# GROUNDWATER MONITORING PROGRAM
# 2022 ANNUAL STATUS REPORT
# FINAL

## Operations and Maintenance and
## Long-Term Monitoring
## Former Scotia Navy Depot, Glenville, New York

***PREPARED FOR:***

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# Groundwater Monitoring Program
# 2022 Annual Status Report
# Operations and Maintenance and
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# Glenville, New York

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## LIST OF ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| µg/L | Microgram(s) per liter |
| % | Percent |
| AECOM | AECOM Technical Services, Inc. |
| AWQS | Ambient Water Quality Standard |
| COC | Constituent of concern |
| CVOC | Chlorinated volatile organic compound |
| DCE | Dichloroethene |
| DO | Dissolved oxygen |
| DUSR | Data usability summary report |
| EA | EA Engineering, Science, and Technology, Inc., PBC |
| EPA | U.S. Environmental Protection Agency |
| EWP | Evaluation Work Plan |
| ft | Foot (feet) |
| ft/day | Foot (feet) per day |
| ft/ft | Foot (feet) per foot |
| GSA | U.S. General Services Administration |
| HPIT | Hydraulic pulse interference testing |
| LTM | Long-term monitoring |
| mg/L | Milligram(s) per liter |
| mL/min | Milliliter(s) per minute |
| MNA | Monitored natural attenuation |
| mV | Millivolt(s) |
| NTU | Nephelometric turbidity unit |
| NYS | New York State |
| NYSDEC | New York State Department of Environmental Conservation |
| NYSDOH | New York State Department of Health |
| ORP | Oxidation-reduction potential |
| PCE | Tetrachloroethene |
| PDI | Pre-Design Investigation |
| PRB | Permeable reactive barrier |
| PRR | Periodic Review Report |

## LIST ACRONYMS AND ABBREVIATIONS *(continued)*

| | |
|---|---|
| RAWP | Remedial Action Work Plan |
| RDI | Remedial Design Investigation |
| ROD | Record of Decision |
| Site | Former Scotia Navy Depot |
| SMP | Site Management Plan |
| Stone | Stone Environmental |
| SVI | Soil vapor intrusion |
| TCE | Trichloroethene |
| TOC | Total organic carbon |
| USACE | U.S. Army Corps of Engineers |
| VOC | Volatile organic compound |
| ZVI | Zero valent iron |

# 1. INTRODUCTION

1.1 This report has been prepared on behalf of the U.S. Army Corps of Engineers (USACE) and the U.S. General Services Administration (GSA) to document annual groundwater monitoring activities performed at the Former Scotia Navy Depot (Site) between 17 October 2022 and 20 October 2022. This report presents the results of the 15th groundwater sampling event after completion of the construction of a zero valent iron (ZVI) permeable reactive barrier (PRB) installed to remediate volatile organic compound (VOC) impacted groundwater at the Site. The first eight sampling events were conducted on a quarterly basis (December, March, June, and September) from December 2016 through September 2018. The next six sampling events were conducted on a semi-annual basis (December and June) from December 2018 through June 2021. Following completion of the 14th sampling event in June 2021, the schedule was changed to annual sampling in accordance with the Site Management Plan (SMP) (EA Engineering, Science, and Technology, Inc., PBC [EA] 2022a).

1.2 Installation of the PRB was completed from February 2016 to December 2016. The Site is adjacent to the north side of New York State (NYS) Route 5 (Amsterdam Road) in the town of Glenville, Schenectady County, New York. A Site location map is provided on **Figure 1-1**.

## 1.3 SITE DESCRIPTION

1.3.1 The Site and adjacent properties are zoned for commercial use. Residential properties are located to the south between Amsterdam Road and the Mohawk River. The Mohawk River is located approximately 1,500 feet (ft) west-southwest of the Site and represents the major drainage feature in Schenectady County. The water table beneath the Site is approximately 65 ft below ground surface, and groundwater beneath the Site flows from northeast to southwest toward the Mohawk River.

1.3.2 The Site overlies a U.S. Environmental Protection Agency (EPA) designated Sole Source Aquifer referred to as the Schenectady or Great Flats Aquifer system, which is adjacent to and extends beneath the Mohawk River over a distance of approximately 12 miles in Schenectady County. Relative to a series of four aquifer protection zones established to protect five municipal water supplies relying on the aquifer system, the Site lies in Zone III or the General Aquifer Recharge Area. The Site is located approximately 1,500 ft southwest of the village of Scotia well field and approximately 1.25 miles north of the town of Rotterdam and city of Schenectady well fields.

1.3.3 Portions of the original Scotia Depot have been subdivided and sold since 1972 by the United States Government. The Site now consists of several large privately held parcels in addition to a portion of land still administered by the GSA. The private parcels contain a variety of industrial tenants, while the GSA leases its remaining portion to the Defense Logistics Agency/Defense National Stockpile Center and the Navy.

## 1.4 SITE HISTORY

1.4.1 The Scotia Depot was built in 1942-1943 and was commissioned as a U.S. Navy facility on 30 March 1943. It served as a storage and supply depot for naval forces along the Atlantic Coast and Europe, and as a storage and distribution point for National Stockpile materials.

1.4.2 On 1 January 1960, the Navy turned the facility over to GSA. During the period between early 1966 and approximately 1973, USACE/Army Material Command leased buildings from the Navy for the fabrication and storage of vehicles as well as other military equipment. Additionally, between 1967 and 1969, GSA and the Navy leased to the U.S. Army/Defense Supply Agency, Buildings 202 and 203. The agreement indicates these buildings were used for the preservation and rail loading of trucks, and storage of trucks and vehicles.

### 1.4.3 Summary of Previous Investigations

1.4.3.1 In the late 1980s, trichloroethene (TCE) was detected at low-level concentrations of less than 1 microgram per liter (µg/L) in the town of Rotterdam and city of Schenectady well fields. In an effort to determine the potential source(s) of the TCE, the New York State Department of Health (NYSDOH) performed sampling of private water supply wells in the area during 1991. The private water supply sampling included residences located on NYS Route 5 in the town of Glenville hydraulically downgradient of the Site. VOCs, including TCE, 1,1,1-trichloroethane, and tetrachloroethene (PCE), were detected in groundwater collected in some of these residential wells. The sampling results were consistent with the known groundwater contamination concentrations at the Site, including TCE which was detected in the NYS Route 5 residential well water samples at concentrations up to 320 µg/L. Following a recommendation by the NYSDOH to connect to public water, the homes on NYS Route 5 were subsequently connected to public water provided by the town of Glenville. Although the drinking water standard was never exceeded in the city of Schenectady and the town of Rotterdam municipal water supply wells, increased groundwater quality monitoring was initiated following the identification of the contamination.

1.4.3.2 Subsequent to the NYSDOH residential groundwater sampling, six subsurface investigations were completed to identify the possible source of TCE in the residential wells and to delineate the extent of the TCE groundwater plume. The investigations were completed between 1995 and 2007 and focused on the assemblage of properties comprising the former 337-acre Scotia Depot. The New York State Department of Environmental Conservation (NYSDEC) 2007 Expanded Site Investigation (NYSDEC 2007) provides details on each of these investigations. Investigation data indicated that TCE disposal may have also occurred in the northeast corner of the 401 sub-block and the area near the north corner of the 403 sub-block.

1.4.3.3 Based on these investigations, a Record of Decision (ROD) specifying a groundwater remedy was approved by the NYSDEC in March 2010 (NYSDEC 2010). The ROD specified a remedial action for the groundwater plume which included treatment of the plume through the installation of a ZVI PRB. During this time investigations were also conducted in relation to a carbon tetrachloride plume that was identified as a source for potential soil vapor intrusion (SVI). In addition to the groundwater remedy, the ROD also identified the need for SVI mitigation at the building 201 sub-block. Details on the installation and monitoring of the SVI portion of the remedy are provided in the Final Engineering Report (AECOM Technical Services, Inc. [AECOM] 2017). Site features are presented on **Figure 1-2**.

### 1.4.4 Pre-Design Groundwater Investigation – 2013

1.4.4.1 A Pre-Design Investigation (PDI) was completed by Stone Environmental (Stone) in 2013 to verify the location and dimensions of the TCE plume to better estimate the appropriate location and depth of the PRB. The PDI was completed as a component of the ROD selected remedy to aid in the PRB design. The PDI included:

- Baseline groundwater sampling of 24 existing on-site monitoring wells
- Synoptic measurement of groundwater elevations in 35 on-site and off-site monitoring wells
- Vertical groundwater profile of VOC plume at 16 locations (WP-01 to WP-16)
- Installation and development of four on-site monitoring wells (MW-24 through MW-27)
- Hydraulic conductivity measurements
- Geotechnical soil sampling (laboratory sieve, bulk density, and effective porosity analyses)
- ZVI treatability study (bench-scale column test) using Site soil and groundwater.

1.4.4.2 The results of the PDI indicated that the plume location had shifted to the south/southeast from the estimated plume delineation shown in the 2010 ROD (see Figure 3 from the ROD and Figures 6 and 10 from Final PDI Report) (Stone 2013). The PDI also delineated the vertical and horizontal limits of the plume across a transect of groundwater profile locations, which had not been well defined in previous investigations. The results of the ZVI treatability study indicated that ZVI would be effective in remediating the TCE plume at the detected maximum concentrations and Site-specific geochemical conditions. The PDI evaluated a preliminary PRB design approximately 850-ft long centered on the highest concentration axis of the TCE plume and extending to estimated lateral limits of the plume based on the results of the vertical groundwater profile locations. Subsequent evaluation of the data to maximize effectiveness and efficiency of the remedial design suggested a 700-ft long deep section centered on the TCE plume with a shallower 250-ft long section to treat lower TCE concentrations would be effective at mitigating the groundwater contamination.

### 1.4.5 Baseline Groundwater Investigation

1.4.5.1 As part of the Remedial Design Investigation (RDI) work plan (AECOM 2015) various field activities were conducted during the Fall of 2015 in order to gather data and information needed to complete the final PRB design; the main components included:

- Installation and development of four "compliance" well pairs (MW-28 to MW-35) and one additional monitoring well (MW-36) to confirm the upgradient edge of the groundwater plume. Note: The compliance wells included the following designations: MW-28 (downgradient) / MW-29 (upgradient); MW-30 (downgradient) / MW-31 (upgradient);

MW-32 (downgradient) / MW-33 (upgradient); and MW-34 (downgradient) / MW-35 (upgradient).

- Collection of 33 baseline groundwater samples
- Performance of a confirmatory ZVI bench scale test
- Performance of aquifer tests including slug testing and hydraulic pulse interference testing (HPIT)

1.4.5.2 Detailed methods and results of these field activities were presented in the PRB Remedial Action Work Plan (RAWP) (AECOM 2016) and the 2015 RDI Work Summary Memo presented in Appendix A of the PRB-RAWP.

## 1.5 PRB DESIGN SUMMARY

1.5.1 The remedial investigation activities at the Site indicated that variable hydraulic conductivity and hydraulic gradient conditions may exist at the Site, resulting in varied groundwater velocity. Therefore, various design cases were analyzed within the range of the measured values to determine the optimum design for the PRB. Three design cases in particular were outlined in the PRB-RAWP (AECOM 2016). These design cases were based on average values from the slug test data and HPIT data from the 2015 RDI activities and historic data from the Stone PDI (Stone 2013). The three design cases used an average value of 0.004 feet per foot (ft/ft) for the hydraulic gradient and varied the hydraulic conductivity from 15.66 feet per day (ft/day) to 193.8 ft/day. Using an assumed porosity of 0.4 this variability of hydraulic conductivity results in an expected range of groundwater velocity at the Site from 0.128 ft/day to 2.83 ft/day. GeoSierra Environmental, Inc., the PRB installation subcontractor, performed a sensitivity analysis based on these design cases and the design of the PRB was chosen based on design scenarios that reflected a conservative approach. A full description of the PRB design including details of each design case is presented in the PRB-RAWP (AECOM 2016).

## 1.6 REMEDIAL ACTION IMPLEMENTATION

1.6.1 In accordance with the ROD for the remedial action at the Site, a ZVI PRB was installed in order to mitigate the impacted groundwater plume at the Site. AECOM and its subcontractor GeoSierra Environmental, Inc. performed the installation of the PRB over the course of 10 months in 2016. The design and installation procedures of the PRB are outlined in the PRB-RAWP (AECOM 2016). The main components of PRB installation were as follows:

- Completion of 77 injection points
- Installation of 31 Resistivity strings
- Placement of ZVI into the formation via injection wells
- Post PRB installation HPIT testing.

1.6.2 The installation of the ZVI PRB was successfully completed in November 2016. Details of the PRB construction activities of the PRB are provided in the Final Engineering Report (AECOM 2017) for the Site. Since the installation of the ZVI PRB in 2016, groundwater monitoring events have been conducted in accordance with the NYSDEC approved SMP (i.e., on a quarterly and semi-annual basis) with results presented in associated monitoring reports and annual Periodic Review Reports (PRRs).

1.6.3 In a letter dated 6 July 2021, NYSDEC provided review comments and concerns regarding the 2021 PRR (AECOM 2021) prepared on behalf of USACE and GSA (Forster 2021). NYSDEC noted that the 2021 PRR (which included the December 2020 groundwater monitoring results), as well as semi-annual groundwater monitoring reports between April 2019 – March 2021, outlined the insufficient reduction of chlorinated volatile organic compounds (CVOCs) in groundwater downgradient of the ZVI PRB.

1.6.4 Pursuant to addressing NYSDEC comments, the EA-Wood-2 MP Joint Venture was contracted by USACE to conduct a review of documentation regarding installation and construction of the existing ZVI PRB at the Site, also including the existing SMP, and subsequent monitoring PRRs; the results of this review were presented in an Evaluation Work Plan (EWP) (EA 2022b). Per NYSDEC request, proposed actions to assess potential ZVI PRB performance issues were also outlined in the EWP.

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# 2. GROUNDWATER MONITORING PROGRAM

2.1 Monitoring well locations are shown on **Figure 1-2** and are described in **Table 2-1**. **Table 2-1** also provides the monitoring well sampling schedule and analytical information for the groundwater monitoring program. The groundwater monitoring program is being carried out in accordance with the schedule and sampling protocol outlined in the SMP.

2.2 The eight compliance monitoring wells (MW-28 through MW-35) were installed in pairs so that groundwater quality could be monitored directly upgradient and directly downgradient of the PRB. The 4 monitoring well pairs are installed 20 ft apart on opposite sides of the wall, 1 being upgradient and 1 being downgradient, with corresponding screen depths. **Figures 2-1a and 2-1b** provide profiles of the compliance monitoring wells showing the screened interval in relation to the PRB. Results from the groundwater monitoring program are being used to evaluate the effectiveness of the remedy at decreasing CVOC concentrations in groundwater and preventing the migration of contaminated groundwater off-site. The compliance well pairs, in addition to MW-24 (downgradient), MW-26 (downgradient), MW-15 (upgradient) and MW-16 (outside of plume), were to be sampled quarterly for the first 2 years (8 quarters), then semi-annually for 3 years (6 semi-annual events), and annually thereafter; quarterly sampling was initiated in December 2016, semi-annual sampling was initiated in December 2018, and annual sampling was initiated in October 2022.

## 2.3 SAMPLE COLLECTION METHODS

2.3.1 Prior to sample collection, depth to water measurements were collected with an electronic water level meter from all accessible wells on the Site. Depth to water measurements were recorded to the nearest hundredth of a ft from a designated measuring point on the well casing.

2.3.2 During the October 2022 annual sampling event, gauging was performed at 34 of the 38 planned locations, and sampling was performed at 27 of 29 planned well locations, with exceptions noted below:

- Well MW-4 could not be located nor gauged; this well had not been gauged since 2015 and subsequent historical monitoring reports indicate it was inaccessible, damaged, or no longer exists. Based on historical figures, it appears this well was originally located approximately 400-500 ft northwest of well MW-5.

- Well MW-8 was inaccessible and could not be gauged/sampled; it was suspected that the well was covered by wooden shipping containers which were staged at this location at the time of the sampling event.

- Well MW-18 was inaccessible and could not be gauged/sampled; it was noted that regrading/reseeding had recently been performed in the vicinity of this well location.

- Well MW-25 was inaccessible and could not be gauged; it was noted that crushed stone had recently been placed along the surface in the vicinity of this well location.

2.3.3 USACE was notified immediately once it was determined that well MW-4 could not be located and wells MW-8, MW-18, and MW-25 were inaccessible.

2.3.4 With the exception of MW-14 and GEP-1, groundwater sampling was performed in accordance with EPA's low stress, often referred to as low-flow, sampling technique (Low-Flow [Minimal Drawdown] Ground-Water Sampling Procedures, EPA/540/S-95/504) (EPA 2010) and is further discussed in the paragraphs below. Monitoring wells MW-14 and GEP-1 were purged and sampled with bailers as damage to the polyvinyl chloride casing at each well prevented the use of a submersible pump. Five well volumes were removed from each well before collecting groundwater samples. Groundwater parameters discussed below were recorded for each well volume removed.

2.3.5 A submersible Geotech Geosub 2 stainless steel pump was used to purge the monitoring wells with the pump intake set at the midpoint of the saturated screened interval. During purging, the pump was operated at a flow rate of approximately 250 to 300 milliliters per minute (mL/min) and water levels were monitored to ensure that the pumping rate caused minimal/no drawdown. Dedicated tubing for each monitoring well was used for groundwater sample collection. Field parameters were recorded on the well sampling forms every 5 minutes during purging, including:

- Purge rate (mL/min)
- Depth to water (0.01 ft)
- Temperature (degrees Celsius)
- pH
- Specific conductance (millisiemens per centimeter)
- Dissolved oxygen (DO) (milligrams per liter [mg/L])
- Oxidation-reduction potential (ORP) (millivolts [mV])
- Turbidity (nephelometric turbidity units [NTU])

2.3.6 Drawdown was monitored to the hundredth of a ft throughout purging using an electronic water level meter. Groundwater quality parameters including temperature, pH, conductivity, dissolved oxygen, oxidation reduction potential, and turbidity were monitored at 5-minute intervals throughout purging using a Horiba-U-52 water quality meter equipped with a flow-through cell. Sampling instruments were calibrated daily prior to starting sampling activities, or as needed throughout the day. A log of the field equipment calibration records is provided in **Appendix A**.

2.3.7 Purging was considered complete when the indicator parameters had stabilized over three consecutive readings, indicating that formation water was being drawn. Stabilization parameters included the following:

- Drawdown: less than 0.3 ft drawdown during purging
- pH: ± 0.1 standard unit
- Specific Conductivity: ± 3 percent (%)
- DO: ± 10 % (mg/L) for values greater than 0.5 mg/L or 3 readings < 0.5 mg/L
- ORP: ±10 mV
- Turbidity: < 5 NTU or ± 10% for readings >5 NTU

2.3.8 Groundwater sample collection forms with the field parameter readings for each monitoring well are included as **Appendix B**. Stability criteria were achieved for each location except MW-7, MW-12R, MW-15, MW-24, MW-28, MW-29, and GEP-2 for turbidity; and MW-26 for specific conductivity as described below:

- MW-7 was purged for 55 minutes, and while turbidity readings dropped from an initial reading of 278 NTU to 61.9 NTU, turbidity readings did not stabilize during the last 3 consecutive readings (135, 65.6, and 61.9 NTU).

- Wells MW-12R, MW-15, MW-24, MW-28, MW-29, and GEP-2 were each purged for 55 minutes, with turbidity decreasing to less than 5 NTU during the final reading. However, the last 3 readings were not considered stable as they were not each less than 5 NTU.

- MW-26 was purged for 35 minutes. The last 3 consecutive specific conductivity readings at MW-26 (0.381, 0.389, and 0.394 millisiemens per centimeter), were not within 3%, and therefore specific conductivity stability criteria at this location was not achieved.

- Since stability was unable to be achieved because of high turbidity values at several monitoring wells (MW-7, MW-12R, MW-15, MW-24, MW-28, MW-29, and GEP-2), it is suggested that the listed monitoring wells be redeveloped.

2.3.9 Prior to sample collection, the flow-through cell was disconnected from the dedicated sample tubing and the sample was collected directly from the tubing into the laboratory supplied sample containers. The target flow rate during sample collection was approximately 100 mL/min. Once sampling was complete, the purge water was placed in a 55-gallon drum at the conclusion of the sampling event. More detailed procedures for sample collection and handling and waste handling, are included in Appendix M of the SMP (EA 2022a). Appendix L of the SMP includes the Uniform Federal Policy – Quality Assurance Project Plan for the long-term monitoring (LTM) activities. Appendix N of the SMP includes the Health and Safety Plan for the LTM activities.

2.3.10 Groundwater samples were packaged on ice and delivered to Chemtech Laboratory via Federal Express shipping during the sample collection timeframe. Standard chain-of-custody procedures were used for sample transport. In total, 27 groundwater samples were collected and analyzed for VOCs (EPA method 8260D) and 12 samples were analyzed for MNA parameters including total organic carbon (TOC) (Method 9060A), alkalinity (SM 2320B), anions (chloride, nitrate, sulfate; Method 9056A), and dissolved gases (methane, ethane, and ethene; Method RSK 175) as well as total and dissolved iron (EPA SW-846 Method 6010D).

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# 3. RESULTS

## 3.1 HYDROGEOLOGIC RESULTS

3.1.1 The groundwater elevations for the Site were determined based on the initial depth to groundwater measurements that were taken prior to sample collection. **Table 3-1** shows the groundwater elevation data for the October 2022 sampling event and compares it to the November/December 2015 baseline sampling event and past sampling event levels. A potentiometric Site map indicating the overburden, groundwater elevation, and direction of groundwater flow during the October 2022 sampling event is included as **Figure 3-1**. Observed general groundwater flow direction in October 2022 was from east/northeast to west/southwest, which is similar to past sampling events. The October 2022 groundwater levels were found to be similar to those of past sampling events.

3.1.2 Based on observed trends during the past sampling events, groundwater elevation at the Site is subject to seasonal variability. The winter sampling events (i.e., December and March) typically exhibited lower groundwater elevations than the summer sampling events (i.e., June and September). The differences between the winter events and summer events indicate a seasonal groundwater level trend. Groundwater elevation data for the October 2022 sampling event indicate that groundwater levels at MW-28/29 are currently at the top of the PRB wall while groundwater levels at wells to the south (MW-30/31, MW-32/33, and MW-34/35) are slightly above the top of the PRB wall. Similar or higher groundwater levels have been observed during previous sampling events conducted from 2018 through 2021, suggesting that the recent average groundwater level at the Site may be different from when the wall was designed in 2013. The current potentiometric surface in relation to the PRB is shown in profile on **Figure 2-1a**. The current potentiometric surface along the axis of the plume is shown on **Figure 2-1b**.

