U	< 0.54 U	< 2.7 U
1,1-Dichloroethane	5	µg/L	< 1 U	0.46 J	0.22 J	1.2 J	< 1 U	< 0.57 U	< 2.8 U
1,1-Dichloroethene	5	µg/L	< 1 U	< 2 U	< 1 U	< 5.0 U	< 1 U	< 0.59 U	< 3.0 U
1,4-Dioxane (P-Dioxane)	0.35	µg/L	NA	NA	< 40 UJ	< 200 U	< 40 U	< 0.050 U	< 0.20 U
Acetone	50	µg/L	4.1 J	< 20 U	1.4 J	9.4 J	< 5 U	< 3.1 U	< 15 U
Benzene	1	µg/L	0.28 J	< 2 U	< 1 U	< 5.0 U	< 1 U	< 0.43 U	< 2.1 U
Bromodichloromethane	50	µg/L	< 1 U	< 2 U	< 1 U	< 5.0 U	< 1 U	< 0.45 U	< 2.3 U
Bromomethane	5	µg/L	< 2 UJ	< 4 U	< 1 U	< 5.0 U	< 1 U	< 1.6 U	< 8.2 U
Carbon Disulfide	60	µg/L	< 1 U	< 2 U	< 1 U	< 5.0 U	< 1 U	< 1.8 U	< 9.0 U
Chloroethane	5	µg/L	< 2 U	< 4 U	< 1 U	< 5.0 U	< 1 U	< 0.73 U	< 3.6 U
Chloroform	7	µg/L	< 1 U	< 2 U	< 1 U	< 5.0 U	< 1 U	< 0.50 U	< 2.5 U
Chloromethane	NSL	µg/L	< 2 U	< 4 U	< 1 U	< 5.0 U	< 1 U	< 0.76 U	< 3.8 U
Cis -1,2-Dichloroethylene	5	µg/L	3.1	**110**	**29**	**100**	**55**	**121**	**128**
Cyclohexane	NSL	µg/L	0.47 J	< 4 U	< 1 U	< 5.0 U	< 1 U	< 0.78 U	< 3.9 U
Ethylbenzene	5	µg/L	< 1 U	< 2 U	< 1 U	< 5.0 U	< 1 U	< 0.60 U	< 3.0 U
m,p-Xylene	NSL	µg/L	0.63 J	< 4 U	< 2 U	< 10 U	< 2 U	< 0.78 U	< 3.9 U
Methyl Ethyl Ketone (2-Butanone)	50	µg/L	< 5 U	< 10 U	< 5 U	< 25 U	< 5 U	< 2.7 U	< 14 U
Methylcyclohexane	NSL	µg/L	0.79 J	< 2 U	< 1 U	< 5.0 U	< 1 U	< 0.60 U	< 3.0 U
O-Xylene (1,2-Dimethylbenzene)	5	µg/L	< 1 U	< 2 U	< 1 U	< 5.0 U	< 1 U	< 0.59 U	< 3.0 U
Tetrachloroethylene (PCE)	5	µg/L	0.41 J	**1500**	**530**	**5300**	**120**	**302**	**887**
Toluene	5	µg/L	0.6 J	< 2 U	< 1 U	< 5.0 U	< 1 U	< 0.49 U	< 2.5 U
Trans -1,2-Dichloroethene	5	µg/L	< 1 U	1.3 J	1	< 5.0 U	0.45 J	0.61 J	< 2.7 U
Trichloroethylene (TCE)	5	µg/L	1	**170**	**130**	**140**	**38**	**67.2**	**85.4**
Vinyl Chloride	2	µg/L	0.38 J	< 2 U	< 1 U	< 5.0 U	< 1 U	< 0.52 U	< 2.6 U

Notes:
1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).
This table shows detected analytes only.
µg/L = Microgram(s) per liter
AWQS = Ambient water quality standards
EPA = U.S. Environmental Protection Agency
ID = Identification
J = Concentration is estimated.
J+ = Concentration is estimated, biased high.
NA = Not analyzed.
NSL = No screening level
NYSCRR = New York Codes, Rules and Regulations
NYSDEC = New York State Department of Environmental Conservation
TOGS = Technical and Operational Guidance Series
U = Analyte not detected.
VOC = Volatile organic compounds
Bold and Shaded values indicate that the analyte meets or exceeds NYSDEC AWQS.

Table 4. Historical Overburden VOC Analytical Results

		Location ID	DP-11	DP-12				DP-14			
		Sample Name	828149-DP011012	828149-DP1217	828149-DP012015	828149-DP012015	828149-DP012015	828149-DP1407	828149-DP014009	828149-DP014009	828149-DP014009
		Parent Sample ID									
		Sample Date	5/8/2019	7/24/2013	4/26/2016	10/10/2017	5/8/2019	7/24/2013	4/26/2016	10/11/2017	5/7/2019
Analyte	**NYSDEC AWQS[1]**	**Unit**	**Method SW8260**								
1,1,1-Trichloroethane (TCA)	5	µg/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 UJ	< 50 U	< 50 U	< 50 U	< 50 U
1,1-Dichloroethane	5	µg/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 UJ	< 50 U	< 50 U	< 50 U	< 50 U
1,1-Dichloroethene	5	µg/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 UJ	< 50 U	< 50 U	< 50 U	< 50 U
1,4-Dioxane (P-Dioxane)	0.35	µg/L	< 40 U	NA	< 40 UJ	< 40 U	< 40 UJ	NA	< 2000 UJ	< 2000 U	< 2000 U
Acetone	50	µg/L	< 5 U	< 10 U	5.2	< 5.0 U	< 5 UJ	< 500 U	< 250 U	< 250 U	< 250 U
Benzene	1	µg/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 UJ	< 50 U	< 50 U	< 50 U	< 50 U
Bromodichloromethane	50	µg/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 UJ	< 50 U	< 50 U	< 50 U	< 50 U
Bromomethane	5	µg/L	< 1 U	< 2 UJ	< 1 U	< 1.0 U	< 1 UJ	< 100 UJ	< 50 U	< 50 U	< 50 U
Carbon Disulfide	60	µg/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 UJ	< 50 U	< 50 U	< 50 U	< 50 U
Chloroethane	5	µg/L	< 1 U	< 2 U	< 1 U	< 1.0 U	< 1 UJ	< 100 U	< 50 U	< 50 U	< 50 U
Chloroform	7	µg/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 UJ	< 50 U	< 50 U	< 50 U	< 50 U
Chloromethane	NSL	µg/L	< 1 U	< 2 U	< 1 U	< 1.0 U	< 1 UJ	< 100 U	< 50 U	< 50 U	< 50 U
Cis -1,2-Dichloroethylene	5	µg/L	< 1 U	0.64 J	0.46 J	1.7	0.54 J	**870**	**450**	**550**	**340**
Cyclohexane	NSL	µg/L	< 1 U	< 2 U	< 1 U	< 1.0 U	< 1 UJ	< 100 U	< 50 U	< 50 U	< 50 U
Ethylbenzene	5	µg/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 UJ	< 50 U	< 50 U	< 50 U	< 50 U
m,p-Xylene	NSL	µg/L	< 2 U	< 2 U	< 2 U	< 2.0 U	< 2 UJ	< 100 U	< 100 U	< 100 U	< 100 U
Methyl Ethyl Ketone (2-Butanone)	50	µg/L	< 5 U	< 5 U	< 5 U	< 5.0 U	< 5 UJ	< 250 U	< 250 U	< 250 U	< 250 U
Methylcyclohexane	NSL	µg/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 UJ	< 50 U	< 50 U	< 50 U	< 50 U
O-Xylene (1,2-Dimethylbenzene)	5	µg/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 UJ	< 50 U	< 50 U	< 50 U	< 50 U
Tetrachloroethylene (PCE)	5	µg/L	0.96 J	0.81 J	< 1 U	< 1.0 U	0.59 J	**13000**	**9400**	**12000**	**8100**
Toluene	5	µg/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 UJ	< 50 U	< 50 U	< 50 U	< 50 U
Trans -1,2-Dichloroethene	5	µg/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 UJ	< 50 U	< 50 U	< 50 U	< 50 U
Trichloroethylene (TCE)	5	µg/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 UJ	**500**	**360**	**420**	**310**
Vinyl Chloride	2	µg/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 UJ	< 50 U	< 50 U	< 50 U	< 50 U

Notes:

1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).

This table shows detected analytes only.

µg/L = Microgram(s) per liter

AWQS = Ambient water quality standards

EPA = U.S. Environmental Protection Agency

ID = Identification

J = Concentration is estimated.

J+ = Concentration is estimated, biased high.

NA = Not analyzed.

NSL = No screening level

NYSCRR = New York Codes, Rules and Regulations

NYSDEC = New York State Department of Environmental Conservation

TOGS = Technical and Operational Guidance Series

U = Analyte not detected.

VOC = Volatile organic compounds

Bold and Shaded values indicate that the analyte meets or exceeds NYSDEC AWQS.

Table 4. Historical Overburden VOC Analytical Results

	Location ID	DP-15						
	Sample Name	828149-DP1507	828149-DP015009	828149-DP015009	828149-DP015009	828149-DP-15	828149-DP-15-20231127	828149-DP-15-20240507
	Parent Sample ID							
	Sample Date	7/24/2013	4/27/2016	10/11/2017	5/8/2019	6/6/2023	11/27/2023	5/7/2024
Analyte	**NYSDEC AWQS[1]**	**Unit**	**Method SW8260**						
1,1,1-Trichloroethane (TCA)	5	µg/L	< 25 U	< 20 U	< 50 U	< 5 U	< 20 U	< 5.4 U	< 2.7 U
1,1-Dichloroethane	5	µg/L	< 25 U	< 20 U	< 50 U	< 5 U	< 20 U	< 5.7 U	< 2.8 U
1,1-Dichloroethene	5	µg/L	< 25 U	< 20 U	< 50 U	< 5 U	< 20 U	< 5.9 U	< 3.0 U
1,4-Dioxane (P-Dioxane)	0.35	µg/L	NA	< 800 UJ	< 2000 U	< 200 U	< 0.21 U	< 0.050 U	< 0.20 U
Acetone	50	µg/L	< 250 U	< 100 U	< 250 U	< 25 U	< 1000 U	< 31 U	< 15 U
Benzene	1	µg/L	< 25 U	< 20 U	< 50 U	< 5 U	< 20 U	< 4.3 U	< 2.1 U
Bromodichloromethane	50	µg/L	< 25 U	< 20 U	< 50 U	< 5 U	< 10 U	< 4.5 U	< 2.3 U
Bromomethane	5	µg/L	< 50 UJ	< 20 U	< 50 U	< 5 U	< 40 U	< 16 U	< 8.2 U
Carbon Disulfide	60	µg/L	< 25 U	< 20 U	< 50 U	< 5 U	< 100 U	< 18 U	< 9.0 U
Chloroethane	5	µg/L	< 50 U	< 20 U	< 50 U	< 5 U	< 40 U	< 7.3 U	< 3.6 U
Chloroform	7	µg/L	< 25 U	< 20 U	< 50 U	< 5 U	< 40 U	< 5.0 U	< 2.5 U
Chloromethane	NSL	µg/L	< 50 U	< 20 U	< 50 U	< 5 U	< 40 U	< 7.6 U	< 3.8 U
Cis -1,2-Dichloroethylene	5	µg/L	**230**	**190**	**220**	**47**	**88**	**129**	**54.1**
Cyclohexane	NSL	µg/L	< 50 U	< 20 U	< 50 U	< 5 U	NA	< 7.8 U	< 3.9 U
Ethylbenzene	5	µg/L	< 25 U	< 20 U	< 50 U	< 5 U	< 20 U	< 6.0 U	< 3.0 U
m,p-Xylene	NSL	µg/L	< 50 U	< 40 U	< 100 U	< 10 U	< 40 U	< 7.8 U	< 3.9 U
Methyl Ethyl Ketone (2-Butanone)	50	µg/L	< 130 U	< 100 U	< 250 U	< 25 U	**63 J**	< 27 U	< 14 U
Methylcyclohexane	NSL	µg/L	< 25 U	< 20 U	< 50 U	< 5 U	< 20 U	< 6.0 U	< 3.0 U
O-Xylene (1,2-Dimethylbenzene)	5	µg/L	< 25 U	< 20 U	< 50 U	< 5 U	< 20 U	< 5.9 U	< 3.0 U
Tetrachloroethylene (PCE)	5	µg/L	**8500**	**5900**	**6800**	**1300**	**1200**	**2300**	**658**
Toluene	5	µg/L	< 25 U	< 20 U	< 50 U	< 5 U	< 20 U	< 4.9 U	< 2.5 U
Trans -1,2-Dichloroethene	5	µg/L	< 25 U	< 20 U	< 50 U	< 5 U	< 20 U	< 5.4 U	< 2.7 U
Trichloroethylene (TCE)	5	µg/L	**410**	**210**	**210**	**59**	**36**	**103**	**37.9**
Vinyl Chloride	2	µg/L	< 25 U	< 20 U	< 50 U	< 5 U	< 40 U	< 5.2 U	< 2.6 U

Notes:

1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).

This table shows detected analytes only.

µg/L = Microgram(s) per liter

AWQS = Ambient water quality standards

EPA = U.S. Environmental Protection Agency

ID = Identification

J = Concentration is estimated.

J+ = Concentration is estimated, biased high.

NA = Not analyzed.

NSL = No screening level

NYSCRR = New York Codes, Rules and Regulations

NYSDEC = New York State Department of Environmental Conservation

TOGS = Technical and Operational Guidance Series

U = Analyte not detected.

VOC = Volatile organic compounds

Bold and Shaded values indicate that the analyte meets or exceeds NYSDEC AWQS.

Table 4. Historical Overburden VOC Analytical Results

		Location ID	DP-16			
		Sample Name	828149-DP1607	828149-DP016009	828149-DP016009	828149-DP016009
		Parent Sample ID				
		Sample Date	7/23/2013	4/27/2016	10/11/2017	5/8/2019
Analyte	**NYSDEC AWQS[1]**	**Unit**	**Method SW8260**			
1,1,1-Trichloroethane (TCA)	5	µg/L	< 1 U	< 1 U	< 1.0 U	< 2 U
1,1-Dichloroethane	5	µg/L	0.35 J	< 1 U	0.35 J	0.44 J
1,1-Dichloroethene	5	µg/L	3.7	1.1	2.1	3.8
1,4-Dioxane (P-Dioxane)	0.35	µg/L	NA	< 40 UJ	< 40 U	< 80 U
Acetone	50	µg/L	< 10 U	< 5 U	1.8 J	< 10 U
Benzene	1	µg/L	< 1 U	< 1 U	< 1.0 U	< 2 U
Bromodichloromethane	50	µg/L	< 1 U	< 1 U	< 1.0 U	< 2 U
Bromomethane	5	µg/L	< 2 UJ	< 1 U	< 1.0 U	< 2 U
Carbon Disulfide	60	µg/L	< 1 U	< 1 U	< 1.0 U	< 2 U
Chloroethane	5	µg/L	< 2 U	< 1 U	0.59 J	< 2 U
Chloroform	7	µg/L	< 1 U	< 1 U	< 1.0 U	< 2 U
Chloromethane	NSL	µg/L	< 2 U	< 1 U	< 1.0 U	< 2 U
Cis -1,2-Dichloroethylene	5	µg/L	**270**	**130**	**300**	**610**
Cyclohexane	NSL	µg/L	< 2 U	< 1 U	< 1.0 U	< 2 U
Ethylbenzene	5	µg/L	< 1 U	< 1 U	< 1.0 U	< 2 U
m,p-Xylene	NSL	µg/L	< 2 U	< 2 U	< 2.0 U	< 4 U
Methyl Ethyl Ketone (2-Butanone)	50	µg/L	< 5 U	< 5 U	< 5.0 U	< 10 U
Methylcyclohexane	NSL	µg/L	< 1 U	< 1 U	< 1.0 U	< 2 U
O-Xylene (1,2-Dimethylbenzene)	5	µg/L	< 1 U	< 1 U	< 1.0 U	< 2 U
Tetrachloroethylene (PCE)	5	µg/L	**96**	**75**	**140**	**300**
Toluene	5	µg/L	< 1 U	< 1 U	< 1.0 U	< 2 U
Trans -1,2-Dichloroethene	5	µg/L	2.1	3.6	1.8	4
Trichloroethylene (TCE)	5	µg/L	**32**	**22**	**38**	**91**
Vinyl Chloride	2	µg/L	**120**	**23**	**36 J**	**32**

Notes:

1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).

This table shows detected analytes only.

µg/L = Microgram(s) per liter

AWQS = Ambient water quality standards

EPA = U.S. Environmental Protection Agency

ID = Identification

J = Concentration is estimated.

J+ = Concentration is estimated, biased high.

NA = Not analyzed.

NSL = No screening level

NYSCRR = New York Codes, Rules and Regulations

NYSDEC = New York State Department of Environmental Conservation

TOGS = Technical and Operational Guidance Series

U = Analyte not detected.

VOC = Volatile organic compounds

Bold and Shaded values indicate that the analyte meets or exceeds NYSDEC AWQS.

Table 4. Historical Overburden VOC Analytical Results

	Location ID	DP-17						
	Sample Name	828149-DP1714	828149-DP017015	828149-DP017015	828149-DP017015	828149-DP-17	828149-DP-17-20231127	828149-DP-17-20240507
	Parent Sample ID							
	Sample Date	7/23/2013	4/26/2016	10/12/2017	5/8/2019	6/5/2023	11/27/2023	5/7/2024
Analyte	**NYSDEC AWQS[1]**	**Unit**	**Method SW8260**						
1,1,1-Trichloroethane (TCA)	5	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.54 U	< 0.54 U
1,1-Dichloroethane	5	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.57 U	< 0.57 U
1,1-Dichloroethene	5	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.59 U	< 0.59 U
1,4-Dioxane (P-Dioxane)	0.35	µg/L	NA	< 40 UJ	< 0.40 U	< 40 U	< 0.2 U	< 0.050 U	NA
Acetone	50	µg/L	< 10 U	1.4 J	< 5.0 U	< 5 U	< 50 U	< 3.1 U	< 3.1 U
Benzene	1	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.43 U	< 0.43 U
Bromodichloromethane	50	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	< 0.5 U	< 0.45 U	< 0.45 U
Bromomethane	5	µg/L	< 2 UJ	< 1 U	< 1.0 U	< 1 UJ	< 2 U	< 1.6 U	< 1.6 U
Carbon Disulfide	60	µg/L	< 1 U	< 1 UJ	< 1.0 U	< 1 U	< 5 U	< 1.8 U	< 1.8 U
Chloroethane	5	µg/L	< 2 U	< 1 U	< 1.0 U	< 1 U	< 2 U	< 0.73 U	< 0.73 U
Chloroform	7	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	< 2 U	< 0.50 U	< 0.50 U
Chloromethane	NSL	µg/L	< 2 U	< 1 U	< 1.0 U	< 1 U	< 2 U	< 0.76 U	< 0.76 U
Cis -1,2-Dichloroethylene	5	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.51 U	< 0.51 U
Cyclohexane	NSL	µg/L	< 2 U	< 1 U	< 1.0 U	< 1 U	NA	< 0.78 U	< 0.78 U
Ethylbenzene	5	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.60 U	< 0.60 U
m,p-Xylene	NSL	µg/L	< 2 U	< 2 U	< 2.0 U	< 2 U	< 2 U	< 0.78 U	< 0.78 U
Methyl Ethyl Ketone (2-Butanone)	50	µg/L	< 5 U	< 5 U	< 5.0 U	< 5 U	< 20 U	< 2.7 U	< 2.7 U
Methylcyclohexane	NSL	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.60 U	< 0.60 U
O-Xylene (1,2-Dimethylbenzene)	5	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.59 U	< 0.59 U
Tetrachloroethylene (PCE)	5	µg/L	0.48 J	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.56 U	< 0.56 U
Toluene	5	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.49 U	< 0.49 U
Trans -1,2-Dichloroethene	5	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.54 U	< 0.54 U
Trichloroethylene (TCE)	5	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.53 U	< 0.53 U
Vinyl Chloride	2	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	< 2 U	< 0.52 U	< 0.52 U

Notes:

1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).

This table shows detected analytes only.

µg/L = Microgram(s) per liter

AWQS = Ambient water quality standards

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NYSDEC = New York State Department of Environmental Conservation

TOGS = Technical and Operational Guidance Series

U = Analyte not detected.

VOC = Volatile organic compounds

Bold and Shaded values indicate that the analyte meets or exceeds NYSDEC AWQS.

Table 4. Historical Overburden VOC Analytical Results

		Location ID	DP-18						
		Sample Name	828149-DP1807	828149-DP018009	828149-DP018009	828149-DP018009	828149-DP-18	828149-DP-18-20231127	828149-DP-18-20240507
		Parent Sample ID							
		Sample Date	7/23/2013	4/27/2016	10/11/2017	5/7/2019	6/6/2023	11/27/2023	5/7/2024
Analyte	**NYSDEC AWQS[1]**	**Unit**	**Method SW8260**						
1,1,1-Trichloroethane (TCA)	5	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.54 U	< 0.54 U
1,1-Dichloroethane	5	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.57 U	< 0.57 U
1,1-Dichloroethene	5	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.59 U	< 0.59 U
1,4-Dioxane (P-Dioxane)	0.35	µg/L	NA	< 40 UJ	< 40 U	< 40 U	< 0.21 U	< 0.050 U	< 0.20 U
Acetone	50	µg/L	3.1 J	< 5 U	1.7 J	< 5 U	4.0 J	< 3.1 U	< 3.1 U
Benzene	1	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.43 U	< 0.43 U
Bromodichloromethane	50	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	< 0.5 U	< 0.45 U	< 0.45 U
Bromomethane	5	µg/L	< 2 UJ	< 1 U	< 1.0 U	< 1 U	< 2 U	< 1.6 U	< 1.6 U
Carbon Disulfide	60	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	< 5 U	< 1.8 U	< 1.8 U
Chloroethane	5	µg/L	< 2 U	< 1 U	< 1.0 U	< 1 U	< 2 U	< 0.73 U	< 0.73 U
Chloroform	7	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	< 2 U	< 0.50 U	< 0.50 U
Chloromethane	NSL	µg/L	< 2 U	< 1 U	0.23 J	< 1 U	< 2 U	< 0.76 U	< 0.76 U
Cis -1,2-Dichloroethylene	5	µg/L	0.78 J	1.5	< 1.0 U	< 1 U	0.58 J	1.2	0.76 J
Cyclohexane	NSL	µg/L	< 2 U	< 1 U	< 1.0 U	< 1 U	NA	< 0.78 U	< 0.78 U
Ethylbenzene	5	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.60 U	< 0.60 U
m,p-Xylene	NSL	µg/L	< 2 U	< 2 U	< 2.0 U	< 2 U	< 2 U	< 0.78 U	< 0.78 U
Methyl Ethyl Ketone (2-Butanone)	50	µg/L	1.7 J	< 5 U	< 5.0 U	< 5 U	< 20 U	< 2.7 U	< 2.7 U
Methylcyclohexane	NSL	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.60 U	< 0.60 U
O-Xylene (1,2-Dimethylbenzene)	5	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.59 U	< 0.59 U
Tetrachloroethylene (PCE)	5	µg/L	1.4	3.7	3.1	< 1 U	1.7	4	2.1
Toluene	5	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.49 U	< 0.49 U
Trans -1,2-Dichloroethene	5	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.54 U	< 0.54 U
Trichloroethylene (TCE)	5	µg/L	0.79 J	1.5	< 1.0 U	< 1 U	0.90 J	1.8	1
Vinyl Chloride	2	µg/L	< 1 U	0.6 J	< 1.0 U	< 1 U	< 2 U	< 0.52 U	< 0.52 U

Notes:

1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).

This table shows detected analytes only.

µg/L = Microgram(s) per liter

AWQS = Ambient water quality standards

EPA = U.S. Environmental Protection Agency

ID = Identification

J = Concentration is estimated.

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NA = Not analyzed.

NSL = No screening level

NYSCRR = New York Codes, Rules and Regulations

NYSDEC = New York State Department of Environmental Conservation

TOGS = Technical and Operational Guidance Series

U = Analyte not detected.

VOC = Volatile organic compounds

Bold and Shaded values indicate that the analyte meets or exceeds NYSDEC AWQS.

Table 4. Historical Overburden VOC Analytical Results

		Location ID	DP-19							
		Sample Name	828149-GW019014	828149-DP1910	828149-DP019012	828149-DP019012	828149-DP019012	828149-DP-19	828149-DP-19-20231128	828149-DP-19-20240507
		Parent Sample ID								
		Sample Date	5/23/2013	7/24/2013	4/27/2016	10/11/2017	5/8/2019	6/6/2023	11/28/2023	5/7/2024
Analyte	**NYSDEC AWQS[1]**	**Unit**	**Method SW8260**							
1,1,1-Trichloroethane (TCA)	5	µg/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 UJ	< 1 U	< 0.54 U	< 0.54 U
1,1-Dichloroethane	5	µg/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 UJ	< 1 U	< 0.57 U	< 0.57 U
1,1-Dichloroethene	5	µg/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 UJ	< 1 U	< 0.59 U	< 0.59 U
1,4-Dioxane (P-Dioxane)	0.35	µg/L	NA	NA	< 40 UJ	< 40 U	< 40 UJ	< 0.21 U	< 0.050 U	NA
Acetone	50	µg/L	< 10 U	< 10 UJ	< 5 U	< 5.0 U	< 5 UJ	< 50 U	< 3.1 U	< 3.1 U
Benzene	1	µg/L	0.2 J	< 1 U	< 1 U	< 1.0 U	< 1 UJ	< 1 U	< 0.43 U	< 0.43 U
Bromodichloromethane	50	µg/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 UJ	< 0.5 U	< 0.45 U	< 0.45 U
Bromomethane	5	µg/L	< 2 UJ	< 2 UJ	< 1 U	< 1.0 U	< 1 UJ	< 2 U	< 1.6 U	< 1.6 U
Carbon Disulfide	60	µg/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 UJ	< 5 U	< 1.8 U	< 1.8 U
Chloroethane	5	µg/L	< 2 U	< 2 U	< 1 U	< 1.0 U	< 1 UJ	< 2 U	< 0.73 U	< 0.73 U
Chloroform	7	µg/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 UJ	< 2 U	< 0.50 U	< 0.50 U
Chloromethane	NSL	µg/L	< 2 U	< 2 U	< 1 U	< 1.0 U	< 1 UJ	< 2 U	< 0.76 U	< 0.76 U
Cis -1,2-Dichloroethylene	5	µg/L	**6.5**	**6.7**	**7.3**	**12**	**7.8 J**	**9.4**	**15.8**	**12.3**
Cyclohexane	NSL	µg/L	0.29 J	< 2 U	< 1 U	< 1.0 U	< 1 UJ	NA	< 0.78 U	< 0.78 U
Ethylbenzene	5	µg/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 UJ	< 1 U	< 0.60 U	< 0.60 U
m,p-Xylene	NSL	µg/L	0.34 J	< 2 U	< 2 U	< 2.0 U	< 2 UJ	< 2 U	< 0.78 U	< 0.78 U
Methyl Ethyl Ketone (2-Butanone)	50	µg/L	< 5 U	< 5 UJ	< 5 U	< 5.0 U	< 5 UJ	< 20 U	< 2.7 U	< 2.7 U
Methylcyclohexane	NSL	µg/L	0.48 J	< 1 U	< 1 U	< 1.0 U	< 1 UJ	< 1 U	< 0.60 U	< 0.60 U
O-Xylene (1,2-Dimethylbenzene)	5	µg/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 UJ	< 1 U	< 0.59 U	< 0.59 U
Tetrachloroethylene (PCE)	5	µg/L	**17**	**19**	**16**	**28**	**19 J**	**41**	**52.9**	**41.8**
Toluene	5	µg/L	0.44 J	< 1 U	< 1 U	< 1.0 U	< 1 UJ	< 1 U	< 0.49 U	< 0.49 U
Trans -1,2-Dichloroethene	5	µg/L	< 1 U	< 1 U	< 1 U	< 1.0 U	0.21 J	< 1 U	< 0.54 U	< 0.54 U
Trichloroethylene (TCE)	5	µg/L	4.4	4.9	4.9	**8.5**	**5.5 J**	**10**	**13.8**	**10.6**
Vinyl Chloride	2	µg/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 UJ	0.29 J	< 0.52 U	< 0.52 U

Notes:

1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).

This table shows detected analytes only.

µg/L = Microgram(s) per liter

AWQS = Ambient water quality standards

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ID = Identification

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NYSDEC = New York State Department of Environmental Conservation

TOGS = Technical and Operational Guidance Series

U = Analyte not detected.

VOC = Volatile organic compounds

Bold and Shaded values indicate that the analyte meets or exceeds NYSDEC AWQS.

Table 4. Historical Overburden VOC Analytical Results

			Location ID	DP-20						
			Sample Name	828149-GW020015	828149-GW020019	828149-DP2012	828149-DP020012	828149-DP020012	828149-DP020012	828149-DP-20	828149-DP-20-20240507
			Parent Sample ID								
			Sample Date	5/23/2013	5/23/2013	7/23/2013	4/27/2016	10/11/2017	5/8/2019	6/6/2023	5/7/2024
Analyte	**NYSDEC AWQS[1]**	**Unit**		**Method SW8260**							
1,1,1-Trichloroethane (TCA)	5	µg/L		< 1 U	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.54 U
1,1-Dichloroethane	5	µg/L		< 1 U	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.57 U
1,1-Dichloroethene	5	µg/L		< 1 U	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.59 UJ
1,4-Dioxane (P-Dioxane)	0.35	µg/L		NA	NA	NA	< 40 UJ	< 40 U	< 40 U	< 0.21 U	< 0.20 U
Acetone	50	µg/L		8.9 J	< 10 U	< 10 UJ	5.7	4.2 J	< 5 U	2.7 J	< 3.1 U
Benzene	1	µg/L		**1.8**	0.49 J	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.43 U
Bromodichloromethane	50	µg/L		< 1 U	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 U	< 0.5 U	< 0.45 U
Bromomethane	5	µg/L		< 2 UJ	< 2 UJ	< 2 UJ	< 1 U	< 1.0 U	< 1 U	< 2 U	< 1.6 U
Carbon Disulfide	60	µg/L		0.41 J	0.27 J	< 1 U	< 1 U	< 1.0 U	< 1 U	< 5 U	< 1.8 UJ
Chloroethane	5	µg/L		< 2 U	< 2 U	< 2 U	< 1 U	< 1.0 U	< 1 U	< 2 U	< 0.73 U
Chloroform	7	µg/L		< 1 U	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 U	< 2 U	< 0.50 U
Chloromethane	NSL	µg/L		< 2 U	< 2 U	< 2 U	< 1 U	< 1.0 U	0.28 J	< 2 U	< 0.76 U
Cis -1,2-Dichloroethylene	5	µg/L		< 1 U	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.51 U
Cyclohexane	NSL	µg/L		1.8 J	0.64 J	0.25 J	< 1 U	< 1.0 U	< 1 U	NA	< 0.78 U
Ethylbenzene	5	µg/L		0.28 J	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.60 U
m,p-Xylene	NSL	µg/L		2.7	0.78 J	< 2 U	< 2 U	< 2.0 U	< 2 U	< 2 U	< 0.78 U
Methyl Ethyl Ketone (2-Butanone)	50	µg/L		1.6 J	< 5 U	< 5 UJ	< 5 U	< 5.0 U	< 5 U	< 20 U	< 2.7 U
Methylcyclohexane	NSL	µg/L		2.8	1.1	0.48 J	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.60 U
O-Xylene (1,2-Dimethylbenzene)	5	µg/L		0.78 J	0.27 J	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.59 U
Tetrachloroethylene (PCE)	5	µg/L		< 1 U	< 1 U	< 1 U	0.46 J	0.78 J	< 1 U	< 1 U	< 0.56 U
Toluene	5	µg/L		3.1	0.97 J	0.26 J	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.49 U
Trans -1,2-Dichloroethene	5	µg/L		< 1 U	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.54 UJ
Trichloroethylene (TCE)	5	µg/L		< 1 U	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.53 U
Vinyl Chloride	2	µg/L		< 1 U	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 U	< 2 U	< 0.52 U

Notes:

1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).

This table shows detected analytes only.

µg/L = Microgram(s) per liter

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ID = Identification

J = Concentration is estimated.

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TOGS = Technical and Operational Guidance Series

U = Analyte not detected.

VOC = Volatile organic compounds

Bold and Shaded values indicate that the analyte meets or exceeds NYSDEC AWQS.

Table 4. Historical Overburden VOC Analytical Results

		Location ID	DP-21							
		Sample Name	828149-GW021011	828149-DP2107	828149-DP021009	828149-DP021009	828149-DP021009	828149-DP-21	828149-DP-21-20231128	828149-DP-21-20240507
		Parent Sample ID								
		Sample Date	5/23/2013	7/23/2013	4/27/2016	10/11/2017	5/8/2019	6/6/2023	11/28/2023	5/7/2024
Analyte	**NYSDEC AWQS[1]**	**Unit**	**Method SW8260**							
1,1,1-Trichloroethane (TCA)	5	µg/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.54 U	< 0.54 U
1,1-Dichloroethane	5	µg/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.57 U	< 0.57 U
1,1-Dichloroethene	5	µg/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.59 U	< 0.59 U
1,4-Dioxane (P-Dioxane)	0.35	µg/L	NA	NA	< 40 UJ	< 40 U	< 40 U	< 0.21 U	< 0.050 U	NA
Acetone	50	µg/L	5.2 J	< 10 UJ	< 5 U	1.8 J	< 5 U	< 50 U	< 3.1 U	< 3.1 U
Benzene	1	µg/L	0.82 J	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.43 U	< 0.43 U
Bromodichloromethane	50	µg/L	< 1 U	1.2	< 1 U	< 1.0 U	< 1 U	< 0.5 U	< 0.45 U	< 0.45 U
Bromomethane	5	µg/L	< 2 UJ	< 2 UJ	< 1 U	< 1.0 U	< 1 U	< 2 U	< 1.6 U	< 1.6 U
Carbon Disulfide	60	µg/L	0.33 J	< 1 U	< 1 U	< 1.0 U	< 1 U	< 5 U	< 1.8 U	< 1.8 U
Chloroethane	5	µg/L	< 2 U	< 2 U	< 1 U	< 1.0 U	< 1 U	< 2 U	< 0.73 U	< 0.73 U
Chloroform	7	µg/L	4.2	**15**	0.55 J	**8.3**	0.3 J	2.7	**8.2**	< 0.50 U
Chloromethane	NSL	µg/L	< 2 U	< 2 U	< 1 U	< 1.0 U	< 1 U	< 2 U	< 0.76 U	< 0.76 U
Cis -1,2-Dichloroethylene	5	µg/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.51 U	< 0.51 U
Cyclohexane	NSL	µg/L	1.6 J	< 2 U	< 1 U	< 1.0 U	< 1 U	NA	< 0.78 U	< 0.78 U
Ethylbenzene	5	µg/L	0.21 J	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.60 U	< 0.60 U
m,p-Xylene	NSL	µg/L	2.4	< 2 U	< 2 U	< 2.0 U	< 2 U	< 2 U	< 0.78 U	< 0.78 U
Methyl Ethyl Ketone (2-Butanone)	50	µg/L	< 5 U	< 5 UJ	< 5 U	< 5.0 U	< 5 U	< 20 U	< 2.7 U	< 2.7 U
Methylcyclohexane	NSL	µg/L	2.9	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.60 U	< 0.60 U
O-Xylene (1,2-Dimethylbenzene)	5	µg/L	0.66 J	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.59 U	< 0.59 U
Tetrachloroethylene (PCE)	5	µg/L	1.9	2.1	3.8	**5.4**	1.8	1.6	2.4	1.6
Toluene	5	µg/L	2.2	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.49 U	< 0.49 U
Trans -1,2-Dichloroethene	5	µg/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.54 U	< 0.54 U
Trichloroethylene (TCE)	5	µg/L	< 1 U	< 1 U	< 1 U	0.33 J	< 1 U	< 1 U	< 0.53 U	< 0.53 U
Vinyl Chloride	2	µg/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1 U	< 2 U	< 0.52 U	< 0.52 U

Notes:

1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).

This table shows detected analytes only.

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U = Analyte not detected.

VOC = Volatile organic compounds

Bold and Shaded values indicate that the analyte meets or exceeds NYSDEC AWQS.

Table 4. Historical Overburden VOC Analytical Results

			Location ID	GEMW-1			
			Sample Name	828149-GEMW001014	828149-GEMW001014	828149-GEMW001014	828149-GEMW001014
			Parent Sample ID				
			Sample Date	7/24/2013	4/27/2016	10/11/2017	5/7/2019
Analyte	**NYSDEC AWQS[1]**	**Unit**		**Method SW8260**			
1,1,1-Trichloroethane (TCA)	5	µg/L		< 1 U	< 2 U	< 5.0 U	< 1 U
1,1-Dichloroethane	5	µg/L		0.38 J	< 2 U	< 5.0 U	< 1 U
1,1-Dichloroethene	5	µg/L		**5**	**5.2**	**5.2**	1.1
1,4-Dioxane (P-Dioxane)	0.35	µg/L		NA	< 80 UJ	< 200 U	< 40 U
Acetone	50	µg/L		< 10 U	4.6 J	< 25 U	< 5 U
Benzene	1	µg/L		< 1 U	< 2 U	< 5.0 U	< 1 U
Bromodichloromethane	50	µg/L		< 1 U	< 2 U	< 5.0 U	< 1 U
Bromomethane	5	µg/L		< 2 U	< 2 U	< 5.0 U	< 1 U
Carbon Disulfide	60	µg/L		< 1 U	< 2 U	< 5.0 U	< 1 U
Chloroethane	5	µg/L		< 2 U	< 2 U	< 5.0 U	< 1 U
Chloroform	7	µg/L		< 1 U	< 2 U	< 5.0 U	< 1 U
Chloromethane	NSL	µg/L		< 2 U	< 2 U	< 5.0 U	< 1 U
Cis -1,2-Dichloroethylene	5	µg/L		**310**	**600**	**520**	**150**
Cyclohexane	NSL	µg/L		< 2 U	< 2 U	< 5.0 U	< 1 U
Ethylbenzene	5	µg/L		< 1 U	< 2 U	< 5.0 U	< 1 U
m,p-Xylene	NSL	µg/L		< 2 U	< 4 U	< 10 U	< 2 U
Methyl Ethyl Ketone (2-Butanone)	50	µg/L		< 5 U	< 10 U	< 25 U	< 5 U
Methylcyclohexane	NSL	µg/L		< 1 U	< 2 U	< 5.0 U	< 1 U
O-Xylene (1,2-Dimethylbenzene)	5	µg/L		< 1 U	< 2 U	< 5.0 U	< 1 U
Tetrachloroethylene (PCE)	5	µg/L		**76**	**200**	**250**	**93**
Toluene	5	µg/L		< 1 U	< 2 U	< 5.0 U	< 1 U
Trans -1,2-Dichloroethene	5	µg/L		2.4	**5**	3.5 J	1.2
Trichloroethylene (TCE)	5	µg/L		**69**	**120**	**120**	**38**
Vinyl Chloride	2	µg/L		**69**	**32**	**15 J**	**7.3**

Notes:

1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).