3.1.3 The hydraulic gradient is the change in hydraulic head, or water level, per unit distance. The average hydraulic gradient at the Site in the vicinity of the PRB, estimated based on October 2022 hydrogeologic conditions, was determined to be 0.0022 ft/ft[1]. The hydraulic gradient for the past three sampling events was 0.0058 ft/ft in June 2021, 0.0038 ft/ft in December 2020, and 0.0054 ft/ft in June 2020. The groundwater seepage velocity is the rate of solute transport through the open pore space in the soil. Based on the October 2022 hydraulic gradient of 0.0022 ft/ft and the range of hydraulic conductivities evaluated for the PRB design (15.66 ft/day to 193.8 ft/day), and assuming a porosity of 0.4, groundwater seepage velocity at the Site could vary between approximately 0.09 ft/day and 1.09 ft/day, which is below the range of estimated groundwater velocities used for the PRB design (0.128 ft/day to 2.83 ft/day). Calculations for hydraulic gradient and velocity estimates are included in **Appendix C**.

## 3.2 GROUNDWATER FIELD DATA AND MNA PARAMETER RESULTS

3.2.1 Results of field data and groundwater MNA parameters obtained from the baseline sampling event through the October 2022 annual sampling event for the PRB monitoring compliance wells are presented in **Table 3-2**.

[1] Previous events included a calculation of hydraulic gradient between wells MW-25 and MW-26. As MW-25 was not gauged in October 2022, well B-1R was used in place of MW-25 in the hydraulic gradient calculation.

3.2.2 Field parameter readings (i.e., DO, ORP, pH, etc.) are primarily collected to demonstrate stabilization criteria as discussed in Section 2.3; however, they can also give insight as to subsurface conditions and serve as indicators for reactions taking place.

- During previous sampling events DO measurements were variable with some compliance well pairs showing an increase and some pairs showing a decrease from upgradient to downgradient. ORP values downgradient of the ZVI PRB wall are expected to be reducing (i.e., < 0 mV), and it is expected that there would be little to no DO in these monitoring locations. To date these expected values have not been observed on a consistent basis and no definitive trends on DO and ORP measurements have been observed.

- During the October 2022 event, DO measurements were collected with an optical DO meter (Horiba U-52) equipped with a flow-through cell; the DO data is presented in **Table 3-2**. For most compliance well pairs, the downgradient DO readings were 0.00 mg/L, which is expected. Well pairs MW-32/33 and MW-34/35 had an especially noticeable decrease in DO from upgradient (3.29 mg/L at MW-33 and 3.35 mg/L at MW-35) to downgradient (0.00 mg/L at MW-32 and MW-34). In contrast, well pair MW-28/29 had an increase in DO from upgradient (1.43 mg/L at MW-29) to downgradient (2.33 mg/L at MW-28), which is similar to what was observed in June 2021.

- During the October 2022 sampling event ORP levels were variable, but measurements showed decreases between compliance well pairs MW-30/31 (decreasing from -179 mV at MW-31 to -224 mV at MW-30), MW-32/33 (decreasing from 37 mV at MW-33 to -179 mV at MW-32), and MW-34/35 (decreasing from 62 mV at MW-35 to -98 mV at MW-34). The ORP measurements at MW-28/29 showed a slight decrease from upgradient (127 mV) to downgradient (117 mV). ORP data at MW-28/29 are not indicative of those typically expected downgradient of a ZVI PRB wall. For instance, the ORP values typically observed within the ZVI wall itself would range from -300 to -400 mV; ORP values downgradient of the wall may increase slightly from those values within the wall but are still expected to be indicative of reducing conditions (ORP < 0 mV).

- ZVI PRB reactions typically result in a significant increase in pH to levels in the range of 9-10 in downgradient monitoring locations, depending on the buffering capacity of the soil. However, pH measurements observed to date downgradient of the wall have mostly remained unchanged (typically in the range of 7-9) since the baseline sampling event was completed.

3.2.3 Other MNA parameters are being compared over time between compliance well pairs to observe changes in groundwater chemistry from upgradient to downgradient of the wall. Groundwater MNA results from the October 2022 sampling event indicate the following:

- Methane concentrations increased in 2 of the downgradient compliance wells when compared to their upgradient counterparts. The largest increases were seen in compliance monitoring well pairs in the middle of the PRB (MW-30/31 and MW-32/33) with methane increasing from 136 µg/L at upgradient well MW-31 to 2,800 µg/L at downgradient well MW-30, and from non-detect at upgradient well MW-33 to 545 µg/L at downgradient well

MW-32. A slight increase in methane was also noted in the compliance monitoring well pair at the southern end of the PRB (MW-34/35) with methane increasing from non-detect at upgradient well MW-35 to an estimated 22.7 µg/L at downgradient well MW-34.

- The methane concentration slightly decreased in the compliance monitoring well pair at the northern end of the PRB (MW-28/29), from an estimated 1.8 µg/L at upgradient well MW-29 to <0.94 µg/L at downgradient well MW-28.

- Increased methane concentrations in downgradient compliance wells were initially observed in mid-2017, and since then the methane levels have been relatively stable in the mid-section of the wall. Initially, it was believed that methane concentrations (as well as ethane and ethene) increased as a result of the breakdown of the ZVI carrier fluids (guar) and served as an indicator for biological reductive dechlorination activity in the subsurface. Elevated levels of methane continue to be observed in downgradient compliance wells, shifting from the southern end to the middle of the wall, suggesting the continued occurrence of anaerobic biological activity in the subsurface in some portions of the wall.

- Ethene and ethane concentrations have been variable to date, with ethane not detected in compliance well pairs in October 2022. Ethene concentrations generally exhibit higher concentrations on the downgradient side of the PRB (at wells MW-28, MW-30, and MW-32). The continued presence of ethene in downgradient well pairs is indicative of reductive dechlorination activity.

- Samples were analyzed for acetylene during some previous groundwater sampling events, however the detection of acetylene is rare since it is extremely volatile. Acetylene could be produced as a byproduct of abiotic TCE reduction. Its presence would be an indicator of an abiotic TCE reduction, but its absence does not necessarily provide any insight into the reactions that may be occurring within the ZVI PRB. For the 10 locations where acetylene was analyzed for in June 2019, there were no detections; therefore, acetylene analysis was discontinued after the June 2019 event.

- Nitrate and sulfate levels have been variable since the 2015 baseline sampling event. Decreases in nitrate and sulfate concentrations from upgradient to downgradient wells are indicative of the occurrence of bioactivity. During the October 2022 event, downgradient wells MW-32 and MW-34 showed a decrease in nitrate when compared to their upgradient counterparts MW-33 and MW-35 (with nitrate decreasing from 0.67 mg/L at upgradient well MW-33 to non-detect at downgradient well MW-32 and nitrate decreasing from 0.82 mg/L at upgradient well MW-35 to non-detect at downgradient well MW-34). Additionally, downgradient wells MW-30 and MW-32 showed a decrease in sulfate when compared to their upgradient counterparts MW-31 and MW-33 (with sulfate decreasing from 10.7 mg/L at upgradient well MW-31 to an estimated 1.8 mg/L at downgradient well MW-30 and sulfate decreasing from 12.9 mg/L at upgradient well MW-33 to 10 mg/L at downgradient well MW-32). Nitrate concentrations increased at downgradient well MW-28 compared to upgradient counterpart MW-29 (nitrate increasing from 0.59 mg/L at upgradient well MW-29 to 0.78 mg/L at downgradient well MW-28). Nitrate was not detected at compliance well pair MW-30/31. Sulfate concentrations increased at

downgradient wells MW-28 and MW-34 compared to their upgradient counterparts MW-29 and MW-35 (with sulfate increasing from 20.7 at upgradient well MW-29 to 37.3 mg/L at downgradient well MW-28 and sulfate increasing from 10 mg/L at upgradient well MW-35 to 10.4 mg/L at downgradient well MW-34).

- Dissolved iron and total iron were sampled at the eight compliance wells during the September 2018, December 2018, June 2019, and October 2022 sampling events to monitor for reaction byproducts in the vicinity of the wall. Dissolved iron is another byproduct of ZVI redox reactions with CVOCs and it is expected that increased concentrations would be observed in the subsurface at monitoring wells downgradient of the wall. An increase in dissolved and total iron was noted at downgradient wells MW-28, MW-32, and MW-34 compared to their respective upgradient counterparts MW-29, MW-33, and MW-35.

- Dissolved hydrogen sampling was performed during the December 2019 event at five of the compliance wells; dissolved hydrogen is a byproduct of the CVOC degradation reactions taking place in the wall and may serve as an indicator of ZVI reactivity. Results showed very low concentrations of dissolved hydrogen in the vicinity of the wall at both upgradient and downgradient locations; however, the lack of detections of dissolved hydrogen is not unusual since dissolved hydrogen is quickly consumed in the subsurface. The background locations sampled in June 2019 (MW-15 and MW-24) also showed very low dissolved hydrogen concentrations, similar to those observed at the compliance monitoring well locations. Due to the lack of detection of expected concentrations of dissolved hydrogen to date, this analysis was discontinued after the December 2019 event.

3.2.4 Overall, groundwater field data and MNA data does not show consistency in the compliance well pairs throughout the expanse of the PRB. Historical results suggest that there may be two separate degradation pathways occurring at the Site (biotic and abiotic); the expected degradation reaction when impacted groundwater flows through a ZVI PRB is abiotic (i.e., beta-elimination). The October 2022 monitoring data indicate that the groundwater conditions at the Site may be shifting away from those of biotic (i.e., anaerobic) degradation that were created in the wake of the PRB wall installation, toward those of abiotic degradation (i.e., beta-elimination), especially in the middle of the ZVI PRB wall.

## 3.3 GROUNDWATER VOC RESULTS

3.3.1 The VOC results from the October 2022 sampling event are presented in **Tables 3-2 and 3-3,** which provide a comparison to the historic sampling event results. This groundwater sampling event included collection of groundwater samples for VOCs from 27 monitoring wells. **Figure 3-2** provides a summary of the groundwater VOC results for the compliance monitoring well pairs compared to the NYSDEC Ambient Water Quality Standards (AWQS) and Guidance Values found in the Technical and Operational Guidance Series 1.1.1 (NYSDEC 1998). **Figure 3-3** shows the Site-wide monitoring locations total CVOC results. Full analytical reports are included in **Appendix D**.

3.3.2 The laboratory data was validated by a third-party validator and a full data usability summary report (DUSR) was prepared. The DUSR, included in **Appendix E**, indicated that all data points

were usable with some qualifications and no data points were rejected. Further details on other data that required qualifications are provided in the DUSR.

3.3.3 A narrative summary of the October 2022 sampling results is presented below:

- TCE, the primary COC, was detected in all eight of the compliance wells, seven of which were above or equal to the AWQS of 5 µg/L. The TCE concentration in MW-34 (downgradient) returned to a level above the AWQS in October 2022 – concentrations here had been below the AWQS for the June 2019, December 2019, December 2020, and June 2021 sampling events. The concentration in October 2022 increased to 22.5 µg/L. The TCE concentration in MW-30 (downgradient) (2.3 µg/L) decreased to below the AWQS of 5 µg/L in October 2022 for the first time since sampling was initiated in December 2015.

- For the October 2022 event three out of the four downgradient wells of the compliance well monitoring pairs (MW-30/31, MW-32/33, and MW-34/35) showed lower levels of TCE concentrations than their upgradient counterparts. The MW-28/29 pair did not demonstrate a substantial difference in TCE or PCE concentrations upgradient to downgradient of the PRB as shown on **Figure 3-3**. Overall, the downgradient TCE concentrations ranged from 2.3 µg/L (MW-30) to 220 µg/L (MW-28).

- 1,1-dichloroethene (DCE) and *cis*-1,2-DCE were detected in MW-24 which is downgradient of the wall. These two CVOCs are generally considered bi-products of TCE degradation. Until 2018 they were both non-detect at this location. The highest 1,1-DCE concentration was detected in December 2020 (69.3 µg/L), with concentrations decreasing in June 2021 (53.5 µg/L) and October 2022 (45.9 µg/L); however, the concentrations still remain greater than the AWQS of 5 µg/L. The concentration of *cis*-1,2-DCE in October 2022 (4.1 µg/L) was consistent with the concentration in June 2021 (4.2 µg/L), with the concentration below the AWQS of 5 µg/L. TCE was detected above the AWQS of 5 µg/L for the first time in June 2020, with an increase to 129 ug/L in June 2021. The TCE concentration in October 2022 decreased to 6.3 µg/L, however the concentration still remains greater than the AWQS.

- TCE was also detected at varying levels in many of the other wells that were sampled, including elevated levels of TCE in the GEP wells upgradient of the wall (130 to 340 µg/L). TCE was detected at for the first time in October 2022 at MW-B-3 upgradient of the wall (estimated 0.57 µg/L), MW-11R north of the wall (estimated 0.41 µg/L), and MW-26 downgradient of the wall (estimated 0.59 µg/L). Additionally, TCE was detected at MW-16 southwest of the wall (estimated 0.8 µg/L) for the first time since November 2015. Wells MW-B-3, MW-11R, and MW-16 are considered outside the TCE plume. In general, Site-wide detected concentrations of TCE, as well as other CVOCs, at remaining wells for the October 2022 sampling event were consistent with previous groundwater sample results. While there may be some seasonal variability in TCE concentrations, at this time there does not seem to be a clear pattern in the results.

- PCE was detected sporadically throughout the Site, at higher concentrations than the respective AWQS. In general, detected levels of this compound were in line with the results of previous sampling events.

3.3.4 Graphs showing concentrations of CVOCs were created for the monitoring well compliance pairs to monitor groundwater concentration trends using the GSI Mann-Kendall Toolkit (Connor et al. 2012). The GSI Mann-Kendall Toolkit is a spreadsheet-based tool that analyzes time-series groundwater monitoring data to determine trends using the Mann-Kendall statistical analysis method. The Toolkit yields a qualitative determination of groundwater concentration trends (i.e., increasing, decreasing, stable, etc.).

3.3.5 Data shown in the graphs includes the baseline sampling event in December 2015 through the most recent sampling event in October 2022. These trend plots are included in **Appendix F** as Figures F-1 through F-4. Mann-Kendall trend analysis of the laboratory results for TCE suggests that there is a decreasing trend in TCE concentrations at downgradient compliance wells MW-30 and MW-34 located in the deeper portion of the PRB. MW-32, also screened in the deeper portion of the PRB, showed a "probably decreasing" trend in TCE concentrations. MW-28, screened in the shallow portion of the wall, does not exhibit a trend. Trend analysis results are included in **Appendix G**.

# 4. SUMMARY AND CONCLUSIONS

4.1 The October 2022 groundwater monitoring event was the 15th overall sampling event completed since the installation of the PRB wall. Sampling is now being conducted on an annual basis as described in the SMP (EA 2022a).

4.2 Long-term monitoring data, including the results of the most recent October 2022 groundwater monitoring event, indicate that the ZVI PRB has not been effective at reducing COC concentrations (primarily TCE) in some portions of the ZVI PRB, specifically at two monitoring well series (MW-28/MW-29 and MW-32/MW-33). Concentrations of TCE remain equivalent (or in some instances greater than upgradient concentrations), showing no decreasing trend, on both sides of the ZVI PRB at these well series. In contrast, monitoring well series MW-30/MW-31 and MW-34/MW-35 do show positive destruction/degradation of TCE, from upgradient to downgradient across the ZVI PRB.

4.3 Groundwater field data and MNA data does not show consistency in the compliance well pairs throughout the expanse of the PRB. Historical results suggest that there may be 2 separate degradation pathways occurring at the site (biotic and abiotic); the expected degradation reaction when impacted groundwater flows through a ZVI PRB is abiotic (i.e., beta-elimination). The October 2022 monitoring data indicate that the groundwater conditions at the Site may be shifting away from those of biotic (i.e., anaerobic) degradation that were created in the wake of the PRB wall installation, toward those of abiotic degradation (i.e., beta-elimination), especially in the middle of the ZVI PRB wall.

4.4 Current groundwater flow conditions at the Site indicate that on average the hydraulic gradient is consistent with the ZVI PRB design, with the October 2022 event showing slightly higher groundwater elevations as compared with the other sampling events, but consistent with previous events in 2018 and 2019. The PRB was designed based on a hydraulic gradient of 0.004 ft/ft which is greater than the estimated hydraulic gradient of 0.0022 ft/ft measured in October 2022.

4.5 Historic data indicates a range of gradients from 0.001 to 0.006 ft/ft measured at the Site (Stone 2013). Seasonal variability in groundwater elevations and overall hydraulic gradient has been observed throughout the past sampling events. During the winter months when the Mohawk River is lowered, there appears to be an effect on the groundwater elevation at the Site, and groundwater elevations are lower than in the summer. In turn, this could contribute to slightly higher hydraulic gradients observed during these times in previous years. The gradient at the Site is slight and at times there appears to be a reverse gradient in the MW-28/29 well pair at the northern edge of the wall. This is likely an area with a flat gradient, and it is possible that the minor variability in groundwater levels between the well pair is due to margin of error associated with surveying of the well casing or with the collection of field gauging measurements.

4.6 Implementation of field activities detailed in the EWP (to evaluate the ZVI PRB performance) are anticipated to begin in Spring 2023. The next annual groundwater sampling event is scheduled for October 2023.

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# Tables

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**Table 2-1. Monitoring Well Sampling Schedule and Guidelines**

| Monitoring Well ID[1] | Rationale[2] | Sampling Frequency | Analytes[3] | Screen Interval (ft bgs) |
|---|---|---|---|---|
| MW-B-3 | Outside plume | Annual | VOCs | 47.5-67.5 |
| MW-5 | Downgradient | Annual | VOCs | 62.5-72.5 |
| MW-6 | Downgradient | Annual | VOCs | 58.5-68.5 |
| MW-7 | Outside plume | Annual | VOCs | 61-71 |
| MW-8 | CT plume | Annual | VOCs | 66-76 |
| MW-9 | Downgradient | Annual | VOCs | 110-120 |
| MW-11R | CT plume | Annual | VOCs | 65-80 |
| MW-12R | CT plume | Annual | VOCs | 65-80 |
| MW-14 | Upgradient | Annual | VOCs | 65-80 |
| MW-15 | Upgradient | Annual | VOCs/MNA | 65-80 |
| MW-16 | Outside plume | Annual | VOCs/MNA | 55-70 |
| MW-17 | Upgradient | Annual | VOCs | 60-75 |
| MW-18 | Upgradient | Annual | VOCs | 60-75 |
| MW-19 | Upgradient | Annual | VOCs | 62-77 |
| MW-20 | Upgradient | Annual | VOCs | 63-78 |
| MW-22R | Upgradient | Annual | VOCs | 63-78 |
| MW-24 | Downgradient | Annual | VOCs/MNA | 100-110 |
| MW-26 | Downgradient | Annual | VOCs/MNA | 100-110 |
| MW-28 | Downgradient | Annual | VOCs/MNA | 67-72 |
| MW-29 | Upgradient | Annual | VOCs/MNA | 67-72 |
| MW-30 | Downgradient | Annual | VOCs/MNA | 82-92 |
| MW-31 | Upgradient | Annual | VOCs/MNA | 82-92 |
| MW-32 | Downgradient | Annual | VOCs/MNA | 82-92 |
| MW-33 | Upgradient | Annual | VOCs/MNA | 82-92 |
| MW-34 | Downgradient | Annual | VOCs/MNA | 82-92 |
| MW-35 | Upgradient | Annual | VOCs/MNA | 82-92 |
| GEP-1 | Upgradient | Annual | VOCs | 59.6-74.6 |
| GEP-2 | Upgradient | Annual | VOCs | 60.6-75.6 |
| GEP-4 | Upgradient | Annual | VOCs | 60.15-75.15 |

Notes:

1) 2015 Compliance monitoring well

2) Rationale: Upgradient of PRB wall; Downgradient of PRB wall; Outside of any plume; WithinCarbon Tetrachloride (CT

3) Monitored natural attenuation (MNA) parameters include total organic carbon (TOC) by Method 9060A, alkalinity by EPA SM 2320B, anions (chloride, nitrate, sulfate) by Method 9056A, dissolved Gases (methane, ethane, and ethene) by Method RSK 175, and total and dissolved iron by EPA Agency SW-846 Method 6010D.

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**Table 3-1. Groundwater Elevations Data**

| Well IDs | Screened Interval (ft bgs) | Ground Surface Elevation (ft) | Reference Point Elevation (ft) | Adjusted Reference Point Elevation (ft) June 2019 | Adjusted Reference Point Elevation (ft) August 2020 | Depth To Water (ft bgs) 2015 | Depth to Water (ft bgs) 2016 | Depth To Water (ft bgs) Q1 2017 | Depth to Water (ft bgs) Q2 2017 | Depth To Water (ft bgs) Q3 2017 | Depth To Water (ft bgs) Q4 2017 | Depth To Water (ft bgs) Q1 2018 | Depth To Water (ft bgs) Q2 2018 | Depth To Water (ft bgs) Q3 2018 | Depth To Water (ft bgs) Q4 2018 | Depth To Water (ft bgs) Q2 2019 | Depth to Water (ft bags) Q4 2019 | Depth To Water (ft bgs) Q2 2020 | Depth To Water (ft bgs) Q4 2020 | Depth To Water (ft bgs) Q2 2021 | Depth To Water (ft bgs) Q4 2022 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B-1 | 48-68 | - | 287.14 | | | 59.4 | - | - | 57.34 | - | - | - | dry | dry | dry | - | - | - | - | - | - |
| B-1R | 48-68 | | | 287.42 | | - | - | - | - | - | - | - | - | - | - | 57.05 | 61.99 | 59.55 | 61.95 | 60.84 | 59.13 |
| B-3 | 47.5-67.5 | - | 287.05 | | | 59.1 | - | - | - | - | - | - | 58.61 | 58.74 | 59.74 | dry | - | 58.25 | 60.21 | 60.05 | 58.80 |
| MW-4 | 63.8-73.8 | 289.58 | 291.74 | | | 66 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| MW-5 | 62.5-72.5 | 287.95 | 290.11 | | | 64.36 | 70.82 | 70.50 | 63.82 | 64.00 | 72.12 | 71.83 | 64.30 | 63.72 | 71.27 | 64.02 | 71.80 | 72.33 | 72.58 | 64.57 | 66.10 |
| MW-6 | 58.5-68.5 | 286.28 | 288.58 | | | 62.72 | 68.78 | 68.78 | 62.03 | 62.27 | 70.19 | 69.96 | 62.57 | 62.11 | 69.32 | 62.28 | 69.96 | 70.40 | 71.30 | 63.06 | 64.44 |
| MW-7 | 61-71 | 286.8 | 289.26 | | | 62.98 | 66.1 | 68.47 | 61.96 | 61.95 | 67.84 | 68.22 | 62.80 | 62.32 | 66.72 | 62.31 | 67.82 | 68.32 | 69.23 | 63.90 | 62.93 |
| MW-8 | | | | 293.03 | | 62.5 | 68.58 | - | - | - | - | - | - | - | - | 65.78 | 72.71 | 72.82 | 74.38 | 66.93 | - |
| MW-9 | 110-120 | 285.98 | 288.33 | | | 64.91 | - | 68.55 | 61.85 | 62.04 | 69.70 | 69.74 | 62.40 | 61.89 | 69.06 | 62.07 | 69.71 | 70.92 | 71.11 | 62.88 | 64.24 |
| MW-11 | 65-80 | 295.73 | 295.12 | | | 67.42 | 69.21 | 70.12 | 64.36 | 65.36 | 69.55 | 70.15 | 66.12 | 66.80 | 67.43 | - | - | - | - | - | - |
| MW-11R | 65-80 | | | 295.56 | | - | - | - | - | - | - | - | - | - | - | 64.81 | - | 68.43 | 71.77 | 67.53 | 67.89 |
| MW-12R | 60-80 | | | 292.34 | | - | - | - | - | - | - | - | - | - | - | 64.16 | 69.64 | 69.47 | 71.41 | 65.71 | 66.36 |
| MW-13 | 65-80 | 292.62 | 293.85 | | | 66.53 | 68.42 | 69.90 | 64.25 | 64.40 | 68.86 | 69.72 | 65.75 | 65.99 | 67.51 | 64.20 | 69.73 | 68.11 | 70.51 | 66.69 | 66.48 |
| MW-14 | 65-80 | - | 296.2 | | 294.21 | 68.12 | 69.64 | 70.13 | 64.88 | 65.60 | 69.13 | 70.17 | 66.81 | 67.52 | 67.18 | 64.58 | 68.35 | 67.99 | 69.03 | 64.85 | 68.78 |
| MW-15 | 65-80 | - | 293.67 | | 292.72 | 65.87 | 67.4 | 68.35 | 63.07 | 63.49 | 67.00 | 68.20 | 64.88 | 65.32 | 65.42 | 62.76 | 66.35 | 65.87 | 67.91 | 65.02 | 64.51 |
| MW-16 | 55-70 | - | 288.33 | | | 61.94 | 62.95 | 66.38 | 60.7 | 60.28 | 63.72 | 65.13 | 62.14 | 61.36 | 63.17 | 60.63 | 63.85 | 64.88 | 65.84 | 63.52 | 61.21 |
| MW-17 | 60-75 | - | 295.24 | 292.05 | | 67.16 | 68.69 | 69.25 | 64.09 | 64.66 | 67.99 | 69.20 | 65.98 | 66.60 | 66.26 | 60.49 | 62.25 | 63.36 | 66.76 | 63.90 | 63.50 |
| MW-18 | 60-75 | - | 295.24 | 291.97 | | 67.3 | 68.78 | 69.56 | 64.49 | 64.86 | 68.15 | 69.48 | 66.34 | 66.76 | 66.62 | 60.77 | 63.17 | 63.70 | 66.78 | 64.19 | - |
| MW-19 | 62-77 | - | 297.67 | 295.33 | | 69.24 | 70.82 | 70.54 | 65.74 | 66.42 | 69.63 | 70.80 | 67.80 | 68.66 | 67.50 | 62.86 | 63.36 | 65.37 | 68.27 | 65.54 | 66.54 |
| MW-20 | 63-78 | - | 301.55 | 298.55 | | 72.84 | 74.54 | 73.72 | 69.22 | 69.90 | 72.93 | 74.10 | 71.35 | 72.34 | 70.82 | 65.55 | 68.80 | 67.82 | 71.98 | 69.47 | 69.61 |
| MW-21 | 57-72 | - | 296.52 | | 294.01 | 68.46 | 70.02 | 70.55 | 65.19 | 65.40 | 69.70 | - | - | 67.85 | 67.61 | 64.93 | 68.80 | 68.06 | 69.01 | 64.60 | 65.70 |
| MW-22 | 63-78 | - | 298.91 | | | 70.62 | 72.18 | 72.08 | 67.64 | 67.80 | 70.61 | 72.20 | 69.65 | 70.14 | - | - | - | - | - | - | - |
| MW-22R | 63-78 | | | 296.35 | | - | - | - | - | - | - | - | - | - | - | 64.38 | 67.02 | 66.71 | 70.09 | 68.30 | 67.70 |
| MW-23 | 63-78 | - | 300.54 | | | 71.64 | 73.48 | 72.14 | 67.98 | 68.55 | - | - | 70.70 | 71.23 | 70.76 | 67.34 | - | 69.41 | 73.64 | 71.42 | 71.62 |
| MW-24 | 90-100 | 290.24 | 292.45 | | | 65.66 | 67.15 | 68.85 | 63.4 | 63.62 | 67.33 | 68.46 | 65.02 | 65.13 | 66.06 | 63.22 | 66.42 | 66.72 | 69.18 | 66.15 | 65.28 |
| MW-25 | 65-75 | 288.16 | 290.26 | 288.11 | | 63.1 | 64.44 | 65.44 | 60.61 | 60.57 | 63.56 | 65.13 | 62.48 | 62.59 | 62.42 | 57.28 | 63.42 | 59.95 | 62.61 | 60.90 | - |
| MW-26 | 100-110 | 287.23 | 286.45 | | | 60.39 | 61.7 | 63.85 | 58.44 | 58.35 | 61.80 | 63.19 | 60.02 | 59.86 | 60.88 | 58.23 | 61.65 | 61.70 | 63.78 | 61.30 | 60.10 |
| MW-27 | 100-110 | 286.08 | 288.32 | | | 62.82 | 64.88 | 68.67 | 61.89 | 62.00 | 67.35 | 67.93 | 63.11 | 62.52 | 67.11 | 63.71 | 69.00 | 69.85 | 69.52 | 63.55 | 64.66 |
| MW-28 | 67-72 | 292.55 | 292.25 | | 293.65 | 65.18 | 66.84 | 67.94 | 62.46 | 63.06 | 66.72 | 67.81 | 64.18 | 64.63 | 65.24 | 62.28 | 66.41 | 65.69 | 69.48 | 65.92 | 65.70 |
| MW-29 | 67-72 | 292.50 | 292.13 | | 293.05 | 65.08 | 66.75 | 67.80 | 62.31 | 62.94 | 66.90 | 67.70 | 64.04 | 64.49 | 65.06 | 62.13 | 66.07 | 65.55 | 68.78 | 64.93 | 65.05 |
| MW-30 | 82-92 | 291.76 | 291.63 | | 292.84 | 64.65 | 66.28 | 67.65 | 62.19 | 62.59 | 66.35 | 67.35 | 63.83 | 64.11 | 64.93 | 62.01 | 65.89 | 65.44 | 68.19 | 64.93 | 64.45 |
| MW-31 | 82-92 | 291.80 | 291.54 | | 292.27 | 64.59 | 66.14 | 67.42 | 62.02 | 62.43 | 66.14 | 67.20 | 63.70 | 63.99 | 64.69 | 61.84 | 65.65 | 65.21 | 66.99 | 63.79 | 63.25 |
| MW-32 | 82-92 | 290.12 | 289.75 | | | 62.89 | 64.3 | 66.05 | 60.7 | 60.82 | 64.33 | 65.57 | 62.30 | 62.36 | 63.15 | 60.45 | 64.00 | 63.82 | 66.21 | 63.48 | 62.45 |
| MW-33 | 82-92 | 290.27 | 289.91 | | | 63.02 | 64.4 | 66.11 | 60.8 | 60.86 | 64.37 | 65.65 | 62.40 | 62.49 | 63.23 | 60.54 | 64.05 | 63.84 | 66.28 | 63.62 | 62.68 |
| MW-34 | 82-92 | 287.30 | 287.05 | | | 60.32 | 61.57 | 63.70 | 58.39 | 58.28 | 61.54 | 63.16 | 60.02 | 59.84 | 60.68 | 58.44 | 61.61 | 61.60 | 63.56 | 61.39 | 59.56 |
| MW-35 | 82-92 | 287.25 | 286.96 | | | 60.27 | 61.5 | 63.56 | 58.28 | 58.15 | 61.40 | 62.88 | 59.92 | 59.70 | 60.49 | 58.01 | 61.73 | 61.30 | 63.35 | 61.21 | 59.60 |
| MW-36 | 70-80 | 292.61 | 292.36 | | | 64.56 | 66.24 | 66.10 | 61.87 | 60.98 | 64.42 | 66.40 | 63.23 | 64.27 | 63.36 | 61.21 | - | 63.39 | 66.68 | 65.18 | 64.64 |
| GEP-1 | 59.6-74.6 | - | 294.98 | 295.2 | 291.21 | 67.62 | - | 70.55 | 65.06 | - | 69.30 | 70.33 | - | - | 67.72 | 65.07 | 66.30 | 68.40 | 68.91 | 65.64 | 65.18 |
| GEP-2 | 60.6-75.6 | - | 296.02 | | 293.93 | 68.12 | 69.64 | 70.43 | 65.18 | 65.69 | 69.19 | 70.35 | 67.00 | 67.52 | 67.51 | 64.86 | 68.50 | 67.93 | 68.86 | 64.96 | 65.56 |
| GEP-3 | 59.6-74.6 | - | 292.97 | | 291.9 | 65.16 | 66.66 | 67.71 | 62.47 | 62.85 | 66.30 | 67.54 | 64.25 | 64.62 | 64.86 | 62.21 | 64.16 | 65.29 | 67.16 | 64.35 | 63.70 |
| GEP-4 | 60.15-75.15 | - | 295.62 | 292.88 | 292.9 | 67.89 | 69.4 | 70.23 | 65.01 | 65.50 | 68.98 | - | - | - | - | 61.94 | 65.17 | 65.02 | 67.40 | 65.20 | 64.75 |

Notes:
"-" data is not available due to inaccessibility, damage to monitoring well location, or well was not locate
bgs = Below ground surfac
ft = Foot (feet)
ID = Identification

**Table 3-1. Groundwater Elevations Data**

| Well IDs | Screened Interval (ft bgs) | Ground Surface Elevation (ft) | Reference Point Elevation (ft) | Adjusted Reference Point Elevation (ft) June 2019 | Adjusted Reference Point Elevation (ft) August 2020 | Groundwater Elevation 2015 | Groundwater Elevation 2016 | Groundwater Elevation Q1 2017 | Groundwater Elevation Q2 2017 | Groundwater Elevation Q3 2017 | Groundwater Elevation Q4 2017 | Groundwater Elevation Q1 2018 | Groundwater Elevation Q2 2018 | Groundwater Elevation Q3 2018 | Groundwater Elevation Q4 2018 | Groundwater Elevation Q2 2019 | Groundwater Elevation Q4 2019 | Groundwater Elevation Q2 2020 | Groundwater Elevation Q4 2020 | Groundwater Elevation Q2 2021 | Groundwater Elevation Q4 2022 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B-1 | 48-68 | - | 287.14 | | | 227.74 | - | - | 229.80 | - | - | - | - | - | - | - | - | - | - | - | - |
| B-1R | 48-68 | | | 287.42 | | - | - | - | - | - | - | | | - | - | 230.37 | 225.43 | 227.87 | 225.47 | 226.58 | 228.29 |
| B-3 | 47.5-67.5 | - | 287.05 | | | 227.95 | - | - | - | - | - | - | 228.44 | 228.31 | dry | dry | - | 228.80 | 226.84 | 227.00 | 228.25 |
| MW-4 | 63.8-73.8 | 289.58 | 291.74 | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| MW-5 | 62.5-72.5 | 287.95 | 290.11 | | | 225.75 | 219.29 | 219.61 | 226.29 | 226.11 | 217.99 | 218.28 | 225.81 | 226.39 | 218.84 | 226.09 | 218.31 | 217.78 | 217.53 | 225.54 | 224.01 |
| MW-6 | 58.5-68.5 | 286.28 | 288.58 | | | 225.86 | 219.80 | 219.80 | 226.55 | 226.31 | 218.39 | 218.62 | 226.01 | 226.47 | 219.26 | 226.30 | 218.62 | 218.18 | 217.28 | 225.52 | 224.14 |
| MW-7 | 61-71 | 286.8 | 289.26 | | | 226.28 | 223.16 | 220.79 | 227.30 | 227.31 | 221.42 | 221.04 | 226.46 | 226.94 | 222.54 | 226.95 | 221.44 | 220.94 | 220.03 | 225.36 | 226.33 |
| MW-8 | | | | 293.03 | | - | - | - | - | - | - | - | - | - | - | 227.25 | 220.32 | 220.21 | 218.65 | 226.10 | - |
| MW-9 | 110-120 | 285.98 | 288.33 | | | 225.83 | 219.75 | 219.78 | 226.48 | 226.29 | 218.63 | 218.59 | 225.93 | 226.44 | 219.27 | 226.26 | 218.62 | 217.41 | 217.22 | 225.45 | 224.09 |
| MW-11 | 65-80 | 295.73 | 295.12 | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| MW-11R | 65-80 | | | 295.56 | | - | - | - | - | - | - | - | - | - | - | 230.75 | - | 227.13 | 223.79 | 228.03 | 227.67 |
| MW-12R | 60-80 | | | 292.34 | | - | - | - | - | - | - | - | - | - | - | 228.18 | 222.70 | 222.87 | 220.93 | 226.63 | 225.98 |
| MW-13 | 65-80 | 292.62 | 293.85 | | | 227.32 | 225.43 | 223.95 | 229.60 | 229.45 | 224.99 | 224.13 | 228.10 | 227.86 | 226.34 | 229.65 | 224.12 | 225.74 | 223.34 | 227.16 | 227.37 |
| MW-14 | 65-80 | - | 296.2 | | 294.21 | 228.08 | 226.56 | 226.07 | 231.32 | 230.60 | 227.07 | 226.03 | 229.39 | 228.68 | 229.02 | 231.62 | 227.85 | 228.21 | 225.18 | 229.36 | 225.43 |
| MW-15 | 65-80 | - | 293.67 | | 292.72 | 227.8 | 226.27 | 225.32 | 230.60 | 230.18 | 226.67 | 225.47 | 228.79 | 228.35 | 228.25 | 230.91 | 227.32 | 227.80 | 224.81 | 227.70 | 228.21 |
| MW-16 | 55-70 | - | 288.33 | | | 226.39 | 225.38 | 221.95 | 227.63 | 228.05 | 224.61 | 223.20 | 226.19 | 226.97 | 225.16 | 227.70 | 224.48 | 223.45 | 222.49 | 224.81 | 227.12 |
| MW-17 | 60-75 | - | 295.24 | 292.05 | | 228.08 | 226.55 | 225.99 | 231.15 | 230.58 | 227.25 | 226.04 | 229.26 | 228.64 | 228.98 | 231.56 | 229.80 | 228.69 | 228.48 | 231.34 | 228.55 |
| MW-18 | 60-75 | - | 295.24 | 291.97 | | 227.94 | 226.46 | 225.68 | 230.75 | 230.38 | 227.09 | 225.76 | 228.90 | 228.48 | 228.62 | 231.20 | 228.80 | 228.27 | 228.46 | 231.05 | - |
| MW-19 | 62-77 | - | 297.67 | 295.33 | | 228.43 | 226.85 | 227.13 | 231.93 | 231.25 | 228.04 | 226.87 | 229.87 | 229.01 | 230.17 | 232.47 | 231.97 | 229.96 | 229.40 | 232.13 | 228.79 |
| MW-20 | 63-78 | - | 301.55 | 298.55 | | 228.71 | 227.01 | 227.83 | 232.33 | 231.65 | 228.62 | 227.45 | 230.20 | 229.21 | 230.73 | 233.00 | 229.75 | 230.73 | 229.57 | 232.08 | 228.94 |
| MW-21 | 57-72 | - | 296.52 | | 294.01 | - | - | - | - | - | - | - | - | 228.67 | 228.91 | 231.59 | 227.72 | 228.46 | 225.00 | 229.41 | 228.31 |
| MW-22 | 63-78 | - | 298.91 | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| MW-22R | 63-78 | | | 296.35 | | - | - | - | - | - | - | - | - | - | - | 231.97 | 229.33 | 229.64 | 226.26 | 228.05 | 228.65 |
| MW-23 | 63-78 | - | 300.54 | | | 228.9 | 227.06 | 228.40 | 232.56 | 231.99 | - | - | 229.84 | 229.31 | 229.78 | 233.20 | - | 231.13 | 226.90 | 229.12 | 228.92 |
| MW-24 | 90-100 | 290.24 | 292.45 | | | 226.79 | 225.30 | 223.60 | 229.05 | 228.83 | 225.12 | 223.99 | 227.43 | 227.32 | 226.39 | 229.23 | 226.03 | 225.73 | 223.27 | 226.30 | 227.17 |
| MW-25 | 65-75 | 288.16 | 290.26 | 288.11 | | 227.16 | 225.82 | 224.82 | 229.65 | 229.69 | 226.70 | 225.13 | 227.78 | 227.67 | 227.84 | 230.83 | 224.69 | 228.16 | 227.65 | 229.36 | - |
| MW-26 | 100-110 | 287.23 | 286.45 | | | 226.06 | 224.75 | 222.60 | 228.01 | 228.10 | 224.65 | 223.26 | 226.43 | 226.59 | 225.57 | 228.22 | 224.80 | 224.75 | 222.67 | 225.15 | 226.35 |
| MW-27 | 100-110 | 286.08 | 288.32 | | | 225.5 | 223.44 | 219.65 | 226.43 | 226.32 | 220.97 | 220.39 | 225.21 | 225.80 | 221.21 | 224.61 | 219.32 | 218.47 | 218.80 | 224.77 | 223.66 |
| MW-28 | 67-72 | 292.55 | 292.25 | | 293.65 | 227.07 | 225.41 | 224.31 | 229.79 | 229.19 | 225.53 | 224.44 | 228.07 | 227.62 | 227.01 | 229.97 | 225.84 | 226.56 | 224.17 | 227.73 | 227.95 |
| MW-29 | 67-72 | 292.50 | 292.13 | | 293.05 | 227.05 | 225.38 | 224.33 | 229.82 | 229.19 | 225.23 | 224.43 | 228.09 | 227.64 | 227.07 | 230.00 | 226.06 | 226.58 | 224.27 | 228.12 | 228.00 |
| MW-30 | 82-92 | 291.76 | 291.63 | | 292.84 | 226.98 | 225.35 | 223.98 | 229.44 | 229.04 | 225.28 | 224.28 | 227.80 | 227.52 | 226.70 | 229.62 | 225.74 | 226.19 | 224.65 | 227.91 | 228.39 |
| MW-31 | 82-92 | 291.80 | 291.54 | | 292.27 | 226.95 | 225.40 | 224.12 | 229.52 | 229.11 | 225.40 | 224.34 | 227.84 | 227.55 | 226.85 | 229.70 | 225.89 | 226.33 | 225.28 | 228.48 | 229.02 |
| MW-32 | 82-92 | 290.12 | 289.75 | | | 226.86 | 225.45 | 223.70 | 229.05 | 228.93 | 225.42 | 224.18 | 227.45 | 227.39 | 226.60 | 229.30 | 225.75 | 225.93 | 223.54 | 226.27 | 227.30 |
| MW-33 | 82-92 | 290.27 | 289.91 | | | 226.89 | 225.51 | 223.80 | 229.11 | 229.05 | 225.54 | 224.26 | 227.51 | 227.42 | 226.68 | 229.37 | 225.86 | 226.07 | 223.63 | 226.29 | 227.23 |
| MW-34 | 82-92 | 287.30 | 287.05 | | | 226.73 | 225.48 | 223.35 | 228.66 | 228.77 | 225.51 | 223.89 | 227.03 | 227.21 | 226.37 | 228.61 | 225.44 | 225.45 | 223.49 | 225.66 | 227.49 |
| MW-35 | 82-92 | 287.25 | 286.96 | | | 226.69 | 225.46 | 223.40 | 228.68 | 228.81 | 225.56 | 224.08 | 227.04 | 227.26 | 226.47 | 228.95 | 225.23 | 225.66 | 223.61 | 225.75 | 227.36 |
| MW-36 | 70-80 | 292.61 | 292.36 | | | 227.8 | 226.12 | 226.26 | 230.49 | 231.38 | 227.94 | 225.96 | 229.13 | 228.09 | 229.00 | 231.15 | - | 228.97 | 225.68 | 227.18 | 227.72 |
| GEP-1 | 59.6-74.6 | - | 294.98 | 295.2 | 291.21 | 227.36 | - | 224.43 | 229.92 | - | 225.68 | 224.65 | - | - | 227.26 | 230.13 | 228.90 | 226.80 | 222.30 | 225.57 | 226.03 |
| GEP-2 | 60.6-75.6 | - | 296.02 | | 293.93 | 227.9 | 226.38 | 225.59 | 230.84 | 230.33 | 226.83 | 225.67 | 229.02 | 228.50 | 228.51 | 231.16 | 227.52 | 228.09 | 225.07 | 228.97 | 228.37 |
| GEP-3 | 59.6-74.6 | - | 292.97 | | 291.9 | 227.81 | 226.31 | 225.26 | 230.50 | 230.12 | 226.67 | 225.43 | 228.72 | 228.35 | 228.11 | 230.76 | 228.81 | 227.68 | 224.74 | 227.55 | 228.20 |
| GEP-4 | 60.15-75.15 | - | 295.62 | 292.88 | 292.9 | 227.73 | 226.22 | 225.39 | 230.61 | 230.12 | 226.64 | - | - | - | - | 230.94 | 227.71 | 227.86 | 225.50 | 227.70 | 228.15 |

Notes:
"-" data is not available due to inaccessibility, damage to monitoring well location, or well was not locate
bgs = Below ground surface
ft = Foot (feet)
ID = Identification