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U = Analyte not detected.

VOC = Volatile organic compounds

Bold and Shaded values indicate that the analyte meets or exceeds NYSDEC AWQS.

Table 4. Historical Overburden VOC Analytical Results

			Location ID	GEMW-2					
			Sample Name	828149-GEMW002014	828149-GEMW002014	828149-GEMW002014	828149-GEMW002014	828149-GEMW-2	828149-GEMW-2-20231128	828149-GEMW-2-20240507
			Parent Sample ID							
			Sample Date	7/24/2013	4/26/2016	10/10/2017	5/8/2019	6/6/2023	11/28/2023	5/7/2024
Analyte	**NYSDEC AWQS[1]**	**Unit**		**Method SW8260**						
1,1,1-Trichloroethane (TCA)	5	µg/L		< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.54 U	< 0.54 U
1,1-Dichloroethane	5	µg/L		< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.57 U	< 0.57 U
1,1-Dichloroethene	5	µg/L		< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.59 U	< 0.59 U
1,4-Dioxane (P-Dioxane)	0.35	µg/L		NA	< 40 UJ	< 40 U	< 40 U	< 0.21 U	< 0.050 U	NA
Acetone	50	µg/L		< 10 U	1.7 J	< 5.0 U	< 5 U	< 50 U	< 3.1 U	< 3.1 U
Benzene	1	µg/L		< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.43 U	< 0.43 U
Bromodichloromethane	50	µg/L		< 1 U	< 1 U	< 1.0 U	< 1 U	< 0.5 U	< 0.45 U	< 0.45 U
Bromomethane	5	µg/L		< 2 U	< 1 U	0.31 J	< 1 U	< 2 U	< 1.6 U	< 1.6 U
Carbon Disulfide	60	µg/L		< 1 U	< 1 U	< 1.0 U	< 1 U	< 5 U	< 1.8 U	< 1.8 U
Chloroethane	5	µg/L		< 2 U	< 1 U	< 1.0 U	< 1 U	< 2 U	< 0.73 U	< 0.73 U
Chloroform	7	µg/L		< 1 U	< 1 U	< 1.0 U	< 1 U	< 2 U	< 0.50 U	< 0.50 U
Chloromethane	NSL	µg/L		< 2 U	< 1 U	< 1.0 U	< 1 U	< 2 U	< 0.76 U	< 0.76 U
Cis -1,2-Dichloroethylene	5	µg/L		**14**	4	3.3	0.94 J	0.27 J	< 0.51 U	< 0.51 U
Cyclohexane	NSL	µg/L		< 2 U	< 1 U	< 1.0 U	< 1 U	NA	< 0.78 U	< 0.78 U
Ethylbenzene	5	µg/L		< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.60 U	< 0.60 U
m,p-Xylene	NSL	µg/L		< 2 U	< 2 U	< 2.0 U	< 2 U	< 2 U	< 0.78 U	< 0.78 U
Methyl Ethyl Ketone (2-Butanone)	50	µg/L		< 5 U	< 5 U	< 5.0 U	< 5 U	< 20 U	< 2.7 U	< 2.7 U
Methylcyclohexane	NSL	µg/L		< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.60 U	< 0.60 U
O-Xylene (1,2-Dimethylbenzene)	5	µg/L		< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.59 U	< 0.59 U
Tetrachloroethylene (PCE)	5	µg/L		**230**	**130**	**150**	**81**	**67**	**71**	**66.8**
Toluene	5	µg/L		< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.49 U	< 0.49 U
Trans -1,2-Dichloroethene	5	µg/L		< 1 U	< 1 U	< 1.0 U	< 1 U	< 1 U	< 0.54 U	< 0.54 U
Trichloroethylene (TCE)	5	µg/L		**5**	2.2	3.3	0.93 J	1.1	1.3	0.82 J
Vinyl Chloride	2	µg/L		< 1 U	< 1 U	< 1.0 U	< 1 U	< 2 U	< 0.52 U	< 0.52 U

Notes:

1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).

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U = Analyte not detected.

VOC = Volatile organic compounds

Bold and Shaded values indicate that the analyte meets or exceeds NYSDEC AWQS.

Table 4. Historical Overburden VOC Analytical Results

		Location ID	MW-1				
		Sample Name	828149-MW001010	828149-MW001010	828149-MW001010D	828149-MW001010	828149-MW001010D
		Parent Sample ID			828149-MW001010		828149-MW001010
		Sample Date	7/24/2013	4/26/2016	4/26/2016	10/10/2017	10/10/2017
Analyte	**NYSDEC AWQS[1]**	**Unit**	**Method SW8260**				
1,1,1-Trichloroethane (TCA)	5	µg/L	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
1,1-Dichloroethane	5	µg/L	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
1,1-Dichloroethene	5	µg/L	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
1,4-Dioxane (P-Dioxane)	0.35	µg/L	NA	< 2000 UJ	< 2000 UJ	< 2000 U	< 2000 U
Acetone	50	µg/L	< 500 U	< 250 U	< 250 U	< 250 U	< 250 U
Benzene	1	µg/L	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
Bromodichloromethane	50	µg/L	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
Bromomethane	5	µg/L	< 100 U	< 50 U	< 50 U	< 50 U	< 50 U
Carbon Disulfide	60	µg/L	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
Chloroethane	5	µg/L	< 100 U	< 50 U	< 50 U	< 50 U	< 50 U
Chloroform	7	µg/L	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
Chloromethane	NSL	µg/L	< 100 U	< 50 U	< 50 U	13 J	< 50 U
Cis -1,2-Dichloroethylene	5	µg/L	**660**	**320**	**330**	**340**	**310**
Cyclohexane	NSL	µg/L	< 100 U	< 50 U	< 50 U	< 50 U	< 50 U
Ethylbenzene	5	µg/L	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
m,p-Xylene	NSL	µg/L	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U
Methyl Ethyl Ketone (2-Butanone)	50	µg/L	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U
Methylcyclohexane	NSL	µg/L	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
O-Xylene (1,2-Dimethylbenzene)	5	µg/L	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
Tetrachloroethylene (PCE)	5	µg/L	**11000**	**8400**	**8500**	**9700**	**9600**
Toluene	5	µg/L	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
Trans -1,2-Dichloroethene	5	µg/L	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
Trichloroethylene (TCE)	5	µg/L	**260**	**180**	**190**	**260**	**240**
Vinyl Chloride	2	µg/L	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U

Notes:

1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).

This table shows detected analytes only.

µg/L = Microgram(s) per liter

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U = Analyte not detected.

VOC = Volatile organic compounds

Bold and Shaded values indicate that the analyte meets or exceeds NYSDEC AWQS.

Table 4. Historical Overburden VOC Analytical Results

		Location ID	MW-1			
		Sample Name	828149-MW001010	828149-MW001010D	828149-MW-1-20231127	828149-MW-1-20240508
		Parent Sample ID		828149-MW001010		
		Sample Date	5/7/2019	5/7/2019	11/27/2023	5/8/2024
Analyte	**NYSDEC AWQS[1]**	**Unit**	**Method SW8260**			
1,1,1-Trichloroethane (TCA)	5	µg/L	< 20 U	< 20 U	< 5.4 U	< 2.7 U
1,1-Dichloroethane	5	µg/L	< 20 U	< 20 U	< 5.7 U	< 2.8 U
1,1-Dichloroethene	5	µg/L	< 20 U	< 20 U	< 5.9 U	< 3.0 U
1,4-Dioxane (P-Dioxane)	0.35	µg/L	< 800 U	< 800 U	< 0.050 U	< 0.20 U
Acetone	50	µg/L	< 100 U	< 100 U	< 31 U	< 15 U
Benzene	1	µg/L	< 20 U	< 20 U	< 4.3 U	< 2.1 U
Bromodichloromethane	50	µg/L	< 20 U	< 20 U	< 4.5 U	< 2.3 U
Bromomethane	5	µg/L	< 20 UJ	< 20 UJ	< 16 U	< 8.2 U
Carbon Disulfide	60	µg/L	< 20 U	< 20 U	< 18 U	< 9.0 U
Chloroethane	5	µg/L	< 20 U	< 20 U	< 7.3 U	< 3.6 U
Chloroform	7	µg/L	< 20 U	< 20 U	< 5.0 U	< 2.5 U
Chloromethane	NSL	µg/L	< 20 U	< 20 U	< 7.6 U	< 3.8 U
Cis -1,2-Dichloroethylene	5	µg/L	**34**	**38**	**27.6**	**31.2**
Cyclohexane	NSL	µg/L	< 20 U	< 20 U	< 7.8 U	< 3.9 U
Ethylbenzene	5	µg/L	< 20 U	< 20 U	< 6.0 U	< 3.0 U
m,p-Xylene	NSL	µg/L	< 40 U	< 40 U	< 7.8 U	< 3.9 U
Methyl Ethyl Ketone (2-Butanone)	50	µg/L	< 100 U	< 100 U	< 27 U	< 14 U
Methylcyclohexane	NSL	µg/L	< 20 U	< 20 U	< 6.0 U	< 3.0 U
O-Xylene (1,2-Dimethylbenzene)	5	µg/L	< 20 U	< 20 U	< 5.9 U	< 3.0 U
Tetrachloroethylene (PCE)	5	µg/L	**1900 J+**	**2000 J+**	**2570**	**907**
Toluene	5	µg/L	< 20 U	< 20 U	< 4.9 U	< 2.5 U
Trans -1,2-Dichloroethene	5	µg/L	< 20 U	< 20 U	< 5.4 U	< 2.7 U
Trichloroethylene (TCE)	5	µg/L	**34**	**35**	**21.1**	**11.5**
Vinyl Chloride	2	µg/L	< 20 U	< 20 U	< 5.2 U	< 2.6 U

Notes:

1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).

This table shows detected analytes only.

µg/L = Microgram(s) per liter

AWQS = Ambient water quality standards

EPA = U.S. Environmental Protection Agency

ID = Identification

J = Concentration is estimated.

J+ = Concentration is estimated, biased high.

NA = Not analyzed.

NSL = No screening level

NYSCRR = New York Codes, Rules and Regulations

NYSDEC = New York State Department of Environmental Conservation

TOGS = Technical and Operational Guidance Series

U = Analyte not detected.

VOC = Volatile organic compounds

Bold and Shaded values indicate that the analyte meets or exceeds NYSDEC AWQS.

Table 4. Historical Overburden VOC Analytical Results

		Location ID	MW-2			
		Sample Name	828149-MW002010	828149-MW002010	828149-MW002010	828149-MW002010
		Parent Sample ID				
		Sample Date	7/24/2013	4/27/2016	10/11/2017	5/8/2019
Analyte	**NYSDEC AWQS[1]**	**Unit**	**Method SW8260**			
1,1,1-Trichloroethane (TCA)	5	µg/L	< 250 U	< 500 U	< 500 U	< 500 U
1,1-Dichloroethane	5	µg/L	< 250 U	< 500 U	< 500 U	< 500 U
1,1-Dichloroethene	5	µg/L	< 250 U	< 500 U	< 500 U	< 500 U
1,4-Dioxane (P-Dioxane)	0.35	µg/L	NA	< 20000 UJ	< 20000 U	< 20000 U
Acetone	50	µg/L	< 2500 UJ	< 2500 U	< 2500 U	< 2500 U
Benzene	1	µg/L	< 250 U	< 500 U	< 500 U	< 500 U
Bromodichloromethane	50	µg/L	< 250 U	< 500 U	< 500 U	< 500 U
Bromomethane	5	µg/L	< 500 UJ	< 500 U	< 500 U	< 500 U
Carbon Disulfide	60	µg/L	< 250 U	< 500 U	< 500 U	< 500 U
Chloroethane	5	µg/L	< 500 U	< 500 U	< 500 U	< 500 U
Chloroform	7	µg/L	< 250 U	< 500 U	< 500 U	< 500 U
Chloromethane	NSL	µg/L	< 500 U	< 500 U	< 500 U	< 500 U
Cis -1,2-Dichloroethylene	5	µg/L	**260**	< 500 U	< 500 U	< 500 U
Cyclohexane	NSL	µg/L	< 500 U	< 500 U	< 500 U	< 500 U
Ethylbenzene	5	µg/L	< 250 U	< 500 U	< 500 U	< 500 U
m,p-Xylene	NSL	µg/L	< 500 U	< 1000 U	< 1000 U	< 1000 U
Methyl Ethyl Ketone (2-Butanone)	50	µg/L	< 1300 UJ	< 2500 U	< 2500 U	< 2500 U
Methylcyclohexane	NSL	µg/L	< 250 U	< 500 U	< 500 U	< 500 U
O-Xylene (1,2-Dimethylbenzene)	5	µg/L	< 250 U	< 500 U	< 500 U	< 500 U
Tetrachloroethylene (PCE)	5	µg/L	**90000**	**85000**	**69000**	**63000**
Toluene	5	µg/L	< 250 U	< 500 U	< 500 U	< 500 U
Trans -1,2-Dichloroethene	5	µg/L	< 250 U	< 500 U	< 500 U	< 500 U
Trichloroethylene (TCE)	5	µg/L	**410**	**240 J**	**170 J**	**160 J**
Vinyl Chloride	2	µg/L	< 250 U	< 500 U	< 500 U	< 500 U

Notes:

1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).

This table shows detected analytes only.

µg/L = Microgram(s) per liter

AWQS = Ambient water quality standards

EPA = U.S. Environmental Protection Agency

ID = Identification

J = Concentration is estimated.

J+ = Concentration is estimated, biased high.

NA = Not analyzed.

NSL = No screening level

NYSCRR = New York Codes, Rules and Regulations

NYSDEC = New York State Department of Environmental Conservation

TOGS = Technical and Operational Guidance Series

U = Analyte not detected.

VOC = Volatile organic compounds

Bold and Shaded values indicate that the analyte meets or exceeds NYSDEC AWQS.

Table 4. Historical Overburden VOC Analytical Results

	Location ID	MW-2				
	Sample Name	828149-MW-2	828149-FD-01	828149-MW-2-20231127	828149-FD-01-20231127	828149-MW-2-20240507
	Parent Sample ID		828149-MW-2		828149-MW-2-20231127	
	Sample Date	6/5/2023	6/5/2023	11/27/2023	11/27/2023	5/7/2024
Analyte	**NYSDEC AWQS[1]**	**Unit**	**Method SW8260**				
1,1,1-Trichloroethane (TCA)	5	µg/L	< 1 U	< 1 U	< 0.54 U	< 0.54 U	< 0.54 U
1,1-Dichloroethane	5	µg/L	< 1 U	< 1 U	< 0.57 U	< 0.57 U	< 0.57 U
1,1-Dichloroethene	5	µg/L	< 1 U	< 1 U	< 0.59 U	< 0.59 U	< 0.59 U
1,4-Dioxane (P-Dioxane)	0.35	µg/L	< 0.2 U	< 0.21 U	< 0.050 U	< 0.050 U	NA
Acetone	50	µg/L	< 50 U	< 50 U	< 3.1 U	< 3.1 U	< 3.1 U
Benzene	1	µg/L	< 1 U	< 1 U	< 0.43 U	< 0.43 U	< 0.43 U
Bromodichloromethane	50	µg/L	< 0.5 U	< 0.5 U	< 0.45 U	< 0.45 U	< 0.45 U
Bromomethane	5	µg/L	< 2 U	< 2 U	< 1.6 U	< 1.6 U	< 1.6 U
Carbon Disulfide	60	µg/L	< 5 U	< 5 U	< 1.8 U	< 1.8 U	< 1.8 U
Chloroethane	5	µg/L	< 2 U	< 2 U	< 0.73 U	< 0.73 U	< 0.73 U
Chloroform	7	µg/L	< 2 U	< 2 U	< 0.50 U	< 0.50 U	< 0.50 U
Chloromethane	NSL	µg/L	< 2 U	< 2 U	< 0.76 U	< 0.76 U	< 0.76 U
Cis -1,2-Dichloroethylene	5	µg/L	**22**	**21**	**21.1**	**21.2**	**19**
Cyclohexane	NSL	µg/L	NA	NA	< 0.78 U	< 0.78 U	< 0.78 U
Ethylbenzene	5	µg/L	< 1 U	< 1 U	< 0.60 U	< 0.60 U	< 0.60 U
m,p-Xylene	NSL	µg/L	< 2 U	< 2 U	< 0.78 U	< 0.78 U	< 0.78 U
Methyl Ethyl Ketone (2-Butanone)	50	µg/L	< 20 U	< 20 U	< 2.7 U	< 2.7 U	< 2.7 U
Methylcyclohexane	NSL	µg/L	< 1 U	< 1 U	< 0.60 U	< 0.60 U	< 0.60 U
O-Xylene (1,2-Dimethylbenzene)	5	µg/L	< 1 U	< 1 U	< 0.59 U	< 0.59 U	< 0.59 U
Tetrachloroethylene (PCE)	5	µg/L	**69**	**70**	**65.2**	**70.3**	**76.4**
Toluene	5	µg/L	< 1 U	< 1 U	< 0.49 U	< 0.49 U	< 0.49 U
Trans -1,2-Dichloroethene	5	µg/L	0.31 J	0.36 J	< 0.54 U	< 0.54 U	< 0.54 U
Trichloroethylene (TCE)	5	µg/L	**18**	**17**	**17.5**	**17.6**	**17.8**
Vinyl Chloride	2	µg/L	< 2 U	< 2 U	< 0.52 U	< 0.52 U	< 0.52 U

Notes:

1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).

This table shows detected analytes only.

µg/L = Microgram(s) per liter

AWQS = Ambient water quality standards

EPA = U.S. Environmental Protection Agency

ID = Identification

J = Concentration is estimated.

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NA = Not analyzed.

NSL = No screening level

NYSCRR = New York Codes, Rules and Regulations

NYSDEC = New York State Department of Environmental Conservation

TOGS = Technical and Operational Guidance Series

U = Analyte not detected.

VOC = Volatile organic compounds

Bold and Shaded values indicate that the analyte meets or exceeds NYSDEC AWQS.

Table 4. Historical Overburden VOC Analytical Results

		Location ID	MW-3					
		Sample Name	828149-MW003010	828149-MW003010D	828149-MW003009	828149-MW003009D	828149-MW003009	828149-MW003009D
		Parent Sample ID		828149-MW003010		828149-MW003009		828149-MW003009
		Sample Date	7/23/2013	7/23/2013	4/27/2016	4/27/2016	10/12/2017	10/12/2017
Analyte	**NYSDEC AWQS[1]**	**Unit**	**Method SW8260**					
1,1,1-Trichloroethane (TCA)	5	µg/L	< 5 U	< 10 U	< 5 U	< 5 U	< 5.0 U	< 5.0 U
1,1-Dichloroethane	5	µg/L	< 5 U	< 10 U	< 5 U	< 5 U	< 5.0 U	< 5.0 U
1,1-Dichloroethene	5	µg/L	**16**	**15**	**11**	**11**	**8.5**	**8.2**
1,4-Dioxane (P-Dioxane)	0.35	µg/L	NA	NA	< 200 UJ	< 200 UJ	**1.1**	< 200 U
Acetone	50	µg/L	< 50 U	< 100 UJ	7 J	7.1 J	< 25 U	< 25 U
Benzene	1	µg/L	< 5 U	< 10 U	< 5 U	< 5 U	< 5.0 U	< 5.0 U
Bromodichloromethane	50	µg/L	< 5 U	< 10 U	< 5 U	< 5 U	< 5.0 U	< 5.0 U
Bromomethane	5	µg/L	< 10 U	< 20 UJ	< 5 U	< 5 U	< 5.0 U	< 5.0 U
Carbon Disulfide	60	µg/L	< 5 U	< 10 U	< 5 U	< 5 U	< 5.0 U	< 5.0 U
Chloroethane	5	µg/L	< 10 U	< 20 U	< 5 U	< 5 U	< 5.0 U	< 5.0 U
Chloroform	7	µg/L	< 5 U	< 10 U	< 5 U	< 5 U	< 5.0 U	< 5.0 U
Chloromethane	NSL	µg/L	< 10 U	< 20 U	< 5 U	< 5 U	< 5.0 U	< 5.0 U
Cis -1,2-Dichloroethylene	5	µg/L	**890**	**840**	**850**	**710**	**670**	**690**
Cyclohexane	NSL	µg/L	< 10 U	< 20 U	< 5 U	< 5 U	< 5.0 U	< 5.0 U
Ethylbenzene	5	µg/L	< 5 U	< 10 U	< 5 U	< 5 U	< 5.0 U	< 5.0 U
m,p-Xylene	NSL	µg/L	< 10 U	< 20 U	< 10 U	< 10 U	< 10 U	< 10 U
Methyl Ethyl Ketone (2-Butanone)	50	µg/L	< 25 U	16 J	< 25 U	< 25 U	< 25 U	< 25 U
Methylcyclohexane	NSL	µg/L	< 5 U	< 10 U	< 5 U	< 5 U	< 5.0 U	< 5.0 U
O-Xylene (1,2-Dimethylbenzene)	5	µg/L	< 5 U	< 10 U	< 5 U	< 5 U	< 5.0 U	< 5.0 U
Tetrachloroethylene (PCE)	5	µg/L	**2200**	**1800**	**790**	**790**	**650**	**670**
Toluene	5	µg/L	< 5 U	< 10 U	< 5 U	< 5 U	< 5.0 U	< 5.0 U
Trans -1,2-Dichloroethene	5	µg/L	**7.1**	**6 J**	**12**	**12**	**5.1**	**5.3**
Trichloroethylene (TCE)	5	µg/L	**450**	**410**	**320**	**240**	**310**	**320**
Vinyl Chloride	2	µg/L	**260**	**260**	**200**	**160**	**200 J**	**200 J**

Notes:

1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).

This table shows detected analytes only.

µg/L = Microgram(s) per liter

AWQS = Ambient water quality standards

EPA = U.S. Environmental Protection Agency

ID = Identification

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NA = Not analyzed.

NSL = No screening level

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NYSDEC = New York State Department of Environmental Conservation

TOGS = Technical and Operational Guidance Series

U = Analyte not detected.

VOC = Volatile organic compounds

Bold and Shaded values indicate that the analyte meets or exceeds NYSDEC AWQS.

Table 4. Historical Overburden VOC Analytical Results

			Location ID	MW-3				
			Sample Name	828149-MW003009	828149-MW003009D	828149-MW-3	828149-MW-3-20231127	828149-MW-3-20240508	828149-DUP-20240508
			Parent Sample ID		828149-MW003009				828149-MW-3-20240508
			Sample Date	5/6/2019	5/6/2019	6/6/2023	11/27/2023	5/8/2024	5/8/2024
Analyte	**NYSDEC AWQS[1]**	**Unit**		**Method SW8260**					
1,1,1-Trichloroethane (TCA)	5	µg/L		< 5 U	< 5 U	< 40 U	< 11 U	< 5.4 U	< 5.4 U
1,1-Dichloroethane	5	µg/L		< 5 U	< 5 U	< 40 U	< 11 U	< 5.7 U	< 5.7 U
1,1-Dichloroethene	5	µg/L		**6.2**	**6.3**	< 40 U	< 12 U	< 5.9 U	< 5.9 U
1,4-Dioxane (P-Dioxane)	0.35	µg/L		< 200 U	< 200 U	< 0.2 U	< 0.050 U	< 0.20 U	< 0.20 U
Acetone	50	µg/L		< 25 U	< 25 U	< 2000 U	< 61 U	< 31 U	< 31 U
Benzene	1	µg/L		< 5 U	< 5 U	< 40 U	< 8.5 U	< 4.3 U	< 4.3 U
Bromodichloromethane	50	µg/L		< 5 U	< 5 U	< 20 U	< 9.0 U	< 4.5 U	< 4.5 U
Bromomethane	5	µg/L		< 5 U	< 5 U	< 80 U	< 33 U	< 16 U	< 16 U
Carbon Disulfide	60	µg/L		< 5 U	< 5 U	< 200 U	< 36 U	< 18 U	< 18 U
Chloroethane	5	µg/L		< 5 U	< 5 U	< 80 U	< 15 U	< 7.3 U	< 7.3 U
Chloroform	7	µg/L		< 5 U	< 5 U	< 80 U	< 10 U	< 5.0 U	< 5.0 U
Chloromethane	NSL	µg/L		< 5 U	< 5 U	< 80 U	< 15 U	< 7.6 U	< 7.6 U
Cis -1,2-Dichloroethylene	5	µg/L		**530**	**530**	**330**	**1210**	**182**	**188**
Cyclohexane	NSL	µg/L		< 5 U	< 5 U	NA	< 16 U	< 7.8 U	< 7.8 U
Ethylbenzene	5	µg/L		< 5 U	< 5 U	< 40 U	< 12 U	< 6.0 U	< 6.0 U
m,p-Xylene	NSL	µg/L		< 10 U	< 10 U	< 80 U	< 16 U	< 7.8 U	< 7.8 U
Methyl Ethyl Ketone (2-Butanone)	50	µg/L		< 25 U	< 25 U	< 800 U	< 55 U	< 27 U	< 27 U
Methylcyclohexane	NSL	µg/L		< 5 U	< 5 U	< 40 U	< 12 U	< 6.0 U	< 6.0 U
O-Xylene (1,2-Dimethylbenzene)	5	µg/L		< 5 U	< 5 U	< 40 U	< 12 U	< 5.9 U	< 5.9 U
Tetrachloroethylene (PCE)	5	µg/L		**390**	**380**	**2000**	**3220**	**1730**	**1750**
Toluene	5	µg/L		< 5 U	< 5 U	< 40 U	< 9.8 U	< 4.9 U	< 4.9 U
Trans -1,2-Dichloroethene	5	µg/L		3.6 J	3.6 J	< 40 U	< 11 U	< 5.4 U	< 5.4 U
Trichloroethylene (TCE)	5	µg/L		**220**	**220**	**160**	**475**	**68.4**	**69.9**
Vinyl Chloride	2	µg/L		**190**	**190**	< 80 U	**52.9**	< 5.2 U	< 5.2 U

Notes:
1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).
This table shows detected analytes only.
µg/L = Microgram(s) per liter
AWQS = Ambient water quality standards
EPA = U.S. Environmental Protection Agency
ID = Identification
J = Concentration is estimated.
J+ = Concentration is estimated, biased high.
NA = Not analyzed.
NSL = No screening level
NYSCRR = New York Codes, Rules and Regulations
NYSDEC = New York State Department of Environmental Conservation
TOGS = Technical and Operational Guidance Series
U = Analyte not detected.
VOC = Volatile organic compounds
Bold and Shaded values indicate that the analyte meets or exceeds NYSDEC AWQS.

Table 4. Historical Overburden VOC Analytical Results

		Location ID	MW-10			
		Sample Name	828149-MW010010	828149-MW010010	828149-MW010010	828149-MW010010
		Parent Sample ID				
		Sample Date	7/24/2013	4/28/2016	10/11/2017	5/9/2019
Analyte	**NYSDEC AWQS[1]**	**Unit**	**Method SW8260**			
1,1,1-Trichloroethane (TCA)	5	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U
1,1-Dichloroethane	5	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U
1,1-Dichloroethene	5	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U
1,4-Dioxane (P-Dioxane)	0.35	µg/L	NA	< 40 UJ	< 40 U	< 40 U
Acetone	50	µg/L	< 10 U	1.6 J	1.4 J	< 5 U
Benzene	1	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U
Bromodichloromethane	50	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U
Bromomethane	5	µg/L	< 2 U	< 1 U	< 1.0 U	< 1 U
Carbon Disulfide	60	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U
Chloroethane	5	µg/L	< 2 U	< 1 U	< 1.0 U	< 1 U
Chloroform	7	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U
Chloromethane	NSL	µg/L	< 2 U	< 1 U	< 1.0 U	< 1 U
Cis -1,2-Dichloroethylene	5	µg/L	< 1 U	< 1 U	4.5	< 1 U
Cyclohexane	NSL	µg/L	< 2 U	< 1 U	< 1.0 U	< 1 U
Ethylbenzene	5	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U
m,p-Xylene	NSL	µg/L	< 2 U	< 2 U	< 2.0 U	< 2 U
Methyl Ethyl Ketone (2-Butanone)	50	µg/L	< 5 U	< 5 U	< 5.0 U	< 5 U
Methylcyclohexane	NSL	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U
O-Xylene (1,2-Dimethylbenzene)	5	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U
Tetrachloroethylene (PCE)	5	µg/L	**28**	< 1 U	**130**	< 1 U
Toluene	5	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U
Trans -1,2-Dichloroethene	5	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U
Trichloroethylene (TCE)	5	µg/L	0.38 J	< 1 U	3	< 1 U
Vinyl Chloride	2	µg/L	< 1 U	< 1 U	< 1.0 U	< 1 U

Notes:

1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).

This table shows detected analytes only.

µg/L = Microgram(s) per liter

AWQS = Ambient water quality standards

EPA = U.S. Environmental Protection Agency

ID = Identification

J = Concentration is estimated.

J+ = Concentration is estimated, biased high.

NA = Not analyzed.

NSL = No screening level

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NYSDEC = New York State Department of Environmental Conservation

TOGS = Technical and Operational Guidance Series

U = Analyte not detected.

VOC = Volatile organic compounds

Bold and Shaded values indicate that the analyte meets or exceeds NYSDEC AWQS.

Table 4. Historical Overburden VOC Analytical Results

		Location ID	MW-13						
		Sample Name	828149-MW1307	828149-MW013012	828149-MW013012	828149-MW013012	828149-MW-13	828149-MW-13-20231127	828149-MW-13-20240508
		Parent Sample ID							
		Sample Date	7/24/2013	4/28/2016	10/12/2017	5/7/2019	6/5/2023	11/27/2023	5/8/2024
Analyte	**NYSDEC AWQS[1]**	**Unit**	**Method SW8260**						
1,1,1-Trichloroethane (TCA)	5	µg/L	< 50 U	< 50 U	< 50 U	< 10 U	< 50 U	< 2.7 U	< 2.1 U
1,1-Dichloroethane	5	µg/L	< 50 U	< 50 U	< 50 U	< 10 U	< 50 U	< 2.8 U	< 2.3 U
1,1-Dichloroethene	5	µg/L	< 50 U	< 50 U	< 50 U	< 10 U	< 50 U	< 3.0 U	< 2.4 U
1,4-Dioxane (P-Dioxane)	0.35	µg/L	NA	< 2000 UJ	0.26 J	< 400 U	< 0.2 U	< 0.050 U	< 0.20 U
Acetone	50	µg/L	< 500 U	< 250 U	< 250 U	< 50 U	< 2500 U	< 15 U	< 12 U
Benzene	1	µg/L	< 50 U	< 50 U	< 50 U	< 10 U	< 50 U	< 2.1 U	< 1.7 U
Bromodichloromethane	50	µg/L	< 50 U	< 50 U	< 50 U	< 10 U	< 25 U	< 2.3 U	< 1.8 U
Bromomethane	5	µg/L	< 100 UJ	< 50 U	< 50 U	< 10 U	< 100 U	< 8.2 U	< 6.6 U
Carbon Disulfide	60	µg/L	< 50 U	< 50 U	< 50 U	< 10 U	< 250 U	< 9.0 U	< 7.2 U
Chloroethane	5	µg/L	< 100 U	< 50 U	< 50 U	< 10 U	< 100 U	< 3.6 U	< 2.9 U
Chloroform	7	µg/L	< 50 U	< 50 U	< 50 U	< 10 U	< 100 U	< 2.5 U	< 2.0 U
Chloromethane	NSL	µg/L	< 100 U	< 50 U	< 50 U	< 10 U	< 100 U	< 3.8 U	< 3.0 U
Cis -1,2-Dichloroethylene	5	µg/L	**680**	**590**	**770**	**160**	**170**	**195**	**163**
Cyclohexane	NSL	µg/L	< 100 U	< 50 U	< 50 U	< 10 U	NA	< 3.9 U	< 3.1 U
Ethylbenzene	5	µg/L	< 50 U	< 50 U	< 50 U	< 10 U	< 50 U	< 3.0 U	< 2.4 U
m,p-Xylene	NSL	µg/L	NA	< 100 U	< 100 U	< 20 U	< 100 U	< 3.9 U	< 3.1 U
Methyl Ethyl Ketone (2-Butanone)	50	µg/L	< 250 U	< 250 U	< 250 U	< 50 U	< 1000 U	< 14 U	< 11 U
Methylcyclohexane	NSL	µg/L	< 50 U	< 50 U	< 50 U	< 10 U	< 50 U	< 3.0 U	< 2.4 U
O-Xylene (1,2-Dimethylbenzene)	5	µg/L	< 50 U	< 50 U	< 50 U	< 10 U	< 50 U	< 3.0 U	< 2.4 U
Tetrachloroethylene (PCE)	5	µg/L	**14000**	**12000**	**4100**	**2300**	**3200**	**1130**	**1160**
Toluene	5	µg/L	< 50 U	< 50 U	< 50 U	< 10 U	< 50 U	< 2.5 U	< 2.0 U
Trans -1,2-Dichloroethene	5	µg/L	< 50 U	< 50 U	< 50 U	< 10 U	< 50 U	< 2.7 U	< 2.1 U
Trichloroethylene (TCE)	5	µg/L	**380**	**350**	**200**	**190**	**120**	**71.8**	**89.5**
Vinyl Chloride	2	µg/L	< 50 U	< 50 U	< 50 U	< 10 U	< 100 U	< 2.6 U	< 2.1 U

Notes:

1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).

This table shows detected analytes only.

µg/L = Microgram(s) per liter

AWQS = Ambient water quality standards

EPA = U.S. Environmental Protection Agency

ID = Identification

J = Concentration is estimated.

J+ = Concentration is estimated, biased high.

NA = Not analyzed.

NSL = No screening level

NYSCRR = New York Codes, Rules and Regulations

NYSDEC = New York State Department of Environmental Conservation

TOGS = Technical and Operational Guidance Series

U = Analyte not detected.

VOC = Volatile organic compounds

Bold and Shaded values indicate that the analyte meets or exceeds NYSDEC AWQS.

Table 5. Historical Emerging Contaminants Analytical Results

	Targeted Unit Location ID		Overburden						
			DP-010				DP-011	DP-012	
	Sample Name		828149-DP010008	828149-DP010008	828149-DP-10-20231127	828149-DP-10-20240507	828149-DP011012	828149-DP012015	828149-DP012015
	Parent Sample ID								
	Sample Date		10/11/2017	5/8/2019	11/27/2023	5/7/2024	5/8/2019	10/10/2017	5/8/2019
Analyte	NYSDEC AWQS[1]	Unit							
EPA Method 1633 and 537									
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NSL	ng/L	NA	NA	< 0.89 U	< 0.86 U	NA	NA	NA
Perfluorobutanesulfonic acid (PFBS)	NSL	ng/L	NA	NA	9.3	6.6	NA	NA	NA
Perfluorobutanoic Acid	NSL	ng/L	NA	NA	24.6	28.4	NA	NA	NA
Perfluorodecanoic acid (PFDA)	NSL	ng/L	NA	NA	0.74 J	< 0.58 U	NA	NA	NA
Perfluoroheptanesulfonic acid (PFHpS)	NSL	ng/L	NA	NA	2.3	2.8	NA	NA	NA
Perfluoroheptanoic acid (PFHpA)	NSL	ng/L	NA	NA	2.7	3.9	NA	NA	NA
Perfluorohexanesulfonic acid (PFHxS)	NSL	ng/L	NA	NA	12.3	18.1	NA	NA	NA
Perfluorohexanoic acid (PFHxA)	NSL	ng/L	NA	NA	6.5	8.2	NA	NA	NA
Perfluorononanoic acid (PFNA)	NSL	ng/L	NA	NA	0.74 J	< 0.38 U	NA	NA	NA
Perfluorooctane Sulfonamide (FOSA)	NSL	ng/L	NA	NA	< 0.67 U	< 0.65 U	NA	NA	NA
Perfluorooctanesulfonic acid (PFOS)	2.7	ng/L	NA	NA	< 0.42 U	**86.5 J**	NA	NA	NA
Perfluorooctanoic acid (PFOA)	6.7	ng/L	NA	NA	**13.7**	**28**	NA	NA	NA
Perfluoropentanesulfonic Acid (PFPeS)	NSL	ng/L	NA	NA	< 0.98 U	1.3 J	NA	NA	NA
Perfluoropentanoic Acid (PFPeA)	NSL	ng/L	NA	NA	10.6	10.8	NA	NA	NA
Method 8270-SIM									
1,4-Dioxane (P-Dioxane)	0.35	µg/L	< 100 U	< 13 U	< 0.050 U	< 0.20 U	< 13 U	< 20 U	< 13 UJ

Notes:
1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).
This table shows detected analytes only.
µg/L = micrograms per liter
AWQS = Ambient water quality standards
EPA = U.S. Environmental Protection Agency
ID = Identification
U = Analyte not detected.
J = Concentration is estimated.
ng/L = Nanogram(s) per liter
NA = Not analyzed
NSL = No screening level available.
NYSCRR = New York Codes, Rules and Regulations
NYSDEC = New York State Department of Environmental Conservation
TOGS = Technical and Operational Guidance Series
Bold and shaded values indicate that the analyte was detected greater than EPA MCLs.

Table 5. Historical Emerging Contaminants Analytical Results

			Targeted Unit	Overburden						
			Location ID	DP-014		DP-015				
			Sample Name	828149-DP014009	828149-DP014009	828149-DP015009	828149-DP015009	828149-DP-15	828149-DP-15-20231127	828149-DP-15-20240507
			Parent Sample ID							
			Sample Date	10/11/2017	5/7/2019	10/11/2017	5/8/2019	6/6/2023	11/27/2023	5/7/2024
Analyte	NYSDEC AWQS[1]	Unit								
EPA Method 1633 and 537										
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NSL	ng/L	NA	NA	NA	NA	< 400 U	< 0.87 U	< 0.87 U
Perfluorobutanesulfonic acid (PFBS)	NSL	ng/L	NA	NA	NA	NA	< 100 U	4.7	9.2
Perfluorobutanoic Acid	NSL	ng/L	NA	NA	NA	NA	< 400 U	9.8	22.7
Perfluorodecanoic acid (PFDA)	NSL	ng/L	NA	NA	NA	NA	< 100 U	< 0.60 U	< 0.59 U
Perfluoroheptanesulfonic acid (PFHpS)	NSL	ng/L	NA	NA	NA	NA	< 100 U	0.99 J	1.7 J
Perfluoroheptanoic acid (PFHpA)	NSL	ng/L	NA	NA	NA	NA	< 100 U	2.4	4.8
Perfluorohexanesulfonic acid (PFHxS)	NSL	ng/L	NA	NA	NA	NA	< 100 U	4.9	12
Perfluorohexanoic acid (PFHxA)	NSL	ng/L	NA	NA	NA	NA	< 100 U	3	6.6
Perfluorononanoic acid (PFNA)	NSL	ng/L	NA	NA	NA	NA	< 100 U	0.77 J	0.72 J
Perfluorooctane Sulfonamide (FOSA)	NSL	ng/L	NA	NA	NA	NA	< 100 U	< 0.66 U	< 0.66 U
Perfluorooctanesulfonic acid (PFOS)	2.7	ng/L	NA	NA	NA	NA	< 100 U	**26.7**	**47.9 J**
Perfluorooctanoic acid (PFOA)	6.7	ng/L	NA	NA	NA	NA	< 100 U	**9.4**	**22.7**
Perfluoropentanesulfonic Acid (PFPeS)	NSL	ng/L	NA	NA	NA	NA	< 100 U	< 0.97 U	1.3 J
Perfluoropentanoic Acid (PFPeA)	NSL	ng/L	NA	NA	NA	NA	< 200 U	4.1	7.5
Method 8270-SIM										
1,4-Dioxane (P-Dioxane)	0.35	µg/L	< 1000 U	< 650 U	< 1000 U	< 65 U	< 0.034 U	< 0.050 U	< 0.20 U

Notes:
1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).
This table shows detected analytes only.
µg/L = micrograms per liter
AWQS = Ambient water quality standards
EPA = U.S. Environmental Protection Agency
ID = Identification
U = Analyte not detected.
J = Concentration is estimated.
ng/L = Nanogram(s) per liter
NA = Not analyzed
NSL = No screening level available.
NYSCRR = New York Codes, Rules and Regulations
NYSDEC = New York State Department of Environmental Conservation
TOGS = Technical and Operational Guidance Series
Bold and shaded values indicate that the analyte was detected greater than EPA MCLs.

Table 5. Historical Emerging Contaminants Analytical Results

			Targeted Unit	Overburden					
			Location ID	DP-016		DP-017			
			Sample Name	828149-DP016009	828149-DP016009	828149-DP017015	828149-DP017015	828149-DP-17	828149-DP-17-20231127
			Parent Sample ID						
			Sample Date	10/11/2017	5/8/2019	10/12/2017	5/8/2019	6/5/2023	11/27/2023
Analyte	NYSDEC AWQS[1]	Unit							
EPA Method 1633 and 537									
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NSL	ng/L	NA	NA	NA	NA	< 3.9 U	< 0.86 U
Perfluorobutanesulfonic acid (PFBS)	NSL	ng/L	NA	NA	4.9	NA	3.4	3.4
Perfluorobutanoic Acid	NSL	ng/L	NA	NA	2.6	NA	6	2.7 J
Perfluorodecanoic acid (PFDA)	NSL	ng/L	NA	NA	< 2.0 U	NA	< 0.98 U	< 0.58 U
Perfluoroheptanesulfonic acid (PFHpS)	NSL	ng/L	NA	NA	< 2.0 U	NA	< 0.98 U	< 0.92 U
Perfluoroheptanoic acid (PFHpA)	NSL	ng/L	NA	NA	< 2.0 U	NA	0.36 J	< 0.47 U
Perfluorohexanesulfonic acid (PFHxS)	NSL	ng/L	NA	NA	< 2.0 U	NA	< 0.98 U	< 1.0 U
Perfluorohexanoic acid (PFHxA)	NSL	ng/L	NA	NA	< 2.0 U	NA	0.47 J	< 0.27 U
Perfluorononanoic acid (PFNA)	NSL	ng/L	NA	NA	< 2.0 U	NA	< 0.98 U	< 0.38 U
Perfluorooctane Sulfonamide (FOSA)	NSL	ng/L	NA	NA	< 41 UJ	NA	< 0.98 U	< 0.65 U
Perfluorooctanesulfonic acid (PFOS)	2.7	ng/L	NA	NA	< 2.0 U	NA	< 0.98 U	< 0.41 U
Perfluorooctanoic acid (PFOA)	6.7	ng/L	NA	NA	< 2.0 U	NA	0.68 J	< 0.71 U
Perfluoropentanesulfonic Acid (PFPeS)	NSL	ng/L	NA	NA	NA	NA	< 0.98 U	< 0.95 U
Perfluoropentanoic Acid (PFPeA)	NSL	ng/L	NA	NA	< 2.0 U	NA	0.89 J	2.1 J
Method 8270-SIM									
1,4-Dioxane (P-Dioxane)	0.35	µg/L	< 20 U	< 26 U	< 0.20 U	< 13 U	< 0.033 U	< 0.050 U

Notes:
1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).
This table shows detected analytes only.
µg/L = micrograms per liter
AWQS = Ambient water quality standards
EPA = U.S. Environmental Protection Agency
ID = Identification
U = Analyte not detected.
J = Concentration is estimated.
ng/L = Nanogram(s) per liter
NA = Not analyzed
NSL = No screening level available.
NYSCRR = New York Codes, Rules and Regulations
NYSDEC = New York State Department of Environmental Conservation
TOGS = Technical and Operational Guidance Series
Bold and shaded values indicate that the analyte was detected greater than EPA MCLs.

Table 5. Historical Emerging Contaminants Analytical Results

			Targeted Unit	Overburden				
			Location ID	DP-018				
			Sample Name	828149-DP018009	828149-DP018009	828149-DP-18	828149-DP-18-20231127	828149-DP-18-20240507
			Parent Sample ID					
			Sample Date	10/11/2017	5/7/2019	6/6/2023	11/27/2023	5/7/2024
Analyte	**NYSDEC AWQS[1]**	**Unit**						
EPA Method 1633 and 537								
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NSL	ng/L	NA	NA	520	< 0.96 U	< 0.86 U
Perfluorobutanesulfonic acid (PFBS)	NSL	ng/L	NA	NA	< 100 U	5.4	5.9
Perfluorobutanoic Acid	NSL	ng/L	NA	NA	< 400 U	6.3 J	7.1 J
Perfluorodecanoic acid (PFDA)	NSL	ng/L	NA	NA	< 100 U	< 0.65 U	< 0.58 U
Perfluoroheptanesulfonic acid (PFHpS)	NSL	ng/L	NA	NA	< 100 U	< 1.0 U	< 0.92 U
Perfluoroheptanoic acid (PFHpA)	NSL	ng/L	NA	NA	< 100 U	2.2	1.8 J
Perfluorohexanesulfonic acid (PFHxS)	NSL	ng/L	NA	NA	< 100 U	1.7 J	1.5 J
Perfluorohexanoic acid (PFHxA)	NSL	ng/L	NA	NA	< 100 U	1.2 J	1.6 J
Perfluorononanoic acid (PFNA)	NSL	ng/L	NA	NA	< 100 U	0.72 J	0.8 J
Perfluorooctane Sulfonamide (FOSA)	NSL	ng/L	NA	NA	< 100 U	< 0.73 U	< 0.65 U
Perfluorooctanesulfonic acid (PFOS)	2.7	ng/L	NA	NA	< 100 U	1.9 J	< 0.41 U
Perfluorooctanoic acid (PFOA)	6.7	ng/L	NA	NA	< 100 U	3.4	4
Perfluoropentanesulfonic Acid (PFPeS)	NSL	ng/L	NA	NA	< 100 U	< 1.1 U	< 0.95 U
Perfluoropentanoic Acid (PFPeA)	NSL	ng/L	NA	NA	< 200 U	2.7 J	2.3 J
Method 8270-SIM								
1,4-Dioxane (P-Dioxane)	0.35	µg/L	< 20 U	< 13 U	< 0.033 U	< 0.050 U	< 0.20 U

Notes:
1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).
This table shows detected analytes only.
µg/L = micrograms per liter
AWQS = Ambient water quality standards
EPA = U.S. Environmental Protection Agency
ID = Identification
U = Analyte not detected.
J = Concentration is estimated.
ng/L = Nanogram(s) per liter
NA = Not analyzed
NSL = No screening level available.
NYSCRR = New York Codes, Rules and Regulations
NYSDEC = New York State Department of Environmental Conservation
TOGS = Technical and Operational Guidance Series
Bold and shaded values indicate that the analyte was detected greater than EPA MCLs.

Table 5. Historical Emerging Contaminants Analytical Results

	Targeted Unit		Overburden							
	Location ID		DP-019				DP-020			
	Sample Name		828149-DP019012	828149-DP019012	828149-DP-19	828149-DP-19-20231128	828149-DP020012	828149-DP020012	828149-DP-20	828149-DP-20-20240507
	Parent Sample ID									
	Sample Date		10/11/2017	5/8/2019	6/6/2023	11/28/2023	10/11/2017	5/8/2019	6/6/2023	5/7/2024
Analyte	**NYSDEC AWQS[1]**	**Unit**								
EPA Method 1633 and 537										
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NSL	ng/L	NA	NA	< 20 U	< 0.89 U	NA	NA	1.1 J	< 0.84 U
Perfluorobutanesulfonic acid (PFBS)	NSL	ng/L	NA	NA	2.2 J	< 0.64 U	NA	NA	4.6	4.1
Perfluorobutanoic Acid	NSL	ng/L	NA	NA	8.0 J	< 0.91 U	NA	NA	7.4	6.7 J
Perfluorodecanoic acid (PFDA)	NSL	ng/L	NA	NA	< 5 U	< 0.60 U	NA	NA	< 0.99 U	< 0.58 U
Perfluoroheptanesulfonic acid (PFHpS)	NSL	ng/L	NA	NA	< 5 U	< 0.96 U	NA	NA	< 0.99 U	< 0.91 U
Perfluoroheptanoic acid (PFHpA)	NSL	ng/L	NA	NA	< 5 U	< 0.49 U	NA	NA	0.45 J	< 0.46 U
Perfluorohexanesulfonic acid (PFHxS)	NSL	ng/L	NA	NA	< 5 U	< 1.1 U	NA	NA	0.60 J	< 1.0 U
Perfluorohexanoic acid (PFHxA)	NSL	ng/L	NA	NA	1.2 J	< 0.28 U	NA	NA	1.7	0.66 J
Perfluorononanoic acid (PFNA)	NSL	ng/L	NA	NA	< 5 U	< 0.39 U	NA	NA	< 0.99 U	< 0.37 U
Perfluorooctane Sulfonamide (FOSA)	NSL	ng/L	NA	NA	< 5 U	< 0.67 U	NA	NA	< 0.99 U	< 0.64 U
Perfluorooctanesulfonic acid (PFOS)	2.7	ng/L	NA	NA	< 5 U	< 0.42 U	NA	NA	**3.6**	< 0.40 U
Perfluorooctanoic acid (PFOA)	6.7	ng/L	NA	NA	1.3 J	< 0.73 U	NA	NA	1.1	1.1 J
Perfluoropentanesulfonic Acid (PFPeS)	NSL	ng/L	NA	NA	< 5 U	< 0.98 U	NA	NA	< 0.99 U	< 0.94 U
Perfluoropentanoic Acid (PFPeA)	NSL	ng/L	NA	NA	< 10 U	< 0.71 U	NA	NA	1.5 J	0.78 J
Method 8270-SIM										
1,4-Dioxane (P-Dioxane)	0.35	µg/L	< 20 U	< 13 UJ	< 0.033 U	< 0.050 U	< 20 U	< 13 U	< 0.034 U	< 0.20 U

Notes:
1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).
This table shows detected analytes only.
µg/L = micrograms per liter
AWQS = Ambient water quality standards
EPA = U.S. Environmental Protection Agency
ID = Identification
U = Analyte not detected.
J = Concentration is estimated.
ng/L = Nanogram(s) per liter
NA = Not analyzed
NSL = No screening level available.
NYSCRR = New York Codes, Rules and Regulations
NYSDEC = New York State Department of Environmental Conservation
TOGS = Technical and Operational Guidance Series
Bold and shaded values indicate that the analyte was detected greater than EPA MCLs.

Table 5. Historical Emerging Contaminants Analytical Results

			Targeted Unit	Overburden					
			Location ID	DP-021				GEMW-1	
			Sample Name	828149-DP021009	828149-DP021009	828149-DP-21	828149-DP-21-20231128	828149-GEMW001014	828149-GEMW001014
			Parent Sample ID						
			Sample Date	10/11/2017	5/8/2019	6/6/2023	11/28/2023	10/11/2017	5/7/2019
Analyte	NYSDEC AWQS[1]	Unit							
EPA Method 1633 and 537									
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NSL	ng/L	NA	NA	< 4.1 U	< 0.87 U	NA	NA
Perfluorobutanesulfonic acid (PFBS)	NSL	ng/L	NA	NA	5.9	3.4	NA	NA
Perfluorobutanoic Acid	NSL	ng/L	NA	NA	10	3.5 J	NA	NA
Perfluorodecanoic acid (PFDA)	NSL	ng/L	NA	NA	< 1 U	< 0.59 U	NA	NA
Perfluoroheptanesulfonic acid (PFHpS)	NSL	ng/L	NA	NA	< 1 U	< 0.94 U	NA	NA
Perfluoroheptanoic acid (PFHpA)	NSL	ng/L	NA	NA	1.3	0.85 J	NA	NA
Perfluorohexanesulfonic acid (PFHxS)	NSL	ng/L	NA	NA	5.5	1.5 J	NA	NA
Perfluorohexanoic acid (PFHxA)	NSL	ng/L	NA	NA	3.2	0.61 J	NA	NA
Perfluorononanoic acid (PFNA)	NSL	ng/L	NA	NA	< 1 U	< 0.38 U	NA	NA
Perfluorooctane Sulfonamide (FOSA)	NSL	ng/L	NA	NA	< 1 U	< 0.66 U	NA	NA
Perfluorooctanesulfonic acid (PFOS)	2.7	ng/L	NA	NA	1.3	1.2 J	NA	NA
Perfluorooctanoic acid (PFOA)	6.7	ng/L	NA	NA	4	1.4 J	NA	NA
Perfluoropentanesulfonic Acid (PFPeS)	NSL	ng/L	NA	NA	0.26 J	< 0.97 U	NA	NA
Perfluoropentanoic Acid (PFPeA)	NSL	ng/L	NA	NA	2.1	1 J	NA	NA
Method 8270-SIM									
1,4-Dioxane (P-Dioxane)	0.35	µg/L	< 20 U	< 13 U	< 0.034 U	< 0.050 U	< 100 U	< 13 U

Notes:
1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).
This table shows detected analytes only.
µg/L = micrograms per liter
AWQS = Ambient water quality standards
EPA = U.S. Environmental Protection Agency
ID = Identification
U = Analyte not detected.
J = Concentration is estimated.
ng/L = Nanogram(s) per liter
NA = Not analyzed
NSL = No screening level available.
NYSCRR = New York Codes, Rules and Regulations
NYSDEC = New York State Department of Environmental Conservation
TOGS = Technical and Operational Guidance Series
Bold and shaded values indicate that the analyte was detected greater than EPA MCLs.

Table 5. Historical Emerging Contaminants Analytical Results

	Targeted Unit		Overburden			
	Location ID		GEMW-2			
	Sample Name		828149-GEMW002014	828149-GEMW002014	828149-GEMW-2	828149-GEMW-2-20231127
	Parent Sample ID					
	Sample Date		10/10/2017	5/8/2019	6/6/2023	11/27/2023
Analyte	**NYSDEC AWQS[1]**	**Unit**				
EPA Method 1633 and 537						
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NSL	ng/L	NA	NA	< 40 U	< 0.92 U
Perfluorobutanesulfonic acid (PFBS)	NSL	ng/L	NA	NA	< 10 U	1.1 J
Perfluorobutanoic Acid	NSL	ng/L	NA	NA	< 40 U	< 0.95 U
Perfluorodecanoic acid (PFDA)	NSL	ng/L	NA	NA	< 10 U	< 0.63 U
Perfluoroheptanesulfonic acid (PFHpS)	NSL	ng/L	NA	NA	< 10 U	< 1.0 U
Perfluoroheptanoic acid (PFHpA)	NSL	ng/L	NA	NA	< 10 U	0.93 J
Perfluorohexanesulfonic acid (PFHxS)	NSL	ng/L	NA	NA	< 10 U	< 1.1 U
Perfluorohexanoic acid (PFHxA)	NSL	ng/L	NA	NA	< 10 U	< 0.29 U
Perfluorononanoic acid (PFNA)	NSL	ng/L	NA	NA	< 10 U	0.67 J
Perfluorooctane Sulfonamide (FOSA)	NSL	ng/L	NA	NA	< 10 U	< 0.70 U
Perfluorooctanesulfonic acid (PFOS)	2.7	ng/L	NA	NA	< 10 U	0.86 J
Perfluorooctanoic acid (PFOA)	6.7	ng/L	NA	NA	< 10 U	1.1 J
Perfluoropentanesulfonic Acid (PFPeS)	NSL	ng/L	NA	NA	< 10 U	< 1.0 U
Perfluoropentanoic Acid (PFPeA)	NSL	ng/L	NA	NA	< 20 U	< 0.74 U
Method 8270-SIM						
1,4-Dioxane (P-Dioxane)	0.35	µg/L	< 20 U	< 13 U	< 0.033 U	< 0.050 U

Notes:
1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).
This table shows detected analytes only.
µg/L = micrograms per liter
AWQS = Ambient water quality standards
EPA = U.S. Environmental Protection Agency
ID = Identification
U = Analyte not detected.
J = Concentration is estimated.
ng/L = Nanogram(s) per liter
NA = Not analyzed
NSL = No screening level available.
NYSCRR = New York Codes, Rules and Regulations
NYSDEC = New York State Department of Environmental Conservation
TOGS = Technical and Operational Guidance Series
Bold and shaded values indicate that the analyte was detected greater than EPA MCLs.

Table 5. Historical Emerging Contaminants Analytical Results

			Targeted Unit	Overburden					
			Location ID	MW-1					
			Sample Name	828149-MW001010	828149-MW001010D	828149-MW001010	828149-MW001010D	828149-MW-1-20231127	888149-MW-1-20240508
			Parent Sample ID		828149-MW001010		828149-MW001010		
			Sample Date	10/10/2017	10/10/2017	5/7/2019	5/7/2019	11/27/2023	5/8/2024
Analyte	NYSDEC AWQS[1]	Unit							
EPA Method 1633 and 537									
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NSL	ng/L	NA	NA	NA	NA	< 0.84 U	< 0.85 U	
Perfluorobutanesulfonic acid (PFBS)	NSL	ng/L	NA	NA	NA	NA	2.6	3.7	
Perfluorobutanoic Acid	NSL	ng/L	NA	NA	NA	NA	2.7 J	2.5 J	
Perfluorodecanoic acid (PFDA)	NSL	ng/L	NA	NA	NA	NA	0.69 J	< 0.58 U	
Perfluoroheptanesulfonic acid (PFHpS)	NSL	ng/L	NA	NA	NA	NA	< 0.90 U	< 0.91 U	
Perfluoroheptanoic acid (PFHpA)	NSL	ng/L	NA	NA	NA	NA	1.2 J	< 0.47 U	
Perfluorohexanesulfonic acid (PFHxS)	NSL	ng/L	NA	NA	NA	NA	1.4 J	< 1.0 U	
Perfluorohexanoic acid (PFHxA)	NSL	ng/L	NA	NA	NA	NA	0.8 J	< 0.27 U	
Perfluorononanoic acid (PFNA)	NSL	ng/L	NA	NA	NA	NA	< 0.37 U	< 0.37 U	
Perfluorooctane Sulfonamide (FOSA)	NSL	ng/L	NA	NA	NA	NA	< 0.63 U	< 0.64 U	
Perfluorooctanesulfonic acid (PFOS)	2.7	ng/L	NA	NA	NA	NA	**22.2**	**15.5**	
Perfluorooctanoic acid (PFOA)	6.7	ng/L	NA	NA	NA	NA	3.5	5	
Perfluoropentanesulfonic Acid (PFPeS)	NSL	ng/L	NA	NA	NA	NA	< 0.93 U	< 0.94 U	
Perfluoropentanoic Acid (PFPeA)	NSL	ng/L	NA	NA	NA	NA	0.75 J	< 0.68 U	
Method 8270-SIM									
1,4-Dioxane (P-Dioxane)	0.35	µg/L	< 1000 U	< 1000 U	< 260 U	< 260 U	< 0.050 U	< 0.20 U	

Notes:
1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).
This table shows detected analytes only.
µg/L = micrograms per liter
AWQS = Ambient water quality standards
EPA = U.S. Environmental Protection Agency
ID = Identification
U = Analyte not detected.
J = Concentration is estimated.
ng/L = Nanogram(s) per liter
NA = Not analyzed
NSL = No screening level available.
NYSCRR = New York Codes, Rules and Regulations
NYSDEC = New York State Department of Environmental Conservation
TOGS = Technical and Operational Guidance Series
Bold and shaded values indicate that the analyte was detected greater than EPA MCLs.

Table 5. Historical Emerging Contaminants Analytical Results

			Targeted Unit	Overburden					
			Location ID	MW-2					
			Sample Name	828149-MW002010	828149-MW002010	828149-MW-2	828149-FD-01	828149-MW-2-20231127	828149-FD-01-20231127
			Parent Sample ID				828149-MW-2		828149-MW-2-20231127
			Sample Date	10/11/2017	5/8/2019	6/5/2023	6/5/2023	11/27/2023	11/27/2023
Analyte	NYSDEC AWQS[1]	Unit							
EPA Method 1633 and 537									
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NSL	ng/L	NA	NA	< 4 U	< 4.1 U	< 0.87 U	< 0.85 U	
Perfluorobutanesulfonic acid (PFBS)	NSL	ng/L	NA	NA	1.5	1.5	1.9	1.8 J	
Perfluorobutanoic Acid	NSL	ng/L	NA	NA	4.0 J	4.3	6.6 J	6.5 J	
Perfluorodecanoic acid (PFDA)	NSL	ng/L	NA	NA	< 1 U	< 1 U	< 0.59 U	< 0.58 U	
Perfluoroheptanesulfonic acid (PFHpS)	NSL	ng/L	NA	NA	< 1 U	< 1 U	< 0.93 U	< 0.92 U	
Perfluoroheptanoic acid (PFHpA)	NSL	ng/L	NA	NA	< 1 U	< 1 U	0.7 J	1.1 J	
Perfluorohexanesulfonic acid (PFHxS)	NSL	ng/L	NA	NA	< 1 U	< 1 U	< 1.1 U	< 1.0 U	
Perfluorohexanoic acid (PFHxA)	NSL	ng/L	NA	NA	0.36 J	0.44 J	1.5 J	1.6 J	
Perfluorononanoic acid (PFNA)	NSL	ng/L	NA	NA	< 1 U	< 1 U	< 0.38 U	< 0.37 U	
Perfluorooctane Sulfonamide (FOSA)	NSL	ng/L	NA	NA	< 1 U	< 1 U	< 0.66 U	< 0.65 U	
Perfluorooctanesulfonic acid (PFOS)	2.7	ng/L	NA	NA	< 1 U	< 1 U	< 0.41 U	< 0.40 U	
Perfluorooctanoic acid (PFOA)	6.7	ng/L	NA	NA	0.27 J	0.27 J	0.87 J	1 J	
Perfluoropentanesulfonic Acid (PFPeS)	NSL	ng/L	NA	NA	< 1 U	< 1 U	< 0.96 U	< 0.95 U	
Perfluoropentanoic Acid (PFPeA)	NSL	ng/L	NA	NA	0.68 J	0.76 J	2.3 J	2.5 J	
Method 8270-SIM									
1,4-Dioxane (P-Dioxane)	0.35	µg/L	< 10000 U	< 6500 U	< 0.033 U	< 0.033 U	< 0.050 U	< 0.050 U	

Notes:
1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).
This table shows detected analytes only.
µg/L = micrograms per liter
AWQS = Ambient water quality standards
EPA = U.S. Environmental Protection Agency
ID = Identification
U = Analyte not detected.
J = Concentration is estimated.
ng/L = Nanogram(s) per liter
NA = Not analyzed
NSL = No screening level available.
NYSCRR = New York Codes, Rules and Regulations
NYSDEC = New York State Department of Environmental Conservation
TOGS = Technical and Operational Guidance Series
Bold and shaded values indicate that the analyte was detected greater than EPA MCLs.

Table 5. Historical Emerging Contaminants Analytical Results

	Targeted Unit		Overburden							
	Location ID		MW-3				IW-1			
	Sample Name		828149-MW003009	828149-MW003009D	828149-MW003009	828149-MW003009D	828149-MW-3	828149-MW-3-20231127	828149-MW-3-20240508	828149-DUP-20240508
	Parent Sample ID			828149-MW003009		828149-MW003009				828149-MW-3-20240508
	Sample Date		10/12/2017	10/12/2017	5/6/2019	5/6/2019	6/6/2023	11/27/2023	5/8/2024	5/8/2024
Analyte	**NYSDEC AWQS[1]**	**Unit**								
EPA Method 1633 and 537										
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NSL	ng/L	NA	NA	NA	NA	< 4.1 U	< 0.87 U	< 0.87 U	< 0.82 U
Perfluorobutanesulfonic acid (PFBS)	NSL	ng/L	8.8	NA	NA	NA	2.4	2.1	1.8 J	1.9
Perfluorobutanoic Acid	NSL	ng/L	7.5	NA	NA	NA	8.9	5 J	6.2 J	5 J
Perfluorodecanoic acid (PFDA)	NSL	ng/L	3.4	NA	NA	NA	< 1 U	< 0.59 U	< 0.59 U	< 0.56 U
Perfluoroheptanesulfonic acid (PFHpS)	NSL	ng/L	1 J	NA	NA	NA	< 1 U	< 0.94 U	< 0.94 U	< 0.89 U
Perfluoroheptanoic acid (PFHpA)	NSL	ng/L	< 2.0 U	NA	NA	NA	1.8	2.4	1.5 J	1.1 J
Perfluorohexanesulfonic acid (PFHxS)	NSL	ng/L	3.4	NA	NA	NA	0.62 J	< 1.1 U	< 1.1 U	< 1.0 U
Perfluorohexanoic acid (PFHxA)	NSL	ng/L	9.6	NA	NA	NA	2.8	2.3	2.1	1.5 J
Perfluorononanoic acid (PFNA)	NSL	ng/L	5.1	NA	NA	NA	0.25 J	0.69 J	< 0.38 U	< 0.36 U
Perfluorooctane Sulfonamide (FOSA)	NSL	ng/L	2.4 J	NA	NA	NA	< 1 U	< 0.66 U	< 0.66 U	< 0.62 U
Perfluorooctanesulfonic acid (PFOS)	2.7	ng/L	**87**	NA	NA	NA	1.4	**4.8**	< 0.41 U	0.95 J
Perfluorooctanoic acid (PFOA)	6.7	ng/L	**17**	NA	NA	NA	3.7	4.6	4.1	3.6
Perfluoropentanesulfonic Acid (PFPeS)	NSL	ng/L	NA	NA	NA	NA	< 1 U	< 0.96 U	< 0.97 U	< 0.91 U
Perfluoropentanoic Acid (PFPeA)	NSL	ng/L	11	NA	NA	NA	2.5	2.5 J	1.9 J	1.9 J
Method 8270-SIM										
1,4-Dioxane (P-Dioxane)	0.35	µg/L	**1.1**	< 100 U	< 65 U	< 65 U	< 0.033 U	< 0.050 U	< 0.20 U	< 0.20 U

Notes:
1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).
This table shows detected analytes only.
µg/L = micrograms per liter
AWQS = Ambient water quality standards
EPA = U.S. Environmental Protection Agency
ID = Identification
U = Analyte not detected.
J = Concentration is estimated.
ng/L = Nanogram(s) per liter
NA = Not analyzed
NSL = No screening level available.
NYSCRR = New York Codes, Rules and Regulations
NYSDEC = New York State Department of Environmental Conservation
TOGS = Technical and Operational Guidance Series
Bold and shaded values indicate that the analyte was detected greater than EPA MCLs.

Table 5. Historical Emerging Contaminants Analytical Results

	Targeted Unit		Overburden						
	Location ID		MW-10		MW-13				
	Sample Name		828149-MW010010	828149-MW010010	828149-MW013012	828149-MW013012	828149-MW-13	828149-MW-13-20231127	828149-MW-13-20240508
	Parent Sample ID								
	Sample Date		10/11/2017	5/9/2019	10/12/2017	5/7/2019	6/5/2023	11/27/2023	5/8/2024
Analyte	NYSDEC AWQS[1]	Unit							
EPA Method 1633 and 537									
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NSL	ng/L	NA	NA	NA	NA	< 4.1 U	< 0.88 U	< 0.92 U
Perfluorobutanesulfonic acid (PFBS)	NSL	ng/L	NA	NA	4.3	NA	4	3.6	6.9
Perfluorobutanoic Acid	NSL	ng/L	NA	NA	8.9	NA	16	9.2	13.4
Perfluorodecanoic acid (PFDA)	NSL	ng/L	NA	NA	< 2.1 U	NA	< 1 U	< 0.60 U	< 0.63 U
Perfluoroheptanesulfonic acid (PFHpS)	NSL	ng/L	NA	NA	< 2.1 U	NA	< 1 U	< 0.95 U	< 0.99 U
Perfluoroheptanoic acid (PFHpA)	NSL	ng/L	NA	NA	2.3	NA	2.8	2.4	3.2
Perfluorohexanesulfonic acid (PFHxS)	NSL	ng/L	NA	NA	2.9	NA	2.2	2.4	2.2
Perfluorohexanoic acid (PFHxA)	NSL	ng/L	NA	NA	3.8	NA	4.5	3.2	4.3
Perfluorononanoic acid (PFNA)	NSL	ng/L	NA	NA	< 2.1 U	NA	0.22 J	1.1 J	0.93 J
Perfluorooctane Sulfonamide (FOSA)	NSL	ng/L	NA	NA	< 41 UJ	NA	< 1 U	< 0.67 U	< 0.70 U
Perfluorooctanesulfonic acid (PFOS)	2.7	ng/L	NA	NA	**6.3**	NA	**12**	**19.2**	**11.2**
Perfluorooctanoic acid (PFOA)	6.7	ng/L	NA	NA	**7.4**	NA	**10**	**8.2**	**12.7**
Perfluoropentanesulfonic Acid (PFPeS)	NSL	ng/L	NA	NA	NA	NA	0.64 J	< 0.98 U	< 1.0 U
Perfluoropentanoic Acid (PFPeA)	NSL	ng/L	NA	NA	3.9	NA	5.5	3.1 J	5
Method 8270-SIM									
1,4-Dioxane (P-Dioxane)	0.35	µg/L	< 20 U	< 13 U	0.26 J	< 130 U	< 0.033 U	< 0.050 U	< 0.20 U

Notes:
1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).
This table shows detected analytes only.
µg/L = micrograms per liter
AWQS = Ambient water quality standards
EPA = U.S. Environmental Protection Agency
ID = Identification
U = Analyte not detected.
J = Concentration is estimated.
ng/L = Nanogram(s) per liter
NA = Not analyzed
NSL = No screening level available.
NYSCRR = New York Codes, Rules and Regulations
NYSDEC = New York State Department of Environmental Conservation
TOGS = Technical and Operational Guidance Series
Bold and shaded values indicate that the analyte was detected greater than EPA MCLs.

Table 5. Historical Emerging Contaminants Analytical Results

	Targeted Unit		Bedrock							
	Location ID		MW-2B		MW-13B				MW-16B	
	Sample Name		828149-MW02B020	828149-MW02B020	828149-MW013B023	828149-MW013B023	828149-MW-13B	828149-MW-13B-20231127	828149-MW016B023	828149-MW16B023
	Parent Sample ID									
	Sample Date		10/12/2017	5/7/2019	10/11/2017	5/7/2019	6/5/2023	11/27/2023	10/10/2017	5/6/2019
Analyte	**NYSDEC AWQS[1]**	**Unit**								
EPA Method 1633 and 537										
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NSL	ng/L	NA	NA	NA	NA	< 4 U	< 0.87 U	NA	NA
Perfluorobutanesulfonic acid (PFBS)	NSL	ng/L	1.6 J	NA	NA	NA	< 0.99 U	< 0.63 U	NA	NA
Perfluorobutanoic Acid	NSL	ng/L	4.9	NA	NA	NA	2.3 J	2.2 J	NA	NA
Perfluorodecanoic acid (PFDA)	NSL	ng/L	< 2.0 U	NA	NA	NA	< 0.99 U	< 0.59 U	NA	NA
Perfluoroheptanesulfonic acid (PFHpS)	NSL	ng/L	< 2.0 U	NA	NA	NA	< 0.99 U	< 0.93 U	NA	NA
Perfluoroheptanoic acid (PFHpA)	NSL	ng/L	< 2.0 U	NA	NA	NA	< 0.99 U	< 0.48 U	NA	NA
Perfluorohexanesulfonic acid (PFHxS)	NSL	ng/L	< 2.0 U	NA	NA	NA	< 0.99 U	< 1.1 U	NA	NA
Perfluorohexanoic acid (PFHxA)	NSL	ng/L	< 2.0 U	NA	NA	NA	0.31 J	< 0.28 U	NA	NA
Perfluorononanoic acid (PFNA)	NSL	ng/L	< 2.0 U	NA	NA	NA	< 0.99 U	< 0.38 U	NA	NA
Perfluorooctane Sulfonamide (FOSA)	NSL	ng/L	0.72 J	NA	NA	NA	< 0.99 U	< 0.66 U	NA	NA
Perfluorooctanesulfonic acid (PFOS)	2.7	ng/L	< 2.0 U	NA	NA	NA	< 0.99 U	< 0.41 U	NA	NA
Perfluorooctanoic acid (PFOA)	6.7	ng/L	< 2.0 U	NA	NA	NA	< 0.99 U	< 0.71 U	NA	NA
Perfluoropentanesulfonic Acid (PFPeS)	NSL	ng/L	NA	NA	NA	NA	< 0.99 U	< 0.96 U	NA	NA
Perfluoropentanoic Acid (PFPeA)	NSL	ng/L	< 2.0 U	NA	NA	NA	0.37 J	< 0.69 U	NA	NA
Method 8270-SIM										
1,4-Dioxane (P-Dioxane)	0.35	µg/L	< 0.20 U	< 13 U	< 20 U	< 13 U	< 0.033 U	< 0.050 U	< 20 U	< 13 U

Notes:
1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).
This table shows detected analytes only.
µg/L = micrograms per liter
AWQS = Ambient water quality standards
EPA = U.S. Environmental Protection Agency
ID = Identification
U = Analyte not detected.
J = Concentration is estimated.
ng/L = Nanogram(s) per liter
NA = Not analyzed
NSL = No screening level available.
NYSCRR = New York Codes, Rules and Regulations
NYSDEC = New York State Department of Environmental Conservation
TOGS = Technical and Operational Guidance Series
Bold and shaded values indicate that the analyte was detected greater than EPA MCLs.

Table 5. Historical Emerging Contaminants Analytical Results

			Targeted Unit	Bedrock							
			Location ID	MW-17B				MW-19B			
			Sample Name	828149-MW017B018	828149-MW017B0180	828149-MW-17B	828149-MW-17B-20231127	828149-MW019B025	828149-MW019B025	828149-MW-19B	828149-MW-19B-20231128
			Parent Sample ID								
			Sample Date	10/11/2017	5/8/2019	6/5/2023	11/27/2023	10/11/2017	5/8/2019	6/6/2023	11/28/2023
Analyte	**NYSDEC AWQS[1]**	**Unit**									
EPA Method 1633 and 537											
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NSL	ng/L	NA	NA	< 4 U	< 0.88 U	NA	NA	< 4 U	< 0.89 U
Perfluorobutanesulfonic acid (PFBS)	NSL	ng/L	NA	NA	0.41 J	< 0.64 U	NA	NA	1.4	1.5 J
Perfluorobutanoic Acid	NSL	ng/L	NA	NA	1.5 J	1.5 J	NA	NA	5.4	5.4 J
Perfluorodecanoic acid (PFDA)	NSL	ng/L	NA	NA	< 1 U	< 0.60 U	NA	NA	< 1 U	< 0.61 U
Perfluoroheptanesulfonic acid (PFHpS)	NSL	ng/L	NA	NA	< 1 U	< 0.95 U	NA	NA	< 1 U	< 0.96 U
Perfluoroheptanoic acid (PFHpA)	NSL	ng/L	NA	NA	< 1 U	< 0.48 U	NA	NA	0.27 J	0.93 J
Perfluorohexanesulfonic acid (PFHxS)	NSL	ng/L	NA	NA	< 1 U	< 1.1 U	NA	NA	0.23 J	< 1.1 U
Perfluorohexanoic acid (PFHxA)	NSL	ng/L	NA	NA	< 1 U	< 0.28 U	NA	NA	0.84 J	1.2 J
Perfluorononanoic acid (PFNA)	NSL	ng/L	NA	NA	< 1 U	< 0.39 U	NA	NA	< 1 U	0.56 J
Perfluorooctane Sulfonamide (FOSA)	NSL	ng/L	NA	NA	< 1 U	< 0.67 U	NA	NA	< 1 U	< 0.67 U
Perfluorooctanesulfonic acid (PFOS)	2.7	ng/L	NA	NA	< 1 U	< 0.42 U	NA	NA	< 1 U	< 0.42 U
Perfluorooctanoic acid (PFOA)	6.7	ng/L	NA	NA	< 1 U	< 0.72 U	NA	NA	0.37 J	< 0.73 U
Perfluoropentanesulfonic Acid (PFPeS)	NSL	ng/L	NA	NA	< 1 U	< 0.97 U	NA	NA	< 1 U	< 0.99 U
Perfluoropentanoic Acid (PFPeA)	NSL	ng/L	NA	NA	< 2 U	< 0.70 U	NA	NA	1.3 J	1.4 J
Method 8270-SIM											
1,4-Dioxane (P-Dioxane)	0.35	µg/L	< 20 U	< 13 U	< 0.032 U	< 0.050 U	< 20 U	< 13 UJ	< 0.033 U	< 0.050 U

Notes:
1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).
This table shows detected analytes only.
µg/L = micrograms per liter
AWQS = Ambient water quality standards
EPA = U.S. Environmental Protection Agency
ID = Identification
U = Analyte not detected.
J = Concentration is estimated.
ng/L = Nanogram(s) per liter
NA = Not analyzed
NSL = No screening level available.
NYSCRR = New York Codes, Rules and Regulations
NYSDEC = New York State Department of Environmental Conservation
TOGS = Technical and Operational Guidance Series
Bold and shaded values indicate that the analyte was detected greater than EPA MCLs.