**Table 3-2. Compliance Well Pairs Groundwater Sample Results – 2015 - 2022**

| Analytes | NYSDEC Ambient Water Quality Standards and Guidance Value | MW-15 | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 11/9/2015 | 12/14/2016 | 3/22/2017 | 6/21/2017 | 9/28/2017 | 12/14/2017 | 3/14/2018 | 6/20/2018 | 9/18/2018 | 12/20/2018 | 6/20/2019 | 12/9/2019 | 6/16/2020 | 12/8/2020 | 6/16/2021 | 10/19/2022 |
| | | Upgradient | | | | | | | | | | | | | | | |
| **VOCs (µg/L)** | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | NA |
| 1,1,1-Trichloroethane (1,1,1-TCA) | 5 | **1.9** | **4.4** | **1.9** | **3.8** | **7.4** | **4.3** | **3.2** | **2.9** | **5.2** | **6.9** | **5.6** | **4.4** | **5.4** | **2.8** | **1.3** | **5.6** |
| 1,1,2,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,1,2-Trichloroethane | 1 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1-Dichloroethane (1,1-DCA) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1-Dichloroethene (1,1-DCE) | 5 | 0.75 U | **0.44 J** | 0.75 U | 0.75 U | **0.69 J** | 0.75 U | 0.75 U | 0.75 U | **0.35 J** | **0.51 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.25 J** |
| 1,2-Dichloroethane (EDC) | 0.6 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Carbon Tetrachloride | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.45 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.48 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.38 J** |
| cis-1,2-Dichloroethene (cis-1,2-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| Tetrachloroethene (PCE; PERC) | 5 | **0.6 J** | **1.7** | **0.84 J** | **0.66 J** | **1.4** | **1.3** | **0.88 J** | **0.62 J** | **0.98 J** | **1.4** | **1.0 J** | **0.92 J** | **1.0** | **0.57 J** | **0.61 J** | **1.2** |
| Toluene | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| trans-1,2-Dichloroethene (trans-1,2-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Trichloroethene (TCE) | 5 | **77.3** | **183** | **80.5** | **122** | **185** | **143** | **87.8** | **72.1** | **130** | **193** | **128** | **105** | **139** | **59.8** | **47.3** | **150** |
| Vinyl Chloride (VC) | 2 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| **MNA Parameters** | | | | | | | | | | | | | | | | | |
| Dissolved Hydrogen (nmol/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | NA | **2.4** | **1.5** | NA | NA | NA | NA | NA |
| Acetylene (ug/L) | NS | NA | NA | NA | NA | NA | NA | NA | 1.0 U | NA | NA | **<0.50** | NA | NA | NA | NA | NA |
| Total Iron (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | **0.10** | **0.26** | **0.06 J** | NA | NA | NA | NA | 0.0400 U |
| Dissolved Iron (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | 0.044 U | 0.04 U | 0.04 U | NA | NA | NA | NA | 0.050 U |
| Alkalinity, Total (as $CaCO_3$) (mg/L)[1] | NS | **182** | **212** | **201** | **217** | **229** | **216** | **223** | **209** | **236** | **224** | **169** | **200** | **220** | **212** | **208** | **201** |
| Chloride (mg/L) | NS | **28.9** | **14.3** | **28.3** | **40.1** | **30.6** | **39.7** | **24.0** | **46.4** | **42.5** | **37.1** | **43.4** | **34.4** | **35.7** | **25.6** | **58.4** | **34.5** |
| Nitrate (mg/L) | NS | **0.58** | **0.56** | **0.90** | **0.52** | **0.58** | **0.60** | **0.70** | **0.48** | **0.54** | **0.70** | **0.56** | **0.50** | **0.50** | **0.64** | **0.3** | **2.3** |
| Sulfate (mg/L) | NS | **12.3** | **12.4** | **21.3** | **20.5** | **14.3** | **20.5** | **12.4** | **15.2** | **13.2** | **11.3** | **12.0** | **12.1** | **10.7** | **10.6** | **13.1** | **19.0** |
| Methane (µg/L) | NS | **0.19 J** | **0.21 J** | **0.21 J** | **0.25 J** | **0.21 J** | 0.50 U | **0.18 J** | **1.3 J+** | 1.5 U | 1.5 U | 1.5 U | 1.5 U | 1.5 U | 1.6 U | 1.6 U | **1.5 J+** |
| Ethane (µg/L) | NS | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 3.3 U | 3.3 U | 3.3 U | 3.3 U | 3.3 U | 2.6 U | 2.6 U | 1.92 U |
| Ethene (µg/L) | NS | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 2.4 U | 2.4 U | 2.4 U | 2.4 U | 2.4 U | 3.6 U | 3.6 U | **10.4 J+** |
| Total Organic Carbon (mg/L) | NS | **0.55 J** | **0.57 J** | **0.47 J** | **0.21 J** | **0.59 J** | **0.33 J** | **0.26 J** | **0.41 J** | **0.46 J** | **1.0 J+** | 1.0 U | **0.83 J** | 1.0 U | **0.81 J** | **1.1** | **1.3** |
| **Field Parameters** | | | | | | | | | | | | | | | | | |
| pH (pH Unit) | NS | 7.73 | 7.31 | 7.53 | 7.42 | 7.16 | 7.38 | 7.94 | 7.62 | 7.49 | 7.43 | 7.48 | 7.46 | 7.51 | 7.65 | 7.68 | 7.52 |
| Turbidity (NTU) | NS | 11.1 | 7.00 | 15.7 | 2.10 | 52.1 | 6.30 | 9.22 | 153.0 | 8.7 | 17.9 | 4.49 | 2.71 | 1.58 | 1.87 | 5.47 | 4.80 |
| ORP (MeV) | NS | 91.4 | 54.6 | -0.6 | 114.6 | 92.8 | 16.6 | -1.1 | 67.2 | 135.2 | 320.4 | 102.0 | 133.7 | 160.1 | 173.1 | 51.4 | 160.0 |
| Conductivity (mS/cm) | NS | 0.358 | 0.250 | 0.387 | 0.487 | 0.709 | 0.416 | 0.295 | 0.369 | 0.458 | 0.585 | 0.445 | 0.399 | 0.047 | 0.321 | 0.476 | 0.590 |
| Dissolved Oxygen YSI (mg/L) | NS | 31.45 | 8.04 | 6.37 | 4.90 | 9.22 | 8.38 | 7.64 | 6.72 | 9.44 | 9.4 | 7.98 | 9.75 | 8.74 | 7.39 | 1.88 | 4.47 |
| Dissolved Oxygen- Downhole (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | NA | 7.9 | 10.4 | NA | NA | NA | NA | NA |
| Groundwater Elevation (ft) | NS | 227.80 | 226.27 | 225.32 | 230.60 | 230.18 | 226.67 | 225.47 | 228.79 | 228.35 | 228.25 | 230.91 | 228.25 | 227.80 | 224.81 | 224.81 | 228.21 |

Notes:

MNA - Monitored Natural Attenuation

NS - No Standard

NA - Not Analyzed

Acetylene analysis was added in June 2018.

Detected concentrations are in bold font.

Detections exceeding the NYSDEC Ambient Water Quality Standards (AWQS) are highlighted in gray.

J - Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.

J+ - The result is an estimated quantity, likely to be biased high.

U - Indicates that the analyte was not detected (ND).

R - Non-detect result rejected due to holding time being exceeded.

1 - TheTotal Alkalinity is titrated to a pH of 4.5 and reported as mg $CaCO_3$/L.

2 - Analyte was analyzed past the 48 hour holding time.

3 - The QC sample type DUP for method RSK 175 was outside the control limits for the analyte Methane. The RPD was reported as 23.8 and the upper contol limit is 20.

**Table 3-2. Compliance Well Pairs Groundwater Sample Results – 2015 - 2022**

| Analytes | NYSDEC Ambient Water Quality Standards and Guidance Value | MW-16 | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 11/11/2015 | 12/12/2016 | 3/20/2017 | 6/20/2017 | 9/25/2017 | 12/11/2017 | 3/13/2018 | 6/19/2018 | 9/18/2018 | 12/18/2018 | 6/24/2019 | 12/12/2019 | 6/16/2020 | 12/7/2020 | 6/15/2021 | 10/19/2022 |
| | | Outside Plume | | | | | | | | | | | | | | | |
| **VOCs (µg/L)** | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | NA |
| 1,1,1-Trichloroethane (1,1,1-TCA) | 5 | **0.49 J** | 0.75 U | **0.53 J** | **0.50 J** | **0.44 J** | 0.75 U | 0.75 U | 0.75 U | **0.34 J** | 0.75 U | **0.39 J** | 0.75 U | 0.75 U | 0.75 U | **0.49 J** | 0.5 U |
| 1,1,2,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,1,2-Trichloroethane | 1 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1-Dichloroethane (1,1-DCA) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1-Dichloroethene (1,1-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,2-Dichloroethane (EDC) | 0.6 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Carbon Tetrachloride | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| cis-1,2-Dichloroethene (cis-1,2-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| Tetrachloroethene (PCE; PERC) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Toluene | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| trans-1,2-Dichloroethene (trans-1,2-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Trichloroethene (TCE) | 5 | **0.55 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.8 J** |
| Vinyl Chloride (VC) | 2 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| **MNA Parameters** | | | | | | | | | | | | | | | | | |
| Dissolved Hydrogen (nmol/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetylene (ug/L) | NS | NA | NA | NA | NA | NA | NA | NA | 1.0 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Total Iron (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | **0.15** | NA | **0.07** | NA | NA | NA | NA | **0.269** |
| Dissolved Iron (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | 0.044 U | NA | 0.04 U | NA | NA | NA | NA | 0.0400 UJ |
| Alkalinity, Total (as $CaCO_3$) (mg/L)[1] | NS | **248** | **312** | **317** | **322** | **480** | **322** | **295** | **317** | **339** | **321** | **303** | **296** | **258** | **280** | **319** | **294** |
| Chloride (mg/L) | NS | **13.6** | **9.0** | **5.6** | **20.2** | **4.3** | **4.0** | **2.9** | **3.9** | **2.3** | **2.8** | **5.5** | **1.7 J** | **2.5** | **4.4** | **7** | **4.3** |
| Nitrate (mg/L) | NS | **1.6** | **1.6** | **2.1** | **3.7** | **1.4** | **1.1** | **1.6** | **2.0** | **1.9** | **0.88 J** | **1.3** | **0.84** | **0.98** | **1.0** | **1.4** | **1.9** |
| Sulfate (mg/L) | NS | **35.2** | **44.8** | **65.3** | **75.5** | **64.8** | **119** | **123** | **27.3** | **28.7** | **46.0** | **41.9** | **71.1** | **97.5** | **46.4** | **22.9** | **34.1** |
| Methane (µg/L) | NS | 0.25 U | **0.14 J** | 0.50 U | **0.19 J** | **0.23 J** | 0.50 U | 0.25 U | 1.1 U | 1.2 U | 1.5 U | 1.5 U | 1.5 U | 1.5 U | 1.6 U | 1.6 U | 0.94 U |
| Ethane (µg/L) | NS | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 3.3 U | 3.3 U | 3.3 U | 3.3 U | 3.3 U | 2.6 U | 2.6 U | **2.2 J+** |
| Ethene (µg/L) | NS | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 2.4 U | 2.4 U | 2.4 U | 2.4 U | 2.4 U | 3.6 U | 3.6 U | 2.64 U |
| Total Organic Carbon (mg/L) | NS | **3.6** | **1.0 J** | **1.1** | **0.67 J** | **0.64 J** | **0.9 J** | **0.86 J** | **1.2** | **0.62 J** | **1.5 J+** | **1.6 J+** | **0.88 J** | **1.1 J+** | 1.0 U | **1.5** | **1.6** |
| **Field Parameters** | | | | | | | | | | | | | | | | | |
| pH (pH Unit) | NS | 7.64 | 7.27 | 10.8 | 6.57 | 7.12 | 7.1 | 6.76 | 7.89 | 7.08 | 7.25 | 7.19 | 7.27 | 7.32 | 7.36 | 7.05 | 7.26 |
| Turbidity (NTU) | NS | 8.01 | 14.8 | 7.71 | 4.40 | 199 | 30.9 | 8.14 | 10.77 | 20.50 | 1.53 | 7.58 | 3.07 | 2.83 | 34.50 | 4.97 | 1.70 |
| ORP (MeV) | NS | 137.6 | 139.9 | 115.9 | 298.7 | 82.2 | 94.5 | 118.7 | 16.2 | 215.7 | 138.2 | 299.9 | 64.3 | 167.1 | 128.3 | 108.6 | 127.0 |
| Conductivity (mS/cm) | NS | 0.361 | 0.388 | 0.436 | 0.486 | 0.928 | 0.596 | 0.462 | 0.441 | 0.511 | 0.874 | 0.218 | 0.310 | 0.260 | 0.438 | 0.409 | 0.597 |
| Dissolved Oxygen YSI (mg/L) | NS | 22.27 | 9.50 | 10.40 | 10.82 | 9.81 | 10.30 | 10.09 | 11.71 | 10.04 | 10.93 | 9.28 | 10.98 | 11.06 | 10.37 | 9.48 | 8.61 |
| Dissolved Oxygen- Downhole (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | NA | 9.2 | 10.17 | NA | NA | NA | NA | NA |
| Groundwater Elevation (ft) | NS | 226.39 | 225.38 | 221.95 | 227.63 | 228.05 | 224.61 | 223.20 | 226.19 | 226.97 | 225.16 | 227.70 | 225.16 | 223.45 | 222.49 | 222.49 | 227.12 |

**Table 3-2. Compliance Well Pairs Groundwater Sample Results – 2015 - 2022**

| Analytes | NYSDEC Ambient Water Quality Standards and Guidance Value | MW-24 | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 11/10/2015 | 12/13/2016 | 3/21/2017 | 6/26/2017 | 9/26/2017 | 12/12/2017 | 3/14/2018 | 6/21/2018 | 9/18/2018 | 12/20/2018 | 6/20/2019 | 12/12/2019 | 6/17/2020 | 12/8/2020 | 6/15/2021 | 10/19/2022 |
| | | Downgradient | | | | | | | | | | | | | | | |
| **VOCs (µg/L)** | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | NA |
| 1,1,1-Trichloroethane (1,1,1-TCA) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1,2,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,1,2-Trichloroethane | 1 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1-Dichloroethane (1,1-DCA) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1-Dichloroethene (1,1-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.37 J** | 0.75 U | 0.75 U | **0.55 J** | **26.5** | **37.2** | **58.1** | **69.3** | **53.5** | **45.9** |
| 1,2-Dichloroethane (EDC) | 0.6 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Carbon Tetrachloride | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| cis-1,2-Dichloroethene (cis-1,2-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.40 J** | **3.0** | **6.1** | **9.3** | **10.5** | **4.4** | **4.9** | **4.2** | **4.1** |
| Tetrachloroethene (PCE; PERC) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Toluene | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.66 J** |
| trans-1,2-Dichloroethene (trans-1,2-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **2** |
| Trichloroethene (TCE) | 5 | **0.93 J** | **1.4** | **1.7** | **1.2** | **1.0** | **0.94 J** | **2.0** | **0.66 J** | **0.97 J** | **1.3** | **1.0** | **1.4** | **9.4** | **3.7** | **129.0** | **6.3** |
| Vinyl Chloride (VC) | 2 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| **MNA Parameters** | | | | | | | | | | | | | | | | | |
| Dissolved Hydrogen (nmol/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | NA | **3.4** | **1.9** | NA | NA | NA | NA | NA |
| Acetylene (ug/L) | NS | NA | NA | NA | NA | NA | NA | NA | 1.0 U | NA | NA | **<0.50** | NA | NA | NA | NA | NA |
| Total Iron (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | **1.4** | **1.4** | **1.1** | NA | NA | NA | NA | **1.920** |
| Dissolved Iron (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | 0.044 U | 0.04 U | 0.04 U | NA | NA | NA | NA | **1.710** |
| Alkalinity, Total (as $CaCO_3$) (mg/L)[1] | NS | **168** | **198** | **205** | **195** | **282** | **352** | **313** | **159** | **200** | **185** | **134** | **146** | **185** | **192** | **213** | **184** |
| Chloride (mg/L) | NS | **36.3** | **38.5** | **59.0** | **41.0** | **110** | **155** | **60.8** | **37.1** | **36.7** | **32.6** | **29.1 J-** | **29.2** | **27.3** | **31.6** | **29.8** | **43.1** |
| Nitrate (mg/L) | NS | **0.9** | 0.06 U | 0.06 U | **0.04 J** | 0.06 U | 0.06 U | 0.06 U | 0.06 U | 0.06 U | 0.06 U | 0.06 U | 0.06 U | 0.06 U | 0.14 U | 0.1 U | 0.25 U |
| Sulfate (mg/L) | NS | **15.5** | **21.4** | **24.1** | **22.1** | 0.5 U | **0.48 J** | **0.22 J** | **21.5** | **14.2** | **2.7** | **3.0** | **2.3** | **20.4** | **13.9** | **12.1** | **21.3** |
| Methane (µg/L) | NS | **0.82** | **1.6** | **1.7** | **2.2** | **7.8** | **431** | **927** | **1.3 J+** | **13.9** | **102** | **179** | **103** | **8.6** | **103** | **112.0** | 0.94 U |
| Ethane (µg/L) | NS | **0.34 J** | 0.50 U | 0.50 U | 0.50 U | **0.29 J** | 0.50 U | 0.50 U | 0.50 U | **1.5 J** | **11.2** | **14.7** | **5.2** | **2.0 J** | **0.67 J** | **2.3 J** | 1.92 U |
| Ethene (µg/L) | NS | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **1.0 J** | **0.20 J** | **9.5** | **9.7** | **1.7 J** | **2.9** | **2.4 U** | 3.6 U | **1.1 J** | 2.64 U |
| Total Organic Carbon (mg/L) | NS | **3.5** | **1.9** | **1.0 J** | **0.79 J** | **94.6** | **96.2** | **44.1** | **4.5** | **3.1** | **4.0** | **2.0 J+** | **1.4** | **1.2 J+** | **1.2** | **1.4** | **1.5** |
| **Field Parameters** | | | | | | | | | | | | | | | | | |
| pH (pH Unit) | NS | 7.75 | 7.22 | 7.83 | 7.78 | 7.40 | 7.29 | 7.97 | 7.95 | 7.70 | 7.92 | 7.53 | 7.64 | 7.63 | 7.83 | 7.40 | 7.82 |
| Turbidity (NTU) | NS | 9.33 | 13.9 | 16.3 | 35.2 | 88.37 | 2.8 | 16.0 | 19.5 | 7.94 | 2.77 | 1.74 | 0.0 | 1.97 | 0.02 | 0.02 | 2.80 |
| ORP (MeV) | NS | -80.2 | -93.2 | -111.3 | -108.6 | -169.9 | -83.1 | -127.6 | -147.3 | -162.2 | -185.0 | -149 | -189.1 | -144.0 | -102.2 | -169.2 | -179.0 |
| Conductivity (mS/cm) | NS | 0.327 | 0.570 | 0.438 | 0.365 | 1.396 | 8.411 | 0.409 | 0.204 | 0.403 | 0.436 | 0.333 | 0.161 | 0.375 | 0.278 | 0.372 | 0.556 |
| Dissolved Oxygen YSI (mg/L) | NS | 0.94 | 0.44 | 0.55 | 1.20 | 0.30 | 0.15 | 0.55 | 11.71 | 7.23 | 0.5 | 0.29 | 0.18 | 0.55 | 0.45 | 0.47 | 0 |
| Dissolved Oxygen- Downhole (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.1 | -0.25 | NA | NA | NA | NA | NA |
| Groundwater Elevation (ft) | NS | 226.79 | 225.30 | 223.60 | 229.05 | 228.83 | 225.12 | 223.99 | 227.43 | 227.32 | 226.39 | 229.23 | 226.39 | 225.73 | 223.27 | 227.17 | 227.17 |

**Table 3-2. Compliance Well Pairs Groundwater Sample Results – 2015 - 2022**

| Analytes | NYSDEC Ambient Water Quality Standards and Guidance Value | MW-26 | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 11/17/2015 | 12/13/2016 | 3/21/2017 | 6/26/2017 | 9/25/2017 | 12/12/2017 | 3/14/2018 | 6/20/2018 | 9/18/2018 | 12/18/2018 | 6/20/2019 | 12/12/2019 | 6/16/2020 | 12/8/2020 | 6/15/2021 | 10/19/2022 |
| | | Downgradient | | | | | | | | | | | | | | | |
| **VOCs (µg/L)** | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | NA |
| 1,1,1-Trichloroethane (1,1,1-TCA) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1,2,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,1,2-Trichloroethane | 1 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1-Dichloroethane (1,1-DCA) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1-Dichloroethene (1,1-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,2-Dichloroethane (EDC) | 0.6 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Carbon Tetrachloride | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| cis-1,2-Dichloroethene (cis-1,2-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| Tetrachloroethene (PCE; PERC) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Toluene | 5 | **0.57 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.93 J+** |
| trans-1,2-Dichloroethene (trans-1,2-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Trichloroethene (TCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.59 J** |
| Vinyl Chloride (VC) | 2 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| **MNA Parameters** | | | | | | | | | | | | | | | | | |
| Dissolved Hydrogen (nmol/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetylene (ug/L) | NS | NA | NA | NA | NA | NA | NA | NA | 1.0 U | NA | NA | NA | NA | NA | NA | NA | NA |
| Total Iron (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | **0.61** | **0.23** | **1.1** | NA | NA | NA | NA | **0.580 J+** |
| Dissolved Iron (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | **0.43** | **0.029 J** | **0.15** | NA | NA | NA | NA | **0.431 J+** |
| Alkalinity, Total (as $CaCO_3$) (mg/L)[1] | NS | **204** | **197** | **196** | **223** | **317** | **204** | **196** | **225** | **178** | **179** | **174** | **171** | **205** | **168** | **167** | **185** |
| Chloride (mg/L) | NS | **45.2** | **44.9** | **53.4** | **133** | **86.2** | **56.7** | **32.3** | **49.1** | **21** | **48.3** | **32.2** | **23** | **37** | **22.4** | **2.9** | **23.9** |
| Nitrate (mg/L) | NS | 0.06 U | **0.04 J** | 0.06 U | **0.02 J** | 0.06 U | 0.06 U | 0.06 U | 0.06 U | **0.04 J** | **0.06 J** | 0.06 U | **0.06 J** | **0.1 J** | 0.14 U | **0.32** | 0.25 U |
| Sulfate (mg/L) | NS | **25.1** | **24.6** | **29.4** | **20.9** | **5.9** | **25.7** | **10.6** | **16.3** | **4.8** | **22.4** | **9.5** | **9.6** | **14.5** | **11.2** | **2.5** | **18.1** |
| Methane (µg/L) | NS | **34.8** | **2.7** | **1.4 J** | **2.1** | **444** | **20.7** | **26.6** | **80** | **12.9** | **19.7 J+** | **112** | **8.1** | **58.1** | **5.7** | 1.6 U | 0.94 U |
| Ethane (µg/L) | NS | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 3.3 U | 3.3 U | 3.3 U | 3.3 U | 3.3 U | 2.6 U | 2.6 U | 1.92 U |
| Ethene (µg/L) | NS | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 2.4 U | 2.4 U | 2.4 U | 2.4 U | 2.4 U | 3.6 U | 3.6 U | 2.64 U |
| Total Organic Carbon (mg/L) | NS | **9.3** | **2.6** | **1.3 J** | **30.7** | **52.1** | **1.1** | **5.8 J** | **0.50 J** | **12.9** | **2.2** | **6.4** | **5.4** | **4.0** | **5.0** | **21.4** | **7.2** |
| **Field Parameters** | | | | | | | | | | | | | | | | | |
| pH (pH Unit) | NS | 7.52 | 7.22 | 7.80 | 7.23 | 7.39 | 7.65 | 7.56 | 7.57 | 7.29 | 7.43 | 7.6 | 7.37 | 7.66 | 7.60 | 7.11 | 7.50 |
| Turbidity (NTU) | NS | 68.3 | 21.8 | 31.9 | 0.4 | 60.96 | 57.38 | 18.6 | 36.2 | 9.12 | 7.65 | 9.3 | 1.79 | 3.17 | 0.02 | 33.4 | 3.3 |
| ORP (MeV) | NS | -103.6 | -28.9 | -46.4 | -26.9 | -138.7 | -173.0 | -89.4 | -75.3 | 82.0 | -44.9 | -108.6 | -119.0 | -25.3 | 198.7 | 136.9 | 10 |
| Conductivity (mS/cm) | NS | 0.324 | 0.590 | 0.469 | 0.630 | 1.347 | 0.426 | 0.260 | 0.415 | 0.270 | 0.715 | 0.423 | 0.161 | 0.25 | 0.233 | 0.285 | 0.394 |
| Dissolved Oxygen YSI (mg/L) | NS | 0.00 | 0.33 | 0.27 | 0.62 | 0.33 | 0.66 | 0.27 | 1.38 | 8.9 | 0.55 | 0.3 | 0.36 | 4.81 | 1.53 | 5.4 | 0.05 |
| Dissolved Oxygen- Downhole (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | NA | 4.3 | -0.19 | NA | NA | NA | NA | NA |
| Groundwater Elevation (ft) | NS | 226.06 | 224.75 | 222.60 | 228.01 | 228.10 | 224.65 | 223.26 | 226.43 | 226.59 | 225.57 | 228.22 | 225.57 | 224.75 | 222.67 | 226.35 | 226.35 |