Table 5. Historical Emerging Contaminants Analytical Results

			Targeted Unit	Bedrock			
			Location ID	MW-21B			
			Sample Name	828149-MW021B019	828149-MW021B019	828149-MW-21B	828149-MW-21B-20231128
			Parent Sample ID				
			Sample Date	10/11/2017	5/8/2019	6/6/2023	11/28/2023
Analyte	**NYSDEC AWQS[1]**	**Unit**					
EPA Method 1633 and 537							
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NSL	ng/L	NA	NA	< 4.1 U	< 0.85 U
Perfluorobutanesulfonic acid (PFBS)	NSL	ng/L	NA	NA	7.8	6.6
Perfluorobutanoic Acid	NSL	ng/L	NA	NA	6.5	6.5 J
Perfluorodecanoic acid (PFDA)	NSL	ng/L	NA	NA	< 1 U	< 0.58 U
Perfluoroheptanesulfonic acid (PFHpS)	NSL	ng/L	NA	NA	< 1 U	< 0.91 U
Perfluoroheptanoic acid (PFHpA)	NSL	ng/L	NA	NA	0.89 J	1.3 J
Perfluorohexanesulfonic acid (PFHxS)	NSL	ng/L	NA	NA	5.6	3.7
Perfluorohexanoic acid (PFHxA)	NSL	ng/L	NA	NA	1.7	2.2
Perfluorononanoic acid (PFNA)	NSL	ng/L	NA	NA	< 1 U	< 0.37 U
Perfluorooctane Sulfonamide (FOSA)	NSL	ng/L	NA	NA	< 1 U	< 0.64 U
Perfluorooctanesulfonic acid (PFOS)	2.7	ng/L	NA	NA	< 1 U	1.6 J
Perfluorooctanoic acid (PFOA)	6.7	ng/L	NA	NA	3	2.8
Perfluoropentanesulfonic Acid (PFPeS)	NSL	ng/L	NA	NA	< 1 U	< 0.94 U
Perfluoropentanoic Acid (PFPeA)	NSL	ng/L	NA	NA	1.6 J	2.3 J
Method 8270-SIM						
1,4-Dioxane (P-Dioxane)	0.35	µg/L	< 20 U	< 13 U	< 0.034 U	< 0.050 U

Notes:
1. Screening level is the NYSDEC Class GA AWQS and Guidance Values (TOGS 1.1.1 and 6 NYCRR Part 703).
This table shows detected analytes only.
µg/L = micrograms per liter
AWQS = Ambient water quality standards
EPA = U.S. Environmental Protection Agency
ID = Identification
U = Analyte not detected.
J = Concentration is estimated.
ng/L = Nanogram(s) per liter
NA = Not analyzed
NSL = No screening level available.
NYSCRR = New York Codes, Rules and Regulations
NYSDEC = New York State Department of Environmental Conservation
TOGS = Technical and Operational Guidance Series
Bold and shaded values indicate that the analyte was detected greater than EPA MCLs.

Table 6. Monitored Natural Attenuation Analytical Results

	Location ID	MW-1	MW-13	IW-1[1]
	Sample Name	828149-MW-1-20240508	828149-MW-13-20240508	828149-MW-3-20240508
	Parent Sample ID			
	Sample Date	5/8/2024	5/8/2024	5/8/2024
Analyte	**Unit**	**Result**	**Result**	**Result**
Inorganic Anions (SW9056)				
Chloride (As Cl)	mg/L	35.1	161	105
Sulfate (As SO4)	mg/L	14.4	174	206
Total Metals (SW6010D)				
Iron	µg/L	141000 J	< 100 U	363
Manganese	µg/L	4710 J-	42.4	1960
TOC (SM5310B)				
Total Organic Carbon	mg/L	1.8 J	3.3	1.7
Alkalinity (SM2320B)				
Alkalinity, Total (As CaCO3)	mg/L	361	539	267
Dissolved Gases (RSK-175)				
Carbon Dioxide	µg/L	87000 J	72700 J+	36600 J+
Ethane	µg/L	1.7 J	< 0.14 U	0.16 J
Ethene	µg/L	< 0.16 UJ	< 0.16 U	< 0.16 U
Methane	µg/L	21.7 J	< 0.080 UJ	3.23 J
Nitrogen (Various Methods)				
Nitrogen, Nitrate-Nitrite (EPA 353.2)	mg/L	1.2	0.15	0.23
Nitrogen, Nitrate (As N) (Calculated)	mg/L	1.2	0.15	0.2
Nitrogen, Nitrite (SM4500B)	mg/L	< 0.010 R	< 0.010 R	0.03 J
Water Quality Parameters				
Dissolved Oxygen	mg/L	7.24	0	0
Oxidation Reduction Potential	mV	139	31	167
pH	Unitless	7.49	6.88	7.15

Notes:
(1) Monitoring well MW-3 was mistaken for injecion well IW-1 during the field event.
µg/L = Mircogram(s) per liter.
J = Concentration is estimated.
J- = Concentration is estimated; biased low.
J+ = Concentration is estimated; biased high.
mg/L - Miligram(s) per liter.
NSL = No screening level available.
R = Result was rejected during validation.
U = Analyte not detected.

Table 7. Analytical Parameters and Weightings for Preliminary Screening for Anaerobic Biodegradation Processes

Analysis	Concentration in Most Contaminated Zone	Interpretation	Value	MW-1	IW-1	MW-13
Oxygen	<0.5 mg/L	Tolerated, suppresses the reductive pathway at higher concentrations	3	0	3	3
Oxygen	> 5 mg/L	Not tolerated; however VC may be oxidized aerobically	-3	-3	0	0
Nitrate	<1 mg/L	At higher concentrations may complete wth reductive pathways	2	0	2	2
Iron II	> 1 mg/L	Reductive pathway possible; VC may be oxidized under Fe(III)- reducing conditions	3	3	0	0
Sulfate	< 20 mg/L	At higher concentrations may compete with reductive pathway	2	2	0	0
Sulfide	> 1 mg/L	Reductive pathway possible	3	0	0	0
Methane	<0.5 mg/L	VC oxidizes	0	0	0	0
	> 0.5 mg/L	Ultimate reductive daughter product, VC Accumulates	3	0	0	0
Oxidation Reduction Potential (ORP)	< 50 mV	Reductive pathway possible	1	0	0	1
	<-100 mV	Reductive pathway likely	2	0	0	0
pH*	5 < pH < 9	Optimal range for reductive pathway	0	0	0	0
	5 > pH > 9	Outside optimal range for reductive pathway	-2	0	0	0
TOC	>20 mg/L	Carbon and energy source; drives dechlorination; can be natural or anthropogenic	2	0	0	0
Temperature	> 20 ºC	At T >20°C biochemical process is accelerated	1	0	0	0
Carbon Dioxide	>2x background	Ultimate oxidative daughter product	1	---	---	---
Alkalinity	>2x background	Results from interaction between CO2 and aquifer minerals	1	0	0	0
Chloride	>2x background	Daughter product of organic chlorine	2	0	0	0
Hydrogen	> 1 nM	Reductive pathway possible, VC may accumulate	3	---	---	---
Hydrogen	< 1 nM	VC oxidized	0	---	---	---
Volatile Fatty Acids	> 0.1 mg/L	Intermediates resulting from biodegradation of more complex compounds; carbon and energy source	2	---	---	---
BTEX	> 0.1 mg/L	Carbon and energy source; drives dechlorination	2	0	0	0
Tetrachloroethene	---	Material released	0	0	0	0
Trichloroethene	---	Material released	0	0	0	0
		Daughter products of PCE	2	2	2	2
DCE	---	Material released	0	0	0	0
		Daughter products of TCE if cis is > 80% of total DCE it is likely a daughter product of 1,1-DCE can be chemical reaction product of TCE	2	2	2	2
VC	---	Material released	0	0	0	0
		Daughter products of DCE	2	0	0	0
1,1,1-Trichloroethane	---	Material released	0	0	0	0
DCA	---	Daughter product of TCE under reducing conditions	2	0	0	0
Carbon Tetrachloride	---	Material released	0	0	0	0
Chloroethane*	---	Daughter product of DCA or VC under reducing conditions	2	0	0	0
Ethene	>0.01 mg/L	Daughter product of VC	2	0	0	0
Ethane	>0.1 mg/L	Daughter product of ethene	3	0	0	0
Chloroform	---	Material released	0	0	0	0
		Daughter product of Carbon Tetrachloride	2	0	0	0
Dichloromethane	---	Material released	0	0	0	0
		Daughter product of Chloroform	2	0	0	0
		Total Score		6	9	10
		Inadequate evidence for anaerobic biodegradation (0-5)				
		Limited evidence for anaerobic biodegradation (6-14)		X	X	X
		Adequate evidence for anaerobic biodegradation (15-20)				
		Strong evidence for anaerobic biodegradation (>20)				

Notes:
--- = Not applicable
ºC = Degrees Celsius
BTEX = Benzene, toluene, ethylbenzene, and xylenes
DCA = Dichloroethane
DCE = Dichloroethene
mg/L = Milligram(s) per liter
mV = Millivolt(s)
nM = Nanomolar
PCE = Tetrachloroethene
TCE = Trichloroethene
TOC = Total organic carbon
VC = Vinyl chloride

Figures

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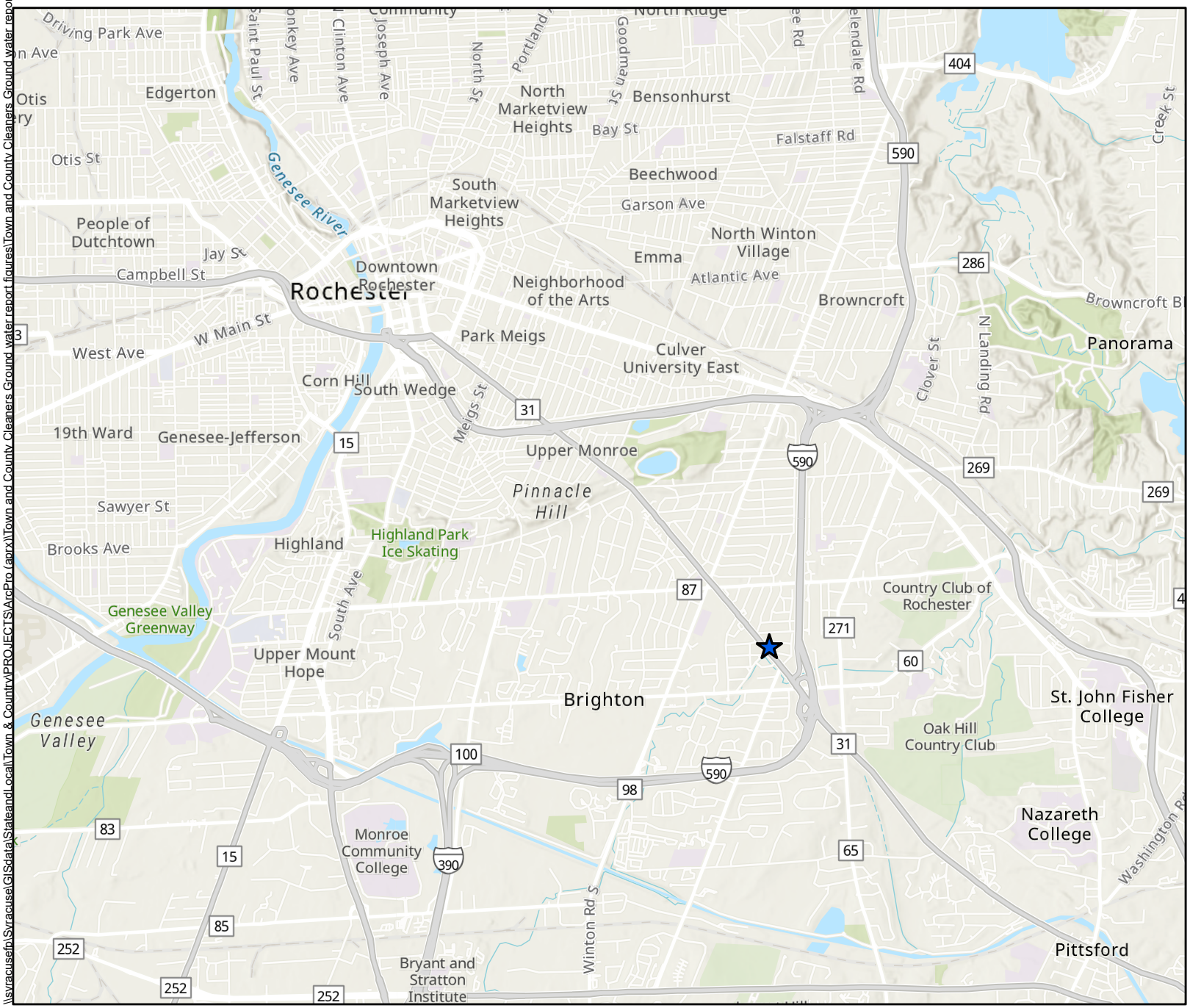
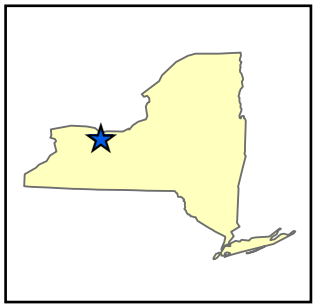


VICINITY MAP



Legend

★ Site Location

N

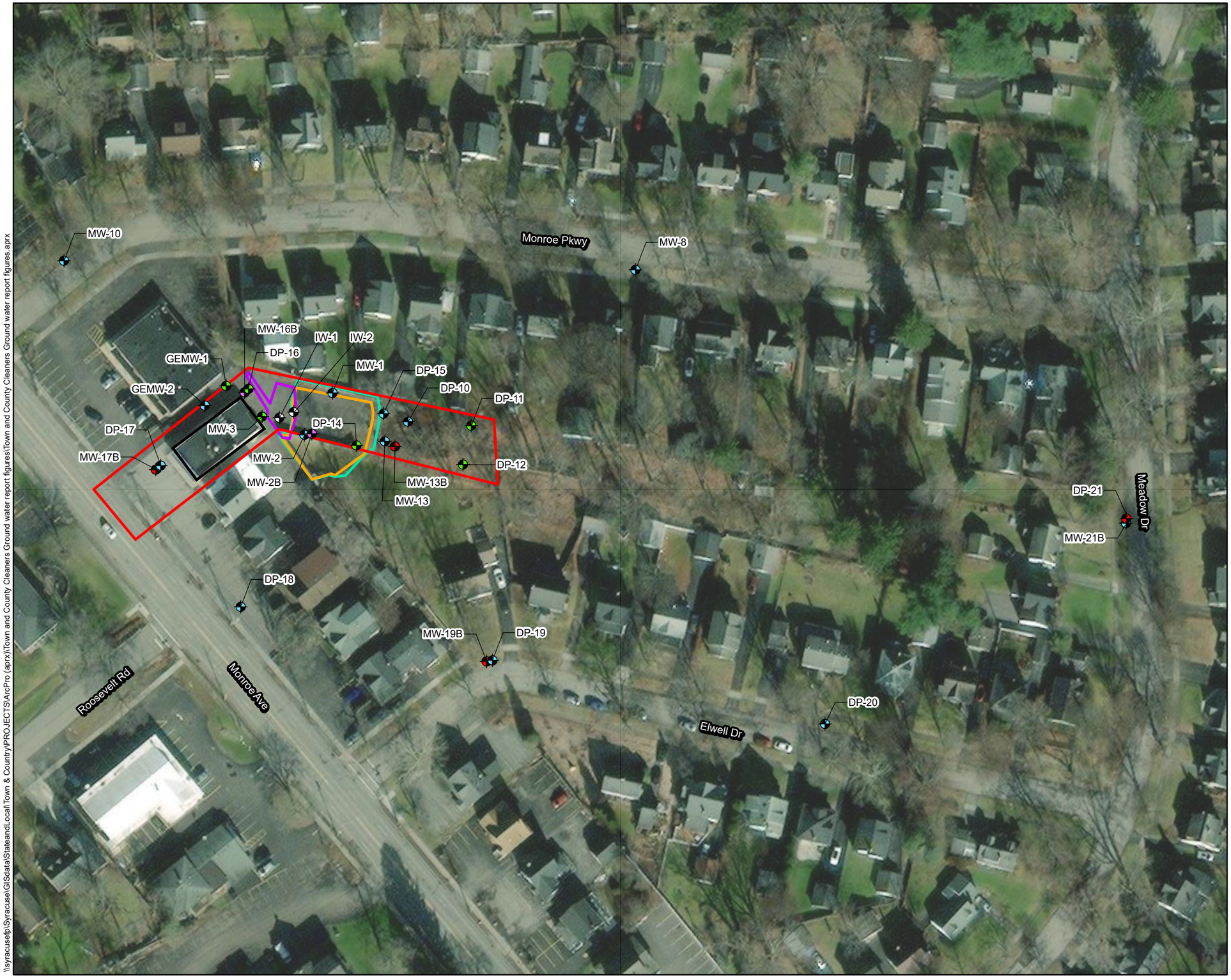
0 0.5 1

Miles

Map Date: 6/13/2024
Projection: NAD83 New York StatePlane West US Feet
Source: ESRI, NYS

NEW YORK STATE Department of Environmental Conservation

Figure 1
General Site Location
Town and Country Cleaners
Brighton, New York



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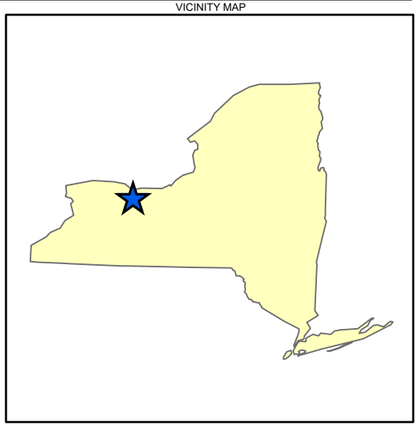

Legend

- Site Location
- Overburden Well
- Bedrock Well
- Overburden Well Not Found
- Bedrock Well Not Found
- Injection Well
- Site Building
- Site Boundary
- Approximate Limit of Completed Hazardous Excavation
- Approximate Limit of Completed Non-Hazardous Evacuation
- Limit of IRM Excavation

Notes:
IRM: Interim Remedial Measure

Map Date: 7/2/2024
Projection: NAD83 New York State Plane West US Feet
Source: ESRI 2022, NYS

N

0 50 100
Feet

NEW YORK STATE Department of Environmental Conservation

Figure 2
Site Layout
Town and Country Dry Cleaners
Brighton, New York

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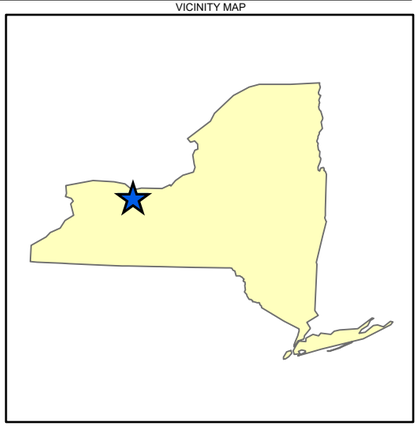

Legend

- Site Location
- Overburden Well
- Bedrock Well
- Overburden Well - Not Found
- Bedrock Well - Not Found
- Injection Well
- Site Building
- Site Boundary
- Approximate Limit of Completed Hazardous Excavation
- Approximate Limit of Completed Non-Hazardous Evacuation
- Limit of IRM Excavation
- Overburden Groundwater Elevation
- Inferred Overburden Groundwater Elevation
- Direction of Groundwater Flow

Notes:
IRM: Interim Remedial Measure
A: Abandoned
NA: Not Applicable (Bedrock Wells)
NF: Not Found

Elevation contours are shown in feet above mean sea level.
Highlighted wells were considered when drawing contours.

Map Date: 7/2/2024
Projection: NAD83 New York State Plane West US Feet
Source: ESRI, NYS

0 50 100
Feet

N

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Figure 3
May 2024 Overburden Groundwater Elevation Contour
Town and Country Dry Cleaners
Brighton, New York

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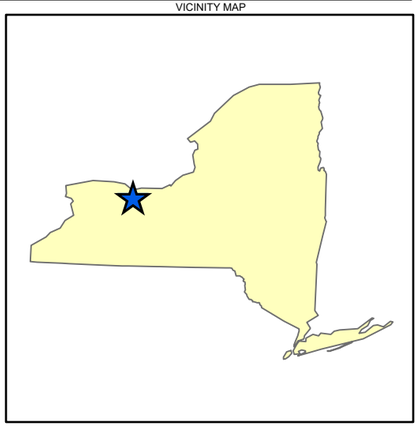
VICINITY MAP



Legend

- Site Location
- Overburden Well
- Bedrock Well
- Overburden Well - Not Found
- Bedrock Well - Not Found
- Injection Well
- Site Building
- Site Boundary
- Limit of IRM Excavation
- Approximate Limit of Completed Hazardous Excavation
- Approximate Limit of Completed Non-Hazardous Evacuation
- Bedrock Groundwater Elevation
- Inferred Bedrock Groundwater Elevation
- Direction of Groundwater Flow

Notes:
IRM: Interim Remedial Measure
NF: Not Found
A: Abandoned
NA: Not Applicable (Overburden Wells)

Elevation contours are shown in feet above mean sea level.
Highlighted wells were considered when drawing contours.

Map Date: 7/2/2024
Projection: NAD83 New York State Plane West US Feet
Source: ESRI, NYS

0 50 100
Feet

N

NEW YORK STATE Department of Environmental Conservation

Figure 4
May 2024 Bedrock Groundwater Elevation Contour
Town and Country Dry Cleaners
Brighton, New York

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Analyte	NYSDEC AWQS
cis-1,2-DCE	5
PCE	5
TCE	5
VC	2

DP-17	
5/7/2024	
cis-1,2-DCE	< 0.51 U
PCE	< 0.56 U
TCE	< 0.53 U
VC	< 0.52 U

MW-2	
5/7/2024	
cis-1,2-DCE	**19**
PCE	**76.4**
TCE	**17.8**
VC	< 0.52 U

MW-1	
5/8/2024	
cis-1,2-DCE	**31.2**
PCE	**907**
TCE	**11.5**
VC	< 2.6 U

GEMW-2	
5/7/2024	
cis-1,2-DCE	< 0.51 U
PCE	**66.8**
TCE	0.82 J
VC	< 0.52 U

DP-15	
5/7/2024	
cis-1,2-DCE	**54.1**
PCE	**658**
TCE	**37.9**
VC	< 2.6 U

DP-10	
5/7/2024	
cis-1,2-DCE	**128**
PCE	**887**
TCE	**85.4**
VC	< 2.6 U

MW-17B	
5/7/2024	
cis-1,2-DCE	< 0.51 U
PCE	< 0.56 U
TCE	< 0.53 U
VC	< 0.52 U

DP-21	
5/7/2024	
cis-1,2-DCE	< 0.51 U
PCE	1.6
TCE	< 0.53 U
VC	< 0.52 U

MW-13B	
5/8/2024	
cis-1,2-DCE	5
PCE	0.71 J
TCE	1.2
VC	< 0.52 U

MW-13	
5/8/2024	
cis-1,2-DCE	**163**
PCE	**1160**
TCE	**89.5**
VC	< 2.1 U

IW-1	
5/8/2024	
cis-1,2-DCE	**182**
PCE	**1730**
TCE	**68.4**
VC	<5.2 U

MW-21B	
5/7/2024	
cis-1,2-DCE	< 0.51 U
PCE	2.5
TCE	< 0.53 U
VC	< 0.52 U

DP-18	
5/7/2024	
cis-1,2-DCE	0.76 J
PCE	2.1
TCE	1
VC	< 0.52 U

MW-19B	
5/7/2024	
cis-1,2-DCE	**16**
PCE	**10.5**
TCE	**7.5**
VC	< 0.52 U

DP-19	
5/7/2024	
cis-1,2-DCE	**12.3**
PCE	**41.8**
TCE	**10.6**
VC	< 0.52 U

DP-20	
5/7/2024	
cis-1,2-DCE	< 0.51 U
PCE	< 0.56 U
TCE	< 0.53 U
VC	< 0.52 U

MW-10 MW-8 IW-2 MW-3 MW-2B DP-14 DP-11 DP-12 MW-13 MW-13B MW-21B DP-21 DP-20 DP-19 MW-19B DP-18 IW-1 MW-17B DP-17 GEMW-2 DP-15 DP-10

Monroe Pkwy Meadow Dr Elwell Dr Monroe Ave Roosevelt Rd

VICINITY MAP

Legend

- Site Location
- Overburden Well
- Bedrock Well
- Overburden Well - Not Found
- Bedrock Well - Not Found
- Injection Well
- Site Building
- Site Boundary
- Limit of IRM Excavation
- Approximate Limit of Completed Hazardous Excavation
- Approximate Limit of Completed Non-Hazardous Evacuation

Notes:
Shaded and bolded values exceed NYSDEC AWQS
Sample results are in micrograms per liter (µg/L)
AWQS: Ambient Water Quality Standards
DCE: Dichloroethylene
IRM: Interim Remedial Measure
J: Value is is estimated.
PCE: Tetrachloroethylene
TCE: Trichloroethylene
U: Value not detected.
VC: Vinyl Chloride
Wells sampled: DP-10, DP-15, DP-17, DP-18, DP-19, DP-20, DP-21, GEMW-2, MW-1, MW-2, MW-3, MW-13, MW-13B, MW-17B, MW-19B, MW-21B

Map Date: 7/2/2024
Projection: NAD83 New York State Plane West US Feet
Source: ESRI, NYS

0 50 100
Feet

N

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Figure 5
May 2024 VOC Analytical Results
Town and Country Dry Cleaners
Brighton, New York

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Analyte	NYSDEC AWQS	EPA MCL
PFHxS	NSL	10
PFNA	NSL	10
PFOS	2.7	4.0
PFOA	6.7	4.0

MW-1	
5/8/2024	
PFHxS	< 1.0 U
PFNA	< 0.37 U
PFOS	**15.5**
PFOA	5

DP-15	
5/7/2024	
PFHxS	12
PFNA	0.72 J
PFOS	**47.9**
PFOA	**22.7**

DP-10	
5/7/2024	
PFHxS	18.1
PFNA	< 0.38 U
PFOS	**86.5**
PFOA	**28**

IW-1	
5/8/2024	
PFHxS	< 1.1 U
PFNA	< 0.38 U
PFOS	0.73 J
PFOA	4.1

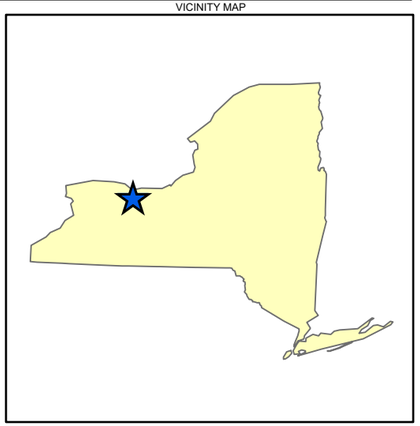
MW-13	
5/8/2024	
PFHxS	2.2
PFNA	0.93 J
PFOS	**11.2**
PFOA	**12.7**

DP-18	
5/7/2024	
PFHxS	1.5 J
PFNA	0.8 J
PFOS	< 0.41 U
PFOA	4

DP-20	
5/7/2024	
PFHxS	< 1.0 U
PFNA	< 0.37 U
PFOS	1.6 J
PFOA	1.1 J

MW-10, DP-16, MW-16B, MW-2, GEMW-1, IW-2, GEMW-2, DP-17, MW-3, DP-14, MW-17B, MW-2B, MW-13B, DP-11, DP-12, MW-8, Monroe Pkwy, Meadow Dr, MW-21B, DP-21, Roosevelt Rd, Monroe Ave, MW-19B, DP-19, Elwell Dr

VICINITY MAP



Legend

- Site Location
- Overburden Well
- Bedrock Well
- Overburden Well - Not Found
- Bedrock Well - Not Found
- Injection Well
- Site Building
- Site Boundary
- Limit of IRM Excavation
- Approximate Limit of Completed Hazardous Excavation
- Approximate Limit of Completed Non-Hazardous Evacuation

Notes:
Bolded values exceed NYSDEC AWQS.
Shaded values exceed EPA MCLs.
Samples are in nanogram(s) per liter (ng/L).
AWQS: Ambient Water Quality Standards
IRM: Interim Remedial Measure
J: Value is estimated.
NS: Not Sampled
PFHxS: Perfluorohexanesulfonic acid
PFNA: Perfluorononanoic acid
PFOS: Perfluorooctanesulfonic acid
PFOA: Perfluorooctanoic acid
U: Value is not detected.
Sampled wells include: DP-10, DP-15, DP-18, DP-20, MW-1, MW-3, MW-13

Map Date: 7/2/2024
Projection: NAD83 New York State Plane West US Feet
Source: ESRI, NYS

0 50 100
Feet

N

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Figure 6
May 2024 Emerging Contaminants Analytical Results
Town and Country Dry Cleaners
Brighton, New York

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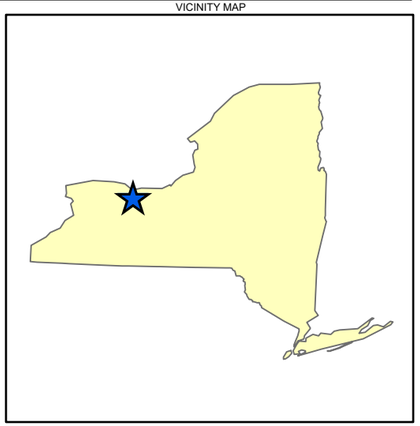

Legend

- Site Location
- Overburden Well
- Bedrock Well
- Overburden Well - Not Found
- Bedrock Well - Not Found
- Injection Well
- Site Building
- Site Boundary

PCE Concentration (µg/L)

- 5-10
- 10-100
- 100-1000
- 1000+

Notes:
A: Abandoned
NA: Not Applicable (Bedrock Wells)
ND: Not Detected
NF: Not Found
NS: Not Sampled
PCE: Tetrachloroethylene

Concentrations are in micrograms per liter (µg/L)
Highlighted wells were considered when drawing plumes.

Map Date: 4/25/2025
Projection: NAD83 New York State Plane West US Feet
Source: ESRI, NYS

0 50 100
Feet

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Figure 7
May 2024 PCE Concentrations in Overburden
Town and Country Dry Cleaners
Brighton, New York

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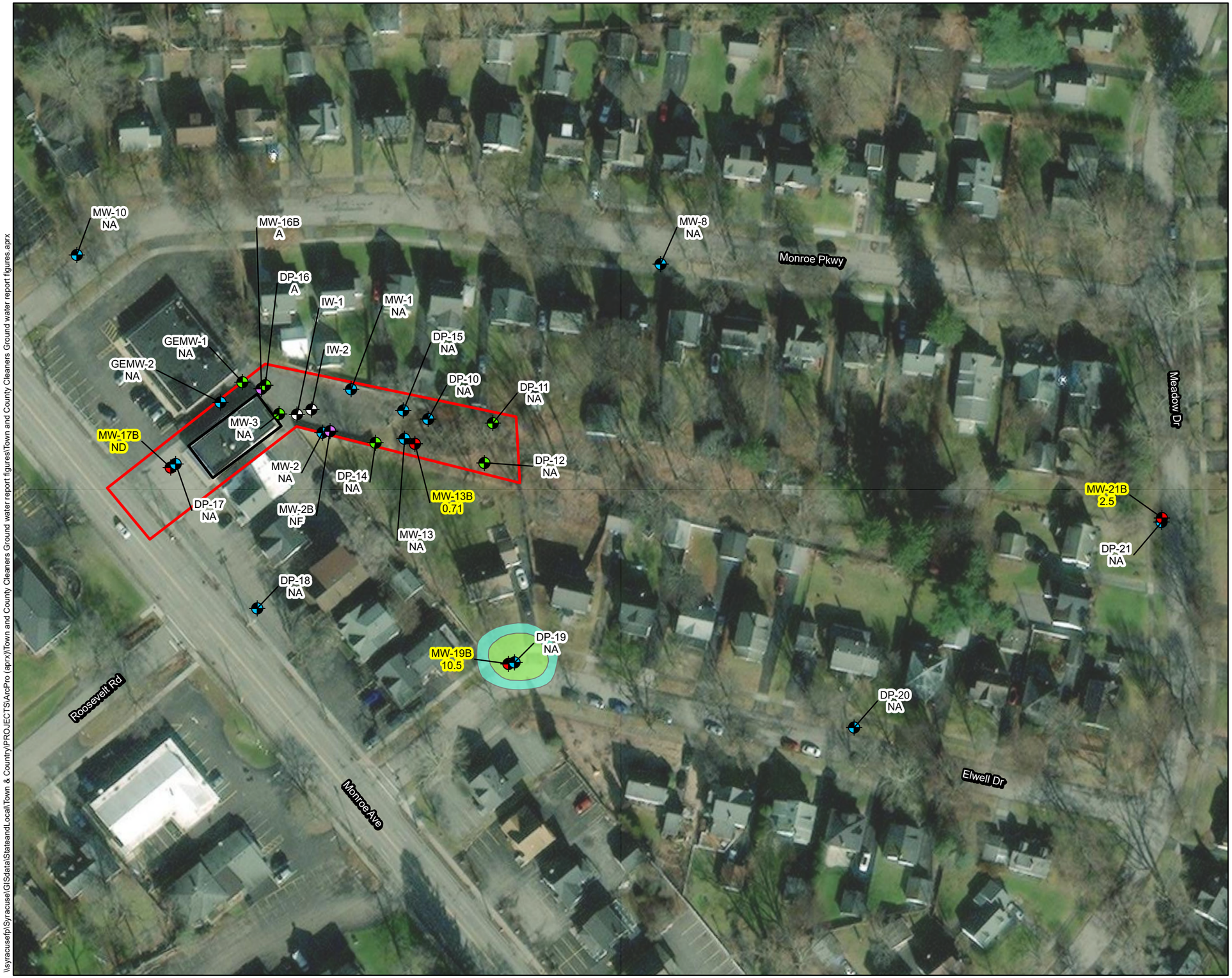

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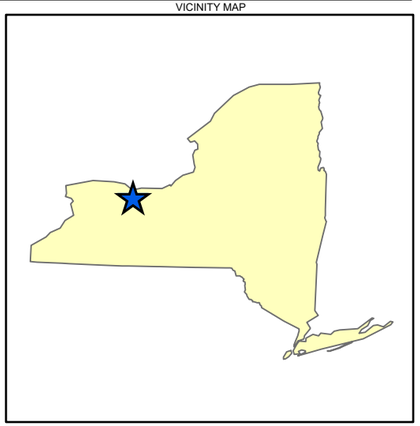

Legend

- Site Location
- Overburden Well
- Bedrock Well
- Overburden Well - Not Found
- Bedrock Well - Not Found
- Injection Well
- Site Building
- Site Boundary

PCE Concentration (µg/L)

- 5-10
- 10+

Notes:
A: Abandoned
NA: Not Applicable (Overburden Wells)
ND: Not Detected
NF: Not Found
NS: Not Sampled
PCE: Tetracholorethylene

Concentrations are in micrograms per liter (µg/L)
Highlighted wells were considered when drawing plumes.

Map Date: 4/25/2025
Projection: NAD83 New York State Plane West US Feet
Source: ESRI, NYS

0 50 100
Feet

N

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Figure 8
May 2024 PCE Concentrations in Bedrock
Town and Country Dry Cleaners
Brighton, New York

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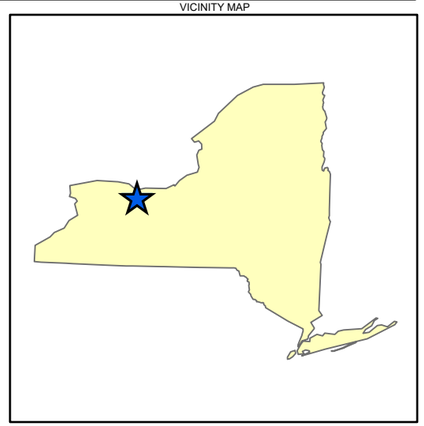
MW-10
NS
Monroe Pkwy
MW-8
NS
MW-16B
A
GEMW-1
NF
DP-16
A
MW-1
11.5
DP-15
37.9
GEMW-2
0.82
IW-1
68.4
IW-2
DP-10
85.4
DP-11
NF
DP-17
ND
DP-14
NF
MW-3
NF
MW-17B
NA
MW-2
17.8
DP-12
NF
MW-2B
NF
MW-13B
NA
MW-13
89.5
Meadow Dr
MW-21B
NA
DP-21
ND
DP-18
1
MW-19B
NA
DP-19
10.6
Roosevelt Rd
Monroe Ave
DP-20
ND
Elwell Dr

VICINITY MAP



Legend

- Site Location
- Overburden Well
- Bedrock Well
- Overburden Well - Not Found
- Bedrock Well - Not Found
- Injection Well
- Site Building
- Site Boundary

TCE Concentration (µg/L)

- 5-10
- 10-100

Notes:
A: Abandoned
NA: Not Applicable (Bedrock Wells)
ND: Not Detected
NF: Not Found
NS: Not Sampled
TCE: Trichloroethylene

Concentrations are in micrograms per liter (µg/L)
Highlighted wells were considered when drawing plumes.

Map Date: 7/2/2024
Projection: NAD83 New York State Plane West US Feet
Source: ESRI, NYS

0 50 100
Feet

N

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Figure 9
May 2024 TCE Concentrations in Overburden
Town and Country Dry Cleaners
Brighton, New York

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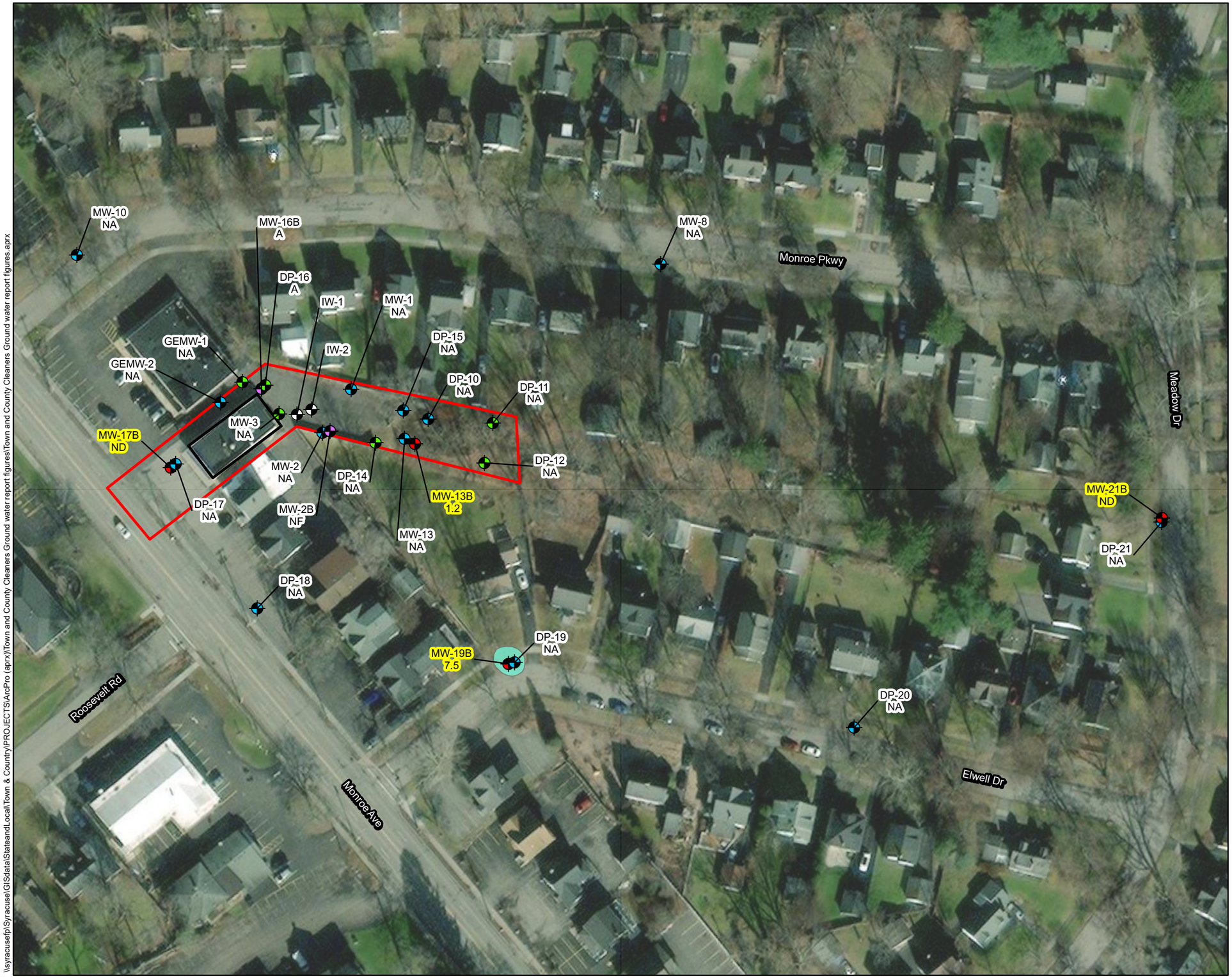
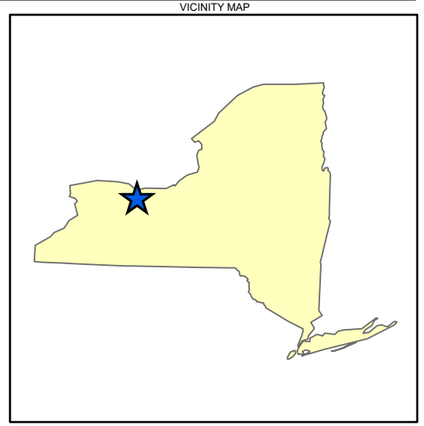


VICINITY MAP



Legend

- Site Location
- Overburden Well
- Bedrock Well
- Overburden Well - Not Found
- Bedrock Well - Not Found
- Injection Well
- Site Building
- Site Boundary

TCE Concentration (µg/L)

- 5-10

Notes:
A: Abandoned
NA: Not Applicable (Overburden Wells)
ND: Not Detected
NF: Not Found
NS: Not Sampled
TCE: Trichloroethylene

Concentrations are in micrograms per liter (µg/L)
Highlighted wells were considered when drawing plumes.

Map Date: 4/25/2025
Projection: NAD83 New York State Plane West US Feet
Source: ESRI, NYS

0 50 100
Feet

N

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Figure 10
May 2024 TCE Concentrations in Bedrock
Town and Country Dry Cleaners
Brighton, New York

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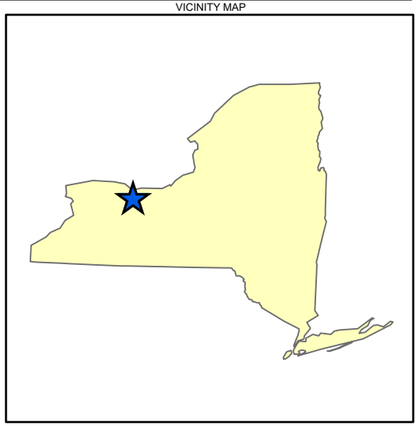
VICINITY MAP



Legend

- Site Location
- Overburden Well
- Bedrock Well
- Overburden Well - Not Found
- Bedrock Well - Not Found
- Injection Well
- Site Building
- Site Boundary

Cis-1,2-DCE Concentration (µg/L)

- 5-10
- 10-100
- 100+

Notes:
A: Abandoned
DCE: Dichloroethylene
NA: Not Applicable (Bedrock Wells)
ND: Not Detected
NF: Not Found
NS: Not Sampled

Concentrations are in micrograms per liter (µg/L)
Highlighted wells were considered when drawing plumes.

Map Date: 7/2/2024
Projection: NAD83 New York State Plane West US Feet
Source: ESRI, NYS

0 50 100
Feet

N

NEW YORK STATE Department of Environmental Conservation

Figure 11
May 2024 Cis-1,2-DCE Concentrations in Overburden
Town and Country Dry Cleaners
Brighton, New York

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Appendix A

Field Forms

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Town & Country Cleaners (828149)
Weather: sunny, 59°F, no wind
0800 C. Derrick, M. Gilkey, H. Bedell, A. Faux (EA) onsite
0809 Calibrate PIDs and Horibas and hold safety tailgate meeting
0900 Start purge DP-18.
0909 Start purge DP-15.
0922 Start purge DP-10.
0931 Sample 828149-DP-18-20240507.
0949 Sample 828149-DP-10-20240507.
1020 Sample 828149-DP-15-20240507.
1013 Start purge DP-20.
1052 Sample 828149-DP-20-20240507 with MS/MSD
1115 Start purge DP-17.
1118 Start purge DP-21.
1141 Start purge DP-19
1151 Sample 828149-DP-17-20240507.
1200 Start purge MW-21B.
1145 Sample 828149-DP-21-20240507.
1221 Sample 828149-MW-21B-20240507.
1259 Sample 828149-DP-19-20240507.
1409 Start purge MW-17B.
1413 Start purge GEMW-2.
1415 Start purge MW-19B.
1443 Sample 828149-MW-17B-20240507.

Rain in the Rain

16 Town & Country (828149)

1457 Sample 828149-GEMW-2-20240507.
1506 Sample 828149-MW-19B-20240507.
1503 Start purge MW-2.
1528 Sample 828149-MW-2-20240507.
1535 Sample 828149-FB-20240507.
1538 Sample 828149-EB-20240507.
1600 EA offsite.

5.7.2024

Town & Country (828149) 17

Weather: partly cloudy, 64°F, wind WSW 11 mph
0800 C. Derrick, M. Gilkey, N. Bedell, A. Faux (EA) onsite.
0812 Safety tailgate meeting, Calibrate Horibas.
0845 Start purge MW-13.
0848 Start purge MW-1.
0855 Start purge ~~MW-3~~.
0916 Sample 828149-MW-3-20240508 with DUP.
MW-1 goes dry.
0921 Sample 828149-MW-13-20240508.
0958 Start purge MW-13B.
1015 Sample 828149-MW-1-20240508 upon recharge- high turbidity.
1101 Sample 828149-MW-13B-20240508.
1118 Begin synoptic gauging.
1210 Finish gauging, take field blanks.
1230 EA offsite.
1602 Take equipment blank.

IW-1
Sample for IW-1

5.8.2024

Rite in the Rain

MONITORING WELL GAUGING LOG

Inspector(s): C. Derrick, M. Gilkey, H. Bedell, A. Faux

Weather Conditions: windy 69°F

Site Name: Town and Country Cleaners

Date/Time: 5/8/24, 1118

Well ID	PID Reading (ppm)	DTW (ft. below TOC)	DTB (ft. below TOC)	Well Condition / Notes
MW-13B	0.0	10.00	21.97	good
MW-13	9.9	6.79	12.93	good
DP-15	0.4	3.50	9.39	Good
MW-1	0.0	2.85	10.88	fair, asphalt in well casing, replaced broken j-plug
MW-2	0.0	4.41	22.55	good, replaced broken j-plug
~~MW-3~~ IW-1	3.3	3.33	7.62	good, uneven PVC, replaced j-plug
GEMW-2	0.0	8.00	14.59	good
MW-17B	0.0	7.23	27.33	good
DP-17	0.0	6.82	16.19	good, soft bottom, needs 1 screw
DP-18	0.0	5.96	10.31	good, needs 1 ~~bolt~~ screw
DP-19	0.0	4.55	12.96	good
MW-19B	0.0	4.87	21.06	good, needs bolts (2)
DP-20	0.0	10.47	14.71	good
DP-21	0.0	6.91	10.38	good
MW-21B	0.0	7.36	19.52	good
MW-8	0.0	9.14	9.28	dry, gauged but not sampled due to well volume
MW-10	0.0	6.97	9.57	good, gauged but not sampled due to historically low well volume
DP-10	0.0	4.30	9.27	good

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GROUNDWATER SAMPLING PURGE FORM

Well I.D.: DP-10	EA Personnel: C Dennis	Client: NYSDEC (828149)
Location: Town & Country Rochester, NY	Well Condition: good	Weather: sunny, 59°F
Sounding Method: Solinist WLM	Gauge Date: 05/08/2024	Measurement Ref: TOC
Stick Up/Down (ft): flush	Gauge Time: 1118	Well Diameter (in): 1 in

Purge Date: 5/7/24	Purge Time: 0922
Purge Method: Low Flow Peristaltic Pump	Field Technician: C Dennis

Well Volume

A. Well Depth (ft): 9.27	D. Well Volume (ft): ~~gal~~ 0.041	Depth/Height of Top of PVC: ~ - 4 in
B. Depth to Water (ft): 4.30	E. Well Volume (gal) C*D): 0.20	Pump Type: Peristaltic Pump
C. Liquid Depth (ft) (A-B): 4.97	F. Three Well Volumes (gal) (E3): 0.61	Pump Intake Depth: Mid-screen

Water Quality Parameters

Time (hrs) 3-5 min	Temperature (oC) ± 1 °C	pH (pH units) ± 0.1 pH	ORP (mV) ± 10 mV	Conductivity (S/m) ± 3%	Turbidity (ntu) ± 10 NTUs	DO (mg/L) ± 10% / <0.5	DTW * (ft btoc) ± 0.3 feet	Rate (Lpm) 0.1-0.5 Lpm	Volume (liters)
0922	14.33	6.42	168	1.45	315	2.09	—	0.25	—
0925	14.27	6.66	119	1.48	257	5.08			0.75
0928	14.39	6.76	109	1.51	268	6.28			1.50
0931	14.50	6.89	101	1.51	325	9.80			2.25
0934	14.70	6.98	98	1.51	282	9.97			3.00
0937	14.75	7.02	93	1.52	247	10.42			3.75
0940	14.52	7.05	85	1.53	217	10.55			4.50
0943	14.24	7.05	93	1.53	219	10.59			5.25
0946	14.56	7.05	103	1.52	229	10.46			6.00
0949	14.36	7.07	103	1.53	227	10.44			6.75
—	—	—	—	SAMPLE	—	—	—	—	—

Total Quantity of Water Removed (gal):	1.78 gal	Sampling Time:	0949
Samplers:	C. Dennis	Split Sample With:	—
Sampling Date:	5/7/24	Sample Type:	grab

COMMENTS AND OBSERVATIONS: * DTW not taken due to sampling for PFAs.
PID: 0.0 ppm
Analysis: VOCs PFAs, 1,4-Dioxane
SAMPLE ID: 828149-DP-10-20240507

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GROUNDWATER SAMPLING PURGE FORM

Well I.D.: DP-15	**EA Personnel:** C.Derick/H.Bedell/M.Gilkey/A.Faux	**Client:** NYSDEC (#828149)
Location: Townsend Cleaners Rochester, NY	**Well Condition:** Good	**Weather:** 56°F, Sunny
Sounding Method: Solinst WLM	**Gauge Date:** 05/08/2024	**Measurement Ref:** TOC
Stick Up/Down (ft): Flush	**Gauge Time:** 1118	**Well Diameter (in):** 1

Purge Date: 05/07/2024	**Purge Time:** 0909
Purge Method: Low Flow Peristaltic Pump	**Field Technician:** H.Bedell

Well Volume

A. Well Depth (ft): 9.39	**D. Well Volume (ft):** 0.041	**Depth/Height of Top of PVC:** ~-3in
B. Depth to Water (ft): 3.50	**E. Well Volume (gal) C*D:** 0.24	**Pump Type:** Peristaltic Pump
C. Liquid Depth (ft) (A-B): 5.89	**F. Three Well Volumes (gal) (E3):** 0.72	**Pump Intake Depth:** Mid-screen

Water Quality Parameters

Time (hrs) 3-5 min	Temperature (oC) ± 1 °C	pH (pH units) ± 0.1 pH	ORP (mV) ± 10 mV	Conductivity (S/m) ± 3%	Turbidity (ntu) ± 10 NTUs	DO (mg/L) ±10%/ <0.5	DTW (ft btoc) ± 0.3 feet	Rate (Lpm) 0.1-0.5 Lpm	Volume (liters)
0911	12.35	6.17	267	1.06	197	0.97		0.25	—
0914	12.46	6.60	251	1.08	302	A.11			0.75
0917	12.37	6.69	246	1.09	150	0.00			1.50
0920	12.29	6.73	242	1.10	99.4	0.00			2.25
0923	12.35	6.74	239	1.09	83.6	0.00			3.00
0926	12.35	6.66	234	1.09	95.0	0.00			3.75
0929	12.37	6.76	231	1.09	107	0.00			4.50
0932	12.48	6.77	229	1.09	157	0.00			5.25
0935	12.56	6.77	227	1.08	157	0.00			6.00
0938	12.60	6.78	225	1.08	195	0.00			6.75
0941	12.53	6.78	225	1.09	385	0.00			7.50
0944	12.29	6.80	224	1.09	502	7.13			8.25
0947	12.43	6.81	224	1.08	390	6.86			9.00
0950	12.34	6.82	224	1.09	289	7.23			9.75
0953	12.58	6.81	225	1.08	358	3.88			10.50
0956	12.27	6.83	225	1.09	374	8.15			11.25

Total Quantity of Water Removed (gal):	4.56 gal	**Sampling Time:**	1020
Samplers:	H.Bedell/C.Derick/M.Gilkey/A.Faux	**Split Sample With:**	X
Sampling Date:	05/07/2024	**Sample Type:**	GRAB

COMMENTS AND OBSERVATIONS: *No water level taken due to PFAS sampling, PID=0.4ppm

Sample ID: 828149-DP-15-20240507

Analysis: VOCs 8260, PFAS 1633, 1,4-Dioxane 8271 SIM

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

GROUNDWATER SAMPLING PURGE FORM

Well I.D.: DP-15	EA Personnel:	Client: NYSDEC (#828149)
Location:	Well Condition:	Weather:
Sounding Method:	Gauge Date:	Measurement Ref:
Stick Up/Down (ft):	Gauge Time:	Well Diameter (in):

Same as Page 1

Purge Date:	Purge Time:
Purge Method: Low Flow Peristaltic Pump	Field Technician: H. Bedell

Well Volume

Same as Page 1

A. Well Depth (ft):	D. Well Volume (ft):	Depth/Height of Top of PVC:
B. Depth to Water (ft):	E. Well Volume (gal) C*D):	Pump Type: Peristaltic Pump
C. Liquid Depth (ft) (A-B):	F. Three Well Volumes (gal) (E3):	Pump Intake Depth: Mid-screen

Water Quality Parameters

Time (hrs) 3-5 min	Temperature (oC) ± 1 °C	pH (pH units) ± 0.1 pH	ORP (mV) ± 10 mV	Conductivity (S/m) ± 3%	Turbidity (ntu) ± 10 NTUs	DO (mg/L) ± 10%/ <0.5	DTW (ft btoc) ± 0.3 feet	Rate (Lpm) 0.1-0.5 Lpm	Volume (liters)
0959	12.33	6.84	223	1.09	396	8.32		0.25	12.00
1002	12.37	6.87	224	1.07	418	8.61			12.75
1005	12.44	6.88	224	1.08	417	8.22			13.50
1008	12.48	6.90	225	1.07	619	8.81			14.25
1011	12.51	6.90	226	1.08	773	8.26			15.00
1014	12.33	6.89	226	1.08	>1000	8.18			15.75
1017	12.39	6.87	225	1.06	>1000	8.23			16.50
1020	12.46	6.90	224	1.08	>1000	8.93		↓	17.25

Same as Page 1

Total Quantity of Water Removed (gal):		Sampling Time:	
Samplers:	H. Bedell / C. Derrick / M. Gilkey / A. Faux	Split Sample With:	X
Sampling Date:		Sample Type:	GRAB

COMMENTS AND OBSERVATIONS:

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

GROUNDWATER SAMPLING PURGE FORM

Well I.D.: DP-17	EA Personnel: C.Derrick/H.Bedell/M.Gilkey/A.Faux	Client: NYSDEC (828149)
Location: Town + Country Cleaners Rochester NY	Well Condition: Good	Weather: 65°F, Sunny
Sounding Method: Solinst WLM	Gauge Date: 05/08/2024	Measurement Ref: TOC
Stick Up/Down (ft): flush	Gauge Time: 1118	Well Diameter (in): 1

Purge Date: 05/07/2024	Purge Time: 1115
Purge Method: Low Flow Peristaltic Pump	Field Technician: H.Bedell

Well Volume

A. Well Depth (ft): 16.19	D. Well Volume ~~(ft)~~: Gal 0.041	Depth/Height of Top of PVC: ~ -4 in
B. Depth to Water (ft): 6.82	E. Well Volume (gal) C*D): 0.38	Pump Type: Peristaltic Pump
C. Liquid Depth (ft) (A-B): 9.37	F. Three Well Volumes (gal) (E3): 1.15	Pump Intake Depth: Mid-screen

Water Quality Parameters

Time (hrs) 3-5 min	Temperature (oC) ± 1 °C	pH (pH units) ± 0.1 pH	ORP (mV) ± 10 mV	Conductivity (S/m) ± 3%	Turbidity (ntu) ± 10 NTUs	DO (mg/L) ± 10%/ <0.5	DTW * (ft btoc) ± 0.3 feet	Rate (Lpm) 0.1-0.5 Lpm	Volume (liters)
1115	15.49	6.94	224	3.13	255	0.00	|	0.25	—
1118	14.96	6.82	226	3.18	166	0.00	|	|	0.75
1121	14.66	6.81	225	3.17	136	0.00	|	|	1.50
1124	14.69	6.80	225	3.15	76.9	0.00	|	|	2.25
1127	15.21	6.80	224	3.12	191	0.00	|	|	3.00
1130	15.46	6.80	224	3.12	128	0.00	|	|	3.75
1133	15.84	6.80	223	3.11	42.4	0.00	|	|	4.50
1136	16.03	6.80	222	3.11	75.5	0.00	|	|	5.25
1139	16.23	6.80	221	3.09	25.5	0.00	|	|	6.00
1142	16.32	6.80	220	3.09	32.8	0.00	|	|	6.75
1145	16.37	6.80	218	3.13	22.7	0.00	|	|	7.50
1148	16.44	6.79	214	3.13	21.6	0.00	|	|	8.25
1151	16.57	6.80	211	3.12	20.3	0.00	|	↓	9.00

Total Quantity of Water Removed (gal):	2.38 gal	Sampling Time:	1151
Samplers:	C.Derrick/H.Bedell/M.Gilkey/A.Faux	Split Sample With:	X
Sampling Date:	05/07/2024	Sample Type:	GRAB

COMMENTS AND OBSERVATIONS: * DTW not taken due to tubing and WLM not fitting down well at the same time.

Sample ID: 828149-DP-17-20240507

Analysis: VOCs 8260

PID = 0.0 ppm

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

GROUNDWATER SAMPLING PURGE FORM

Well I.D.: DP-18	EA Personnel: M. Gilkey/C. Derrick	Client: NYSDEC (#828149)
Location: Town & Country (Parking lot)	Well Condition: OK	Weather: 52°F; Sunny
Sounding Method: Solinst WLM	Gauge Date: 05/08/2024	Measurement Ref: TOIC
Stick Up/Down (ft): Flush	Gauge Time: 1118	Well Diameter (in): 1" PVC

Purge Date: 5/7/24	Purge Time: 0900
Purge Method: Low Flow Peristaltic Pump	Field Technician: M. Gilkey/H. Faux

Well Volume

A. Well Depth (ft): 10.31	D. Well Volume (ft): gal 0.041	Depth/Height of Top of PVC: ~ -3in
B. Depth to Water (ft): 5.96	E. Well Volume (gal) C*D): 0.18	Pump Type: Peristaltic Pump
C. Liquid Depth (ft) (A-B): 4.35	F. Three Well Volumes (gal) (E3): 0.54	Pump Intake Depth: Mid-screen

Water Quality Parameters

Time (hrs) 3-5 min	Temperature (oC) ± 1 °C	pH (pH units) ± 0.1 pH	ORP (mV) ± 10 mV	Conductivity (S/m) ± 3%	Turbidity (ntu) ± 10 NTUs	DO (mg/L) ± 10%/ <0.5	DTW * (ft btoc) ± 0.3 feet	Rate (Lpm) 0.1-0.5 Lpm	Volume (liters)
0901	13.76	6.00	232	3.97	289	8.07	—	0.15	0
0904	13.96	6.33	203	3.88	*1000	8.57	—	0.15	0.45
0907	13.17	6.61	150	4.44	*1000	7.69	—	0.15	0.90
0910	13.72	6.72	122	4.63	*1000	7.51	—	0.15	1.35
0913	13.74	6.79	107	4.58	*1000	7.12	—	0.15	1.80
0916	13.79	6.86	97	4.72	*1000	7.51	—	0.15	2.25
0919	13.80	6.90	92	4.83	*1000	7.69	—	0.15	2.70
0922	13.84	6.93	89	4.84	*1000	7.95	—	0.15	3.15
0925	13.98	6.94	88	4.87	*1000	7.79	—	0.15	3.60
0928	13.94	6.96	86	4.86	*1000	8.11	—	0.15	4.05
0931	13.95	6.96	85	4.91	*1000	7.99	—	0.15	4.50

Total Quantity of Water Removed (gal): 1.19 gal
Samplers: M. Gilkey/C. Derrick/H. Balelli/H. Faux
Sampling Date: 5/7/24

Sampling Time: 0931
Split Sample With:
Sample Type: GRAB

COMMENTS AND OBSERVATIONS:

* PFAS sampling - Can not gauge well before sample due to PFAS contamination - well is 1" diameter so can't fit down well w/ tubing
Well was struggling to produce water from purge start

*1000 NTU = Turbidity over what Horiba can read

Analysis: PFAS & 1,4-Dioxane, VOCs

Sample ID: 828149-DP-18-20240507

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

GROUNDWATER SAMPLING PURGE FORM

Well I.D.: DP-19	EA Personnel: (H. Bedell) M. Gilkey/A. Faux, C. Derrick	Client: NYSDEC (#828149)
Location: Town & Country	Well Condition: Good	Weather: 100°F; Fuel Sun
Sounding Method: Solonst WLM	Gauge Date: 05/08/2024	Measurement Ref: TOIC
Stick Up/Down (ft): Flush	Gauge Time: 1118	Well Diameter (in): 1" PVC

Purge Date: 5/7/24	Purge Time: 1141
Purge Method: Low Flow Peristaltic Pump	Field Technician: M. Gilkey/A. Faux/C. Derrick

Well Volume

A. Well Depth (ft): 12.96	D. Well Volume (~~ft~~ gal): 0.041	Depth/Height of Top of PVC: ~-3in
B. Depth to Water (ft): 4.55	E. Well Volume (gal) C*D): 0.34	Pump Type: Peristaltic Pump
C. Liquid Depth (ft) (A-B): 8.41	F. Three Well Volumes (gal) (E3): 1.03	Pump Intake Depth: Mid-screen

Water Quality Parameters

Time (hrs) 3-5 min	Temperature (oC) ± 1 °C	pH (pH units) ± 0.1 pH	ORP (mV) ± 10 mV	Conductivity (S/m) ± 3%	Turbidity (ntu) ± 10 NTUs	DO (mg/L) ± 10%/ <0.5	DTW (ft btoc) ± 0.3 feet	Rate (Lpm) 0.1-0.5 Lpm	Volume (liters)
1141	17.19	7.15	146	1.40	*800	2.31	—	0.25	0
1144	16.76	6.99	149	1.44	160	0.22	—	0.25	0.75
1147	16.73	6.96	149	1.44	49.0	0.0	—	0.25	1.50
1150	16.62	6.94	149	1.45	40.2	0.0	—	0.25	2.25
1153	16.54	6.93	148	1.45	21.8	0.0	—	0.25	3.00
1156	16.24	6.92	147	1.46	12.0	0.0	—	0.25	3.75
1159	16.01	6.91	147	1.46	8.2	0.0	—	0.25	4.50
1202	15.77	6.90	146	1.47	5.3	0.0	—	0.25	5.25
1205	15.72	6.89	145	1.47	4.2	0.0	—	0.25	6.00
1208	15.67	6.88	144	1.47	3.6	0.0	—	0.25	6.75
1211	15.61	6.87	143	1.47	2.1	0.0	—	0.25	7.50
1214	15.66	6.86	143	1.47	3.3	0.0	—	0.25	8.25
1217	15.66	6.85	143	1.47	2.5	0.0	—	0.25	9.00
1220	15.66	6.85	142	1.47	2.2	0.0	—	0.25	9.25
1223	15.54	6.85	141	1.47	2.7	0.0	—	0.25	10.00
1226	15.53	6.85	140	1.48	2.3	0.0	—	0.25	10.25

Total Quantity of Water Removed (gal): 4.89 good		Sampling Time: 1259	
Samplers: M. Gilkey/C. Derrick		Split Sample With:	
Sampling Date: 5/7/24		Sample Type: GRAB	

COMMENTS AND OBSERVATIONS:

* ~~**~~ Waterlined meter (ran 6ft down well w/tubing due to diameter (1"))
DTW @ taken during purge

Analysis: VOCs 8260

Sample ID: 828149-DP-19-20240507

*800 NTU = Turbidity above what Horiba can read

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

GROUNDWATER SAMPLING PURGE FORM

Well I.D.: DP-19	EA Personnel:	Client: NYSDEC
Location:	Well Condition: see page 1	Weather:
Sounding Method:	Gauge Date:	Measurement Ref:
Stick Up/Down (ft):	Gauge Time:	Well Diameter (in):

see page 1

Purge Date:	Purge Time:
Purge Method: Low Flow Peristaltic Pump	Field Technician:

Well Volume

A. Well Depth (ft):	D. Well Volume (ft):	Depth/Height of Top of PVC:
B. Depth to Water (ft):	E. Well Volume (gal) C*D):	Pump Type: Peristaltic Pump
C. Liquid Depth (ft) (A-B):	F. Three Well Volumes (gal) (E3):	Pump Intake Depth: Mid-screen

Water Quality Parameters

Time (hrs) 3-5 min	Temperature (oC) ± 1 °C	pH (pH units) ± 0.1 pH	ORP (mV) ± 10 mV	Conductivity (S/m) ± 3%	Turbidity (ntu) ± 10 NTUs	DO (mg/L) ± 10%/ <0.5	DTW (ft btoc) ± 0.3 feet	Rate (Lpm) 0.1-0.5 Lpm	Volume (liters)
1229	15.57	6.85	140	1.48	0.0	0.0	—	0.25	11.00
1232	15.45	6.85	139	1.48	0.7	0.0	—	0.25	11.75
1235	15.29	6.84	139	1.48	5.2	0.0	—	0.25	12.50
1238	15.26	6.85	139	1.49	20.0	0.0	—	0.25	13.25
1241	16.36	6.83	139	1.48	12.2	0.0	—	0.25	14.00
1244	15.33	6.83	139	1.48	7.4	0.0	—	0.25	14.25
1247	15.38	6.84	139	1.48	10.1	0.0	—	0.25	15.50
1250	15.30	6.84	138	1.48	11.8	0.0	—	0.25	16.25
1253	15.25	6.85	138	1.48	7.3	0.0	—	0.25	17.00
1256	15.27	6.86	137	1.48	7.1	0.0	—	0.25	17.75
1259	15.28	6.86	137	1.48	6.9	0.0	—	0.25	18.5

Total Quantity of Water Removed (gal):		Sampling Time:	1259
Samplers:	MG/CD	Split Sample With:	
Sampling Date:	5/7/24	Sample Type:	GRAB

COMMENTS AND OBSERVATIONS:

see page 1

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

GROUNDWATER SAMPLING PURGE FORM

Well I.D.: DP-20	**EA Personnel:** A. Faux M. Gilkey / C. Derrick / M. Pickell	**Client:** NYSDEC (#828149)
Location: Town & Country Dry Cleaners	**Well Condition:** Good	**Weather:** 52° F Sun
Sounding Method: Solonst WLM	**Gauge Date:**	**Measurement Ref:** TOIC
Stick Up/Down (ft): Flush	**Gauge Time:**	**Well Diameter (in):** 1" PVC

Purge Date: 5/7/24	**Purge Time:** 1013
Purge Method: Low Flow Peristaltic Pump	**Field Technician:** M. Gilkey / A. Faux

Well Volume

A. Well Depth (ft): 14.71	**D. Well Volume (ft):** ~~gal~~ 0.041	**Depth/Height of Top of PVC:** ~ - 3in
B. Depth to Water (ft): 10.47	**E. Well Volume (gal) C*D):** 0.17	**Pump Type:** Peristaltic Pump
C. Liquid Depth (ft) (A-B): 4.24	**F. Three Well Volumes (gal) (E3):** 0.52	**Pump Intake Depth:** Mid-screen

Water Quality Parameters

Time (hrs) 3-5 min	Temperature (oC) ± 1 °C	pH (pH units) ± 0.1 pH	ORP (mV) ± 10 mV	Conductivity (S/m) ± 3%	Turbidity (ntu) ± 10 NTUs	DO (mg/L) ± 10% / <0.5	DTW (ft btoc) ± 0.3 feet	Rate (Lpm) 0.1-0.5 Lpm	Volume (liters)	
1013	16.32	7.17	68	1.45	49.6	1.21	—	0.25	0	
1016	15.31	6.93	51	1.45	27.6	0.0	—	0.25	0.75	
1019	15.12	6.88	62	1.44	14.9	0.0	—	0.25	~~0.75~~	1.50
1022	15.13	6.88	66	1.43	12.5	0.0	—	0.25	~~0.90~~	2.25
1025	15.17	6.87	67	1.43	11.9	0.0	—	0.25	~~0.65~~	3.00
1028	15.30	6.86	75	1.42	9.2	0.0	—	0.25	~~1.30~~	3.75
1031	15.30	6.85	82	1.41	16.7	0.0	—	0.25	~~2.06~~	4.50
1034	15.37	6.85	88	1.42	9.5	0.0	—	0.25	~~2.80~~	5.25
1037	15.43	6.84	93	1.40	6.2	0.0	—	0.25	6.00	
1040	15.57	6.84	96	1.39	3.9	0.0	—	0.25	6.75	
1043	15.72	6.84	99	1.38	3.2	0.0	—	0.25	7.25	
1046	15.78	6.84	102	1.39	2.0	0.0	—	0.25	8.00	
1049	15.88	6.84	104	1.38	2.0	0.0	—	0.25	8.75	
1052	15.96	6.84	106	1.38	1.9	0.0	—	0.25	9.50	

Total Quantity of Water Removed (gal):	2.5 gal	**Sampling Time:**	1052
Samplers:	M. Gilkey / C. Derrick	**Split Sample With:**	~~MS~~ MS/MSD
Sampling Date:	5/7/24	**Sample Type:**	GRAB

COMMENTS AND OBSERVATIONS:

*PFAS Sampling: Well are Ø gauged before hand to reduce cross contamination of PFAS

Well diameter is too small to allow WLM & tubing down well

Analysis: PFAS 1633 (MC), 1,4-D (8270SIM), VOCs

Sample ID: 828149-~~MW~~ DP-20-20240507

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

GROUNDWATER SAMPLING PURGE FORM

Well I.D.: DP-21	EA Personnel: C Derrick	Client: NYSDEC (828149)
Location: Town & County Rochester, NY	Well Condition: good - no J-plug	Weather: Sunny 68°F
Sounding Method: Solinist WLM	Gauge Date: 05/08/2024	Measurement Ref: TOIC
Stick Up/Down (ft): flush	Gauge Time: 1118	Well Diameter (in): 1 in

Purge Date: 5/7/24	Purge Time: 1118
Purge Method: Low Flow Peristaltic Pump	Field Technician: C. Derrick

Well Volume

A. Well Depth (ft): 10.38	D. Well Volume (ft): 0.041	Depth/Height of Top of PVC: ~ - 3 in
B. Depth to Water (ft): 6.91	E. Well Volume (gal) C*D): .14	Pump Type: Peristaltic Pump
C. Liquid Depth (ft) (A-B): 3.47	F. Three Well Volumes (gal) (E3): 0.43	Pump Intake Depth: Mid-screen

Water Quality Parameters

Time (hrs) 3-5 min	Temperature (oC) ± 1 °C	pH (pH units) ± 0.1 pH	ORP (mV) ± 10 mV	Conductivity (S/m) ± 3%	Turbidity (ntu) ± 10 NTUs	DO (mg/L) ± 10%/ <0.5	DTW* (ft btoc) ± 0.3 feet	Rate (Lpm) 0.1-0.5Lpm	Volume (liters)
1118	20.52	7.32	146	1.19	49.7	5.28	—	0.25	—
1121	20.71	7.22	145	1.15	41.9	3.84			.75
1124	20.05	7.18	145	1.15	34.0	2.57			1.50
1127	20.06	7.12	145	1.13	31.7	1.35			2.25
1130	19.67	7.09	143	1.13	28.7	0.85			3.00
1133	19.93	7.06	142	1.11	26.8	0.72			3.75
1136	19.62	7.04	142	1.11	25.4	0.62			4.50
1139	19.81	7.04	140	1.11	23.6	0.26			5.25
1142	19.60	7.03	140	1.10	23.3	0.20			6.00
1145	19.78	7.02	139	1.09	22.7	0.29			6.75
—	—	—	—	SAMPLE	—	—	—	—	—

Total Quantity of Water Removed (gal):	1.75 gal	Sampling Time:	1145
Samplers:	C Derrick	Split Sample With:	X
Sampling Date:	5/7/2024	Sample Type:	grab

COMMENTS AND OBSERVATIONS: * DTW not taken due to small (1") well diameter
PID: 0.0 ppm
Analysis: VOCs
Sample ID: 828149-AP-21-20240507

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

GROUNDWATER SAMPLING PURGE FORM

Well I.D.: GEMW-2	EA Personnel: C. Derrick	Client: NYSDEC (828149)
Location: Town & Country, Rochester, NY	Well Condition: good	Weather: Sunny, 73°F
Sounding Method: Solonist WLM	Gauge Date: 05/08/2024	Measurement Ref: TOIC
Stick Up/Down (ft): flush	Gauge Time: 1118	Well Diameter (in): 1 in

Purge Date: 5/7/24	Purge Time: 1413
Purge Method: Low Flow Peristaltic Pump	Field Technician: C. Derrick

Well Volume

A. Well Depth (ft): 14.59	D. Well Volume (ft): 0.041	Depth/Height of Top of PVC: 0
B. Depth to Water (ft): 8.00	E. Well Volume (gal) C*D): 0.27	Pump Type: Peristaltic Pump
C. Liquid Depth (ft) (A-B): 6.59	F. Three Well Volumes (gal) (E3): 0.81	Pump Intake Depth: Mid-screen

Water Quality Parameters

	Time (hrs) 3-5 min	Temperature (oC) ± 1 °C	pH (pH units) ± 0.1 pH	ORP (mV) ± 10 mV	Conductivity (S/m) ± 3%	Turbidity (ntu) ± 10 NTUs	DO (mg/L) ± 10% / <0.5	DTW* (ft btoc) ± 0.3 feet	Rate (Lpm) 0.1-0.5Lpm	Volume (liters)
1413	~~1413~~ 00	25.60	7.67	120	1.06	166	4.80	—	0.25	—
1416	~~1416~~	24.13	7.36	133	1.04	>1000	4.05			0.75
1419	~~1419~~	21.81	7.23	143	1.10	>1000	3.67			1.50
1422	~~1422~~	20.19	7.17	149	1.17	>1000	4.62			2.25
	1425	20.62	7.19	150	1.16	762	3.87			3.00
	1428	19.95	7.15	154	1.19	695	5.43			3.75
	1431	19.41	7.16	155	1.20	366	6.01			4.50
	1434	19.53	7.17	155	1.21	180	7.47			5.25
	1437	19.67	7.18	155	1.21	146	7.57			6.00
	1440	19.84	7.19	154	1.20	105	7.41			6.75
	1443	19.86	7.20	155	1.20	53.2	8.58			7.50
	1446	19.70	7.21	155	1.21	47.3	8.75			8.25
	—	—	—	—	DRY **	—	—	—	—	—

Total Quantity of Water Removed (gal): 2.18 gal
Samplers: C. Derrick
Sampling Date: 5/7/24
Sampling Time: 1457
Split Sample With: —
Sample Type: grab

COMMENTS AND OBSERVATIONS:
PID: 0.0 ppm
Analysis: VOCs
Sample ID: 828149-GEMW-2-20240507

*DTW not taken due to small well diameter (1").
**well dry at 1447, sampled on recharge at 1457.