**Table 3-2. Compliance Well Pairs Groundwater Sample Results – 2015 - 2022**

| Analytes | NYSDEC Ambient Water Quality Standards and Guidance Value | Confirmation Well MW-28 Downgradient | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 12/1/2015 | 12/14/2016 | 3/22/2017 | 6/27/2017 | 9/27/2017 | 12/14/2017 | 3/15/2018 | 6/22/2018 | 9/21/2018 | 12/20/2018 | 6/19/2019 | 12/10/2019 | 6/17/2020 | 12/9/2020 | 6/16/2021 | 10/19/2022 |
| **VOCs (µg/L)** | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | NA |
| 1,1,1-Trichloroethane (1,1,1-TCA) | 5 | **11.2** | **10.4** | **9.9** | **8.9 J** | **10.5** | **9.5** | **5.6** | **10.5** | **9.0** | **9.8** | **8.0** | **9.5** | **6.6** | **9.5** | **3.7** | **7.2** |
| 1,1,2,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,1,2-Trichloroethane | 1 | **0.46 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.33 J** | 0.75 U | **0.44 J** | **0.42 J** | **0.34 J** | 0.75 U | **0.38 J** | 0.75 U | **0.34 J** | 0.75 U | 0.5 U |
| 1,1-Dichloroethane (1,1-DCA) | 5 | **1.0** | **0.77 J** | **0.88 J** | **1.0 J** | **1.3** | **0.84 J** | **0.69 J** | **0.86 J** | **1.2** | **1.2** | **1.2** | **0.98 J** | **0.92 J** | **0.56 J** | 0.75 U | 0.5 U |
| 1,1-Dichloroethene (1,1-DCE) | 5 | **0.53 J** | **0.43 J** | **0.53 J** | **0.38 J** | **0.76 J** | **0.45 J** | 0.75 U | **0.39 J** | **0.34 J** | **0.42 J** | 0.75 U | **0.45 J** | 0.75 U | **0.42 J** | 0.75 U | **0.26 J** |
| 1,2-Dichloroethane (EDC) | 0.6 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Carbon Tetrachloride | 5 | **0.61 J** | 0.75 U | **0.62 J** | 0.75 U | **0.53 J** | **0.57 J** | 0.75 U | 0.75 U | 0.75 U | **0.42 J** | **0.36 J** | **0.51 J** | **0.44 J** | **0.57 J** | 0.75 U | **0.52 J** |
| cis-1,2-Dichloroethene (cis-1,2-DCE) | 5 | **4.7** | **4.3** | **4.4** | **4.7 J** | **5.5** | **5.0** | **4.4** | **4.9** | **4.5** | **4.7** | **5.8** | **5.9** | **3.8** | **4.6** | **0.73 J** | **3.3** |
| Tetrachloroethene (PCE; PERC) | 5 | **33** | **44.6** | **42.4** | **36.3 J** | **37.1** | **45.2** | **23.2** | **38.7** | **43.7** | **34.7** | **31.9** | **33.6** | **25.5** | **19.2** | **19.3** | **27** |
| Toluene | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| trans-1,2-Dichloroethene (trans-1,2-DCE) | 5 | 0.75 U | **0.47 J** | **0.42 J** | **0.37 J** | **0.35 J** | **0.49 J** | 0.75 U | **0.36 J** | **0.33 J** | 0.75 U | 0.75 U | **0.37 J** | 0.75 U | **0.36 J** | **0.63 J** | **0.28 J** |
| Trichloroethene (TCE) | 5 | **182** | **196** | **181** | **195** | **170** | **201** | **153** | **214** | **232 J** | **195** | **172** | **219** | **140** | **143** | **260.0** | **220** |
| Vinyl Chloride (VC) | 2 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| **MNA Parameters** | | | | | | | | | | | | | | | | | |
| Dissolved Hydrogen (nmol/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | **3.9** | **3.7** | **2.7** | **1.8** | NA | NA | NA | NA |
| Acetylene (ug/L) | NS | NA | NA | NA | NA | NA | NA | NA | 1.0 U | NA | NA | **<0.50** | NA | NA | NA | NA | NA |
| Total Iron (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | 0.045 U | **0.024 J** | 0.045 U | 0.045 U | **0.026 J** | **0.032 J** | 0.045 U | **0.796 J** |
| Dissolved Iron (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | 0.044 U | 0.04 U | 0.04 U | 0.04 U | 0.04 U | 0.040 U | 0.04 U | **0.307 J+** |
| Alkalinity, Total (as $CaCO_3$) (mg/L)[1] | NS | **352** | **316** | **295** | **352** | **380** | **383** | **360** | **422** | **345** | **342** | **325** | **307** | **367** | **243** | **291** | **325** |
| Chloride (mg/L) | NS | **22.1** | **32.4** | **25.7** | **29.0** | **25.7** | **20.4** | **20.9** | **33.1** | **42.7** | **25.4** | **41.6** | **38.0** | **31.1** | **39.6** | **60.6** | **39.1** |
| Nitrate (mg/L) | NS | 0.06 U | **0.06 J** | **0.44** | **1.5** | **0.18 J** | **1.2** | **1.5** | **0.58** | **0.58** | **0.16 J** | 0.20 U | **0.74** | **0.36** | **0.38** | **0.82** | **0.78** |
| Sulfate (mg/L) | NS | **22.4** | **20.9** | **21.6** | **13.0** | **10.3** | **22.4** | **20.2** | **23.1** | **13.2** | **13.1** | **13.6** | **22.0** | **20.5** | **21.2** | **30.0** | **37.3** |
| Methane (µg/L) | NS | **3.4** | **3.0** | **0.94** | **1.0** | **0.37 J** | 0.50 U | 0.25 U | **1800** | **60.8** | 1.5 U | 1.5 U | 1.5 U | **471** | **28** | 1.6 U | 0.94 U |
| Ethane (µg/L) | NS | 0.50 U | **3.6** | **1.0** | 0.50 U | **0.45 J** | 0.50 U | 0.50 U | 0.50 U | **1.3 J** | 3.3 U | 3.3 U | 3.3 U | 3.3 U | 2.6 U | 2.6 U | 1.92 U |
| Ethene (µg/L) | NS | 0.75 U | **1.3 J** | **1.9** | 0.75 U | **0.72 J** | 0.75 U | 0.75 U | 0.75 U | **1.4 J** | 2.4 U | 2.4 U | 2.4 U | 2.4 U | 3.6 U | 3.6 U | **10.9 J+** |
| Total Organic Carbon (mg/L) | NS | **1.9** | **2.3** | **0.81 J** | **0.76 J** | **1.9** | **0.94 J** | **0.36 J** | **4.1** | **0.85 J** | **2.1 J+** | **1.6 J+** | **1.0** | **2.1** | **1.1** | **1.0** | **2.4** |
| **Field Parameters** | | | | | | | | | | | | | | | | | |
| pH (pH Unit) | NS | 6.83 | 7.03 | 7.12 | 7.05 | 6.87 | 7.15 | 8.17 | 7.33 | 7.08 | 7.21 | 6.84 | 7.08 | 7.19 | 7.54 | 7.6 | 7.17 |
| Turbidity (NTU) | NS | 209 | 1.5 | 2.07 | -3 | 61.1 | 229.80 | 8.52 | 1.32 | 0.02 | 0.59 | 0.02 | 0.78 | 2.11 | 0.97 | 0.9 | 1.90 |
| ORP (MeV) | NS | 273 | 71.2 | 77.1 | 97.4 | 32.1 | 19.0 | -16.3 | 11.1 | 120.9 | 81.7 | 176.4 | 190.5 | 23.1 | 86.5 | 100.1 | 117 |
| Conductivity (mS/cm) | NS | 0.324 | 0.366 | 0.520 | 0.554 | 1.045 | 0.564 | 0.406 | 0.733 | 0.797 | 0.759 | 0.613 | 0.510 | 0.085 | 0.441 | 0.578 | 0.871 |
| Dissolved Oxygen YSI (mg/L) | NS | 6.75 | 3.94 | 5.2 | 7.59 | 4.3 | 8.45 | 11.96 | 0.63 | 8.83 | 4.13 | 0.89 | 5.79 | 0.35 | 9.26 | 9.85 | 2.33 |
| Dissolved Oxygen- Downhole (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | NA | 2.7 | 10.41 | NA | NA | NA | NA | NA |
| Groundwater Elevation (ft) | NS | 227.07 | 225.41 | 224.31 | 229.79 | 229.19 | 225.53 | 224.44 | 228.07 | 227.62 | 227.01 | 229.97 | 227.01 | 226.56 | 222.67 | 227.95 | 227.95 |

**Table 3-2. Compliance Well Pairs Groundwater Sample Results – 2015 - 2022**

| Analytes | NYSDEC Ambient Water Quality Standards and Guidance Value | Confirmation Well MW-29 | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 12/1/2015 | 12/14/2016 | 3/22/2017 | 6/27/2017 | 9/27/2017 | 12/14/2017 | 3/15/2018 | 6/22/2018 | 9/20/2018 | 12/20/2018 | 6/19/2019 | 12/9/2019 | 6/17/2020 | 12/10/2020 | 6/16/2021 | 10/19/2022 |
| | | Upgradient | | | | | | | | | | | | | | | |
| **VOCs (µg/L)** | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 5 | 0.75 U | 3.8 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | NA |
| 1,1,1-Trichloroethane (1,1,1-TCA) | 5 | **12.4** | **14.0 J** | **10.4** | **11.8 J** | **13.6** | **14.6** | **13.2** | **11.8** | **10.4** | **9.3** | **8.7** | **9.4** | **5.8** | **9.8** | **2.8 J** | **7.7 J-** |
| 1,1,2,2-Tetrachloroethane | 5 | 0.75 U | 3.8 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | 0.75 UJ |
| 1,1,2-Trichloroethane | 1 | 0.75 U | 3.8 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.45 J** | **0.34 J** | **0.36 J** | 0.75 U | **0.42 J** | 0.75 U | 0.75 U | 0.75 UJ | 0.5 UJ |
| 1,1-Dichloroethane (1,1-DCA) | 5 | **0.97 J** | 3.8 U | **0.45 J** | **1.0 J** | **1.2** | **0.88 J** | **0.91 J** | **0.84 J** | **0.87 J** | **1.0 J** | **1.1** | **0.93 J** | **0.59 J** | **0.53 J** | 0.75 UJ | 0.5 UJ |
| 1,1-Dichloroethene (1,1-DCE) | 5 | **0.68 J** | 3.8 U | **0.55 J** | **0.63 J** | **0.99 J** | **0.96 J** | **0.77 J** | **0.48 J** | **0.41 J** | **0.46 J** | **0.35 J** | **0.43 J** | 0.75 U | **0.57 J** | 0.75 UJ | 0.75 UJ |
| 1,2-Dichloroethane (EDC) | 0.6 | 0.75 U | 3.8 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | 0.5 UJ |
| Carbon Tetrachloride | 5 | 0.75 U | 3.8 U | **0.63 J** | 0.75 U | **0.85 J** | **0.71 J** | **0.72 J** | **0.82 J** | 0.75 U | **0.67 J** | **0.49 J** | **0.60 J** | **0.49 J** | **0.64 J** | 0.75 UJ | 0.75 UJ |
| cis-1,2-Dichloroethene (cis-1,2-DCE) | 5 | **4.9** | **6.1 J** | **3.1** | **5.8 J** | **5.6** | **5.7** | **5.4** | **5.1** | **3.7** | **4.1** | **5.4** | **4.6** | **2.9** | **4.0** | **0.95 J** | **3.3 J-** |
| Tetrachloroethene (PCE; PERC) | 5 | **33.2** | **30.8 J** | **37.2** | **38.1 J** | **42.2** | **41.7** | **38.9** | **35.4** | **31.9** | **30.8** | **29.7** | **27.9** | **24.3** | **24.0** | **9.5 J** | **29.8 J-** |
| Toluene | 5 | 0.75 U | 3.8 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | 0.5 UJ |
| trans-1,2-Dichloroethene (trans-1,2-DCE) | 5 | 0.75 U | 3.8 U | **0.61 J** | **0.70 J** | **0.67 J** | **0.62 J** | **0.44 J** | **0.59 J** | **0.35 J** | **0.40 J** | 0.75 U | 0.75 U | 0.75 U | **0.47 J** | **0.47 J** | 0.5 UJ |
| Trichloroethene (TCE) | 5 | **224** | **209 J** | **197** | **264** | **226** | **233** | **207** | **248** | **218** | **218** | **161** | **149** | **102** | **151** | **155** | **210** |
| Vinyl Chloride (VC) | 2 | 0.75 U | 3.8 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | 0.5 UJ |
| **MNA Parameters** | | | | | | | | | | | | | | | | | |
| Dissolved Hydrogen (nmol/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | **2.8** | **2** | **1.5** | NA | NA | NA | NA | NA |
| Acetylene (ug/L) | NS | NA | NA | NA | NA | NA | NA | NA | 1.0 U | NA | NA | **<0.50** | NA | NA | NA | NA | NA |
| Total Iron (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | **0.062 J** | **0.14** | **0.13** | **0.23** | **2.8** | 0.045 U | **0.46** | **0.485 J+** |
| Dissolved Iron (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | 0.044 U | 0.040 U | 0.04 U | 0.04 U | 0.04 U | 0.040 U | 0.04 U | 0.040 U |
| Alkalinity, Total (as $CaCO_3$) (mg/L)[1] | NS | **327** | **301** | **258** | **361** | **374** | **348** | **360** | **370** | **374** | **380** | **342** | **303** | **282** | **244** | **213** | **309** |
| Chloride (mg/L) | NS | **28.2** | **28.4** | **21.3** | **49.4** | **24.2** | **21.3** | **23.4** | **28** | **29.9** | **28.8** | **38.9** | **33.8** | **34.7** | **42.9** | **41.9** | **42.7** |
| Nitrate (mg/L) | NS | **0.1 J** | **0.26** | **0.52** | **1.3** | **0.12 J** | **0.86** | **1.3** | **0.38** | **0.48 J** | **0.50** | **0.26** | **0.90** | **0.64** | **0.46** | **0.6** | **0.59** |
| Sulfate (mg/L) | NS | **29.2** | **24.9** | **20.1** | **13.8** | **16.1** | **22.7** | **15** | **21** | **11.8** | **21.0** | **12.9** | **22.7** | **16.0** | **21.3** | **22.4** | **20.7** |
| Methane (µg/L) | NS | **13.9** | **0.62** | **1.1** | **0.20 J** | **0.21 J** | 0.50 U | 0.25 U | **210** | 1.5 U | 1.5 U | 1.5 U | 1.5 U | 1.5 U | 1.6 U | **0.94 J** | **1.8 J+** |
| Ethane (µg/L) | NS | **0.81 J** | 0.50 U | 0.5 U | 0.50 | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 3.3 U | 3.3 U | 3.3 U | 3.3 U | 3.3 U | 2.6 U | 2.6 U | 1.92 U |
| Ethene (µg/L) | NS | **0.59 J** | 0.75 U | 0.75 U | 0.75 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 2.4 U | 2.4 U | 2.4 U | 2.4 U | 2.4 U | 3.6 U | 3.6 U | 2.64 U |
| Total Organic Carbon (mg/L) | NS | **2.3** | **1.4** | **0.91 J** | **0.92 J** | **2.1** | **1.2** | **0.38 J** | **3.2** | **1.3** | **1.7 J+** | **5.3** | **1.4** | **1.4 J+** | **0.99 J** | **5.3** | **2.4** |
| **Field Parameters** | | | | | | | | | | | | | | | | | |
| pH (pH Unit) | NS | 7.06 | 7.02 | 7.43 | 7.02 | 6.91 | 7.01 | 7.79 | 7.33 | 7.14 | 7.2 | 6.96 | 6.88 | 7.33 | 7.44 | 7.09 | 7.17 |
| Turbidity (NTU) | NS | 82.4 | 0.62 | 2.73 | 2.80 | 65.1 | 1.50 | 8.11 | 15.2 | 0.02 | 4.55 | 3.43 | 11.9 | 997.3 | 0.24 | 0 | 3.90 |
| ORP (MeV) | NS | -25.1 | 60.9 | 46.1 | 120 | 41.7 | 33.7 | 2.8 | 52.3 | 90.9 | 98.6 | 169.6 | 251.2 | 110.7 | 165.9 | -29.3 | 127 |
| Conductivity (mS/cm) | NS | 0.325 | 0.354 | 0.424 | 0.619 | 1.058 | 0.559 | 0.420 | 0.61 | 0.683 | 0.796 | 0.63 | 0.471 | 0.488 | 0.365 | 0.258 | 0.892 |
| Dissolved Oxygen YSI (mg/L) | NS | 4.29 | 6.17 | 9.26 | 7.12 | 6.46 | 8.65 | 7.42 | 2.98 | 9.66 | 5.02 | 2.23 | 6.62 | 5.25 | 9.31 | 2.21 | 1.43 |
| Dissolved Oxygen- Downhole (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5.6 | 9.12 | NA | NA | NA | NA | NA |
| Groundwater Elevation (ft) | NS | 227.05 | 225.38 | 224.33 | 229.79 | 229.19 | 225.23 | 224.43 | 228.09 | 227.64 | 227.07 | 230.00 | 227.07 | 226.58 | 218.80 | 228.00 | 228.00 |

**Table 3-2. Compliance Well Pairs Groundwater Sample Results – 2015 - 2022**

| Analytes | NYSDEC Ambient Water Quality Standards and Guidance Value | Confirmation Well MW-30 | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 12/1/2015 | 12/13/2016 | 3/21/2017 | 6/26/2017 | 9/27/2017 | 12/13/2017 | 3/15/2018 | 6/21/2018 | 9/20/2018 | 12/19/2018 | 6/19/2019 | 12/10/2019 | 6/17/2020 | 12/8/2020 | 6/15/2021 | 10/19/2022 |
| | | Downgradient | | | | | | | | | | | | | | | |
| **VOCs (µg/L)** | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | NA |
| 1,1,1-Trichloroethane (1,1,1-TCA) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1,2,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,1,2-Trichloroethane | 1 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1-Dichloroethane (1,1-DCA) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1-Dichloroethene (1,1-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,2-Dichloroethane (EDC) | 0.6 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Carbon Tetrachloride | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| cis-1,2-Dichloroethene (cis-1,2-DCE) | 5 | 0.75 U | 0.75 U | **0.74 J** | **0.61 J** | **0.39 J** | **0.41 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.52 J** | **0.58 J** |
| Tetrachloroethene (PCE; PERC) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Toluene | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| trans-1,2-Dichloroethene (trans-1,2-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Trichloroethene (TCE) | 5 | **25.2** | **42.3** | **66.3** | **24.3** | **18.4** | **19.6** | **9.8** | **8.1** | **8.2** | **7.3** | **5.0** | **6.5** | **5.7** | **7.9** | **9.1** | **2.3** |
| Vinyl Chloride (VC) | 2 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| **MNA Parameters** | | | | | | | | | | | | | | | | | |
| Dissolved Hydrogen (nmol/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | **12** | **36** | **8.5** | **10** | NA | NA | NA | NA |
| Acetylene (ug/L) | NS | NA | NA | NA | NA | NA | NA | NA | 1.0 UJ | NA | NA | **<0.50** | NA | NA | NA | NA | NA |
| Total Iron (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | **0.16** | **0.087** | **0.93** | **0.42** | **0.076** | **0.10** | **0.14** | **1.430 J+** |
| Dissolved Iron (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | 0.04 U | 0.040 U | **0.33** | **0.11** | **0.033 J** | **0.043 J** | 0.06 U | **0.104 J+** |
| Alkalinity, Total (as $CaCO_3$) (mg/L)[1] | NS | **143** | **319** | **210** | **154** | **104** | **347** | **141** | **58** | **59** | **51** | **65** | **74** | **48** | **70** | **106** | **42.5** |
| Chloride (mg/L) | NS | **38.4** | **182** | **136** | **49.6** | **35.3** | **87.3** | **43.6** | **38.8** | **40.7** | **39.2** | **37.6** | **38.3** | **47.6** | **44.0** | **36.6** | **55.7** |
| Nitrate (mg/L) | NS | 0.06 U | 0.06 U | 0.06 U | 0.06 U | 0.06 U | 0.06 U | 0.06 U | 0.06 U | 0.06 U | 0.06 U | 0.06 U | 0.06 U | 0.06 U | 0.14 U | 0.14 U | 0.25 U |
| Sulfate (mg/L) | NS | **35.9** | **2.9** | 0.5 U | **0.32 J** | 0.5 U | **0.22 J** | 0.5 U | **0.34 J** | 0.5 U | **0.76 J** | 2.0 U | 0.5 U | **1.1 J** | **2.0 J** | **7.5** | **1.8 J** |
| Methane (µg/L) | NS | **47.4** | **146** | **870** | **3210** | **3560** | **12900** | **5860** | **3700** | **4410** | **3790** | **91.6** | **5670** | **5630** | **6270** | **4280** | **2800** |
| Ethane (µg/L) | NS | **4.7** | **5.4** | **23.5** | **36.7** | **39.7** | **40.5** | **31.1** | **52** | **42.2** | **46.4** | 3.3 U | **23.4** | **29.7** | **25.9** | **20.2** | 1.92 U |
| Ethene (µg/L) | NS | **2.2** | **3.3** | **9.1** | **12.7** | **8.5** | **4.2** | **2.2** | **6.3** | **4.3** | **2.8** | 2.4 U | **2.0 J** | **2.5** | **1.7 J** | **1.6 J** | **16.7 J+** |
| Total Organic Carbon (mg/L) | NS | **2.2** | **225** | **139** | **75.2** | **27.0** | **366** | **50.9** | **9.7 J** | **10.2** | **12.1** | **7.7** | **8.8** | **5.4** | **5.1** | **3.3** | **3.2** |
| **Field Parameters** | | | | | | | | | | | | | | | | | |
| pH (pH Unit) | NS | 8.91 | 6.83 | 7.60 | 8.01 | 8.01 | 7.41 | 8.54 | 8.28 | 8.48 | 8.84 | 7.8 | 7.66 | 8.68 | 8.38 | 8.06 | 8.36 |
| Turbidity (NTU) | NS | 58.2 | 3.55 | 3.82 | 3 | 69.1 | 16.1 | 3.12 | 950.5 | 0.02 | 1.36 | 0.81 | 1.33 | 1.45 | 1.12 | 0.30 | 20.01 |
| ORP (MeV) | NS | -278.4 | -166.3 | -166.9 | -173.3 | -212.2 | -170.1 | -122.8 | 12.1 | -217.6 | -208.4 | -164 | -152.9 | -202 | -170.5 | -182.3 | -224 |
| Conductivity (mS/cm) | NS | 0.210 | 1.410 | 0.740 | 0.320 | 0.412 | 0.758 | 0.212 | 0.238 | 0.235 | 0.216 | 0.23 | 0.158 | 0.06 | 0.210 | 0.313 | 0.279 |
| Dissolved Oxygen YSI (mg/L) | NS | 3.70 | 0.29 | 0.17 | 0.48 | 0.06 | 0.80 | 0.19 | 0.98 | 8.41 | 0.44 | 0.28 | 0.22 | 0.05 | 0.38 | 0.41 | 0 |
| Dissolved Oxygen- Downhole (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.2 | -0.41 | NA | NA | NA | NA | NA |
| Groundwater Elevation (ft) | NS | 226.98 | 225.35 | 223.98 | 229.44 | 229.04 | 225.28 | 224.28 | 227.80 | 227.52 | 226.70 | 229.62 | 226.70 | 226.19 | 224.17 | 227.91 | 228.39 |

**Table 3-2. Compliance Well Pairs Groundwater Sample Results – 2015 - 2022**

| Analytes | NYSDEC Ambient Water Quality Standards and Guidance Value | Confirmation Well MW-31 | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 12/1/2015 | 12/14/2016 | 3/22/2017 | 6/26/2017 | 9/27/2017 | 12/13/2017 | 3/15/2018 | 6/21/2018 | 9/20/2018 | 12/19/2018 | 6/19/2019 | 12/10/2019 | 6/17/2020 | 12/9/2020 | 6/16/2021 | 10/19/2022 |
| | | Upgradient | | | | | | | | | | | | | | | |
| **VOCs (µg/L)** | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | NA |
| 1,1,1-Trichloroethane (1,1,1-TCA) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1,2,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,1,2-Trichloroethane | 1 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1-Dichloroethane (1,1-DCA) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1-Dichloroethene (1,1-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,2-Dichloroethane (EDC) | 0.6 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Carbon Tetrachloride | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| cis-1,2-Dichloroethene (cis-1,2-DCE) | 5 | 0.75 U | 0.75 U | **0.41 J** | **0.50 J** | **0.42 J** | **0.40 J** | **0.37 J** | 0.75 U | **0.34 J** | **0.37 J** | 0.75 U | **0.34 J** | 0.75 U | **0.55 J** | 0.75 U | **0.31 J** |
| Tetrachloroethene (PCE; PERC) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.44 J** | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Toluene | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| trans-1,2-Dichloroethene (trans-1,2-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Trichloroethene (TCE) | 5 | **42.7** | **38.2** | **35.0** | **29.0** | **25.6** | **19.6** | **19.1** | **20.6** | **19.7 J+** | **19.1** | **26.2** | **29.2** | **33.5** | **25.2** | **27.5** | **38.4** |
| Vinyl Chloride (VC) | 2 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| **MNA Parameters** | | | | | | | | | | | | | | | | | |
| Dissolved Hydrogen (nmol/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | **4.1** | **1.9** | **2** | **2.2** | NA | NA | NA | NA |
| Acetylene (ug/L) | NS | NA | NA | NA | NA | NA | NA | NA | 1.0 U | NA | NA | **<0.50** | NA | NA | NA | NA | NA |
| Total Iron (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | **0.76** | **0.87** | **0.72** | **0.98** | **0.78** | **0.76** | **0.65** | **1.430 J+** |
| Dissolved Iron (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | 0.04 U | 0.04 U | 0.04 U | **0.023 J** | 0.040 U | 0.040 U | 0.04 U | **0.827** |
| Alkalinity, Total (as $CaCO_3$) (mg/L)[1] | NS | **178** | **222** | **381** | **150** | **132** | **119** | **143** | **169** | **169** | **172** | **142** | **146** | **160** | **142** | **212** | **145** |
| Chloride (mg/L) | NS | **41.9** | **56.6** | **98.5** | **31.0** | **31.7** | **36.3** | **50.6** | **39.9** | **32** | **34.6** | **45.9** | **44.3** | **41.4** | **48.2** | **40.6** | **48.5** |
| Nitrate (mg/L) | NS | 0.06 U | 0.06 U | **0.04 J** | **0.02 J** | 0.06 U | 0.06 U | 0.06 U | 0.06 U | 0.06 U | 0.06 U | 0.06 U | 0.06 U | 0.06 U | 0.14 U | 0.14 U | 0.25 U |
| Sulfate (mg/L) | NS | **26.3** | **10.9** | **2.6** | **5.6** | **5.6** | **7.8** | **6.7** | **7.8** | **4.6** | **7.1** | **10.2** | **8.8** | **9.6** | **9.1** | **8.5** | **10.7** |
| Methane (µg/L) | NS | **20.7** | **3.5** | **106** | **56.5** | **29.1** | **59.4** | **34.4** | **120** | **90.6** | **126** | **99.3** | **512** | **354** | **737** | **178** | **136** |
| Ethane (µg/L) | NS | **2.2** | **1.5** | **10.1** | **2.7** | **2.6** | **3.3** | **2.6** | **5.7** | **4.2** | **4.3** | **3.0 J** | **3.9** | **3.2** | **4.3 J** | **2.0 J** | 1.92 U |
| Ethene (µg/L) | NS | **0.91 J** | **0.84 J** | **4.7** | **3.2** | **2.3** | **1.9** | **1.6** | **104** | **1.4 J** | **1.3 J** | 2.4 U | 2.4 U | 2.4 U | 3.6 U | 3.6 U | 2.64 U |
| Total Organic Carbon (mg/L) | NS | **2.1** | **43.9** | **257** | **2.8** | **1.5** | **1.3** | **1.1** | **2.1** | **0.69 J** | **1.1 J+** | 1.0 U | **0.79 J** | 1.0 U | **0.72 J** | **1.8** | **1.3** |
| **Field Parameters** | | | | | | | | | | | | | | | | | |
| pH (pH Unit) | NS | 7.80 | 7.20 | 7.61 | 9.79 | 7.63 | 7.68 | 8.31 | 7.83 | 7.85 | 8.00 | 7.80 | 7.77 | 7.81 | 8.03 | 7.51 | 7.97 |
| Turbidity (NTU) | NS | 51.7 | 8.03 | 11.4 | 4.60 | 8.60 | 8.62 | 2.95 | 2.6 | 0.02 | 4.36 | 0.69 | 0.0 | 14.42 | 0.83 | 0.0 | 1.9 |
| ORP (MeV) | NS | -319.7 | -163.1 | -201.5 | -283.2 | -174.4 | -208.0 | -161.7 | -155.1 | -180.6 | -172.9 | -165.3 | -202.2 | -148.0 | -138.0 | -141.2 | -189.0 |
| Conductivity (mS/cm) | NS | 0.243 | 0.348 | 0.850 | 0.280 | 0.526 | 0.294 | 0.261 | 0.324 | 0.378 | 0.362 | 0.402 | 0.308 | 0.325 | 0.316 | 0.379 | 0.444 |
| Dissolved Oxygen YSI (mg/L) | NS | 1.29 | 0.28 | 0.22 | 0.70 | 0.13 | 0.19 | 0.17 | 0.22 | 7.99 | 0.48 | 0.15 | 0.31 | 0.91 | 0.51 | 0.40 | 0.00 |
| Dissolved Oxygen- Downhole (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.1 | -0.24 | NA | NA | NA | NA | NA |
| Groundwater Elevation (ft) | NS | 226.95 | 225.40 | 224.12 | 229.52 | 229.11 | 225.40 | 224.34 | 227.84 | 227.55 | 226.85 | 229.70 | 226.85 | 226.33 | 225.28 | 228.48 | 229.02 |

**Table 3-2. Compliance Well Pairs Groundwater Sample Results – 2015 - 2022**

| Analytes | NYSDEC Ambient Water Quality Standards and Guidance Value | Confirmation Well MW-32 Downgradient | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 11/30/2015 | 12/13/2016 | 3/21/2017 | 6/26/2017 | 9/26/2017 | 12/13/2017 | 3/14/2018 | 6/21/2018 | 9/20/2018 | 12/19/2018 | 6/20/2019 | 12/11/2019 | 6/17/2020 | 12/10/2020 | 6/15/2021 | 10/19/2022 |
| **VOCs (µg/L)** | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | NA |
| 1,1,1-Trichloroethane (1,1,1-TCA) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1,2,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,1,2-Trichloroethane | 1 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1-Dichloroethane (1,1-DCA) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1-Dichloroethene (1,1-DCE) | 5 | 0.75 U | 0.75 U | **0.40 J** | **0.48 J** | **0.60 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.34 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.29 J** |
| 1,2-Dichloroethane (EDC) | 0.6 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Carbon Tetrachloride | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| cis-1,2-Dichloroethene (cis-1,2-DCE) | 5 | 0.75 U | 0.75 U | **1.2** | **1.3** | **1.2** | **0.68 J** | **0.61 J** | **0.62 J** | **1.3** | **0.85 J** | **0.83 J** | **2.0** | **0.89 J** | **1.3** | **0.70 J** | **1.7** |
| Tetrachloroethene (PCE; PERC) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Toluene | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.8 J+** |
| trans-1,2-Dichloroethene (trans-1,2-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Trichloroethene (TCE) | 5 | **150** | **132** | **191** | **130** | **135** | **120** | **104** | **64.1** | **95.4** | **87.1** | **118** | **101** | **149** | **122** | **134** | **110** |
| Vinyl Chloride (VC) | 2 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| **MNA Parameters** | | | | | | | | | | | | | | | | | |
| Dissolved Hydrogen (nmol/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | **7.4** | **2.2** | **3.7** | **5.0** | NA | NA | NA | NA |
| Acetylene (ug/L) | NS | NA | NA | NA | NA | NA | NA | NA | 1.0 U | NA | NA | **<0.50** | NA | NA | NA | NA | NA |
| Total Iron (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | **0.51** | **1.0** | **0.47** | **1.1** | **1.6** | **1.7** | **2.0** | **4.660** |
| Dissolved Iron (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | 0.044 U | 0.04 U | **0.024 J** | 0.04 U | 0.04 U | 0.04 U | 0.04 U | **2.570** |
| Alkalinity, Total (as $CaCO_3$) (mg/L)[1] | NS | **196** | **277** | **214** | **129** | **129** | **141** | **162** | **128** | **129** | **158** | **134** | **157** | **169** | **168** | **178.0** | **152.0** |
| Chloride (mg/L) | NS | **35.6** | **138** | **84.6** | **38.0** | **30.7** | **28.2** | **25.4** | **29.5** | **27.8** | **24.5** | **24.1 J-** | **30.6** | **32.1** | **27.7** | **36.1** | **35.7** |
| Nitrate (mg/L) | NS | 0.06 U | 0.06 U | **0.02 J** | **0.02 J** | 0.06 U | 0.06 U | 0.06 U | 0.06 U | 0.06 U | 0.06 U | 0.06 U | 0.06 U | 0.06 U | 0.14 U | 0.14 U | 0.25 U |
| Sulfate (mg/L) | NS | **21.1** | **2.8** | **0.68 J** | **0.50 J** | **0.4 J** | **6.0** | **7.1** | **2.3** | **1.4 J** | **6.0** | **8.6** | **8.1** | **11.5** | **9.8** | **9.6** | **10.0** |
| Methane (µg/L) | NS | **6.8** | **16.5** | **309** | **817** | **835** | **233 J** | **583** | **130** | **2650** | **407** | **2190** | **1180** | **232** | **950** | **2570** | **545** |
| Ethane (µg/L) | NS | **0.5 J** | **1.5** | **19.3** | **35.9** | **29.4** | **5.6 J** | **10.7** | **2** | **21.1** | **12.0** | **12.1** | **9.3** | **4.5** | **6.5** | **8.7** | 1.92 U |
| Ethene (µg/L) | NS | 0.75 U | **1.8** | **10.3** | **15.6** | **5.4** | **2.3 J** | **3.3** | **0.25 J** | **4.7** | **1.5 J** | **1.7 J** | **0.96 J** | 2.40 U | 3.6 U | **1.8 J** | **4.2 J+** |
| Total Organic Carbon (mg/L) | NS | **2.6** | **133** | **98.0** | **22.0** | **5.0** | **5.4 J** | **2.7** | **6.4** | **3.9** | **2.4** | **1.4 J+** | **0.80 J** | 1.0 U | **0.94 J** | **1.1** | **1.6** |
| **Field Parameters** | | | | | | | | | | | | | | | | | |
| pH (pH Unit) | NS | 8.00 | 6.69 | 7.54 | 9.28 | 7.65 | 7.43 | 7.97 | 8.03 | 7.94 | 7.94 | 7.77 | 7.80 | 7.75 | 8.08 | 7.71 | 7.77 |
| Turbidity (NTU) | NS | 180 | 5.92 | 4.01 | 5.10 | 3.91 | 5.11 | 1.36 | 0.02 | 0.02 | 1.60 | 0.02 | 1.98 | 0.7 | 1.11 | 0.02 | 51.10 |
| ORP (MeV) | NS | -234.2 | -107.7 | -140.7 | -238.7 | -149.4 | -181.9 | -106.4 | -149.4 | -201 | -180.0 | -165.3 | -185.0 | -151.9 | -190.2 | -182.3 | -179.0 |
| Conductivity (mS/cm) | NS | 0.239 | 1.180 | 0.640 | 0.261 | 0.478 | 0.257 | 0.239 | 0.206 | 0.291 | 0.338 | 0.320 | 0.264 | 0.124 | 0.243 | 0.429 | 0.388 |
| Dissolved Oxygen YSI (mg/L) | NS | 0.64 | 1.81 | 1.77 | 2.50 | 1.80 | 1.50 | 0.25 | 8.26 | 8.44 | 0.47 | 0.30 | 0.78 | 1.4 | 0.27 | 0.41 | 0.00 |
| Dissolved Oxygen- Downhole (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | NA | 6.4 | -0.39 | NA | NA | NA | NA | NA |
| Groundwater Elevation (ft) | NS | 226.86 | 225.45 | 223.70 | 229.05 | 228.93 | 225.42 | 224.18 | 227.45 | 227.39 | 226.60 | 229.30 | 226.68 | 225.93 | 223.54 | 226.27 | 227.30 |

**Table 3-2. Compliance Well Pairs Groundwater Sample Results – 2015 - 2022**

| Analytes | NYSDEC Ambient Water Quality Standards and Guidance Value | Confirmation Well MW-33 Upgradient | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 11/24/2015 | 12/14/2016 | 3/22/2017 | 6/26/2017 | 9/26/2017 | 12/13/2017 | 3/14/2018 | 6/21/2018 | 9/19/2018 | 12/19/2018 | 6/19/2019 | 12/11/2019 | 6/17/2020 | 12/10/2020 | 6/15/2021 | 10/19/2022 |
| **VOCs (µg/L)** | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | NA |
| 1,1,1-Trichloroethane (1,1,1-TCA) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1,2,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,1,2-Trichloroethane | 1 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1-Dichloroethane (1,1-DCA) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1-Dichloroethene (1,1-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,2-Dichloroethane (EDC) | 0.6 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Carbon Tetrachloride | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| cis-1,2-Dichloroethene (cis-1,2-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.45 J** | 0.75 U | 0.75 U |
| Tetrachloroethene (PCE; PERC) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Toluene | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| trans-1,2-Dichloroethene (trans-1,2-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Trichloroethene (TCE) | 5 | **133** | **93.5** | **151** | **152** | **170** | **142** | **155** | **178** | **137** | **159** | **97.4** | **164** | **165** | **148** | **149** | **140** |
| Vinyl Chloride (VC) | 2 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| **MNA Parameters** | | | | | | | | | | | | | | | | | |
| Dissolved Hydrogen (nmol/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | **3.9** | **2.1** | **3.3** | NA | NA | NA | NA | NA |
| Acetylene (ug/L) | NS | NA | NA | NA | NA | NA | NA | NA | 1.0 U | NA | NA | **<0.50** | NA | NA | NA | NA | NA |
| Total Iron (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | 0.05 U | **0.071** | **0.32** | **0.041 J** | **0.053 J** | **0.370** | **0.091** | **0.590 J+** |
| Dissolved Iron (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | **0.045 J** | 0.04 U | 0.04 U | 0.04 U | 0.04 U | 0.04 U | 0.0 U | **0.117 J+** |
| Alkalinity, Total (as $CaCO_3$) (mg/L)[1] | NS | **172** | **218** | **194** | **205** | **202** | **212** | **215** | **215** | **213** | **211** | **172** | **197** | **201** | **194** | **209** | **183** |
| Chloride (mg/L) | NS | **41.8** | **43.2** | **29.2** | **22.8** | **24.6** | **28.1** | **23.0** | **22.5** | **24.8 J-** | **23.9** | **21.2** | **31.6** | **25.8** | **32.8** | **35** | **33.5** |
| Nitrate (mg/L) | NS | 0.06 U | 0.06 U | **0.32** | **0.32** | **0.30** | **0.32** | **0.34** | **0.42** | **0.4 J** | **0.44** | **0.42** | **0.40** | **0.46** | **0.50** | **0.62** | **0.67** |
| Sulfate (mg/L) | NS | **25.1** | **8.2** | **15.0** | **11.8** | **12.6** | **14.8** | **11.6** | **14.3** | **14.6** | **12.1** | **10.9** | **12.1** | **13.6** | **13.1** | **12.8** | **12.9** |
| Methane (µg/L) | NS | **64** | **3.4** | **9.2** | **16.0** | **17.8** | **7.2** | **6.1** | **17** | 1.5 U | **10.3 J+** | **4.7** | 1.5 U | **4.8** | 1.6 U | 1.6 U | 0.94 U |
| Ethane (µg/L) | NS | **7** | **0.25 J** | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 3.3 U | 3.3 U | 3.3 U | 3.3 U | 3.3 U | 2.6 U | 2.6 U | 1.92 U |
| Ethene (µg/L) | NS | **3.6** | **0.48 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 2.4 U | 2.4 U | **1.2 J** | 2.4 U | 2.4 U | 3.6 U | 3.6 U | 2.64 U |
| Total Organic Carbon (mg/L) | NS | **8.1** | **30.9** | **2.1** | **0.54 J** | **0.44 J** | **0.44 J** | **0.83 J** | **1.6** | **0.58 J** | **1.1 J+** | **1.8 J+** | **0.86 J** | 1.0 U | **1.1** | **1.0** | **1.4** |
| **Field Parameters** | | | | | | | | | | | | | | | | | |
| pH (pH Unit) | NS | 8.39 | 7.18 | 7.58 | 8.8 | 7.51 | 7.53 | 7.99 | 7.66 | 7.69 | 7.69 | 7.21 | 7.65 | 7.3 | 7.81 | 7.54 | 7.50 |
| Turbidity (NTU) | NS | 23.1 | 9.31 | 11.7 | 3.40 | 51.2 | 6.38 | 9.18 | 2.78 | 0.02 | 2.96 | 7.84 | 0.00 | 3.99 | 5.51 | 0.02 | 1.20 |
| ORP (MeV) | NS | -471.2 | -126.8 | -64.3 | 44.9 | -3.2 | -20.4 | -49.9 | 17.6 | 98.7 | 81.9 | 2.8 | 17.1 | 196 | 151.4 | 70.7 | 37.0 |
| Conductivity (mS/cm) | NS | 0.247 | 0.303 | 0.386 | 0.350 | 0.648 | 0.370 | 0.285 | 0.385 | 0.456 | 0.390 | 0.374 | 0.325 | 0.322 | 0.286 | 0.422 | 0.439 |
| Dissolved Oxygen YSI (mg/L) | NS | 0.92 | 0.41 | 2.50 | 2.99 | 2.87 | 6.80 | 1.89 | 3.41 | 9.21 | 3.96 | 0.65 | 3.73 | 7.05 | 5.68 | 4.70 | 3.29 |
| Dissolved Oxygen- Downhole (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | NA | 3.3 | 3.82 | NA | NA | NA | NA | NA |
| Groundwater Elevation (ft) | NS | 226.89 | 225.51 | 223.80 | 229.11 | 229.05 | 225.54 | 224.26 | 227.51 | 227.42 | 226.68 | 229.37 | 226.68 | 226.07 | 223.63 | 226.29 | 227.23 |