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GROUNDWATER SAMPLING PURGE FORM

Well I.D.: MW-1	EA Personnel: C.Derrick/H.Bedell/M.Gilkey	Client: NYSDEC (#828149)
Location: Town & Country Cleaners Rochester NY	Well Condition: Good	Weather: 62°F, Sunny
Sounding Method: SOlinst WLM	Gauge Date: 05/08/2024	Measurement Ref: TOC
Stick Up/Down (ft): flus	Gauge Time: 1118	Well Diameter (in): 1

Purge Date: 05/08/2024	Purge Time: 0848
Purge Method: Low Flow Peristaltic Pump	Field Technician: H.Bedell

Well Volume

A. Well Depth (ft): 10.88	D. Well Volume (ft): gal 0.041	Depth/Height of Top of PVC: ~ -3in
B. Depth to Water (ft): 2.85	E. Well Volume (gal) C*D): 0.33	Pump Type: Peristaltic Pump
C. Liquid Depth (ft) (A-B): 8.03	F. Three Well Volumes (gal) (E3): 0.99	Pump Intake Depth: Mid-screen

Water Quality Parameters

Time (hrs) 3-5 min	Temperature (oC) ± 1 °C	pH (pH units) ± 0.1 pH	ORP (mV) ± 10 mV	Conductivity (S/m) ± 3%	Turbidity (ntu) ± 10 NTUs	DO (mg/L) ± 10% / <0.5	DTW (ft btoc) ± 0.3 feet	Rate (Lpm) 0.1-0.5 Lpm	Volume (liters)
0849	12.35	6.36	93	0.564	>1000	0.81		0.25	—
0852	14.99	6.91	108	0.593	>1000	0.85			0.75
0855	14.29	7.06	86	0.651	>1000	3.04			1.50
0858	14.30	7.25	126	0.641	>1000	5.41			2.25
0901	14.29	7.32	132	0.686	>1000	5.70			3.00
0904	14.07	7.34	47	0.642	>1000	5.99			3.75
0907	14.18	7.39	93	0.636	>1000	6.38			4.50
0910	14.15	7.39	121	0.631	>1000	6.70			5.25
0913	14.16	7.44	134	0.657	>1000	6.99			6.00
0916	14.21	7.49	139	0.671	>1000	7.24		↓	6.75
←			Dry						→

Total Quantity of Water Removed (gal):	1.78 gal	Sampling Time:	1015
Samplers:	C.Derrick/H.Bedell/M.Gilkey/A.Faux	Split Sample With:	X
Sampling Date:	05/08/2024	Sample Type:	GRAB

COMMENTS AND OBSERVATIONS: * No DTW due to PFAS sampling. PID=0.0ppm
Sample ID: 828149-MW-1-20240508
Analysis: VOCs 8260 PFAS 1633, 1,4 Dioxane 8271 SM RSK175, 6010, SM4500, SM2320, SM3500.0, 415
Well went dry at 0916, sampled upon recharge at 1015 - high turbidity throughout sampling.

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GROUNDWATER SAMPLING PURGE FORM

Well I.D.: MW-2	**EA Personnel:** C.Dewick/H.Bedell/M.Gilkey/A.Faux	**Client:** NYSDEC (#828149)
Location: Town & Country Clarens Rochester, NY	**Well Condition:** Good	**Weather:** 73°F Sunny
Sounding Method: Solinst W.L.M	**Gauge Date:** 05/08/2024	**Measurement Ref:** TOC
Stick Up/Down (ft): Flush	**Gauge Time:** 1118	**Well Diameter (in):** 2

Purge Date: 05/07/2024	**Purge Time:** 1503
Purge Method: Low Flow Peristaltic Pump	**Field Technician:** H.Bedell

Well Volume

A. Well Depth (ft): 22.55	**D. Well Volume ~~(ft)~~ (gal):** 0.163	**Depth/Height of Top of PVC:** ~ -4 in
B. Depth to Water (ft): 4.41	**E. Well Volume (gal) C*D):** 2.96	**Pump Type:** Peristaltic Pump
C. Liquid Depth (ft) (A-B): 18.14	**F. Three Well Volumes (gal) (E3):** 8.87	**Pump Intake Depth:** Mid-screen

Water Quality Parameters

Time (hrs) 3-5 min	Temperature (oC) ± 1 °C	pH (pH units) ± 0.1 pH	ORP (mV) ± 10 mV	Conductivity (S/m) ± 3%	Turbidity (ntu) ± 10 NTUs	DO (mg/L) ± 10% / <0.5	DTW (ft btoc) ± 0.3 feet	Rate (Lpm) 0.1-0.5 Lpm	Volume (liters)
1504	17.79	7.51	86	1.23	19.9	0.18	4.50	0.25	—
1507	15.68	7.19	94	1.29	3.7	0.00			0.75
1510	15.34	7.07	42	1.27	0.9	.00			1.50
1513	15.10	7.01	-16	1.24	0.2	0.00			2.25
1516	15.02	6.96	-52	1.24	0.2	0.00	4.57		3.00
1519	15.07	6.94	-66	1.23	0.0	0.00			3.75
1522	15.05	6.91	-79	1.23	.0	.00			4.50
1525	15.01	6.90	-85	1.23	0.0	0.00			5.25
1528	14.95	6.89	-88	1.23	0.0	0.00	4.63		6.00

Total Quantity of Water Removed (gal):	1.59 gal	**Sampling Time:**	1528
Samplers:	C.Dewick/H.Bedell/M.Gilkey/A.Faux	**Split Sample With:**	X
Sampling Date:	05/07/2024	**Sample Type:**	GRAB

COMMENTS AND OBSERVATIONS: PID = 0.0 ppm

Sample ID: 828149-MW-2-20240507

Analysis: VOCs 8260

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

GROUNDWATER SAMPLING PURGE FORM

Well I.D.: ~~MW-3~~ IW-1	EA Personnel: C. Derrick	Client: NYSDEC (828149)
Location: Town & Country, Rochester, NY	Well Condition: good, uneven PVC top	Weather: partly cloudy 64°F
Sounding Method: Solinst WLM	Gauge Date: 05/08/2024	Measurement Ref: TOIC
Stick Up/Down (ft): flush	Gauge Time: 1118	Well Diameter (in): 4 in

Purge Date: 5/8/24	Purge Time: 0855
Purge Method: Low Flow Peristaltic Pump	Field Technician: C. Derrick

Well Volume

A. Well Depth (ft): 9.62	D. Well Volume (ft): gal 0.653	Depth/Height of Top of PVC: ~ -3 in
B. Depth to Water (ft): 3.33	E. Well Volume (gal) C*D): 2.80	Pump Type: Peristaltic Pump
C. Liquid Depth (ft) (A-B): 4.29	F. Three Well Volumes (gal) (E3): 8.40	Pump Intake Depth: Mid-screen

Water Quality Parameters

Time (hrs) 3-5 min	Temperature (oC) ± 1 °C	pH (pH units) ± 0.1 pH	ORP (mV) ± 10 mV	Conductivity (S/m) ± 3%	Turbidity (ntu) ± 10 NTUs	DO (mg/L) ± 10%/ <0.5	DTW * (ft btoc) ± 0.3 feet	Rate (Lpm) 0.1-0.5 Lpm	Volume (liters)
0855	17.82	5.96	232	1.20	0.8	2.70		0.25	—
0858	17.73	6.60	199	1.19	0.0	1.49			0.75
0901	17.63	6.80	189	1.18	0.0	1.02			1.50
0904	17.62	6.92	182	1.18	0.0	0.61			2.25
0907	17.59	7.01	177	1.18	0.0	0.40			3.00
0910	17.59	7.07	172	1.18	0.0	0.22			3.75
0913	17.59	7.13	168	1.17	0.0	0.07			4.50
0916	17.59	7.15	167	1.17	0.0	0.00			5.25
				SAMPLE					

Total Quantity of Water Removed (gal):	1.39 gal	Sampling Time:	0916
Samplers:	C. Derrick	Split Sample With:	DUP
Sampling Date:	5/8/24	Sample Type:	grab

COMMENTS AND OBSERVATIONS: * DTW not taken while purging due to sampling for PFAS

PID: 3.3 ppm

Analysis: MNA Parameters, PFAS 1,4-Dioxane VOCs

SAMPLE ID: 828149-MW-3-20240508

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

GROUNDWATER SAMPLING PURGE FORM

Well I.D.: MW-~~13~~ 13	EA Personnel: M. Gilkey / A. Faust	Client: NYSDEC (828149)
Location: Town & Country	Well Condition: Good	Weather: 60's F; Sun
Sounding Method: Solinst M	Gauge Date: 05/08/24	Measurement Ref: TOIC
Stick Up/Down (ft): ~3.5 ft	Gauge Time: 1118	Well Diameter (in): 2" PVC

Purge Date: 5/8/24	Purge Time: 0845
Purge Method: Low Flow Peristaltic Pump	Field Technician: M. Gilkey / A. Faust

Well Volume

A. Well Depth (ft): 12.93	D. Well Volume ~~(ft)~~: gal 0.163	Depth/Height of Top of PVC: ~-3in
B. Depth to Water (ft): 6.79	E. Well Volume (gal) C*D): 1.00	Pump Type: Peristaltic Pump
C. Liquid Depth (ft) (A-B): 6.14	F. Three Well Volumes (gal) (E3): 3.00	Pump Intake Depth: Mid-screen

Water Quality Parameters

Time (hrs) 3-5 min	Temperature (oC) ± 1 °C (√)	pH (pH units) ± 0.1 pH (√)	ORP (mV) ± 10 mV	Conductivity (S/m) ± 3% (√)	Turbidity (ntu) (√) ± 10 NTUs	DO (mg/L) (√) ± 10%/ <0.5	DTW (ft btoc) ± 0.3 feet	Rate (Lpm) 0.1-0.5 Lpm	Volume (liters)
0845	15.50	6.04	259	1.65	6.0	1.73	—	0.25	0
0848	15.30	6.47	236	1.66	0.0	0.85	—	0.25	0.75
0851	15.21	6.52	233	1.66	0.0	0.66	—	0.25	1.50
0854	14.78	6.67	227	1.65	0.0	0.26	—	0.25	2.25
0857	14.39	6.78	209	1.65	0.0	0.0	—	0.25	3.00
0900	14.15	6.82	139	1.65	0.0	0.0	—	0.25	3.75
0903	14.01	6.85	86	1.65	0.0	0.0	—	0.25	4.50
0906	13.94	6.86	60	1.65	0.0	0.0	—	0.25	5.25
0909	13.92	6.88	42	1.65	0.0	0.0	—	0.25	6.00
0912	13.92	6.88	37	1.65	0.0	0.0	—	0.25	6.75
0915	13.96	6.88	33	1.64	0.0	0.0	—	0.25	7.50
0918	13.94	6.89	32	1.64	0.0	0.0	—	0.25	8.25
0921	13.88	6.88	31	1.64	0.0	0.0	—	0.25	9.00

Total Quantity of Water Removed (gal): 2.38 gal
Samplers: MG/CD
Sampling Date: 5/8/24
Sampling Time: 0921
Split Sample With: /
Sample Type: GRAB

COMMENTS AND OBSERVATIONS:
Sample ID: 828149-MW-13-20240508
Analytes: VOCs, MNA, PFAS (1073)
PID: 9.8 ppm

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GROUNDWATER SAMPLING PURGE FORM

Well I.D.: MW-13B	EA Personnel: M. Gilkey / A. Faux	Client: NYSDEC
Location: Town & Country	Well Condition: Good	Weather: 62°F; Sun
Sounding Method: Solonst WL-M	Gauge Date: 05/08/24	Measurement Ref: TOIC
Stick Up/Down (ft): ~3.5 ft	Gauge Time: 1118	Well Diameter (in): 2" PVC

Purge Date: 5/08/24	Purge Time: 0958
Purge Method: Low Flow Peristaltic Pump	Field Technician: M. Gilkey / A. Faux

Well Volume

A. Well Depth (ft): 21.57	D. Well Volume (~~ft~~ gal): 0.163	Depth/Height of Top of PVC: ~ -3in
B. Depth to Water (ft): 10.00	E. Well Volume (gal) C*D): 1.89	Pump Type: Peristaltic Pump
C. Liquid Depth (ft) (A-B): 11.57	F. Three Well Volumes (gal) (E3): 5.66	Pump Intake Depth: Mid-screen

Water Quality Parameters

Time (hrs) 3-5 min	Temperature (oC) ± 1 °C	pH (pH units) ± 0.1 pH	ORP (mV) ± 10 mV	Conductivity (S/m) ± 3%	Turbidity (ntu) ± 10 NTUs	DO (mg/L) ± 10%/ <0.5	DTW (ft btoc) ± 0.3 feet	Rate (Lpm) 0.1-0.5 Lpm	Volume (liters)
0958	16.19	7.43	120	0.968	0.0	2.17	10.08	0.25	0.0
1001	16.13	7.09	87	0.960	0.0	0.78	10.08	0.25	0.75
1004	16.05	7.00	32	0.970	0.0	0.10	10.08	0.25	1.50
1007	15.98	6.97	-2	0.982	0.0	0.0	10.08	0.25	2.25
1010	15.93	6.95	-19	0.987	0.0	0.01	10.08	0.25	3.00
1013	15.93	6.94	-34	0.991	0.0	0.0	10.08	0.25	3.75
1016	15.90	6.93	-49	0.994	0.0	0.0	10.08	0.25	4.50
1019	15.83	6.93	-59	0.988	0.0	0.0	10.08	0.25	5.25
1022	15.91	6.94	-74	0.984	0.0	0.0	10.08	0.25	6.00
1025	15.97	6.94	-81	0.983	0.0	0.0	10.08	0.25	6.75
1028	15.53	6.96	-86	0.985	0.0	0.0	10.08	0.25	7.50
1031	15.69	6.96	-93	0.967	0.0	0.0	10.08	0.25	8.25
1034	15.30	6.96	-99	0.966	0.0	0.0	10.08	0.25	9.00
1037	15.35	6.98	-104	0.953	0.0	0.0	10.08	0.25	9.75
1040	15.54	7.00	-112	0.944	0.0	0.0	10.08	0.25	10.50
1043	15.68	7.02	-122	0.933	0.0	0.0	10.08	0.25	11.25

Total Quantity of Water Removed (gal):	4.42 gal	Sampling Time:	1101
Samplers:	MG/CD	Split Sample With:	∅
Sampling Date:	5/8/24	Sample Type:	GRAB

COMMENTS AND OBSERVATIONS:

Sample ID: 828149-MW-13B-20240508

Analysis: VOCs 8260

PID: 3.0 ppm

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

GROUNDWATER SAMPLING PURGE FORM

Well I.D.: MW-13 B	EA Personnel:	Client: NYSDEC
Location:	Well Condition: See page 1	Weather:
Sounding Method:	Gauge Date:	Measurement Ref:
Stick Up/Down (ft):	Gauge Time:	Well Diameter (in):

Purge Date:	Purge Time:
Purge Method: Low Flow Peristaltic Pump	Field Technician:

see page 1

Well Volume

A. Well Depth (ft):	D. Well Volume (ft):	Depth/Height of Top of PVC:
B. Depth to Water (ft):	E. Well Volume (gal) C*D):	Pump Type: Peristaltic Pump
C. Liquid Depth (ft) (A-B):	F. Three Well Volumes (gal) (E3):	Pump Intake Depth: Mid-screen

Water Quality Parameters

Time (hrs) 3-5 min	Temperature (oC) ± 1 °C	pH (pH units) ± 0.1 pH	ORP (mV) ± 10 mV	Conductivity (S/m) ± 3%	Turbidity (ntu) ± 10 NTUs	DO (mg/L) ± 10% / <0.5	DTW (ft btoc) ± 0.3 feet	Rate (Lpm) 0.1-0.5 Lpm	Volume (liters)
1046	15.77	7.03	-128	0928	0.0	0.0	10.08	0.25	12.00
1049	15.66	7.05	-134	0.922	0.0	0.0	10.08	0.25	12.75
1052	15.67	7.07	-144	0.911	0.0	0.0	10.08	0.25	13.50
1055	15.69	7.08	-150	0.903	0.0	0.0	10.08	0.25	14.25
1058	15.74	7.09	-156	0.905	0.0	0.0	10.08	0.25	16.00
1101	15.88	7.09	-160	0.903	0.0	0.0	10.08	0.25	16.75
~~HF~~									

Total Quantity of Water Removed (gal):		Sampling Time:	1101
Samplers:	MA/CD	Split Sample With:	~~S~~
Sampling Date:	5/8/24	Sample Type:	GRAB

see page 1

COMMENTS AND OBSERVATIONS:

See page 1

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

GROUNDWATER SAMPLING PURGE FORM

Well I.D.: MW-17B	EA Personnel: C.Derrick/H.Bedell/M.Gilkey/A.Faux	Client: NYSDEC (#828149)
Location: Town & Country Cleaners Rochester, NY	Well Condition: Good	Weather: 72°F, Sunny
Sounding Method: Solinst WLM	Gauge Date: 05/08/2024	Measurement Ref: TOC
Stick Up/Down (ft): Flush	Gauge Time: 1118	Well Diameter (in): 2

Purge Date: 05/07/2024	Purge Time: 1409
Purge Method: Low Flow Peristaltic Pump	Field Technician: H.Bedell

Well Volume

A. Well Depth (ft): 27.33	D. Well Volume (~~ft~~ gal): 0.163	Depth/Height of Top of PVC: ~ - 3in
B. Depth to Water (ft): 7.23	E. Well Volume (gal) C*D): 3.28	Pump Type: Peristaltic Pump
C. Liquid Depth (ft) (A-B): 20.10	F. Three Well Volumes (gal) (E3): 9.83	Pump Intake Depth: Mid-screen

Water Quality Parameters

Time (hrs) 3-5 min	Temperature (oC) ± 1 °C	pH (pH units) ± 0.1 pH	ORP (mV) ± 10 mV	Conductivity (S/m) ± 3%	Turbidity (ntu) ± 10 NTUs	DO (mg/L) ± 10%/ <0.5	DTW (ft btoc) ± 0.3 feet	Rate (Lpm) 0.1-0.5 Lpm	Volume (liters)
1410	26.03	7.62	-106	0.674	66.9	0.38	6.93	0.25	—
1413	23.87	7.26	-141	0.654	41.7	0.18		↓	0.75
1416	21.67	7.15	-145	0.636	56.6	0.25			1.50
1419	19.60	7.05	-144	0.620	20.9	0.32	7.01		2.25
1422	20.02	6.96	-142	0.618	11.7	0.33			3.00
1425	20.59	6.87	-142	0.626	11.6	0.29			3.75
1428	20.45	6.79	-142	0.662	8.1	0.18	7.10		4.50
1431	20.66	6.75	-146	0.691	5.3	0.06			5.25
1434	20.83	6.71	-152	0.726	4.1	0.00			6.00
1437	20.98	6.71	-155	0.728	3.6	0.00	7.15		6.75
1440	21.32	6.70	-158	0.737	3.9	0.00			7.50
1443	20.73	6.72	-165	0.742	3.4	0.00		↓	8.25

Total Quantity of Water Removed (gal):	2.18 gal	Sampling Time:	1443
Samplers:	C.Derrick/H.Bedell/M.Gilkey/A.Faux	Split Sample With:	X
Sampling Date:	05/07/24	Sample Type:	GRAB

COMMENTS AND OBSERVATIONS:

Sample ID: 828149-MW-17B-20240507

Analysis: VOCs 8260

PID ± 0.0 ppm

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

GROUNDWATER SAMPLING PURGE FORM

Well I.D.: MW 19 B	EA Personnel: C. Derrick / H. Bedell M. Gulkey / A. Faux	Client: NYSDEC (828149)
Location: Town + Country	Well Condition: Good	Weather: 61°F ; Sun
Sounding Method: Solonst WLM	Gauge Date: 05/08/2024	Measurement Ref: TOIC
Stick Up/Down (ft): Flush	Gauge Time: 1118	Well Diameter (in): 2" PVC

Purge Date: 5/7/24	Purge Time: 1415
Purge Method: Low Flow Peristaltic Pump	Field Technician: M. Gulkey / A. Faux / C. Derrick / H. Bedell

Well Volume

A. Well Depth (ft): 21.08	D. Well Volume (~~ft~~ gal): 0.163	Depth/Height of Top of PVC: ~ -3 in
B. Depth to Water (ft): 4.87	E. Well Volume (gal) C*D): 2.64	Pump Type: Peristaltic Pump
C. Liquid Depth (ft) (A-B): 16.21	F. Three Well Volumes (gal) (E3): 7.93	Pump Intake Depth: Mid-screen

Water Quality Parameters

Time (hrs) 3-5 min	Temperature (oC) ± 1 °C	pH (pH units) ± 0.1 pH	ORP (mV) ± 10 mV	Conductivity (S/m) ± 3%	Turbidity (ntu) ± 10 NTUs	DO (mg/L) ± 10%/ <0.5	DTW (ft btoc) ± 0.3 feet	Rate (Lpm) 0.1-0.5 Lpm	Volume (liters)
14:15	19.00	7.33	33	1.22	72.1	0.85	5.24	0.25	0.0
14:18	18.74	7.12	7	1.25	13.3	0.23	5.24	0.25	0.75
1421	16.90	7.02	-1	1.28	9.0	0.02	5.24	0.25	1.50
1424	17.59	6.95	-3	1.28	11.7	0.0	5.24	0.25	2.25
1427	16.24	6.90	-4	1.32	24.3	0.0	5.24	0.25	3.00
1430	16.30	6.85	-5	1.34	0.9	0.0	5.24	0.25	3.75
1433	16.33	6.81	-5	1.36	11.2	0.0	5.24	0.25	4.50
1436	16.38	6.77	-7	1.36	0.5	0.67	5.24	0.25	5.25
1439	16.26	6.75	-7	1.39	0.4	0.38	5.24	0.25	6.00
1442	16.30	6.72	-7	1.41	0.5	0.29	5.24	0.25	6.75
1445	16.57	6.70	-8	1.42	0.5	0.38	5.24	0.25	7.50
1448	16.54	6.68	-8	1.44	0.5	0.16	5.24	0.25	8.25
1451	16.59	6.67	-9	1.44	0.6	0.12	5.24	0.25	9.00
1454	16.51	6.66	-10	1.46	0.3	0.06	5.24	0.25	9.75
1457	16.63	6.65	-10	1.45	6.8	0.03	5.24	0.25	10.50
1500	16.72	6.65	-11	1.46	0.5	0.0	5.24	0.25	11.25

Total Quantity of Water Removed (gal):	3.37	Sampling Time:	1500
Samplers:	M. Gulkey / C. Derrick	Split Sample With:	Y
Sampling Date:	5/7/24	Sample Type:	GRAB

COMMENTS AND OBSERVATIONS:

Sample ID: 828149-MW-19B-20240507

Analysis: VOCs 8260

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

GROUNDWATER SAMPLING PURGE FORM

Well I.D.: MW 19 B	EA Personnel:	Client: NYSDEC
Location:	Well Condition: See page 1	Weather:
Sounding Method:	Gauge Date:	Measurement Ref:
Stick Up/Down (ft):	Gauge Time:	Well Diameter (in):

Purge Date:	Purge Time:
Purge Method: Low Flow Peristaltic Pump	Field Technician:

see page 1

Well Volume

A. Well Depth (ft):	D. Well Volume (ft):	Depth/Height of Top of PVC:
B. Depth to Water (ft):	E. Well Volume (gal) C*D):	Pump Type: Peristaltic Pump
C. Liquid Depth (ft) (A-B):	F. Three Well Volumes (gal) (E3):	Pump Intake Depth: Mid-screen

Water Quality Parameters

Time (hrs) 3-5 min	Temperature (oC) ± 1 °C	pH (pH units) ± 0.1 pH	ORP (mV) ± 10 mV	Conductivity (S/m) ± 3%	Turbidity (ntu) ± 10 NTUs	DO (mg/L) ± 10% / <0.5	DTW (ft btoc) ± 0.3 feet	Rate (Lpm) 0.1-0.5 Lpm	Volume (liters)
1503	16.57	6.65	-12	1.47	0.2	0.00	5.29	0.25	12.00
1506	16.59	6.64	-12	1.47	0.1	0.0	5.29	0.25	12.75

see page 1

Total Quantity of Water Removed (gal):
Samplers: M Gulkey/C. Derrick
Sampling Date: 5/7/24

Sampling Time: 1506
Split Sample With:
Sample Type: GRAB

COMMENTS AND OBSERVATIONS:

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

GROUNDWATER SAMPLING PURGE FORM

Well I.D.: MW-21B	EA Personnel: C. Derrick	Client: NYSDEC (828149)
Location: Town & Country Rochester, NY	Well Condition: good	Weather: Sunny 65°F
Sounding Method: Stainless WLM	Gauge Date: 05/08/2024	Measurement Ref: TOIC
Stick Up/Down (ft): flush	Gauge Time: 1118	Well Diameter (in): 2 in

Purge Date: 5/7/24	Purge Time: 1202
Purge Method: Low Flow Peristaltic Pump	Field Technician: C. Derrick

Well Volume

A. Well Depth (ft): 19.52	D. Well Volume (ft): gal 0.163	Depth/Height of Top of PVC: 2 - 6 in
B. Depth to Water (ft): 7.36	E. Well Volume (gal) C*D): 1.98	Pump Type: Peristaltic Pump
C. Liquid Depth (ft) (A-B): 12.16	F. Three Well Volumes (gal) (E3): 5.95	Pump Intake Depth: Mid-screen

Water Quality Parameters

Time (hrs) 3-5 min	Temperature (oC) ± 1 °C	pH (pH units) ± 0.1 pH	ORP (mV) ± 10 mV	Conductivity (S/m) ± 3%	Turbidity (ntu) ± 10 NTUs	DO (mg/L) ± 10% / <0.5	DTW (ft btoc) ± 0.3 feet	Rate (Lpm) 0.1-0.5 Lpm	Volume (liters)
1200	20.48	7.23	136	1.09	9.9	2.80	14.88	0.25	—
1203	19.66	7.02	129	1.28	2.9	0.55	14.82	|	0.75
1206	18.92	6.97	113	1.38	2.8	0.27	14.82	|	1.50
1209	18.74	6.96	104	1.41	2.7	0.00	14.82	|	2.25
1212	18.77	6.96	100	1.44	2.6	0.00	14.82	|	3.00
1215	19.05	6.95	99	1.43	2.7	0.00	14.91	|	3.75
1218	18.85	6.94	97	1.42	2.6	0.00	14.90	|	4.50
1221	18.58	6.93	97	1.42	2.5	0.00	14.82	|	5.25
—	—	—	—	SAMPLE	—	—	—	—	—

Total Quantity of Water Removed (gal):	1.39 gal	Sampling Time:	1221
Samplers:	C. Derrick	Split Sample With:	✓
Sampling Date:	5/7/24	Sample Type:	grab

COMMENTS AND OBSERVATIONS:

PID: 0.0 ppm

Analysis: VOCs

Sample ID: 828149-MW-21B-20240507

Appendix B

Daily Inspection Reports

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NYSDEC
Division of Environmental Remediation

NEW YORK STATE | Department of Environmental Conservation

Contract No. D009806
DEC PM – J.Stefansky
Engineer PM – J.Oliver
Engineer Insp. – H. Bedell

Site Location: 2310 Monroe Ave, Brighton 14618

Weather Conditions				
General Description	Sunny	AM	Sunny	PM
Temperature	60F	AM	73F	PM
Wind	None	AM	None	PM

Health & Safety
If any box below is checked "Yes", provide explanation under "Health & Safety Comments".

Were there any changes to the Health & Safety Plan?	*Yes	No X	NA
Were there any exceedances of the perimeter air monitoring reported on this date?	*Yes	No	NA X
Were there any nuisance issues reported/observed on this date?	*Yes	No X	NA

Health & Safety Comments

Heat exhaustion and poison ivy were discussed during the tailgate safety meeting.

Summary of Work Performed	Arrived at site:	0800	Departed Site:	1600

(0800) C. Derrick, M. Gilkey, H. Bedell, and A. Faux (EA) onsite.
(0809) Calibrate PIDs and Horibas. Hold safety tailgate meeting.
(0900) Start purge DP-18.
(0909) Start purge DP-15.
(0922) Start purge DP-10.
(0931) Sample 828149-DP-18-20240507.
(0949) Sample 828149-DP-10-20240507.
(1020) Sample 828149-DP-15-20240507.
(1013) Start purge DP-20.
(1052) Sample 828149-DP-20-20240507 with MS/MSD.
(1115) Start purge DP-17.
(1118) Start purge DP-21.
(1141) Start purge DP-19.
(1145) Sample 828149-DP-21-20240507.
(1151) Sample 828149-DP-17-20240507.
(1200) Start purge MW-21B.
(1221) Sample 828149-MW-21B-20240507.
(1259) Sample 828149-DP-19-20240507.
(1409) Start purge MW-17B.
(1413) Start purge GEMW-2.
(1415) Start purge MW-19B.
(1443) Sample 828149-MW-17B-20240507.
(1457) Sample 828149-GEMW-2-20240507.
(1503) Start purge MW-2.
(1506) Sample 828149-MW-19B-20240507.
(1528) Sample 828149-MW-2-20240507.
(1535) Sample 828149-FB-20240507.
(1538) Sample 828149-EB-20240507.
(1600) EA offsite.

Well ID	Purge Start Time	Sample Time	QA/QC	DRY?
DP-10	0922	0949	No	Struggling to produce water from purge start.
DP-15	0909	1020	No	No
DP-17	1115	1151	No	No
DP-18	0900	0931	No	Struggling to produce water from purge start.
DP-19	1141	1259	No	No
DP-20	1013	1052	MS/MSD	No
DP-21	1118	1145	No	No
GEMW-2	1413	1457	No	Yes, sampled on recharge
MW-2	1503	1528	No	No
MW-17B	1409	1443	No	No
MW-19B	1415	1506	No	No
MW-21B	1200	1221	No	No

Equipment/Material Tracking
If any box below is checked "Yes", provide explanation under "Material Tracking Comments".

Were there any vehicles which did not display proper D.O.T numbers and placards?	*Yes	No	NA X
Were there any vehicles which were not tarped?	* Yes	No	NA X
Were there any vehicles which were not decontaminated prior to exiting the work site?	* Yes	No	NA X

Personnel and Equipment

Individual	Company	Trade	Total Hours
Cassandra Derrick	EA	Geologist	8
Moriah Gilkey	EA	Engineer	8
Hannah Bedell	EA	Engineer	8
Alex Faux	EA	Geologist	8

Equipment Description	Contractor/Vendor	Quantity	Used
Horiba	Pine Environmental	3	Y
RXI GX-6000	Pine Environmental	2	Y
Peristaltic Pumps	Pine Environmental	3	Y
Solonist Water Level Meters	Pine Environmental	3	Y
55-Gallon Steel Drum	Pine Environmental	1	Y
Hand Tools	EA	NA	Y
Dodge Ram Truck	Enterprise	1	Y
Ford F-150 Truck	EA	2	Y

Material Description	Imported/ Delivered to Site	Exported off Site	Waste Profile (If Applicable)	Source or Disposal Facility (If Applicable)	Daily Loads	Daily Weight (tons)*

Equipment/Material Tracking Comments:

Visitors to Site

Name	Representing	Entered Exclusion/CRZ Zone	
None		**Yes**	**No**
		Yes	**No**

Site Representatives

Name	Representing
Cassandra Derrick	**EA**
Moriah Gilkey	**EA**
Hannah Bedell	**EA**
Alex Faux	**EA**

Project Schedule Comments

Plan to purge and sample four remaining wells (MW-1, ~~MW-3~~, MW-13, and MW-13B) and perform synoptic gauging on all wells once sampling is complete.

IW-1

Issues Pending

- None.

Interaction with Public, Property Owners, Media, etc.

None.

Site Photographs (Descriptions Below)

New drum stored onsite with label.

Site Inspector(s): Cassandra Derrick, Moriah Gilkey, Hannah Bedell, and Alex Faux

Date: 05/07/2024

Videos of discreet operations have been provided to the DEC Project Manager to facilitate understanding of the ongoing work? Yes ☐ No ☐ N/A ☒

REMEDIAL ACTIVITIES AT PROPERTIES

1. Does anyone at this location have any symptoms of a respiratory infection (e.g., cough, sore throat, fever, or shortness of breath)?	Yes ☐	No ☒
2. Have anyone at this location been tested and confirmed to have COVID-19?	Yes ☐	No ☒
3. Were personal protective gloves, masks, and eye protection being used?	Yes ☐	No ☒
4. Does the Department and its contractors have your permission to enter the property at this time?	Yes ☒	No ☐
5. If Yes to 1 or 2, follow the latest NYSDOH COVID-19 guidance: https://coronavirus.health.ny.gov/home	Yes ☐	No ☐
Comments: N/A		

ON-SITE WASTE STORAGE

Drums, roll offs and piles are staged in secure areas?	Yes ☒	No ☐	N/A☐
Liners and berms have been installed if necessary to prevent cross contamination of clean areas?	Yes ☐	No ☐	N/A☒
Containers are in good condition or properly overpacked?	Yes ☐	No ☐	N/A☒
Waste materials are scheduled to be properly characterized and disposed of prior to demobilization?	Yes ☐	No ☐	N/A☒
Complying with RCRA 90 day storage limitation for hazardous waste?	Yes ☐	No ☐	N/A☒
Piles are securely covered when not in use?	Yes ☐	No ☐	N/A☒
Containers are closed when not in use?	Yes ☐	No ☐	N/A☒
Staging areas should be inspected periodically and any issues addressed immediately?	Yes ☐	No ☐	N/A☒
Signage and labeling comply with RCRA requirements for all staging areas and containers?	Yes ☐	No ☐	N/A☒
If any issues noted, has Contractor been notified?	Yes ☐	No ☐	N/A☒
Comments: NA			

NUISANCE CHECKLIST

Were there any community complaints related to work on this date?	Yes ☐	No ☒	N/A☐
Were there any odors detected on this date?	Yes ☐	No ☒	N/A☐
Was noise outside specification and/or above background on this date?	Yes ☐	No ☒	N/A☐
Were vibration readings outside specification and/or above background on this date?	Yes ☐	No ☐	N/A☒
Any visible dust observed beyond the work perimeter on this date?	Yes ☐	No ☐	N/A☒
Any visible contrast (turbidity) beyond engineering controls observed on this date?	Yes ☐	No ☐	N/A☒
Was turbidity checked at the outfall(s)?	AM ☐	PM ☐	N/A☒
Were any property owners NOT provided advance notice for work performed on this property on this date?	Yes ☐	No ☐	N/A☒

Was the temporary fabric structure closed at the end of the day?	Yes ☐	No ☐	N/A☒
Has Contractor failed to protect all foundations and structures adjacent to and adjoining the site which are affected by the excavations or other operations connected with performance of the Work?	Yes ☐	No ☐	N/A☒
If yes, has Contractor been notified?	Yes ☐	No ☐	N/A☒
Comments: N/A			

RESILIENCE/GREEN REMEDIATION CHECKLIST

Is site power procured from renewable energy sources (e.g., solar, wind, geothermal, biomass and biogas)?	Yes ☐	No ☐	N/A☒
Is the Contractor employing 2007 or newer or retrofitted (BART*) diesel on-road trucks and non-road equipment?	Yes ☐	No ☐	N/A☒
Is vehicle idling adequately reduced per 6NYCRR Part 217-3?	Yes ☐	No ☐	N/A☒
Have equipment operators been trained in the idling requirements of 6NYCRR Part 217-3?	Yes ☐	No ☐	N/A☒
Is BART-equipped equipment properly maintained and working?	Yes ☐	No ☐	N/A☒
Is work being sequenced to avoid double handling?	Yes ☐	No ☐	N/A☒
Is there an onsite recycling program for CONTRACTOR-generated wastes and is it complied with?	Yes ☐	No ☐	N/A☒
Are office trailer heating and cooling systems maintained at efficient set points, have programable thermostats been installed?	Yes ☐	No ☐	N/A☒
Are products and materials used in performance of the work appropriately certified (e.g., LEED, Energy Star, Sustainable Forestry Initiative®, etc.)?	Yes ☐	No ☐	N/A☒
Are resiliency features included in the design, or completed remedy properly installed and/or maintained (flood control, storm water controls, erosion measures, etc.)?	Yes ☐	No ☐	N/A☒
Are green remediation elements included in the design, or completed remedy properly installed and/or maintained (e.g., porous pavement, geothermal, variable speed drives, native plantings, natural stream bank restoration, etc.)?	Yes ☐	No ☐	N/A☒
Has Contractor been notified of any deficiencies?	Yes ☐	No ☐	N/A☒
Are remote/call in job meetings being held in lieu of meeting in person where possible?	Yes ☐	No ☐	N/A☒
Comments: N/A			

* BART – Best Available Retrofit Technology

DAILY INSPECTION REPORT
(Town & Country), Site No. 828149

Date: 05/08/2024

NYSDEC
Division of Environmental Remediation

NEW YORK STATE | Department of Environmental Conservation

Contract No. D009806
DEC PM – J.Stefansky
Engineer PM – J.Oliver
Engineer Insp. – H. Bedell

Site Location: 2310 Monroe Ave, Brighton 14618

Weather Conditions

General Description	Partly Cloudy	AM	Sunny	PM
Temperature	64F	AM	67F	PM
Wind	WSW 11 mph	AM	WSW 20 mph	PM

Health & Safety
If any box below is checked "Yes", provide explanation under "Health & Safety Comments".

Were there any changes to the Health & Safety Plan?	*Yes	No X	NA
Were there any exceedances of the perimeter air monitoring reported on this date?	*Yes	No	NA X
Were there any nuisance issues reported/observed on this date?	*Yes	No X	NA

Health & Safety Comments

Heat exhaustion and poison ivy were discussed during the tailgate safety meeting.

Summary of Work Performed | Arrived at site: 0800 | Departed Site: 1230

(0800) C. Derrick, M. Gilkey, H. Bedell, and A. Faux (EA) onsite.
(0812) Hold safety tailgate meeting. Calibrate Horibas.
(0845) Start purge MW-13.
(0848) Start purge MW-1.
(0855) Start purge ~~MW-3~~. IW-1
(0916) Sample 828149-MW-3-20240508 with DUP (828149-DUP-20240508). MW-1 goes dry.
(0921) Sample 828149-MW-13-20240508.
(0958) Start purge MW-13B.
(1015) Sample 828149-MW-1-20240508 upon recharge- high turbidity.
(1101) Sample 828149-MW-13B-20240508.
(1118) Begin synoptic gauging.
(1210) Finish gauging, take field blanks.
(1230) EA offsite.
(1602) Take equipment blank.

IW-1

Well ID	Purge Start Time	Sample Time	QA/QC	DRY?
MW-1	0848	1015	No	Yes, sampled on recharge
~~MW-3~~	0855	0916	Dup	No
MW-13	0845	0921	No	No
MW-13B	0958	1101	No	No

Equipment/Material Tracking
If any box below is checked "Yes", provide explanation under "Material Tracking Comments".