**Table 3-2. Compliance Well Pairs Groundwater Sample Results – 2015 - 2022**

| Analytes | NYSDEC Ambient Water Quality Standards and Guidance Value | Confirmation Well MW-34 Downgradient | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 11/24/2015 | 12/13/2016 | 3/21/2017 | 6/26/2017 | 9/26/2017 | 12/12/2017 | 3/13/2018 | 6/20/2018 | 9/19/2018 | 12/20/2018 | 6/20/2019 | 12/11/2019 | 6/16/2020 | 12/9/2020 | 6/15/2021 | 10/19/2022 |
| **VOCs (µg/L)** | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | NA |
| 1,1,1-Trichloroethane (1,1,1-TCA) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1,2,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,1,2-Trichloroethane | 1 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1-Dichloroethane (1,1-DCA) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1-Dichloroethene (1,1-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,2-Dichloroethane (EDC) | 0.6 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Carbon Tetrachloride | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| cis-1,2-Dichloroethene (cis-1,2-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.63 J** | **5.0** | 0.75 U | 0.75 U | **0.95 J** |
| Tetrachloroethene (PCE; PERC) | 5 | **0.42 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Toluene | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.72 J+** |
| trans-1,2-Dichloroethene (trans-1,2-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Trichloroethene (TCE) | 5 | **17.7** | **41.3** | **48.3** | **34.0** | **29.6** | **28.0** | **17.6** | **31.3** | **6.9** | **10.6** | **1.1** | **2.9** | **18.9** | **3.6** | **3.9 J** | **22.5** |
| Vinyl Chloride (VC) | 2 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| **MNA Parameters** | | | | | | | | | | | | | | | | | |
| Dissolved Hydrogen (nmol/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | **3.1** | **3.1** | **2.2** | **3.0** | NA | NA | NA | NA |
| Acetylene (ug/L) | NS | NA | NA | NA | NA | NA | NA | NA | 1.0 U | NA | NA | **<0.50** | NA | NA | NA | NA | NA |
| Total Iron (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | 0.05 U | **0.07** | **0.33 J** | **0.35** | **0.66** | **0.062 J** | **0.034 J** | **0.895 J+** |
| Dissolved Iron (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | 0.04 U | 0.04 U | **0.18** | **0.081** | **0.27** | 0.040 U | 0.04 U | **0.979 J** |
| Alkalinity, Total (as $CaCO_3$) (mg/L)[1] | NS | **99** | **191** | **597** | **201** | **197** | **203** | **174** | **226** | **183** | **162** | **194** | **140** | **146** | **99** | **247** | **182** |
| Chloride (mg/L) | NS | **48.5** | **62.3** | **461** | **15.7** | **11.7** | **12.9** | **15.4** | **16.3** | 2.0 U | **12.6** | **6.6 J-** | **2.5** | **13.8** | **3.8** | **3.4** | **13.8** |
| Nitrate (mg/L) | NS | **0.56** | **0.06 J** | 0.06 U | **0.04 J** | 0.06 U | **0.02 J** | **0.02 J** | 0.06 U | **0.56 J** | 0.06 U | 0.06 U | **0.22** | 0.06 U | 0.14 U | **0.1 J** | 0.25 U |
| Sulfate (mg/L) | NS | **64.3** | **23.8** | **0.56 J** | **13.4** | **9.0** | **7.3** | **8.5** | **11.2** | **3.9** | **3.3** | 2.0 U | **2.5** | **3.5** | **5.5** | **3.9** | **10.4** |
| Methane (µg/L) | NS | **14.5** | **1.2** | **1780** | **12.4** | **88.1** | **531** | **1260** | **35** | 1.5 U | **737** | **419** | **144** | **1740** | **8.5** | **1.5 J** | **22.7 J** |
| Ethane (µg/L) | NS | **2.2** | 0.50 U | **17.3** | 0.50 U | **0.45 J** | **1.1** | **1.3** | 0.50 U | 3.31 U | **4.0** | **0.77 J** | 3.3 U | **3.6** | 2.6 U | 2.6 U | 1.92 U |
| Ethene (µg/L) | NS | **1.8** | 0.75 U | **4.4** | 0.75 U | **0.58 J** | 0.75 U | 0.75 U | 0.75 U | 2.41 U | 2.4 U | **1.1 J** | 2.4 U | 2.4 U | 3.6 U | 3.6 U | 2.64 U |
| Total Organic Carbon (mg/L) | NS | **5.9** | **12.0** | **631** | **3.3** | **3.8** | **4.1** | **3.4** | **0.93 J** | **6.8** | **3.2 J+** | **8.3** | **4.3** | **3.8** | **3.8** | **11.1** | **3.0** |
| **Field Parameters** | | | | | | | | | | | | | | | | | |
| pH (pH Unit) | NS | 12.68 | 7.14 | 7.45 | 7.26 | 7.26 | 7.40 | 7.37 | 7.30 | 7.12 | 7.67 | 8.91 | 7.80 | 8.59 | 7.79 | 6.99 | 7.44 |
| Turbidity (NTU) | NS | 44.7 | 3.23 | 4.59 | -4 | 4.40 | 4.20 | 5.63 | 1.4 | 0.02 | 4.26 | 5.55 | 2.96 | 3.16 | 1.20 | 1.32 | 1.90 |
| ORP (MeV) | NS | -185.4 | -8.4 | -144.0 | -139.4 | -63.1 | -133.4 | 25.0 | -76.3 | 118.1 | -29.2 | -140.1 | 269.7 | -87.4 | 112.0 | 187.9 | -98.0 |
| Conductivity (mS/cm) | NS | 0.361 | 0.630 | 2.280 | 0.332 | 0.578 | 0.310 | 0.234 | 0.332 | 0.312 | 0.341 | 0.368 | 0.178 | 0.17 | 0.142 | 0.390 | 0.380 |
| Dissolved Oxygen YSI (mg/L) | NS | 6.9 | 1.12 | 0.12 | 0.46 | 0.62 | 2.70 | 0.34 | 1.31 | 8.69 | 0.47 | 0.35 | 5.05 | 0.17 | 1.14 | 5.55 | 0.00 |
| Dissolved Oxygen- Downhole (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | NA | 4.2 | -0.15 | NA | NA | NA | NA | NA |
| Groundwater Elevation (ft) | NS | 226.73 | 225.48 | 223.35 | 228.66 | 228.77 | 225.51 | 223.89 | 227.03 | 227.21 | 226.37 | 228.61 | 226.37 | 225.45 | 223.49 | 225.66 | 227.49 |

**Table 3-2. Compliance Well Pairs Groundwater Sample Results – 2015 - 2022**

| Analytes | NYSDEC Ambient Water Quality Standards and Guidance Value | Confirmation Well MW-35 | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 11/24/2015 | 12/15/2016 | 3/22/2017 | 6/26/2017 | 9/26/2017 | 12/12/2017 | 3/13/2018 | 6/20/2018 | 9/19/20118 | 12/20/2018 | 6/20/2019 | 12/11/2019 | 6/16/2020 | 12/9/2020 | 6/14/2021 | 10/19/2022 |
| | | Upgradient | | | | | | | | | | | | | | | |
| **VOCs (µg/L)** | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | NA |
| 1,1,1-Trichloroethane (1,1,1-TCA) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1,2,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,1,2-Trichloroethane | 1 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1-Dichloroethane (1,1-DCA) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1-Dichloroethene (1,1-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,2-Dichloroethane (EDC) | 0.6 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Carbon Tetrachloride | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| cis-1,2-Dichloroethene (cis-1,2-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| Tetrachloroethene (PCE; PERC) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Toluene | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| trans-1,2-Dichloroethene (trans-1,2-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Trichloroethene (TCE) | 5 | **31.9** | **31.8** | **12.5** | **43.8 J** | **47.8** | **43.5** | **21.2** | **39.4** | **15.2** | **38.1** | **34.8** | **35.4** | **42.9** | **37.3** | **39.6** | **44** |
| Vinyl Chloride (VC) | 2 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| **MNA Parameters** | | | | | | | | | | | | | | | | | |
| Dissolved Hydrogen (nmol/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | **2.6** | **2.1** | **1.4** | NA | NA | NA | NA | NA |
| Acetylene (ug/L) | NS | NA | NA | NA | NA | NA | NA | NA | 1.0 U | NA | NA | **<0.50** | NA | NA | NA | NA | NA |
| Total Iron (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | **0.45** | **0.12** | **0.61** | **0.30** | **0.087** | **0.036** J | **0.052 J** | **0.161 J+** |
| Dissolved Iron (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | 0.044 U | **0.09** | 0.04 U | 0.04 U | 0.04 U | 0.040 U | 0.04 U | 0.040 U |
| Alkalinity, Total (as $CaCO_3$) (mg/L)[1] | NS | **181** | **223** | **51** | **202** | **192** | **210** | **171** | **197** | **115** | **195** | **174** | **168** | **177** | **184** | **168** | **181** |
| Chloride (mg/L) | NS | **42.2** | **53.9** | **2.0** | **17.1** | **14.4** | **22.2 J+** | **14.5** | **15.7** | **2.1** | **24.4** | **21.2 J-** | **23.1** | **26.1** | **26.2** | **63.7** | **22.7** |
| Nitrate (mg/L) | NS | 0.06 U | **0.04 J** | **0.14 J** | **0.66** | **0.6** | **0.44** | **0.44** | **0.64** | **0.68 J** | **0.58** | **0.38** | **0.44** | **0.54** | **0.50** | **3.8** | **0.82** |
| Sulfate (mg/L) | NS | **48.1** | **7.2** | **3.5** | **13.6** | **10.8** | **10.2** | **8.5** | **10.7** | **2.5** | **9.7** | **9.8** | **9.1** | **10.3** | **10.6** | **21.9** | **10** |
| Methane (µg/L) | NS | **13.8** | **0.90** | **5.8** | **7.2** | **7.5** | **7.9** | **32.7** | **23** | **50.5** | **12.3 J+** | **38.3** | **166** | **59** | 1.6 U | **5.1** | 0.94 U |
| Ethane (µg/L) | NS | **2.9** | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 3.31 U | 3.3 U | 3.3 U | 3.3 U | 3.3 U | 2.6 U | 2.6 U | 1.92 U |
| Ethene (µg/L) | NS | **1.6** | 0.75 U | **0.32 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 2.41 U | 2.4 U | 2.4 U | 2.4 U | 2.4 U | 3.6 U | 3.6 U | 2.64 U |
| Total Organic Carbon (mg/L) | NS | **7.7** | **18.3** | **1.4** | **0.75 J** | **0.68 J** | **0.56 J** | **1.2** | **0.6 J** | **3.5** | **1.1 J** | **1.2 J+** | **1.6** | 1.0 U | **0.59 J** | **1.0** | **1.3** |
| **Field Parameters** | | | | | | | | | | | | | | | | | |
| pH (pH Unit) | NS | 9.68 | 7.09 | 8.79 | 7.66 | 7.46 | 7.44 | 7.46 | 7.55 | 7.49 | 7.77 | 7.42 | 7.59 | 7.56 | 7.87 | 7.33 | 7.47 |
| Turbidity (NTU) | NS | 381 | 5.99 | 16.3 | 38.2 | 31.91 | 13.81 | 11.00 | 25.8 | 33.8 | 4.49 | 12.1 | 9.0 | 3.9 | 0.67 | 0.09 | 3.60 |
| ORP (MeV) | NS | -404 | -167.9 | -68.4 | -10.6 | 30 | 0.40 | 57.10 | 69.5 | 65.6 | 45.4 | -37.1 | 173.8 | 101.2 | 141.8 | 66.3 | 62.0 |
| Conductivity (mS/cm) | NS | 0.287 | 0.329 | 0.078 | 0.324 | 0.600 | 0.338 | 0.218 | 0.335 | 0.204 | 0.453 | 0.361 | 0.134 | 0.394 | 0.328 | 0.246 | 0.404 |
| Dissolved Oxygen YSI (mg/L) | NS | 0.79 | 0.41 | 6.63 | 3.67 | 4.58 | 4.84 | 1.32 | 3.54 | 9.57 | 5.38 | 1.82 | 5.55 | 6.44 | 7.32 | 0.99 | 3.35 |
| Dissolved Oxygen- Downhole (mg/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | NA | 3.5 | 1.35 | NA | NA | NA | NA | NA |
| Groundwater Elevation (ft) | NS | 226.69 | 225.46 | 223.40 | 228.68 | 228.81 | 225.56 | 224.08 | 227.04 | 227.26 | 226.47 | 228.95 | 226.47 | 225.66 | 223.61 | 225.75 | 227.36 |

**Table 3-3. Annual Site Wide Groundwater Sample Results**

| Analytes | NYSDEC Ambient Water Quality Standards and Guidance Value | GEP-1 | | | | | | | GEP-2 | | | | | | | GEP-3 | | | | | | GEP-4 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 11/10/2015 | 6/23/2017 | 1/23/2019 | 6/18/2019 | 6/18/2020 | 6/16/2021 | 10/20/2022 | 11/10/2015 | 6/21/2017 | 6/20/2018 | 6/18/2019 | 6/16/2020 | 6/16/2021 | 10/18/2022 | 11/9/2015 | 6/23/2017 | 6/20/2018 | 6/18/2019 | 6/18/2020 | 6/16/2021 | 11/9/2015 | 6/21/2017 | 1/23/2019 | 6/18/2019 | 6/17/2020 | 6/16/2021 | 10/18/2022 |
| | | Upgradient | | | | | | | Upgradient | | | | | | | Upgradient | | | | | | Upgradient | | | | | | |
| **VOCs (µg/L)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | NA | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | NA | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 3.8 U | 3.8 U | NA |
| 1,1,1-Trichloroethane (1,1,1-TCA) | 5 | **4.6** | **3.3 J+** | **5.8** | **5.1** | **5.9** | **4.2** | **6.5** | **19.7** | **16.3** | **3.7** | **19.6** | **18.1** | **8.4** | **16.1** | **0.93 J** | **1.2** | **0.58 J** | **2.1** | **2.9** | **1.2** | **5.1** | **4.7** | **18.9** | **13.9** | **14.3** | **14.5** | **13.9** |
| 1,1,2,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 3.8 U | 3.8 U | 0.75 U |
| 1,1,2-Trichloroethane | 1 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.28 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 3.8 U | 3.8 U | 0.5 U |
| 1,1-Dichloroethane (1,1-DCA) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | **0.56 J** | **0.68 J** | 0.75 U | **0.92 J** | **0.72 J** | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 3.8 U | 3.8 U | 0.5 U |
| 1,1-Dichloroethene (1,1-DCE) | 5 | **0.43 J** | 0.75 U | **0.39 J** | **0.41 J** | **0.36 J** | 0.75 U | **0.46 J** | **1.1** | **1.1** | 0.75 U | **0.69 J** | **0.55 J** | 0.75 U | **0.69 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.42 J** | 0.75 U | 0.75 U | 0.75 U | **1.2** | **0.73 J** | 3.8 U | 3.8 U | **0.6 J** |
| 1,2-Dichloroethane (EDC) | 0.6 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 3.8 U | 3.8 U | 0.5 U |
| Carbon Tetrachloride | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.40 J** | 0.75 U | **0.5 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.48 J** | 0.75 U | 0.75 U | 0.75 U | **0.65 J** | **0.39 J** | 3.8 U | 3.8 U | **0.54 J** |
| cis-1,2-Dichloroethene (cis-1,2-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | **0.35 J** | 0.75 U | 0.75 U | 0.75 U | **1.2** | **1.8** | **1.1** | **3.3** | **1.9** | **1.2** | **1.8** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.47 J** | **0.41 J** | 3.8 U | 3.8 U | **0.29 J** |
| Tetrachloroethene (PCE; PERC) | 5 | **1.0** | **0.45 J** | 0.75 U | **0.51 J** | **1.1** | **0.48 J** | **1.1** | **3.5** | **3.2** | **0.80 J** | **4.6** | **4.0** | **0.85 J** | **5.3** | **1.1** | **0.57 J** | **0.36 J** | **0.55 J** | **0.48 J** | **0.67 J** | **0.68 J** | **0.80 J** | **3.6** | **3.2** | **3.2 J** | **3.6 J** | **3.6** |
| Toluene | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.38 J** | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.39 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 3.8 U | 3.8 U | 0.5 U |
| trans-1,2-Dichloroethene (trans-1,2-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 3.8 U | 3.8 U | 0.5 U |
| Trichloroethene (TCE) | 5 | **180** | **152 J+** | **157** | **150** | **183** | **109** | **130** | **210** | **167** | **51.3** | **171** | **148** | **54.9** | **210** | **143** | **131** | **74.9** | **137** | **217** | **118** | **85.9** | **72.4** | **441** | **312** | **274** | **423** | **340** |
| Vinyl Chloride (VC) | 2 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 3.8 U | 3.8 U | 0.5 U |
| **MNA Parameters** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dissolved Hydrogen (nmol/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetylene | NS | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Alkalinity, Total (as $CaCO_3$) (mg/L)[1] | NS | 223 | NA | NA | NA | NA | NA | NA | **335** | NA | NA | NA | NA | NA | NA | **217** | NA | NA | NA | NA | NA | **227** | NA | NA | NA | NA | NA | NA |
| Chloride (mg/L) | NS | 13.2 | NA | NA | NA | NA | NA | NA | **5.6** | NA | NA | NA | NA | NA | NA | **15.4** | NA | NA | NA | NA | NA | **22.5** | NA | NA | NA | NA | NA | NA |
| Nitrate (mg/L) | NS | 1.0 | NA | NA | NA | NA | NA | NA | **0.38 J** | NA | NA | NA | NA | NA | NA | **0.79** | NA | NA | NA | NA | NA | **0.71** | NA | NA | NA | NA | NA | NA |
| Sulfate (mg/L) | NS | 10.2 | NA | NA | NA | NA | NA | NA | **9.9** | NA | NA | NA | NA | NA | NA | **10.8** | NA | NA | NA | NA | NA | **13.2** | NA | NA | NA | NA | NA | NA |
| Methane (µg/L) | NS | 0.32 J | NA | NA | NA | NA | NA | NA | **0.33 J** | NA | NA | NA | NA | NA | NA | **0.16 J** | NA | NA | NA | NA | NA | **0.4 J** | NA | NA | NA | NA | NA | NA |
| Ethane (µg/L) | NS | 0.5 U | NA | NA | NA | NA | NA | NA | 0.5 U | NA | NA | NA | NA | NA | NA | 0.5 U | NA | NA | NA | NA | NA | 0.5 U | NA | NA | NA | NA | NA | NA |
| Ethene (µg/L) | NS | 0.75 U | NA | NA | NA | NA | NA | NA | 0.75 U | NA | NA | NA | NA | NA | NA | 0.75 U | NA | NA | NA | NA | NA | 0.75 U | NA | NA | NA | NA | NA | NA |
| Total Organic Carbon (mg/L) | NS | 3.4 | NA | NA | NA | NA | NA | NA | **2.9** | NA | NA | NA | NA | NA | NA | **0.47 J** | NA | NA | NA | NA | NA | **2.7** | NA | NA | NA | NA | NA | NA |
| **Field Parameters** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| pH (pH Unit) | NS | 7.52 | 8.31 | 7.34 | 7.21 | 8.23 | 7.36 | 7.61 | 7.18 | 6.6 | 7.57 | 7.16 | 7.18 | 7.15 | 7.37 | 7.69 | 7.40 | 7.40 | 7.46 | 7.49 | 7.57 | 7.67 | 7.39 | 7.22 | 7.27 | 7.56 | 7.26 | 7.22 |
| Turbidity (NTU) | NS | 33.1 | 45.6 | 5.82 | 15 | 393 | 19 | 98.6 | 28.2 | 0 | 107 | 23 | 32.7 | 13.6 | 4.9 | 13.9 | 113.1 | 78.7 | 54 | 3.01 | 48.9 | 41.8 | 9.4 | 3.24 | 7.14 | 3.35 | 0.0 | 4.2 |
| ORP (MeV) | NS | 141.8 | 203.5 | 124.1 | 251.6 | 173.8 | 78.7 | 145 | 180.3 | 336.1 | 61.1 | 185.1 | 186.0 | 110.2 | 165 | 131.4 | 171.5 | 31.2 | 152.1 | 209.3 | 149.9 | 110.7 | 109.9 | 106.8 | 262.5 | 134.9 | 104.4 | 156 |
| Conductivity (mS/cm) | NS | 0.308 | 0.396 | 0.536 | 0.435 | 0.525 | 0.504 | 0.334 | 0.371 | 0.476 | 0.417 | 0.543 | 0.540 | 0.522 | 0.560 | 0.329 | 0.363 | 0.364 | 0.385 | 0.420 | 0.547 | 0.363 | 0.51 | 0.72 | 0.575 | 0.089 | 0.451 | 0.506 |
| Dissolved Oxygen YSI (mg/L) | NS | 19.53 | 9.9 | -22 * | 8.27 | 8.06 | 7.79 | 5.09 | 30.01 | 8.63 | 11.49 | 8.26 | 9.22 | 7.77 | 4.73 | 114.75 | 9.44 | 8.91 | 8.19 | 9.37 | 7.88 | 14.93 | 5.05 | -22.74 * | 7.86 | 9.34 | 9.62 | 6.25 |
| Groundwater Elevation (ft) | NS | 224.81 | NA | NA | 230.13 | 226.80 | 225.57 | 226.03 | 227.90 | 230.84 | 229.02 | 231.16 | 228.09 | 228.97 | 288.37 | 227.81 | 292.97 | 228.72 | 228.35 | 227.68 | 227.55 | 227.73 | 230.61 | NA | 230.94 | 227.86 | 227.70 | 228.15 |

Notes:
MNA - Monitored Natural Attenuation
NS - no standard
Detected concentrations are in bold font.
Detections exceeding the NYSDEC Ambient Water Quality Standards (AWQS) are highlighted in gray.
J - Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
J+ - The result is an estimated quantity, likely to be biased high.
J- - The result is an estimated quantity, likely to be biased low.
U - Indicates that the analyte was not detected (ND).
* - negative DO measurements are the result of low temperatures affecting the DO probe during the sampling event
1 - TheTotal Alkalinity is titrated to a pH of 4.5 and reported as mg $CaCO_3$/L.
2 - Analyte was analyzed past the 48 hour holding time.
3 - The QC sample type DUP for method RSK 175 was outside the control limits for the analyte Methane. The RPD was reported as 23.8 and the upper contol limit is 20.