Were there any vehicles which did not display proper D.O.T numbers and placards?	*Yes	No	NA X
Were there any vehicles which were not tarped?	* Yes	No	NA X
Were there any vehicles which were not decontaminated prior to exiting the work site?	* Yes	No	NA X

Personnel and Equipment

Individual	Company	Trade	Total Hours
Cassandra Derrick	EA	Geologist	4.5
Moriah Gilkey	EA	Engineer	4.5
Hannah Bedell	EA	Engineer	4.5
Alex Faux	EA	Geologist	4.5

Equipment Description	Contractor/Vendor	Quantity	Used
Horiba	Pine Environmental	3	Y
RXI GX-6000	Pine Environmental	2	Y
Peristaltic Pumps	Pine Environmental	3	Y
Solonist Water Level Meters	Pine Environmental	3	Y
55-Gallon Steel Drum	Pine Environmental	1	Y
Hand Tools	EA	NA	Y

Dodge Ram Truck	Enterprise	1	Y
Ford F-150 Truck	EA	2	Y

Material Description	Imported/ Delivered to Site	Exported off Site	Waste Profile (If Applicable)	Source or Disposal Facility (If Applicable)	Daily Loads	Daily Weight (tons)*

Equipment/Material Tracking Comments:

Visitors to Site

Name	Representing	Entered Exclusion/CRZ Zone	
None		**Yes**	**No**
		Yes	**No**

Site Representatives

Name	Representing
Cassandra Derrick	**EA**
Moriah Gilkey	**EA**
Hannah Bedell	**EA**
Alex Faux	**EA**

Project Schedule Comments

Sample coolers were organized, packed, and shipped via FedEx upon returning to the Syracuse, NY warehouse.

Issues Pending

- None.

Interaction with Public, Property Owners, Media, etc.

None.

Site Inspector(s): Cassandra Derrick, Moriah Gilkey, Hannah Bedell, and Alex Faux	**Date: 05/08/2024**

Videos of discreet operations have been provided to the DEC Project Manager to facilitate understanding of the ongoing work? Yes ☐ No ☐ N/A ☒

REMEDIAL ACTIVITIES AT PROPERTIES

1. Does anyone at this location have any symptoms of a respiratory infection (e.g., cough, sore throat, fever, or shortness of breath)?	Yes ☐	No ☒
2. Have anyone at this location been tested and confirmed to have COVID-19?	Yes ☐	No ☒
3. Were personal protective gloves, masks, and eye protection being used?	Yes ☐	No ☒
4. Does the Department and its contractors have your permission to enter the property at this time?	Yes ☒	No ☐
5. If Yes to 1 or 2, follow the latest NYSDOH COVID-19 guidance: https://coronavirus.health.ny.gov/home	Yes ☐	No ☐
Comments: N/A		

ON-SITE WASTE STORAGE

Drums, roll offs and piles are staged in secure areas?	Yes ☒	No ☐	N/A☐
Liners and berms have been installed if necessary to prevent cross contamination of clean areas?	Yes ☐	No ☐	N/A☒
Containers are in good condition or properly overpacked?	Yes ☐	No ☐	N/A☒
Waste materials are scheduled to be properly characterized and disposed of prior to demobilization?	Yes ☐	No ☐	N/A☒
Complying with RCRA 90 day storage limitation for hazardous waste?	Yes ☐	No ☐	N/A☒
Piles are securely covered when not in use?	Yes ☐	No ☐	N/A☒
Containers are closed when not in use?	Yes ☐	No ☐	N/A☒
Staging areas should be inspected periodically and any issues addressed immediately?	Yes ☐	No ☐	N/A☒
Signage and labeling comply with RCRA requirements for all staging areas and containers?	Yes ☐	No ☐	N/A☒
If any issues noted, has Contractor been notified?	Yes ☐	No ☐	N/A☒
Comments: NA			

NUISANCE CHECKLIST

Were there any community complaints related to work on this date?	Yes ☐	No ☒	N/A☐
Were there any odors detected on this date?	Yes ☐	No ☒	N/A☐
Was noise outside specification and/or above background on this date?	Yes ☐	No ☒	N/A☐
Were vibration readings outside specification and/or above background on this date?	Yes ☐	No ☐	N/A☒
Any visible dust observed beyond the work perimeter on this date?	Yes ☐	No ☐	N/A☒
Any visible contrast (turbidity) beyond engineering controls observed on this date?	Yes ☐	No ☐	N/A☒
Was turbidity checked at the outfall(s)?	AM ☐	PM ☐	N/A☒
Were any property owners NOT provided advance notice for work performed on this property on this date?	Yes ☐	No ☐	N/A☒

Was the temporary fabric structure closed at the end of the day?	Yes ☐	No ☐	N/A☒
Has Contractor failed to protect all foundations and structures adjacent to and adjoining the site which are affected by the excavations or other operations connected with performance of the Work?	Yes ☐	No ☐	N/A☒
If yes, has Contractor been notified?	Yes ☐	No ☐	N/A☒
Comments: N/A			

RESILIENCE/GREEN REMEDIATION CHECKLIST

Is site power procured from renewable energy sources (e.g., solar, wind, geothermal, biomass and biogas)?	Yes ☐	No ☐	N/A☒
Is the Contractor employing 2007 or newer or retrofitted (BART*) diesel on-road trucks and non-road equipment?	Yes ☐	No ☐	N/A☒
Is vehicle idling adequately reduced per 6NYCRR Part 217-3?	Yes ☐	No ☐	N/A☒
Have equipment operators been trained in the idling requirements of 6NYCRR Part 217-3?	Yes ☐	No ☐	N/A☒
Is BART-equipped equipment properly maintained and working?	Yes ☐	No ☐	N/A☒
Is work being sequenced to avoid double handling?	Yes ☐	No ☐	N/A☒
Is there an onsite recycling program for CONTRACTOR-generated wastes and is it complied with?	Yes ☐	No ☐	N/A☒
Are office trailer heating and cooling systems maintained at efficient set points, have programable thermostats been installed?	Yes ☐	No ☐	N/A☒
Are products and materials used in performance of the work appropriately certified (e.g., LEED, Energy Star, Sustainable Forestry Initiative®, etc.)?	Yes ☐	No ☐	N/A☒
Are resiliency features included in the design, or completed remedy properly installed and/or maintained (flood control, storm water controls, erosion measures, etc.)?	Yes ☐	No ☐	N/A☒
Are green remediation elements included in the design, or completed remedy properly installed and/or maintained (e.g., porous pavement, geothermal, variable speed drives, native plantings, natural stream bank restoration, etc.)?	Yes ☐	No ☐	N/A☒
Has Contractor been notified of any deficiencies?	Yes ☐	No ☐	N/A☒
Are remote/call in job meetings being held in lieu of meeting in person where possible?	Yes ☐	No ☐	N/A☒
Comments: N/A			

* BART – Best Available Retrofit Technology

Appendix C

Data Validation Report

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DATA VALIDATION REPORT

NYSDEC Town & Country Dry Cleaners

SDGs: JD88254 and JD88255

Chemical Analyses Performed by:

SGS Dayton, NJ

Prepared by

ENVIRONMENTAL DATA SERVICES, LTD.

Prepared for

EA Engineering, Science and Technology, Inc.

July 10, 2024

5 Brilliant Avenue, Pittsburgh, PA 15215
412.408.3288 I www.eds-pa.com

ENVIRONMENTAL DATA SERVICES, LTD.

DATA USABILITY SUMMARY REPORT FOR TOTAL METALS

PROJECT: NYSDEC Town and Country Dry Cleaners

CLIENT: EA Engineering, Science, and Technology, Inc.

LABORATORY: SGS Dayton, NJ

SAMPLE DELIVERY GROUP: JD88254

SAMPLE DATES: 05/08/2024

The above sample delivery group (SDG) consist of the following samples:

Client Sample ID	Laboratory Sample ID
828149-MW-1-20240508	JD88254-13
828149-MW-3-20240508	JD88254-14
828149-MW-13-20240508	JD88254-15

The samples described above were analyzed via United States Environmental Protection Agency (USEPA) SW-846 Method 6010D to determine the concentrations of iron and manganese.

Project specific quality assurance (QA) objectives and the USEPA Region II SOP, Hazardous Waste Support Section SOP No. HW-3a Revision 1 ISM02.2 ICP-AES Data Validation, September 2016, SOP No. HW-3c, Rev. 1 Mercury and Cyanide Data Validation, September 2016, and the United States Environmental Protection Agency (USEPA) National Functional Guidelines for Inorganic Superfund Methods Data Review, OLEM 9240.1-66 EPA-542-R-20-006, November 2020, (USEPA 2020) have been considered during validation of this data and its usability.

Table 1 provides a summary of major and minor data quality issues identified for this data set. All data are acceptable except those results which have been qualified with “R”, rejected. Data validation qualifiers along with associated descriptions are provided in Table 2. All data qualification related to this group of samples is detailed on the attached sheets.

All data users should note two facts. First, an "R" flag means that the associated value is unusable due to significant quality control (QC) problems, the data is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on any data tables even as a last resort. Second, no analyte concentration, even if it passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

1. HOLDING TIME/SAMPLE HANDLING

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes in the samples whose holding time has been exceeded will be qualified as estimated, "J-", or unusable, "R", if holding times are grossly exceeded.

The samples in this delivery group were received by the laboratory within the proper temperature range as specified in the validation guidance.

The samples contained in this delivery group were prepared and analyzed within the holding times established in the method and validation criteria.

2. BLANK CONTAMINATION

Quality assurance blanks, which include method, trip, field, or rinse blanks, are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Trip blanks measure cross contamination during shipment. Field and rinse blanks measure cross contamination during field operations.

Method Blank Contamination

Method blanks were evaluated at the proper frequency. Upon evaluation, no target analytes were found above the method detection limit (MDL) in any associated method blank.

Field or Rinse Blank Contamination

No sample was submitted as field / rinse blank in association with the samples in this SDG.

3. CALIBRATION

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data.

Initial and Continuing Calibration Verification

The initial calibration curve and its verification demonstrate that the instrument is capable of giving acceptable performance at the beginning of the analytical sequence. The continuing calibration verification standards provide information as to the continuing stability of the calibration curve.

All initial and continuing calibration verifications that bracketed sample analyses associated with the samples in this SDG were within acceptance limits.

Initial and Continuing Calibration Blanks

Qualification of sample results due to ICB contamination affects all samples in the analytical sequence while CCB contamination only affects samples immediately after or before the non-compliant CCB. If the highest level of contamination is found in the field or method blank, all samples are qualified based on that observation.

All initial and continuing calibration blanks (ICB/CCBs) were analyzed at the proper frequency. All ICB and CCBs associated with the samples in this SDG were evaluated. No problems were found for this criterion.

4. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

The matrix spike and matrix spike duplicate (MS/MSD) are generated to determine the precision and accuracy of the analytical procedure in a given sample matrix.

Sample 828149-MW-1-20240508 was submitted for MS/MSD evaluation in association with this SDG. Upon evaluation, all accuracy and precision indicators were acceptable or did not result in a need to qualify sample results with the following exceptions. The observed MS and MSD recoveries for manganese were less than the lower acceptance limit. The results reported for the impacted analyte in the parent sample has been qualified "J-" on this basis.

5. LABORATORY DUPLICATE

The laboratory duplicate sample analysis is performed to determine long-term precision of the analytical method in a given matrix. The relative percent difference (RPD) between the sample and its duplicate may be used to qualify data.

No sample was analyzed as a laboratory duplicate in association with this SDG.

6. LABORATORY CONTROL SAMPLE

The laboratory control sample (LCS) is a quality control sample of known concentration, which is processed along with a batch of samples. The percent recovery of the LCS can be used to assess the accuracy of the analytical procedure performed by a specific individual, during a specific time period, and utilizing the same reagents and equipment as those used for sample analyses. The LCS data is independent of sample matrix and the results may formulate a basis for qualification.

LCS and LCS duplicates were processed at the proper frequency. Upon evaluation, all precision and accuracy indicators were favorable.

7. FIELD DUPLICATE

Field duplicates are two (or more) field samples collected at the same time in the same location. Each of the samples represents the same population and is carried through all steps of the sampling and analytical procedures in an identical manner. Field duplicate results are used to assess precision of the total method, including sampling, analysis, and site heterogeneity.

No samples were submitted as a field duplicate in association with this SDG.

8. ICP INTERFERENCE CHECK SAMPLE

An ICP interference check sample (ICS) must be analyzed for ICP-AES. All elements in the ICP-AES interference check sample solution ICSA should exhibited recoveries within acceptance limits (+/- CRQL of the true/mean value or +/-20% of the true value, whichever is greater) for the aqueous matrix. All elements in the ICP-AES solution ICSAB should exhibited acceptable recoveries (80-120% limits).

ICSA and ICSB solutions were properly analyzed and upon evaluation, found to be acceptable.

9. ICP SERIAL DILUTION

The serial dilution determines whether significant physical or chemical interferences exist due to sample matrix. If the analyte concentration is sufficiently high (concentration in the original sample is greater than 50 times the MDL, the percent difference between the original determination and the serial dilution analysis (a five-fold dilution) after correction for dilution shall be less than 10. For a serial dilution analysis that does not meet the technical criteria, the action was applied to all samples of the same matrix.

Sample 828149-MW-1-20240508 was analyzed as a serial dilution in association with the samples in this SDG. No problems were found for this criterion with the following exception. Poor precision was noted of iron. The result reported for the impacted analyte in the parent sample has been qualified "J" on this basis.

10. OTHER

None.

Table 1
Review Elements Summary

	Were acceptance criteria met?		
	Yes	No	
Metals		Major	Minor
Holding Time/Sample Handling	x		
Method Blank	x		
Field or Rinse Blank	NA		
Initial Calibration	x		
Initial and Continuing Calibration Verification	x		
Initial and Continuing Calibration Blanks	x		
Matrix Spike/Matrix Spike Duplicate			x
Laboratory Duplicate	NA		
Laboratory Control Sample	x		
Field Duplicate	NA		
ICP Interference Check Sample	x		
ICP Serial Dilution			x
Other	x		

Major= Major data quality issue identified resulting in rejection of data.
Minor= Minor data quality issue identified resulting in the qualification of data. Data qualification should be used to inform the data users of data limitations.
NA = Not applicable

Table 2
Data Validation Qualifiers

Data Qualifier	Definition
U	The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.

ENVIRONMENTAL DATA SERVICES, LTD.

DATA USABILITY SUMMARY REPORT
FOR MISCELLANEOUS CHEMISTRY

PROJECT: NYSDEC Town and Country Dry Cleaners

CLIENT: EA Engineering, Science, and Technology, Inc.

LABORATORY: SGS Dayton, NJ

SAMPLE DELIVERY GROUP: JD88254

SAMPLE DATES: 05/08/2024

The above sample delivery group (SDG) consist of the following samples:

Client Sample Identification	Laboratory Sample Identification	353.2	300.0	2320B	4500B	5310B
828149-MW-1-20240508	JD88254-13	X	X	X	X	X
828149-MW-3-20240508	JD88254-14	X	X	X	X	X
828149-MW-13-20240508	JD88254-15	X	X	X	X	X

The samples described above were analyzed via United States Environmental Protection Agency (USEPA) EPA Method 300.0 to determine concentrations of anions, EPA Method 353.2 to determine concentrations of nitrate/nitrite, Standard Method 2320B to determine the concentrations of alkalinity, Standard Method 4500NO2 B to determine concentrations of nitrite and Standard Method 5310B to determine concentrations of total organic carbon (TOC).

Project specific quality assurance (QA) objectives and United States Environmental Protection Agency (USEPA) National Functional Guidelines for Inorganic Superfund Methods Data Review, OLEM 9240.1-66 EPA-542-R-20-006, November 2020, (USEPA 2020) have been considered during validation of this data and its usability.

Table 1 provides a summary of major and minor data quality issues identified for this data set. All data are acceptable except those results which have been qualified with “R”, rejected. Data validation qualifiers along with associated descriptions are provided in Table 2. All data qualification related to this group of samples is detailed on the attached sheets.

All data users should note two facts. First, an "R" flag means that the associated value is unusable due to significant quality control (QC) problems, the data is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on any data tables even as a last resort. Second, no analyte concentration, even if it passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

1. HOLDING TIME / SAMPLE HANDLING:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes in the samples whose holding time has been exceeded will be qualified as estimated, "J-", or unusable, "R", if holding times are grossly exceeded.

The samples in this SDG were received by the laboratory within the proper temperature range and sample preservation as specified in the validation guidance with the following exception.

Sample 828149-MW-1-20240508 did not meet TOC preservation criteria. The sample was received at a pH >2 per the sample prep log. The result reported for TOC in the impacted sample has been qualified estimated "J" on this basis.

The samples contained in this SDG were prepared and analyzed within the holding times established in the method and validation criteria with the following exception.

All samples were analyzed outside of the required 48-hour analytical hold time for nitrite. The sample results reported for the impacted analyte have been qualified "J" or "R" on this basis.

2. CALIBRATION:

Method requirements for satisfactory instrument or procedural calibration are established to ensure that the instrument can produce acceptable quantitative data. Initial calibration verification (ICV) demonstrates that the instrument is capable of acceptable performance at the beginning of the analytical run. Continuing calibration verification (CCV) demonstrates that the initial calibration is still valid by checking the performance of the instrument on a continuing basis.

Immediately after each system has been calibrated, the accuracy of the initial calibration must be verified and documented for each target analyte by the analysis of an ICV solution(s). The CCV standard shall be analyzed at a frequency of every 10 samples. The percent relative standard deviation (%RSD) and/or or the correlation coefficient should be within quality control limits for the initial calibration. ICV and CCV recoveries should be within quality control limits. Qualifications were applied to the samples and analytes as shown below.

Calibrations were performed at the appropriate frequency. The Coefficient of variation/determination values were within acceptable criteria in all cases and all calibration verifications were within acceptance criteria.

3. BLANK CONTAMINATION:

Quality assurance blanks include method, storage, trip, field, or rinse blanks. Blanks are prepared to identify any contamination, which may have been introduced into the samples during laboratory preparation and analysis or field activity. Method and storage blanks measure laboratory contamination. Trip blanks measure cross contamination during shipment. Field and rinse blanks measure cross contamination during field operations.

A) Method Blanks

Method blanks were analyzed with appropriate frequency. No problems were found for this criterion or did not result in the need to qualify sample results.

B) Instrument Blanks

Instruments blanks were analyzed with appropriate frequency. No problems were found for this criterion or did not result in the need to qualify sample results.

C) Field/Equipment Blanks

No sample was submitted as a field/equipment blank in association with the samples in this SDG.

4. LABORATORY CONTROL SAMPLE:

The Laboratory Control Sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. The LCS results are used to verify that the laboratory can perform the analysis in a clean matrix.

No problems were found for this criterion.

5. MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY:

The matrix spike/matrix spike duplicate (MS/MSD) sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. The spike percent recovery must fall within the established laboratory acceptance limits. However, spike recovery limits do not apply when the sample concentration is ≥4x the spike added. For a spike analysis that does not meet the technical criteria, the action was applied to all samples in the preparation batch.

Sample 828149-MW-1-20240508 was submitted for MS/MSD pair evaluation for TOC in association with this SDG. Upon evaluation all precision and accuracy indicators were acceptable.

6. LABORATORY DUPLICATE:

The laboratory duplicate sample analysis is performed to determine long-term precision of the analytical method in a given matrix. The relative percent difference (RPD) between the sample and its duplicate may be used to qualify data.

No sample was submitted for laboratory duplicate pair evaluation in association with this SDG.

7. FIELD DUPLICATES:

Field duplicates are two (or more) field samples collected at the same time in the same location. Each of the samples represents the same population and is carried through all steps of the sampling and analytical procedures in an identical manner. Field duplicate results are used to assess precision of the total method, including sampling, analysis, and site heterogeneity.

No samples were submitted as a field duplicate pair in association with this SDG.

8. OTHER PROBLEMS:

No other problems were found.

Table 1
Review Elements Summary

	Were acceptance criteria met?		
	Yes	**No**	
SM4500 Nitrite		**Major**	**Minor**
Holding Time/Sample Handling		X	X
Calibration	X		
Blank Contamination	X		
Laboratory Control Sample	X		
Matrix Spike/Matrix Spike Duplicate	NA		
Laboratory Duplicate	NA		
Field Duplicate	NA		
Other	X		
	Yes	**No**	
Chloride and Sulfate		**Major**	**Minor**
Holding Time/Sample Handling	X		
Calibration	X		
Blank Contamination	X		
Laboratory Control Sample	X		
Matrix Spike/Matrix Spike Duplicate	NA		
Laboratory Duplicate	NA		
Field Duplicate	NA		
Other	X		
	Yes	**No**	
Alkalinity		**Major**	**Minor**
Holding Time/Sample Handling	X		
Calibration	X		
Blank Contamination	X		
Laboratory Control Sample	X		
Matrix Spike/Matrix Spike Duplicate	NA		
Laboratory Duplicate	NA		
Field Duplicate	NA		
Other	X		
	Yes	**No**	
TOC		**Major**	**Minor**
Holding Time/Sample Handling			X
Calibration	X		
Blank Contamination	X		
Laboratory Control Sample	X		
Matrix Spike/Matrix Spike Duplicate	X		
Laboratory Duplicate	NA		
Field Duplicate	NA		
Other	X		
	Yes	**No**	
E353.2 Nitrate/Nitrite		**Major**	**Minor**
Holding Time/Sample Handling	X		
Calibration	X		
Blank Contamination	X		
Laboratory Control Sample	X		
Matrix Spike/Matrix Spike Duplicate	NA		
Laboratory Duplicate	NA		
Field Duplicate	NA		
Other	X		

Major = Major data quality issue identified resulting in rejection of data.
Minor = Minor data quality issue identified resulting in the qualification of data. Data qualification should be used to inform the data users of data limitations.
NA = Not applicable

Table 2
Data Validation Qualifiers

Data Qualifier	Definition
U	**The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.**
J	**The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.**
J+	**The result is an estimated quantity, but the result may be biased high.**
J-	**The result is an estimated quantity, but the result may be biased low.**
UJ	**The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.**
R	**The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.**

ENVIRONMENTAL DATA SERVICES, LTD.

DATA USABILITY SUMMARY REPORT FOR 1,4-DIOXANE

PROJECT: NYSDEC Town and Country Dry Cleaners

CLIENT: EA Engineering, Science, and Technology, Inc.

LABORATORY: SGS Dayton, NJ

SAMPLE DELIVERY GROUPS: JD88254

SAMPLE DATES: 05/07/2024-05/8/2024

The above sample delivery group (SDG) consist of the following samples:

Client Sample ID	Laboratory Sample ID
828149-DP-10-20240507	JD88254-1
828149-DP-15-20240507	JD88254-2
828149-DP-18-20240507	JD88254-4
828149-DP-20-20240507	JD88254-6
828149-MW-1-20240508	JD88254-13
828149-MW-3-20240508	JD88254-14
828149-MW-13-20240508	JD88254-15
828149-DUP-20240508	JD88254-17
828149-FB-20240508	JD88254-18

The samples described above were analyzed via USEPA SW-846 8270 SIM to determine the concentrations of 1,4-dioxane. The method was modified to include isotopic dilution quantitation.

Project specific quality assurance (QA) objectives, as well as the USEPA Region II SOP, Validating Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8270D, HW-22 Revision 5, December 2010, have been considered during validation of this data and its usability.

Table 1 provides a summary of major and minor data quality issues identified for this data set. All data are acceptable except those results which have been qualified with “R,” rejected. Data validation qualifiers along with associated descriptions are provided in Table 2. All data qualification related to this group of samples is detailed on the attached sheets.

Per USEPA Region 2 Validation Guidance, “All data users should note two facts. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables even as a last resort. The second, no analyte concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.”

1. HOLDING TIME/SAMPLE HANDLING

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Proper sample handling and preservation also play a role in the chemical stability of analytes in the sample matrix. If samples are not collected and stored using proper containers and/or preservatives, data may not be valid.

The samples in this delivery group were received by the laboratory within the proper temperature range as specified in the validation guidance.

The samples in this delivery group were prepared and analyzed within the holding time specified in the validation guidelines.

2. BLANK CONTAMINATION

Quality assurance blanks include method, storage, trip, field, or rinse blanks. Blanks are prepared to identify any contamination, which may have been introduced into the samples during laboratory preparation and analysis or field activity. Method and storage blanks measure laboratory contamination. Trip blanks measure cross contamination during shipment. Field and rinse blanks measure cross contamination during field operations.

Method Blanks

No problems were found for this criterion.

Field Blanks

Sample 828149-FB-20240508 was submitted as a field blank in association with this SDG. No problems were found for this criterion.

3. MASS SPECTROMETER TUNING

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds, and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances.

The tuning standard for semivolatiles is decafluorotriphenylphosphine (DFTPP).

All instrument tunes were fully compliant.

4. CALIBRATION

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative results. The initial calibration curve demonstrates that the instrument is capable of giving acceptable performance at the beginning of an analytical sequence. The continuing calibration verifies that the instrument is continuing to provide satisfactory daily performance. Additionally, a continuing calibration is analyzed at the end of each 12-hour analytical sequence, denoted as a "closing" calibration verification and ascertains acceptable performance at the conclusion of the analytical sequence.

Response Factor

The relative response factor (RRF) measures the instrument's responses to specific chemical compounds. The response factors for the base neutral acid (BNA) target compound list (TCL) analytes must be ≥0.05 in both the initial and continuing calibrations. A value less than the respective criteria indicates serious detection and quantitation problems. If the mean RRF of the initial calibration or the continuing calibration RRF is <0.05 for any analyte, those analytes detected in environmental samples will be qualified as estimated. All non-detects for those analytes will be rejected.

The RRF values in all initial and continuing calibrations were found to be acceptable in all cases.

Note: No closing continuing calibration was performed.

Percent Relative Standard Deviation and Percent Deviation

Percent relative standard deviation (%RSD) is calculated from the initial calibration and is used to indicate stability of a specific compound over the calibration range. Percent deviation (%D) compares the response factor of the continuing calibration with the mean response factor of the initial calibration. Therefore, %D is a measure of the instrument's daily performance.

The following QC criteria have been applied for this project:

The %RSD of initial calibration must be <20%.

An RSD value outside the initial calibration limit indicates the potential for quantitation errors. For this reason, all positive and non-detected results are qualified as estimated. Severe performance failures (RSD >90%) requires rejection of non-detected results.

The %D for continuing calibration must be <20%.

A value outside these limits indicates the potential for detection and quantitation errors. For these reasons, all positive results are qualified as estimated "J," and non-detects are qualified with "UJ."

All initial calibration %RSD and continuing calibration %D values were within defined quality control criteria without exception.

Note: No closing continuing calibration was performed.

5. INTERNAL STANDARDS PERFORMANCE

Internal standard performance criteria are meant to ensure that the gas chromatograph/mass spectrometer (GC/MS) sensitivity and response are stable during every experimental run.

The internal standard area count must not vary by more than a factor of two from the associated continuing calibration standard. The retention time of the internal standard must not vary by more than +/-30 seconds from the associated continuing calibration standard. The area count must be within -50% to 200% range of the associated standard. If area count is >200%, non-detected results are not qualified while positive results are qualified "J," estimated. When an observed area count is <50%, results are qualified "J" or "UJ" as appropriate; however, should area counts be <25%, all associated non-detects are qualified "R," rejected.

The reported sample analyses and associated method blank had internal standard areas and retention times within QC criteria in all cases.

6. SURROGATES

All samples are spiked with surrogate compounds prior to sample preparation and analyses to evaluate overall laboratory performance and efficiency of the analytical technique.

The reported sample analyses and method blank had observed surrogate recoveries within the limits established by the laboratory in all cases.

7. COMPOUND IDENTIFICATION

Semivolatile

The project target analyte compounds are identified on the GC/MS by using the analytes relative retention time (RRT) and ion spectra. For the results to be a positive hit, the sample peak must be within ±0.06 RRT units of the standard compound and have ion spectra which has a ratio of the primary and secondary ion intensities within 20% of that in the standard compound. In the cases where there is not an adequate ion spectrum match, the laboratory may have provided false positive identifications.

All identification criteria were met. Therefore, no analytes were qualified for compound identification.

8. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

The matrix spike and matrix spike duplicate (MS/MSD) are generated to determine the precision and accuracy of the analytical procedure in a given sample matrix.

Sample 828149-DP-20-20240507 was submitted for MS/MSD evaluation in association with this SDG. Upon evaluation all precision and accuracy indicators were favorable.

9. LABORATORY CONTROL SAMPLE

The Laboratory Control Sample (LCS) is spiked with the same analytes at the same concentrations as the matrix spike. The LCS results are used to verify that the laboratory can perform the analysis in a clean matrix.

No problems were found for this criterion.

10. REPORTING

No dilutions, re-extractions, or other re-analyses were performed.

11. OTHER QUALITY CONTROL DATA OUT OF SPECIFICATION

No problems were found for this criterion.

12. FIELD DUPLICATE

Field duplicates are two (or more) field samples collected at the same time in the same location. Each of the samples represents the same population and is carried through all steps of the sampling and analytical procedures in an identical manner. Field duplicate results are used to assess precision of the total method, including sampling, analysis, and site heterogeneity.

Samples 828149-MW-3-20240508 and 828149-DUP-20240508 were analyzed as a field duplicate pair in association with this SDG. Adequate field precision was demonstrated.

13. SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

Overall, the laboratory data generated met the project goals and quality control criteria, with the exceptions identified in this report and as summarized in Table 1.

Table 1
Review Elements Summary

	Were acceptance criteria met?		
	Yes	No	
1,4-Dioxane		**Major**	**Minor**
Holding Time/Sample Handling	x		
Method Blanks	x		
Field Blanks	x		
Mass Spectrometer Tuning	x		
Calibration Response Factor	x		
Calibration Percent Relative Standard Deviation and Percent Difference	x		
Internal Standards Performance	x		
Surrogates	x		
Compound Identification - Semivolatile	x		
Tentatively Identified Compounds - Semivolatile	NA		
Matrix Spike/Matrix Spike Duplicate	x		
Laboratory Control Sample	x		
Other Quality Control Data out of Linear Range	x		
Field Duplicate	x		

Major= Major data quality issue identified resulting in rejection of data.
Minor= Minor data quality issue identified resulting in the qualification of data. Data qualification should be used to inform the data users of data limitations.
NA = Not applicable

Table 2
Data Validation Qualifiers

Data Qualifier	Definition
U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
UJ-	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise, and the result may be biased low.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.

ENVIRONMENTAL DATA SERVICES, LTD.

DATA USABILITY SUMMARY REPORT FOR DISSOLVED GASES

PROJECT: NYSDEC Town and Country Dry Cleaners

CLIENT: EA Engineering, Science, and Technology, Inc.

LABORATORY: SGS Dayton, NJ

SAMPLE DELIVERY GROUP: JD88254

SAMPLE DATES: 05/08/2024

The above sample delivery group (SDG) consist of the following samples:

Client Sample ID	Laboratory Sample ID
828149-MW-1-20240508	JD88254-13
828149-MW-3-20240508	JD88254-14
828149-MW-13-20240508	JD88254-15
828149-TB-20240508	JD88254-19

The samples described above were analyzed via United States Environmental Protection Agency (USEPA) RSK SOP-175 to determine the concentrations of dissolved gases (carbon dioxide, methane, ethane, and ethene).

This Data Usability Summary Report (DUSR) has been prepared in general compliance with analytical methods and the National Functional Guidelines for Organic Superfund Methods Data Review, OLEM 9240.0-51 EPA 540-R-20-005, November 2020.

Table 1 provides a summary of major and minor data quality issues identified for this data set. All data are acceptable except those results which have been qualified with “R”, rejected. Data qualifiers along with associated descriptions are provided in Table 2. All data qualification related to this group of samples is detailed on the attached sheets.

Per USEPA Region II Validation Guidance, “All data users should note two facts. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables even as a last resort. Second, no analyte concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error.”

1. CHAIN OF CUSTODY AND TRAFFIC REPORTS

All chain of custody (COC) and traffic reports were present for all samples.

2. HOLDING TIME/SAMPLE HANDLING

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded the data may not be valid. Proper sample handling and preservation also play a role in the chemical stability of analytes in the sample matrix. If samples are not collected and stored using proper containers and/or preservatives data may not be valid.

The samples in this sample delivery group (SDG) were received by the laboratory within the proper temperature range as specified in the validation guidance. The samples contained in this SDG were prepared and analyzed within the holding times established in the method and validation criteria with the following exceptions.

The pH preservation requirement for sample 828149-MW-1-20240508 was not met. The results in the associated sample have been qualified "J" or "UJ", as appropriate on this basis.

The observed headspace for sample 828149-TB-20240508 was greater than the acceptance criteria. The results in the associated sample have been qualified "J" or "UJ", as appropriate on this basis.

3. BLANK CONTAMINATION

Quality assurance blanks which include method, storage, trip, field, or rinse blanks are prepared to identify any contamination which may have been introduced into the samples during laboratory preparation and analysis or field activity. Method and storage blanks measure laboratory contamination. Trip blanks measure cross contamination of samples during shipment. Field and rinse blanks measure cross contamination during field operations.

Method Blank

Method blanks were prepared and analyzed in association with the samples in this delivery group at the specified frequency. No problems were found for this criterion.

Field Blank

No sample was submitted as a field/equipment blank in association with the samples in this SDG.

Trip Blank

Sample 828149-TB-20240508 was submitted as a trip blank in association with the samples in this SDG. No problems were found for this criterion with the following exception. Methane and carbon dioxide were positively identified in the trip blank associated with all samples in this SDG. Positive results reported for the impacted analytes in the associated samples have been evaluated and qualified per validation guidance.

4. **CALIBRATION**

Satisfactory instrument calibration is established to ensure that the instrument can produce acceptable quantitative data. An initial calibration demonstrates that the instrument can give acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

Initial Calibration

Percent Relative Standard Deviation (%RSD) is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentration. Percent RSD must be less than the maximum %RSD of 20% or, in cases where linear and non-linear regressions are used, correlation coefficients must be greater than or equal to 0.995. If the %RSD or correlation coefficient do not meet quality control criteria, detects may be qualified as "J" and professional judgement is used to qualify non-detects. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion with the following exception. The observed %RSD for methane in the initial calibration associated with all the samples in this SDG was outside acceptance limits. The methane results reported in the associated samples have been qualified "J" or "UJ", as appropriate on this basis.

Continuing Calibration

Percent difference (%D) compares the response factor of the continuing calibration check to mean response factor (RF) from the initial calibration. For the opening or closing continuing calibration verification (CCV) the %D must be <20% for all target compounds. A value outside of these limits indicates potential detection and quantitation errors. If the %D exceeds quality control criteria, the positive results are flagged as estimated, "J" and non-detects are flagged "UJ". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

5. **SURROGATES**

All samples are spiked with system monitoring compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate recovery limits were outside quality control limits in the validation guidance, qualifications were applied to all the samples and analytes as shown below.

Surrogates were not utilized for samples analyzed via RSK SOP-175.

6. **MATRIX SPIKE/MATRIX SPIKE DUPLICATE/MATRIX DUPLICATE**

The matrix spike/matrix spike duplicate (MS/MSD) sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. The spike percent recovery and relative percent difference must fall within the laboratory established acceptance limits. However, spike recovery limits do not apply when the sample concentration is greater than or equal to four times the spike added. The laboratory duplicate sample analysis is performed to determine long-term precision of the analytical method in a given matrix. The relative percent difference (RPD) between the sample and its duplicate may be used to qualify data.

No sample was submitted for MS/MSD or matrix duplicate evaluations in association with this SDG.

7. **LABORATORY CONTROL SAMPLE**

The Laboratory Control Sample (LCS) serves to monitor the overall performance of each step during the analysis. Aqueous/water and soil/sediment LCSs shall be analyzed for each analyte utilizing the same sample preparations, analytical methods, and quality assurance/quality control procedures as employed for the samples. All LCS percent recoveries must fall within the control limits of 80-120% or laboratory acceptance criteria when more restrictive. Qualifications were applied to the samples and analytes as shown below.

LCS evaluations were processed at the proper frequency. Upon evaluation of precision and accuracy criteria no issues were noted.

8. **FIELD DUPLICATE**

Field duplicates are two (or more) field samples collected at the same time in the same location. Each of the samples represents the same population and is carried through all steps of the sampling and analytical procedures in an identical manner. Field duplicate results are used to assess precision of the total method including sampling, analysis, and site heterogeneity.

No samples were submitted as a field duplicate in association with this SDG.

9. OTHER

The laboratory noted that the carbon dioxide results reported for all samples in this SDG were suspected to be biased high due to possible interaction with the acidified sample matrix converting organic carbon into carbon dioxide. The carbon dioxide results have been qualified "J+" on this basis, unless previously qualified "J" for other validation exceedances.

Table 1
Review Elements Summary

	Were acceptance criteria met?		
	Yes	No	
RSK-175		**Major**	**Minor**
Holding Time/Sample Handling			x
Laboratory Blank	x		
Field/Equipment Blank	NA		
Trip Blank			x
Calibration			x
Surrogates	NA		
Matrix Spike/Matrix Spike Duplicate/Laboratory Duplicate	NA		
Field Duplicate	NA		
Laboratory Control Samples	x		
Other Quality Control Data out of Specification			x

Major= Major data quality issue identified resulting in rejection of data.
Minor= Minor data quality issue identified resulting in the qualification of data. Data qualification should be used to inform the data users of data limitations.
NA = Not applicable

Table 2
Data Validation Qualifiers

Data Qualifier	Definition
U	The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents its approximate concentration.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.

ENVIRONMENTAL DATA SERVICES, LTD.

DATA USABILITY SUMMARY REPORT FOR VOLATILES

PROJECT: NYSDEC Town and Country Dry Cleaners

CLIENT: EA Engineering, Science, and Technology, Inc.

LABORATORY: SGS, Dayton NJ

SAMPLE DELIVERY GROUPS: JD88254

SAMPLE DATES: 05/07/2024-05/8/2024

The above sample delivery group (SDG) consist of the following samples:

Client Sample ID	Laboratory Sample ID
828149-DP-10-20240507	JD88254-1
828149-DP-15-20240507	JD88254-2
828149-DP-17-20240507	JD88254-3
828149-DP-18-20240507	JD88254-4
828149-DP-19-20240507	JD88254-5
828149-DP-20-20240507	JD88254-6
828149-DP-21-20240507	JD88254-7
828149-GEMW-2-20240507	JD88254-8
828149-MW-2-20240507	JD88254-9
828149-MW-17B-20240507	JD88254-10
828149-MW-19B-20240507	JD88254-11
828149-MW-21B-20240507	JD88254-12
828149-MW-1-20240508	JD88254-13
828149-MW-3-20240508	JD88254-14
828149-MW-13-20240508	JD88254-15
828149-MW-13B-20240508	JD88254-16
828149-DUP-20240508	JD88254-17
828149-FB-20240508	JD88254-18
828149-TB-20240508	JD88254-19

The samples described above were analyzed via USEPA SW-846 8260 to determine the concentrations of low/medium volatile organic analytes (VOAs).

Project specific quality assurance (QA) objectives, as well as the USEPA Region II SOP, Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B & 8260C, SOP NO. HW-24 Revision 4, September 2014 have been considered during validation of this data and its usability.

Table 1 provides a summary of major and minor data quality issues identified for this data set. All data are acceptable except those results which have been qualified with “R,” rejected. Data validation qualifiers along with associated descriptions are provided in Table 2. All data qualification related to this group of samples is detailed on the attached sheets.

Per USEPA Region 2 Validation Guidance, “All data users should note two facts. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values

should not appear on data tables even as a last resort. The second, no analyte concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error.”

1. **HOLDING TIME/SAMPLE HANDLING**

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Proper sample handling and preservation also play a role in the chemical stability of analytes in the sample matrix. If samples are not collected and stored using proper containers and/or preservatives, data may not be valid.

The samples in this SDG were received by the laboratory within the proper temperature range as specified in the validation guidance.

The samples in this SDG were prepared and analyzed within the holding time specified in the validation guidelines.

2. **BLANK CONTAMINATION**

Quality assurance blanks include method, storage, trip, field, or rinse blanks. Blanks are prepared to identify any contamination, which may have been introduced into the samples during preparation and analysis or field activity. Method and storage blanks measure laboratory contamination. Trip blanks measure cross contamination during shipment. Field and rinse blanks measure cross contamination during field operations.

Method Blanks

Method blanks were prepared and analyzed in association with the samples in these SDGs at the specified frequency. Upon examination of method blank data, no analyte was positively identified at a concentration equal to or above the method detection limit (MDL) in any associated method blank.

Storage Blanks

No storage blanks were submitted in association with this SDG.

Trip Blanks

Sample 828149-TB-20240508 was submitted as a trip blank in association with all samples in this SDG. No problems were found for this criterion.

Field Blanks

Sample 828149-FB-20240508 was submitted as a field blank in association with this SDG. No problems were found for this criterion.

3. **MASS SPECTROMETER TUNING**

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds, and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances.

The tuning standard for volatiles is bromofluorobenzene (BFB).

All tunes associated with these SDGs were fully compliant.

4. **CALIBRATION**

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative results. The initial calibration curve demonstrates that the instrument is capable of giving acceptable performance at the beginning of an analytical sequence. The continuing calibration verifies that the instrument is continuing to provide satisfactory daily performance. Additionally, a continuing calibration is analyzed at the end of each 12-hour analytical sequence, denoted as a "closing" calibration verification, and ascertains acceptable performance at the conclusion of the analytical sequence.

Response Factor

The relative response factor (RRF) measures the instruments responses to specific chemical compounds. The RRFs for the VOA target compound list (TCL) compounds must be greater than the RRFs listed in Region II validation guidelines. A value less than the respective criteria indicates serious detection and quantitation problems. If the mean RRF of the initial calibration or the continuing calibration RRF is below the specified limit for any analyte, those analytes detected in environmental samples will be qualified as estimated. All non-detects for those analytes will be rejected.

The RRF values in all initial and continuing calibrations were found to be acceptable in all cases.

Percent Relative Standard Deviation and Percent Deviation

Percent relative standard deviation (%RSD) is calculated from the initial calibration and is used to indicate stability of a specific compound over the calibration range. Percent deviation (%D) compares the response factor of the continuing calibration with the mean response factor of the initial calibration. Therefore, %D is a measure of the instrument's daily performance.

The following QC criteria have been applied for this project:

The %RSD of initial calibration must be ≤20%.

A %RSD value outside initial calibration limit indicates the potential for quantitation errors. For this reason, all positive results are qualified as estimated and non-detect results are qualified using professional judgement.

The %D for opening continuing calibration must be ≤30%

A value outside these limits indicates the potential for detection and quantitation errors. For these reasons, all positive results are qualified as "J," estimated, and non-detects are qualified with "UJ."

All initial calibration %RSD and continuing calibration %D values were within defined QC criteria.

Please note, the laboratory did not perform closing continuing calibration verifications. Therefore, those criteria were not evaluated during validation. No qualification was applied on this basis.

5. **INTERNAL STANDARDS PERFORMANCE**

Internal standard performance criteria are meant to ensure that the gas chromatography/mass spectrometry (GC/MS) sensitivity and response are stable during every experimental run.

The internal standard area count must not vary by more than a factor of two from the associated continuing calibration standard. The retention time of the internal standard must not vary by more than +/- 30 seconds from the associated continuing calibration standard. The area count must be within -50% to +200% range of the associated standard. If area count is >200%, non-detected results are not qualified while positive results associated with the non-compliant internal standard are qualified "J," estimated. However, when an observed area count is <50%, positive results associated with the non-compliant are qualified "J," estimated, while non-detected results are rejected.

Internal standard area counts are within acceptance criteria for all samples.

6. **SURROGATES**

All samples are spiked with surrogate compounds prior to sample preparation and analyses to evaluate overall laboratory performance and efficiency of the analytical technique. The observed recovery must be within laboratory limits as outlined in the project specific validation guidance.

The reported sample analyses had observed surrogate recoveries within the established acceptance limits in all cases.

7. COMPOUND IDENTIFICATION

Volatile

The project target analyte compounds are identified on the GC/MS by using the analytes relative retention time (RRT) and ion spectra. For the results to be a positive hit, the sample peak must be within ±0.06 RRT units of the standard compound and have ion spectra which has a ratio of the primary and secondary ion intensities within 20% of that in the standard compound. In the cases where there is not an adequate ion spectrum match, the laboratory may have provided false positive identifications.

All samples were evaluated, and all identification criteria were met. Therefore, no analytes were qualified for compound identification.

Volatile Tentatively Identified Compounds

Tentatively Identified Compounds (TICs) were reported by the laboratory and reviewed for quality assurance. For all TIC results where there is presumptive evidence of a match, being greater than or equal to 85% match, the results are qualified "NJ," tentatively identified. If the non-target compound is reported as an unknown, the result is qualified "J," estimated. Likewise, if it is determined that the identification of a TIC is unacceptable, the tentative identification of the compound is changed to "unknown" and the result is qualified "J," estimated.

Volatile TICs were not reported.

8. **MATRIX SPIKE/MATRIX SPIKE DUPLICATE**

The matrix spike and matrix spike duplicate (MS/MSD) are generated to determine the precision and accuracy of the analytical procedure in a given sample matrix.

Sample 828149-DP-20-20240507 was submitted for MS/MSD pair evaluation in association with this SDG. Upon evaluation all precision and accuracy indicators were favorable with the following exceptions. The observed MS and MSD recoveries for the analytes listed below were lower than the lowest acceptance limits. The results reported for the impacted analytes in the parent sample have been qualified "UJ" on this basis.

carbon disulfide	*1,1-dichloroethene*
trans-1,2-dichloroethene	*methylene chloride*

9. **LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE**

The Laboratory Control Sample (LCS) is spiked with the same analytes at the same concentrations as the matrix spike. The LCS results are used to verify that the laboratory can perform the analysis in a clean matrix.

LCS/LCS duplicate evaluations were processed at the proper frequency. Upon evaluation all accuracy and precision criteria were acceptable.

10. **REPORTING**

No dilutions, re-extractions, or other re-analyses were performed other than those necessary to bring positive instrument signals within the linear range.

11. OTHER QUALITY CONTROL DATA OUT OF SPECIFICATION

No problems were found for this criterion.

12. FIELD DUPLICATE

Field duplicates are two (or more) field samples collected at the same time in the same location. Each of the samples represents the same population and is carried through all steps of the sampling and analytical procedures in an identical manner. Field duplicate results are used to assess precision of the total method, including sampling, analysis, and site heterogeneity.

Samples 828149-MW-3-20240508 and 828149-DUP-20240508 were analyzed as a field duplicate pair in association with these SDGs. Adequate field precision was demonstrated.

13. SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

Overall, the laboratory data generated met the project goals and quality control criteria, with the exceptions identified in this report and as summarized in Table 1.

Table 1
Review Elements Summary

	Were acceptance criteria met?		
	Yes	No	
Volatiles		**Major**	**Minor**
Holding Time	x		
Method Blanks	x		
Storage Blanks	NA		
Trip Blanks	x		
Field Blanks	x		
Mass Spectrometer Tuning	x		
Calibration Response Factor	x		
Calibration Percent Relative Standard Deviation and Percent Difference	x		
Internal Standards	x		
Surrogates	x		
Compound Identification - Volatile	x		
Tentatively Identified Compounds - Volatile	NA		
Matrix Spike/Matrix Spike Duplicate			x
Laboratory Control Sample/Laboratory Control Sample Duplicate	x		
Other Quality Control Data out of Specification	x		
Field Duplicate	x		

Major= Major data quality issue identified resulting in rejection of data.
Minor= Minor data quality issue identified resulting in the qualification of data. Data qualification should be used to inform the data users of data limitations.
NA = Not applicable

Table 2
Data Validation Qualifiers

Data Qualifier	Definition
U	The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.

ENVIRONMENTAL DATA SERVICES, LTD.

DATA USABILITY SUMMARY REPORT FOR PER-FLUORINATED ALKYL SUBSTANCES

PROJECT: NYSDEC Town and Country Dry Cleaners

CLIENT: EA Engineering, Science, and Technology, Inc.

LABORATORY: SGS Dayton, NJ

SAMPLE DELIVERY GROUP: JD88255

SAMPLE DATES: 05/07/2024 and 05/08/2024

This sample delivery group (SDG) consists of the following samples:

Client Sample ID	Laboratory Sample ID
888149-MW-1-20240508	JD88255-1
828149-MW-3-20240508	JD88255-2
828149-MW-13-20240508	JD88255-3
828149-DP-10-20240507	JD88255-4
828149-DP-15-20240507	JD88255-5
828149-DP-18-20240507	JD88255-6
828149-DP-20-20240507	JD88255-7
828149-DUP-20240508	JD88255-8
828149-FB-20240507	JD88255-9
828149-EB-20240507	JD88255-10
828149-FB-20240508	JD88255-11
828149-EB-20240508	JD88255-12

Performance criteria specified in the analytical method, USEPA Draft Method 1633, Analysis of Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous, Solid, Biosolids, and Tissue Samples by LC-MS/MS, August 2021; as well as the New York Department of Environmental Conservation Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs, April 2023, have been considered during validation of this data and its usability.

Table 1 provides a summary of major and minor data quality issues identified for this data set. All data are acceptable except those results which have been qualified with "R," rejected. Data validation qualifiers along with associated descriptions are provided in Table 2. All data qualification related to this group of samples is detailed on the attached sheets.

Per USEPA Region 2 Validation Guidance, "All data users should note two facts. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables even as a last resort. The second, no analyte concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error."

1. **HOLDING TIME/SAMPLE HANDLING**

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Proper sample handling and preservation also play a role in the chemical stability of analytes in the sample matrix. If samples are not collected and stored using proper containers and/or preservatives, data may not be valid.

The samples in this SDG were received by the laboratory within the proper temperature range. All holding time criteria were met.

2. **BLANK CONTAMINATION**

Quality assurance blanks include method, storage, trip, field, or rinse blanks. Blanks are prepared to identify any contamination, which may have been introduced into the samples during laboratory preparation and analysis or field activity. Method and storage blanks measure laboratory contamination. Trip blanks measure cross contamination during shipment. Field and rinse blanks measure cross contamination during field operations.

Method Blanks

Method blanks were prepared and analyzed in association with the samples in this SDG at the specified frequency. No problems were found for this criterion.

Calibration Blanks

No problems were found for this criterion with the following exceptions. PFOS and 6:2 FTS were positively identified in an initial calibration blank (ICB) associated with the samples listed in the table below. Results reported for the impacted analytes in the associated samples have been evaluated and qualified as appropriate per validation guidelines.

828149-DP-10-20240507	*828149-MW-13-20240508*
828149-DP-15-20240507	*828149-MW-3-20240508*
828149-DP-18-20240507	*888149-MW-1-20240508*
828149-DP-20-20240507	

Field Blanks

The samples listed in the table below were submitted as equipment / field blanks in association with the samples in this SDG. No problems were found with this criterion.

828149-EB-20240507	*828149-EB-20240508*
828149-FB-20240507	*828149-FB-20240508*

3. **CALIBRATION**

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative results. The initial calibration curve demonstrates that the instrument is capable of giving acceptable performance at the beginning of an analytical sequence. The continuing calibration verifies that the instrument is continuing to provide satisfactory daily performance. Additionally, a continuing calibration is analyzed at the end of each 12-hour analytical sequence, denoted as a "closing" calibration verification and ascertains acceptable performance at the conclusion of the analytical sequence.

Percent Relative Standard Deviation and Percent Deviation

Percent relative standard deviation (%RSD) is calculated from the initial calibration and is used to indicate stability of a specific compound over the calibration range. Percent deviation (%D) compares the response factor of the continuing calibration with the mean response factor of the initial calibration. Therefore, %D is a measure of the instrument's daily performance.

An RSD value outside the initial calibration limit indicates the potential for quantitation errors. For this reason, all positive and non-detected results are qualified as estimated. Severe performance failures (RSD >90%) requires rejection of non-detected results. The following QC criteria have been applied for this project: The %RSD of initial calibration must be <20%.

The %D for all analytes in the continuing calibration must be <30% with the exception of the lowest level continuing calibration which must have all a %D for all analytes <50%. A value outside these limits indicates the potential for detection and quantitation errors. For these reasons, all positive results are qualified as estimated "J," and non-detects are qualified with "UJ."

All initial calibration and continuing calibration %RSD and %D values were within defined QC criteria for all target analytes.

4. **ISOTOPE DILUTION STANDARDS (EXTRACTED INTERNAL STANDARDS)**

All samples are spiked with isotope dilution standards prior to sample preparation and analyses to evaluate overall laboratory performance and efficiency of the analytical technique.

No problems requiring result qualification were found for this criterion.

5. **COMPOUND IDENTIFICATION**

The signal to noise ratio for the quantifier ions should be at least 3:1. Target analyte peaks should be integrated properly and consistently when compared to standards

No problems were found for this criterion with the following exceptions.

The transition mass ratios for PFNA and PFHxS in sample 828149-DP-18-20240507 were outside the established ratio limits indicating some degree of uncertainty in the qualitative identification of the analytes. The results reported for the impacted analytes have been qualified as "J" on this basis.

The transition mass ratios for PFOS in samples 828149-DP-10-20240507 and 828149-DP-15-20240507 were outside the established ratio limits indicating some degree of uncertainty in the qualitative identification of the analyte. The results reported for the impacted analyte have been qualified as "J" on this basis.

6. MATRIX SPIKE/MATRIX DUPLICATE

The matrix spike and matrix spike duplicate (MS/MSD) are generated to determine the precision and accuracy of the analytical procedure in a given sample matrix. A matrix duplicate sample analysis is performed to determine long-term precision of the analytical method in a given matrix. The relative percent difference (RPD) between the sample and its duplicate may be used to qualify data.

Sample 828149-DP-20-20240507 was submitted for MS/MSD evaluation in association with this SDG. Upon evaluation all accuracy and precision indicators were acceptable.

7. LABORATORY CONTROL SAMPLE

The Laboratory Control Sample (LCS) is spiked with the same analytes at the same concentrations as the matrix spike. The LCS results are used to verify that the laboratory can perform the analysis in a clean matrix.

No problems were found for this criterion.

8. REPORTING

No problems were found for this criterion.

9. OTHER QUALITY CONTROL DATA OUT OF SPECIFICATION

None.

10. FIELD DUPLICATE

Field duplicates are two (or more) field samples collected at the same time in the same location. Each of the samples represents the same population and is carried through all steps of the sampling and analytical procedures in an identical manner. Field duplicate results are used to assess precision of the total method, including sampling, analysis, and site heterogeneity.

Samples 828149-MW-3-20240508 and 828149-DUP-20240508 were analyzed as a field duplicate pair in association with this SDG. Upon evaluation adequate field precision was demonstrated.

11. SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

Overall, the laboratory data generated met the project goals and quality control criteria, with the exceptions identified in this report and as summarized in Table 1.

Table 1
Review Elements Summary

	Were acceptance criteria met?		
	Yes	No	
Per-fluorinated Compounds		Major	Minor
Holding Time/Sample Handling	x		
Method Blanks / Calibration Blanks			x
Field Blanks	x		
Calibration Percent Relative Standard Deviation and Percent Difference	x		
Isotope Dilution Standards / Extracted Internal Standard	x		
Compound Identification			x
Matrix Spike/Matrix Duplicate	x		
Laboratory Control Sample	x		
Other Quality Control Data out of Specification	x		
Field Duplicate	x		

Major= Major data quality issue identified resulting in rejection of data.
Minor= Minor data quality issue identified resulting in the qualification of data. Data qualification should be used to inform the data users of data limitations.
NA = Not applicable

Table 2
Data Validation Qualifiers

Data Qualifier	Definition
U	The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.

Table 3

PFAS Definitions Table

	CAS Number	Compound	Abbreviation(s)
1	151772-58-6	Nonafluoro-3,6-dioxaheptanoic acid	NFDHA, PFECA B
2	113507-82-7	Perfluoro (2-ethoxyethane) sulfonic acid	PFEESA, PES
3	4151-50-2	N-ethylperfluoro-1-octanesulfonamide	NEtFOSA, NEtPFOSA
4	31506-32-8	N-methylperfuoro-1octanesulfonamide	NMeFOSA, NMePFOSA
5	377-73-1	Perfluoro-3-methoxypropanoic acid	PFMPA, PRMOPrA, PFECA F
6	375-73-5	Perfluorobutanesulfonic acid	PFBS
7	863090-89-5	Perfluoro-4-methoxybutanoic acid	PFMBA, PFMOBA, PFECA A
8	2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid	NMeFOSAA
9	13252-13-6	Hexafluoropropylene Oxide Dimer Acid	HFPO-DA, Gen-X, HFPODA
10	2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid	NEtFOSAA
11	375-22-4	Perfluorobutanoic acid	PFBA
12	335-67-1	Perfluorooctanoic acid	PFOA
13	2706-91-4	Perfluoropentanesulfonic acid	PFPeS
14	754-91-6	Perfluorooctanesulfonamide	FOSA, PFOSA
15	1763-23-1	Perfluorooctanesulfonic acid	PFOS
16	2706-90-3	Perfluoropentanoic acid	PFPeA
17	2058-94-8	Perfluoroundecanoic acid	PFUnA, PFUnDA
18	376-06-7	Perfluorotetradecanoic acid	PFTeA, PFTeDA
19	72629-94-8	Perfluorotridecanoic acid	PFTriA, PFTrDA
20	375-95-1	Perfluorononanoic acid	PFNA
21	79780-39-5	Perfluorododecanesulfonic acid	PFDoS
22	307-55-1	Perfluorododecanoic acid	PFDoA, PFDoDA
23	335-77-3	Perfluorodecanesulfonic acid	PFDS
24	335-76-2	Perfluorodecanoic acid	PFDA
25	375-92-8	Perfluoroheptanesulfonic Acid	PFHpS
26	307-24-4	Perfluorohexanoic acid	PFHxA
27	68259-12-1	Perfluorononanesulfonic acid	PFNS
28	375-85-9	Perfluoroheptanoic acid	PFHpA
29	355-46-4	Perfluorohexanesulfonic acid	PFHxS
30	763051-92-9	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	11CL-PF3Ouds, F-53 Minor
31	27619-97-2	6:2-Fluorotelomersulfonic acid	6:2 FTS
32	812-70-4	7:3 Fluorotelomer carboxylic acid	7:3 FTCA
33	756426-58-1	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	9Cl-PF3ONS
34	39108-34-4	8:2-Fluotelomersulfonic acid	8:2 FTS
35	914637-49-3	5:3 Fluorotelomer carboxylic acid	5:3 FTCA
36	1691-99-2	2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	NEtPFOSAE, NEtFOSE
37	919005-14-4	4,8-Dioxa-3H-perfluorononanoic acid	DONA, ADONA
38	757124-72-4	4:2-Fluorotelomersulfonic acid	4:2 FTS

	CAS Number	Compound	Abbreviation(s)
39	24448-09-7	2-(N-methylperfluoro-1-octanesulfonamido) ethanol	NMePFOSAE, NMeFOSE
40	356-02-5	3-Perfluoropropylpropanoic acid	3:3 FTCA

Appendix D

Trend Evaluation Graphs

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GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	July-24	Job ID:	1602534.0020
Facility Name:	Town and Country Cleaners Site	Constituent:	PCE
Conducted By:	EA Engineering and Geology, P.C.	Concentration Units:	µg/L

Sampling Point ID:		DP-10	DP-15	DP-18	DP-19	DP-21	GEMW-02	MW-01
Sampling Event	Sampling Date	PCE CONCENTRATION (µg/L)						
1	24-Jul-13	1500	8500	1.4	19	2.1	230	11000
2	26-Apr-16	530	5900	3.7	16	3.8	130	8400
3	11-Oct-17	5300	6800	3.1	28	5.4	150	9700
4	8-May-19	120	1300	0.5	19	1.8	81	1900
5	6-Jun-23		1200	1.7	41	1.6	67	
6	27-Nov-23	302	2300	4.0	52.9	2.4	71	2570
7	7-May-24	887	658	2.1	41.8	1.6	66.8	907
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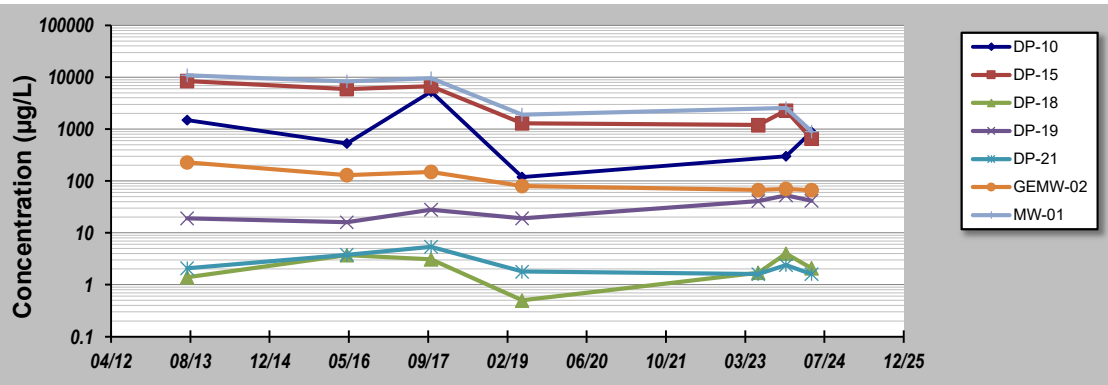
Coefficient of Variation:		1.36	0.83	0.55	0.46	0.53	0.54	0.77
Mann-Kendall Statistic (S):		-3	-15	3	14	-8	-17	-11
Confidence Factor:		64.0%	98.5%	61.4%	97.5%	84.5%	99.5%	97.2%
Concentration Trend:		No Trend	Decreasing	No Trend	Increasing	Stable	Decreasing	Decreasing



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.

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GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	July-24	Job ID:	1602534.0020
Facility Name:	Town and Country Cleaners Site	Constituent:	PCE
Conducted By:	EA Engineering and Geology, P.C.	Concentration Units:	µg/L

Sampling Point ID:	MW-02	MW-03	MW-13	MW-13B	MW-19B	MW-21B
Sampling Event	Sampling Date	PCE CONCENTRATION (µg/L)					
1	24-Jul-13	90000	2200	14000	0.65	4.2	6
2	26-Apr-16	85000	790	12000	3.6	10	5.7
3	11-Oct-17	69000	650	4100	3.3	13	8.3
4	8-May-19	63000	390	2300	1.6	13	6
5	6-Jun-23	69		3200	1	4.3	9.2
6	27-Nov-23	65.2		1130	3	12.9	6.4
7	7-May-24	76.4		1160.0	0.71	10.5	2.5
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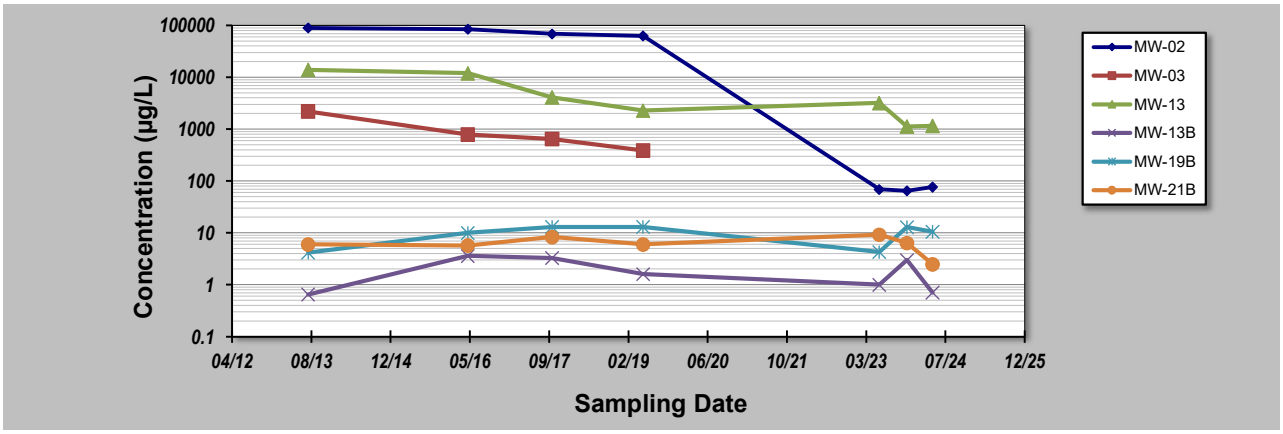
Coefficient of Variation:		0.96	0.81	0.98	0.65	0.40	0.34
Mann-Kendall Statistic (S):		-17	-6	-17	-5	4	0
Confidence Factor:		99.5%	95.8%	99.5%	71.9%	66.7%	37.9%
Concentration Trend:		Decreasing	Decreasing	Decreasing	Stable	No Trend	Stable



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.

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GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	July-24	Job ID:	1602534.0020
Facility Name:	Town and Country Cleaners Site	Constituent:	TCE
Conducted By:	EA Engineering and Geology, P.C.	Concentration Units:	µg/L

Sampling Point ID:		DP-10	DP-15	DP-18	DP-19	GEMW-02	MW-01	MW-02
Sampling Event	Sampling Date	TCE CONCENTRATION (µg/L)						
1	24-Jul-13	170	410	0.79	4.9	5	260	410
2	26-Apr-16	130	210	1.5	4.9	2.2	180	240
3	11-Oct-17	140	210	0.5	8.5	3.3	260	170
4	8-May-19	28	59	0.5	5.5	0.93	34	160
5	6-Jun-23		36	0.9	10.0	1.1		18
6	27-Nov-23	67.2	103	1.8	13.8	1.3	21	18
7	7-May-24	85.4	37.9	1.0	10.6	0.82	11.5	17.8
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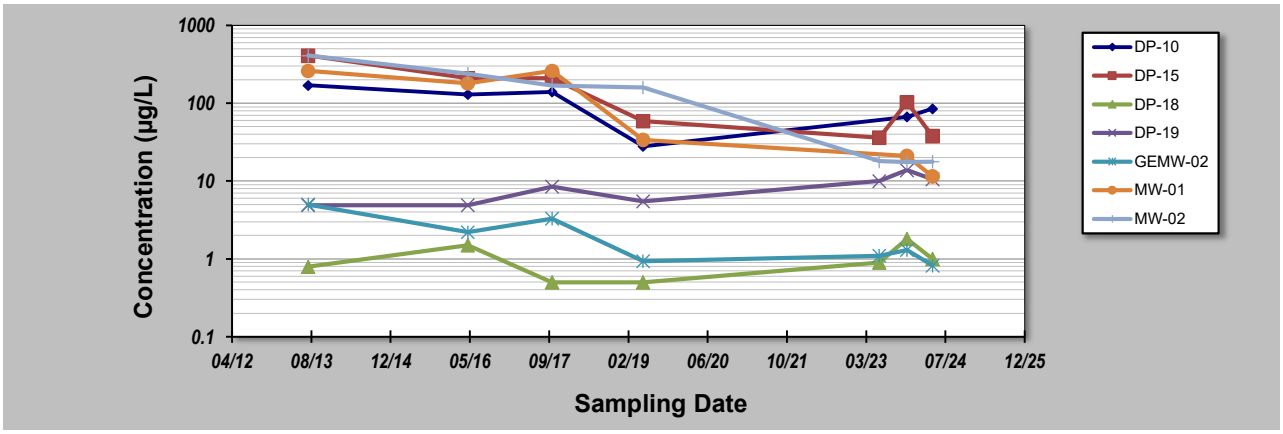
Coefficient of Variation:		0.51	0.89	0.49	0.41	0.74	0.94	0.99
Mann-Kendall Statistic (S):		-7	-14	6	16	-13	-12	-19
Confidence Factor:		86.4%	97.5%	76.4%	99.0%	96.5%	98.2%	99.9%
Concentration Trend:		Stable	Decreasing	No Trend	Increasing	Decreasing	Decreasing	Decreasing



Notes:

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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.

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GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	July-24	Job ID:	1602534.0020
Facility Name:	Town and Country Cleaners Site	Constituent:	TCE
Conducted By:	EA Engineering and Geology, P.C.	Concentration Units:	µg/L

Sampling Point ID:	MW-03	MW-13	MW-13B	MW-19B	MW-21B		
Sampling Event	Sampling Date	TCE CONCENTRATION (µg/L)						
1	24-Jul-13	450	380	0.38	4.4	0.62		
2	26-Apr-16	320	350	0.73	6.2	0.5		
3	11-Oct-17	310	200	1.3	8.4	0.73		
4	8-May-19	220	190	1.2	6.9	0.59		
5	6-Jun-23		120	1.9	0.5	7.7		
6	27-Nov-23		71.8	2.3	9.4	0.3		
7	7-May-24		89.5	1.2	7.5			
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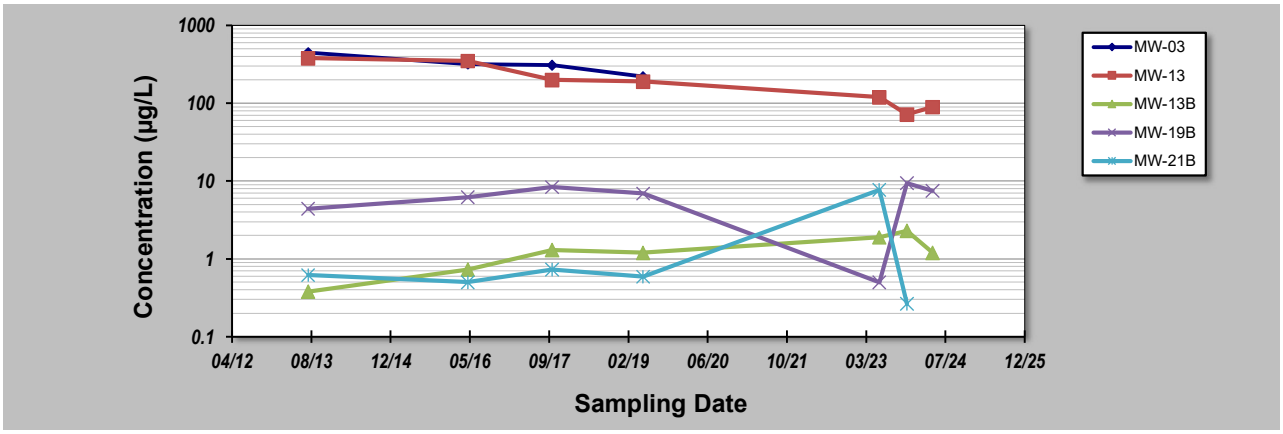
Coefficient of Variation:		0.29	0.61	0.51	0.48	1.69		
Mann-Kendall Statistic (S):		-6	-19	12	7	-1		
Confidence Factor:		95.8%	99.9%	94.9%	80.9%	50.0%		
Concentration Trend:		Decreasing	Decreasing	Prob. Increasing	No Trend	No Trend		



Notes:

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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.

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GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	July-24	Job ID:	1602534.0020
Facility Name:	Town and Country Cleaners Site	Constituent:	cis-1,2-DCE
Conducted By:	EA Engineering and Geology, P.C.	Concentration Units:	µg/L

Sampling Point ID:		DP-10	DP-15	DP-18	DP-19	GEMW-02	MW-01	MW-02
Sampling Event	Sampling Date	CIS-1,2-DCE CONCENTRATION (µg/L)						
1	24-Jul-13	110	230	0.78	6.7	14	660	260
2	26-Apr-16	29	190	1.5	7.3	4	320	250
3	11-Oct-17	100	220	0.5	12	3.3	340	250
4	8-May-19	55	47	0.5	7.8	0.94	34	250
5	6-Jun-23		88	0.58	9.4	0.27		22
6	27-Nov-23	121	129	1.2	15.8	0.26	27.6	21.1
7	7-May-24	128.0	54.1	0.76	12.3	0.26	31.2	19.0
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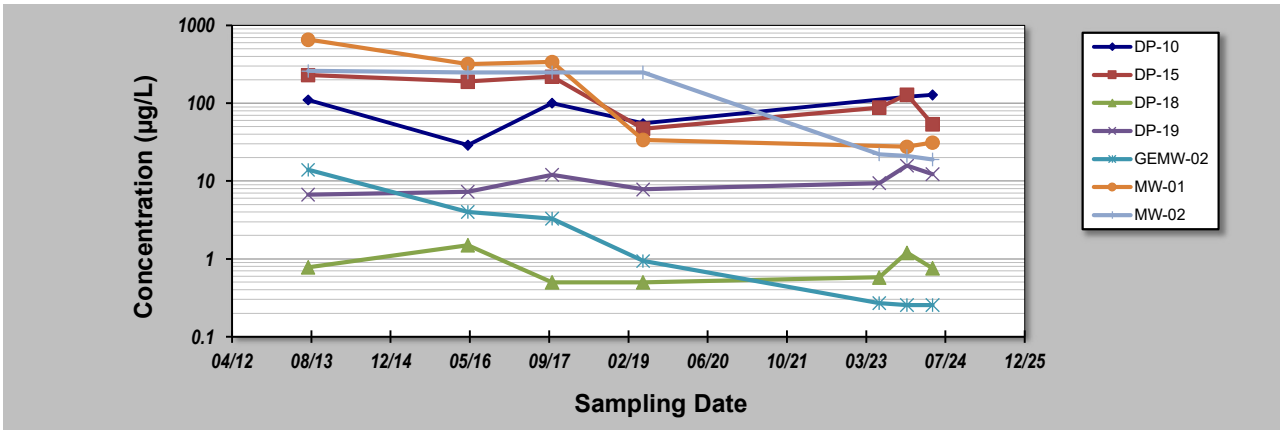
Coefficient of Variation:		0.44	0.56	0.46	0.33	1.51	1.08	0.81
Mann-Kendall Statistic (S):		7	-11	0	15	-20	-11	-18
Confidence Factor:		86.4%	93.2%	37.9%	98.5%	100.0%	97.2%	99.7%
Concentration Trend:		No Trend	Prob. Decreasing	Stable	Increasing	Decreasing	Decreasing	Decreasing



Notes:

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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.

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GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	July-24	Job ID:	1602534.0020
Facility Name:	Town and Country Cleaners Site	Constituent:	cis-1,2-DCE
Conducted By:	EA Engineering and Geology, P.C.	Concentration Units:	µg/L

Sampling Point ID:	MW-03	MW-13	MW-13B	MW-19B	MW-21B		
Sampling Event	Sampling Date	CIS-1,2-DCE CONCENTRATION (µg/L)						
1	24-Jul-13	890	680	0.51	7.7	0.5		
2	26-Apr-16	850	590	0.93	9.8	0.5		
3	11-Oct-17	670	770	2	12	0.5		
4	8-May-19	530	160	2	9.4	0.38		
5	6-Jun-23		170	7	0.5	12.0		
6	27-Nov-23		195	4.6	19.3	0.3		
7	7-May-24		163.0	5.0	16.0			
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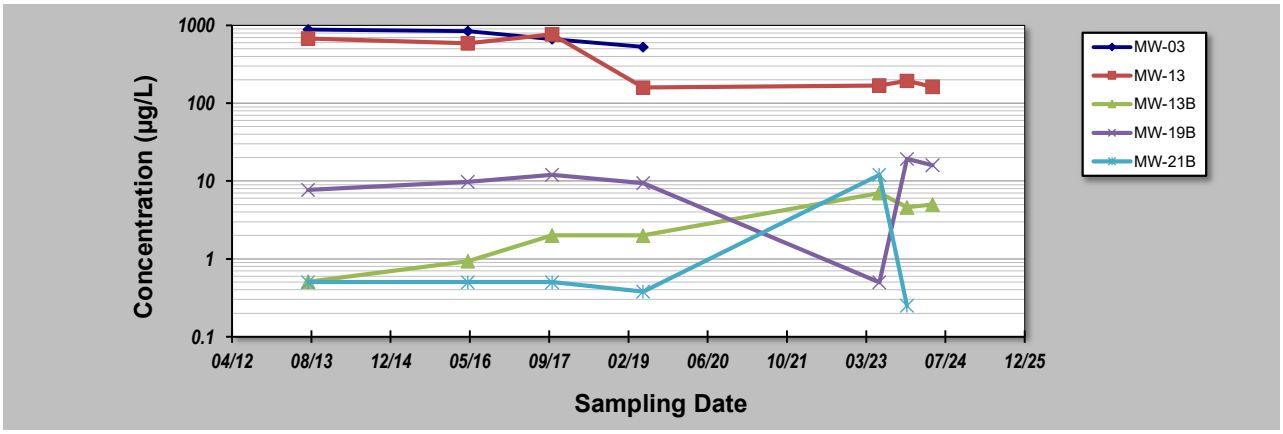
Coefficient of Variation:		0.23	0.71	0.77	0.57	2.01		
Mann-Kendall Statistic (S):		-6	-9	16	7	-4		
Confidence Factor:		95.8%	88.1%	99.0%	80.9%	70.3%		
Concentration Trend:		Decreasing	Stable	Increasing	No Trend	No Trend		



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.

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