**Table 3-3. Annual Site Wide Groundwater Sample Results**

| Analytes | NYSDEC Ambient Water Quality Standards and Guidance Value | MW-B-3 | | | | | | MW-5 | | | | | | | MW-6 | | | | | | | MW-7 | | | | | | | MW-8 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 11/13/2015 | 6/22/2017 | 7/18/2018 | 6/18/2020 | 6/17/2021 | 10/20/2022 | 11/12/2015 | 6/20/2017 | 6/19/2018 | 6/17/2019 | 6/18/2020 | 6/14/2021 | 10/18/2022 | 11/12/2015 | 6/20/2017 | 6/18/2018 | 6/17/2019 | 6/15/2020 | 6/14/2021 | 10/18/2022 | 11/11/2015 | 6/20/2017 | 6/18/2018 | 6/17/2019 | 6/15/2020 | 6/14/2021 | 10/18/2022 | 1/23/2019 | 6/17/2019 | 6/16/2020 | 6/17/2021 |
| | | Outside Plume | | | | | | Downgradient | | | | | | | Downgradient | | | | | | | Downgradient | | | | | | | Outside Plume | | | |
| **VOCs (µg/L)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | NA | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | NA | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | NA | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | NA | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,1,1-Trichloroethane (1,1,1-TCA) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | **0.51 J** | **0.41 J** | 0.75 U | **0.48 J** | 0.75 U | 0.75 U | 0.5 U | **2.1** | **0.77 J** | **0.75 J** | **0.55 J** | **2.6 J+** | **0.95 J** | **0.57 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | **2.1 J** | 0.75 U | 0.75 U | 0.75 U |
| 1,1,2,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,1,2-Trichloroethane | 1 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,1-Dichloroethane (1,1-DCA) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,1-Dichloroethene (1,1-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,2-Dichloroethene (EDC) | 0.6 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| Carbon Tetrachloride | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **2.0** | **2.0** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.50 J** | **0.70 J** | |
| cis-1,2-Dichloroethene (cis-1,2-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.45 J** | **0.39 J** | 0.75 U | 0.75 U | **1.0 J+** | **0.35 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| Tetrachloroethene (PCE; PERC) | 5 | **1.8** | **3.9** | **5.0** | **6.3** | **5.10** | **0.54 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.65 J** | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| Toluene | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **1.3 J+** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.68 J+** | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| trans-1,2-Dichloroethene (trans-1,2-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| Trichloroethene (TCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.57 J** | **0.46 J** | **0.58 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **59.8** | **26** | **24.4** | **19.9** | **88.4 J+** | **32.8** | **30.1** | **1.3** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | **3.4 J** | 0.75 U | 0.75 U | 0.75 U |
| Vinyl Chloride (VC) | 2 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| **MNA Parameters** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dissolved Hydrogen (nmol/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetylene | NS | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Alkalinity, Total (as $CaCO_3$) (mg/L)[1] | NS | **110** | NA | NA | NA | NA | NA | **221** | NA | NA | NA | NA | NA | NA | **281** | NA | NA | NA | NA | NA | NA | **353** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chloride (mg/L) | NS | **155** | NA | NA | NA | NA | NA | **197** | NA | NA | NA | NA | NA | NA | **28.4** | NA | NA | NA | NA | NA | NA | **26.7** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Nitrate (mg/L) | NS | **0.66 J+** | NA | NA | NA | NA | NA | **6.7** | NA | NA | NA | NA | NA | NA | **1.7** | NA | NA | NA | NA | NA | NA | **1.1** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Sulfate (mg/L) | NS | **25.3** | NA | NA | NA | NA | NA | **36.7 J** | NA | NA | NA | NA | NA | NA | **23.2 J** | NA | NA | NA | NA | NA | NA | **15** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Methane (µg/L) | NS | **0.39 J** | NA | NA | NA | NA | NA | **0.19 J** | NA | NA | NA | NA | NA | NA | 0.25 U | NA | NA | NA | NA | NA | NA | **1.7** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Ethane (µg/L) | NS | 0.5 U | NA | NA | NA | NA | NA | 0.5 U | NA | NA | NA | NA | NA | NA | 0.5 U | NA | NA | NA | NA | NA | NA | 0.5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Ethene (µg/L) | NS | 0.75 U | NA | NA | NA | NA | NA | 0.75 U | NA | NA | NA | NA | NA | NA | 0.75 U | NA | NA | NA | NA | NA | NA | 0.75 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total Organic Carbon (mg/L) | NS | **5.2** | NA | NA | NA | NA | NA | **7.3** | NA | NA | NA | NA | NA | NA | **5.5** | NA | NA | NA | NA | NA | NA | **5.5** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Field Parameters** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| pH (pH Unit) | NS | 7.86 | 8.31 | 7.4 | 7.59 | 7.48 | 7.76 | 7.37 | 6.19 | 7.10 | 7.50 | 7.59 | 7.43 | 7.32 | 7.3 | 7.30 | 7.31 | 7.33 | 7.52 | 7.31 | 7.22 | 7.76 | 7.04 | 7.29 | 6.58 | 7.16 | 6.93 | 7.22 | 7.55 | 7.5 | 7.58 | 7.53 |
| Turbidity (NTU) | NS | 4.95 | 8 | 217.9 | 38.1 | 19.1 | 0.00 | 23.9 | 4.7 | 0.02 | 0.02 | 0.02 | 0.05 | 0.00 | 2.76 | 3.9 | 0.02 | 1.39 | 0.17 | 1.60 | 4.50 | 4.64 | 7.4 | 33.8 | 19.5 | 40.0 | 4.0 | 61.9 | 0.02 | 0.02 | 0.02 | 4.74 |
| ORP (MeV) | NS | 157.4 | 180.2 | 218.0 | 151.2 | 76.7 | 147 | 74.3 | 26.3 | 85.9 | 290.8 | 189.9 | 111.4 | 159 | 151.8 | 121.4 | 111.2 | 295 | 119 | 184.2 | 129 | 165.8 | 126.4 | -46.0 | 27.1 | 149.9 | 172.2 | 201 | 93.60 | 295.9 | 149.3 | 146.1 |
| Conductivity (mS/cm) | NS | 0.461 | 0.385 | 0.124 | 0.315 | 0.688 | 0.321 | 0.654 | 0.701 | 1.59 | 10.73 | 0.591 | 0.37 | 0.431 | 0.317 | 0.419 | 0.358 | 9.23 | 0.297 | 0.427 | 0.655 | 0.32 | 0.732 | 0.85 | 1.573 | 0.530 | 0.454 | 0.688 | 0.465 | 8.25 | 0.248 | 0.620 |
| Dissolved Oxygen YSI (mg/L) | NS | 19.91 | 10.1 | 9.06 | 9.65 | 9.25 | 7.31 | 17.86 | 12.4 | 9.60 | 4.34 | 11.10 | 9.66 | 5.13 | 24.39 | 8.9 | 9.98 | 5.48 | 9.37 | 9.87 | 7.54 | 11.81 | 7.38 | 9.00 | 8.07 | 9.80 | 9.92 | 5.11 | -16.2 * | 4.22 | 8.07 | 9.53 |
| Groundwater Elevation (ft) | NS | 227.95 | NA | 228.44 | 228.80 | 227.00 | 228.25 | 225.75 | 226.29 | 225.81 | 226.39 | 217.78 | 225.54 | 224.01 | 225.86 | 226.55 | 226.01 | 226.47 | 218.18 | 225.52 | 224.14 | 226.28 | 227.30 | 222.54 | 226.94 | 220.94 | 225.36 | 226.33 | NA | - | 220.21 | 226.10 |

**Table 3-3. Annual Site Wide Groundwater Sample Results**

| Analytes | NYSDEC Ambient Water Quality Standards and Guidance Value | MW-9 | | | | | | | MW-11 R | | | | MW-12 R | | | | | MW-13 | MW-14 | | | | | | | MW-15 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 11/12/2015 | 6/20/2017 | 6/19/2018 | 6/24/2019 | 6/18/2020 | 6/17/2021 | 10/18/2022 | 6/24/2019 | 6/16/2020 | 6/17/2021 | 10/18/2022 | 1/23/2019 | 6/17/2019 | 6/16/2020 | 6/17/2021 | 10/18/2022 | 6/20/2018 | 11/12/2015 | 6/21/2017 | 6/20/2018 | 6/18/2019 | 6/18/2020 | 6/16/2021 | 10/20/2022 | 11/9/2015 | 12/14/2016 | 6/21/2017 | 6/20/2018 | 6/20/2019 | 6/16/2020 | 6/16/2021 | 10/19/2022 |
| | | Downgradient | | | | | | | Outside Plume | | | | Outside Plume | | | | | Downgradient | Upgradient | | | | | | | Upgradient | | | | | | | |
| **VOCs (µg/L)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | NA | 0.75 U | 0.75 U | 0.75 U | NA | 0.75 U | 0.75 U | 0.75 U | 0.75 U | NA | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | NA | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | NA |
| 1,1,1-Trichloroethane (1,1,1-TCA) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | **0.53 J** | **0.61 J** | **0.47 J** | **0.32 J** | 0.75 U | **2.1** | **1.3** | **1.90** | **2.1** | **4.0** | **3.9** | **1.2** | **2.5** | **1.1** | **4.1** | **2.1** | **7.6** | **1.9** | **4.4** | **3.8** | **2.9** | **5.6** | **5.4** | **1.30** | **5.6** |
| 1,1,2,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,1,2-Trichloroethane | 1 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.50 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.5 U |
| 1,1-Dichloroethane (1,1-DCA) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | **0.43 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.50 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.5 U |
| 1,1-Dichloroethene (1,1-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.44 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.25 J** | **0.25 J** |
| 1,2-Dichloroethane (EDC) | 0.6 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.50 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.5 U |
| Carbon Tetrachloride | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **5.3** | **6.5** | **4.6** | **4.9** | 0.75 U | **4.8** | **8.0** | **4.40** | **3.6** | 0.75 U | 0.75 U | 0.75 U | **0.49 J** | **0.54 J** | **0.74 J** | **0.58 J** | **0.65 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.38 J** |
| cis-1,2-Dichloroethene (cis-1,2-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **2.4** | **0.85 J** | **1.9** | **0.63 J** | **2.7** | **1.3** | **4.8** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| Tetrachloroethene (PCE; PERC) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | **0.79 J** | **0.63 J** | **0.74 J** | **1.30** | 0.75 U | **10.8** | **10.5** | **13.8** | **10.9** | **18.5** | **10.8** | **45.4** | **0.60 J** | **1.7** | **0.66 J** | **0.62 J** | **1.0 J** | **1.0** | **0.61 J** | **1.2** |
| Toluene | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **1.3 J+** | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.69 J+** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.50 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.5 U |
| trans-1,2-Dichloroethene (trans-1,2-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.26 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.50 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.5 U |
| Trichloroethene (TCE) | 5 | **0.68 J** | 0.75 U | 0.75 U | 0.75 U | **0.60 J** | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | **0.41 J** | 0.75 U | **5.0** | **5.4** | **4.50** | **6.8** | **117** | **3.7** | **2.4** | **3.7** | **2.0** | **3.6** | **3** | **7.9** | **77.3** | **183** | **122** | **72.1** | **128** | **139** | **47.30** | **150** |
| Vinyl Chloride (VC) | 2 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.50 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| **MNA Parameters** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dissolved Hydrogen (nmol/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | **1.5** | NA | NA | NA |
| Acetylene | NS | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1.0 U | **<0.50** | NA | NA | NA |
| Alkalinity, Total (as $CaCO_3$) (mg/L)[1] | NS | **186** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | **242** | NA | NA | NA | NA | NA | NA | **182** | **212** | **217** | **209** | **169** | **220** | **208.0** | **201** |
| Chloride (mg/L) | NS | **12** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | **26.4** | NA | NA | NA | NA | NA | NA | **28.9** | **14.3** | **40.1** | **46.4** | **43.4** | **35.7** | **58.4** | **34.5** |
| Nitrate (mg/L) | NS | 0.5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | **0.96** | NA | NA | NA | NA | NA | NA | **0.58** | **0.56** | **0.52** | **0.48** | **0.56** | **0.5** | **0.3** | **2.3** |
| Sulfate (mg/L) | NS | **56.7 J** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | **21 J** | NA | NA | NA | NA | NA | NA | **12.3** | **12.4** | **20.5** | **15.2** | **12** | **10.7** | **13.1** | **19.0** |
| Methane (µg/L) | NS | **2.7** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | **0.86** | NA | NA | NA | NA | NA | NA | **0.19 J** | 0.5 U | 0.5 U | **1.3 J+** | 1.5 U | 1.5 U | 1.6 U | **1.5 J+** |
| Ethane (µg/L) | NS | 0.5 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.5 U | NA | NA | NA | NA | NA | NA | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 3.3 U | 3.3 U | 2.6 U | 9.6 U |
| Ethene (µg/L) | NS | 0.75 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.75 U | NA | NA | NA | NA | NA | NA | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 2.4 U | 2.4 U | 3.6 U | **10.4 J+** |
| Total Organic Carbon (mg/L) | NS | **3.3** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | **6** | NA | NA | NA | NA | NA | NA | **0.55 J** | **0.57 J** | **0.21 J** | **0.41 J** | **1.0 U** | 1.0 U | **1.1** | **1.3** |
| **Field Parameters** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| pH (pH Unit) | NS | 7.82 | 6.64 | 6.96 | 7.54 | 7.73 | 7.59 | 7.83 | 7.46 | 7.62 | 7.4 | 7.60 | 7.50 | 7.36 | 7.49 | 7.55 | 7.58 | 7.27 | 7.39 | 7.28 | 7.01 | 7.49 | 8.55 | 7.78 | 7.38 | 7.73 | 7.31 | 7.42 | 7.62 | 7.48 | 7.51 | 7.68 | 7.52 |
| Turbidity (NTU) | NS | 3.75 | 0.1 | 8.11 | 4.00 | 36.6 | 0.21 | 39.8 | 8.46 | 31.0 | 23.4 | 33.7 | 0.02 | 13.8 | 3.80 | 2.81 | 4.80 | 14.4 | 136 | 5 | 3.80 | 294 | 9.28 | 159.00 | 628 | 11.1 | 7 | 2.1 | 153.0 | 4.49 | 1.58 | 5.47 | 4.80 |
| ORP (MeV) | NS | -121.4 | -1.0 | -22.0 | -34.7 | 34.7 | -133.9 | -140 | 273.5 | 181.6 | 149.6 | 128 | 87.0 | 58.8 | 166.7 | 128.6 | 147 | 28.5 | 119.4 | 122.6 | 52.1 | 154 | 158.2 | 101.2 | 164 | 91.4 | 54.6 | 114.6 | 67.2 | 102 | 160.1 | 54.4 | 160.0 |
| Conductivity (mS/cm) | NS | 0.237 | 0.386 | 0.39 | 0.183 | 0.392 | 0.61 | 0.554 | 189.6 | 0.510 | 0.619 | 0.521 | 0.476 | 0.991 | 0.500 | 0.562 | 0.570 | 0.401 | 0.302 | 0.479 | 0.426 | 0.438 | 0.640 | 0.521 | 0.723 | 0.358 | 0.25 | 0.5 | 0.369 | 0.445 | 0.047 | 0.475 | 0.590 |
| Dissolved Oxygen YSI (mg/L) | NS | 0 | 0.59 | 0.44 | 0.45 | 8.80 | 0.42 | 0.00 | 8.27 | 7.56 | 8.45 | 5 | -20.24 * | 7.77 | 8.36 | 9.92 | 5.47 | 8.62 | 14.94 | -13.54 | 6.7 | 7.26 | 8.02 | 6.44 | 6.34 | 31.45 | 8.04 | 4.9 | 6.72 | 7.98 | 8.74 | 1.88 | 4.47 |
| Groundwater Elevation (ft) | NS | 225.83 | 226.48 | 225.93 | 226.44 | 217.41 | 225.45 | 224.09 | - | 227.13 | 228.03 | 227.67 | NA | - | 222.87 | 226.63 | 225.98 | 228.10 | 228.08 | 231.32 | 229.39 | 228.68 | 228.21 | 229.36 | 225.43 | 227.80 | 226.27 | 230.60 | 228.79 | 228.35 | 227.80 | 227.70 | 228.21 |

**Table 3-3. Annual Site Wide Groundwater Sample Results**

| Analytes | NYSDEC Ambient Water Quality Standards and Guidance Value | MW-16 | | | | | | | | MW-17 | | | | | | | MW-18 | | | | | | MW-19 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 11/11/2015 | 12/12/2016 | 6/20/2017 | 6/19/2018 | 6/24/2019 | 6/16/2020 | 6/15/2021 | 10/19/2022 | 11/16/2015 | 6/23/2017 | 6/20/2018 | 6/18/2019 | 6/16/2020 | 6/16/2021 | 10/18/2022 | 1/4/1900 | 6/21/2017 | 6/19/2018 | 6/18/2019 | 6/16/2020 | 6/16/2021 | 11/16/2015 | 6/21/2017 | 6/19/2018 | 6/18/2019 | 6/18/2020 | 6/17/2021 | 10/18/2022 |
| | | Outside Plume | | | | | | | | Upgradient | | | | | | | Upgradient | | | | | | Upgradient | | | | | | |
| **VOCs (µg/L)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | NA | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | NA | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | NA |
| 1,1,1-Trichloroethane (1,1,1-TCA) | 5 | **0.49 J** | 0.75 U | **0.50 J** | 0.75 U | **0.39 J** | 0.75 U | **0.49 J** | 0.5 U | **17** | **22** | **19.8** | **22.1** | **13.3** | **15.10** | **8** | **2.7** | **2.4** | 0.75 U | **2.5** | **0.92 J** | **0.9 J** | **2.1** | **2.9** | **1.7** | **2.5** | **3.0** | **3.3** | **3.3** |
| 1,1,2,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,1,2-Trichloroethane | 1 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.50 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1-Dichloroethane (1,1-DCA) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | **0.63 J** | **1.1** | **0.84 J** | **0.95 J** | **0.54 J** | **0.59 J** | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1-Dichloroethene (1,1-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.39 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,2-Dichloroethene (EDC) | 0.6 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.50 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Carbon Tetrachloride | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.45 J** | **0.42 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| cis-1,2-Dichloroethene (cis-1,2-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **1.0** | **2.1** | **1.8** | **2.3** | **1.5** | **1.40** | **0.91 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| Tetrachloroethene (PCE; PERC) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | **0.49 J** | 0.75 U | 0.75 U | 0.50 U | **1.6** | **1.8** | 0.75 U | **1.2** | **1.5** | **1.2** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Toluene | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.99 J+** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.37 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| trans-1,2-Dichloroethene (trans-1,2-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.50 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Trichloroethene (TCE) | 5 | **0.55 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.8 J** | **15.2** | **35.2** | **20.5** | **31.9** | **10** | **18.90** | **6.9** | **153** | **117** | **26.8** | **110** | **72** | **41.2** | **30** | **14.3** | **11.4** | **9.0** | **8.9** | **5.1** | **6.9** |
| Vinyl Chloride (VC) | 2 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| **MNA Parameters** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dissolved Hydrogen (nmol/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetylene | NS | NA | NA | NA | 1.0 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Alkalinity, Total (as $CaCO_3$) (mg/L)[1] | NS | **248** | **312** | **322** | **317** | **303** | **258** | **319** | **294** | **310** | NA | NA | NA | NA | NA | NA | **197** | NA | NA | NA | NA | NA | **267** | NA | NA | NA | NA | NA | NA |
| Chloride (mg/L) | NS | **13.6** | **9.0** | **20.2** | **3.9** | **5.5** | **2.5** | **7** | **4.3** | **4.9** | NA | NA | NA | NA | NA | NA | **16.9** | NA | NA | NA | NA | NA | **3.9** | NA | NA | NA | NA | NA | NA |
| Nitrate (mg/L) | NS | **1.6** | **1.6** | **3.7** | **2** | **1.3** | **0.98** | **1.4** | **1.9** | **0.96** | NA | NA | NA | NA | NA | NA | 0.50 U | NA | NA | NA | NA | NA | **0.48** | NA | NA | NA | NA | NA | NA |
| Sulfate (mg/L) | NS | **35.2** | **44.8** | **75.5** | **27.3** | **41.9** | **97.5** | **22.9** | **34.1** | **14.3** | NA | NA | NA | NA | NA | NA | **13.2** | NA | NA | NA | NA | NA | **9.8** | NA | NA | NA | NA | NA | NA |
| Methane (µg/L) | NS | 0.25 U | 0.5 U | 0.5 U | 1.1 U | **1.5 U** | 1.5 U | 1.6 U | 0.94 U | **0.13 J** | NA | NA | NA | NA | NA | NA | **1.1** | NA | NA | NA | NA | NA | **0.65** | NA | NA | NA | NA | NA | NA |
| Ethane (µg/L) | NS | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 3.3 U | 3.3 U | 2.6 U | **2.2 J+** | 0.5 U | NA | NA | NA | NA | NA | NA | 0.5 U | NA | NA | NA | NA | NA | 0.5 U | NA | NA | NA | NA | NA | NA |
| Ethene (µg/L) | NS | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 2.4 U | 2.4 U | 3.6 U | 2.64 U | 0.75 U | NA | NA | NA | NA | NA | NA | 0.75 U | NA | NA | NA | NA | NA | 0.75 U | NA | NA | NA | NA | NA | NA |
| Total Organic Carbon (mg/L) | NS | **3.6** | **0.96 J** | **0.67 J** | **1.2** | **1.6 J+** | **1.1 J+** | **1.5** | **1.6** | **2.7** | NA | NA | NA | NA | NA | NA | **9.5** | NA | NA | NA | NA | NA | **5** | NA | NA | NA | NA | NA | NA |
| **Field Parameters** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| pH (pH Unit) | NS | 7.64 | 7.27 | 6.57 | 7.89 | 7.19 | 7.32 | 7.05 | 7.26 | 7.38 | 7.13 | 7.15 | 7.22 | 7.31 | 7.35 | 7.43 | 7.72 | 7.03 | 7.82 | 7.5 | 7.53 | 7.36 | 7.62 | 7.82 | 6.87 | 7.29 | 7.21 | 7.16 | 7.27 |
| Turbidity (NTU) | NS | 8.01 | 14.8 | 4.4 | 10.77 | 7.58 | 2.83 | 4.97 | 1.70 | 9.02 | 3.1 | 30.7 | 11.8 | 2.98 | 1.83 | 73.9 | 40.1 | 3.8 | 2.33 | 2.08 | 2.72 | 0.0 | 35.4 | 19.4 | 30.8 | 13.6 | 3.16 | 1.76 | 94.6 |
| ORP (MeV) | NS | 137.6 | 139.9 | 298.7 | 16.2 | 299.9 | 167.1 | 108.6 | 127.0 | 118.6 | 159.7 | 134.1 | 143.4 | 170.9 | 144.6 | 127 | 88.7 | 298.7 | 38.5 | 271.3 | 100 | 116.9 | 93.0 | 297.8 | 141.6 | 285.1 | 216.6 | 99.9 | 145 |
| Conductivity (mS/cm) | NS | 0.361 | 0.388 | 0.486 | 0.441 | 0.218 | 0.260 | 0.409 | 0.597 | 0.257 | 0.462 | 0.423 | 0.565 | 0.579 | 0.578 | 0.563 | 0.301 | 0.394 | 0.402 | 0.438 | 0.022 | 0.504 | 0.244 | 0.428 | 0.382 | 0.523 | 0.536 | 0.484 | 0.592 |
| Dissolved Oxygen YSI (mg/L) | NS | 22.27 | 9.5 | 10.82 | 11.71 | 9.28 | 11.06 | 9.48 | 8.61 | 16.42 | 9.99 | 8.7 | 8.49 | 8.65 | 9.63 | 3.75 | 18.46 | 6.33 | 12.25 | 7.58 | 6.39 | 4.99 | 14.23 | 8.82 | 8.80 | 7.87 | 10.12 | 8.79 | 6.19 |
| Groundwater Elevation (ft) | NS | 226.39 | 225.38 | 227.63 | 226.19 | 226.97 | 223.45 | 224.81 | 227.12 | 228.08 | 231.15 | 229.26 | 228.64 | 228.69 | 231.34 | 228.55 | 227.94 | 230.75 | 228.90 | 228.48 | 228.27 | 231.05 | 228.43 | 231.93 | 229.87 | 229.01 | 229.96 | 232.13 | 228.79 |

**Table 3-3. Annual Site Wide Groundwater Sample Results**

| Analytes | NYSDEC Ambient Water Quality Standards and Guidance Value | MW-20 | | | | | | | MW-22 | | | MW-22 R | | | | MW-23 | | | | | | MW-24 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 11/17/2015 | 6/22/2017 | 6/19/2018 | 6/21/2019 | 6/18/2020 | 6/17/2021 | 10/18/2022 | 11/16/2015 | 6/22/2017 | 6/21/2018 | 6/21/2019 | 6/18/2020 | 6/17/2021 | 10/18/2022 | 11/17/2015 | 6/22/2017 | 7/18/2018 | 6/21/2019 | 6/18/2020 | 6/17/2021 | 11/10/2015 | 12/13/2016 | 6/26/2017 | 6/21/2018 | 6/20/2019 | 6/17/2020 | 6/15/2021 | 10/19/2022 |
| | | Upgradient | | | | | | | Upgradient | | | Upgradient | | | | Outside Plume | | | | | | Downgradient | | | | | | | | |
| **VOCs (µg/L)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | 0.75 U | 0.75 U | NA | 0.75 U | 3.8 U | 3.8 U | 3.8 U | 0.75 U | 0.75 U | NA | 0.75 U | 0.75 U | 1 UJ | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | NA | | |
| 1,1,1-Trichloroethane (1,1,1-TCA) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 3.8 U | 3.8 U | 3.8 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 1 UJ | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1,2,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 3.8 U | 3.8 U | 3.8 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 1 UJ | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,1,2-Trichloroethane | 1 | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 3.8 U | 3.8 U | 3.8 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 1 UJ | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1-Dichloroethane (1,1-DCA) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 3.8 U | 3.8 U | 3.8 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 1 UJ | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1-Dichloroethene (1,1-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 3.8 U | 3.8 U | 3.8 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 1 UJ | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **26.5** | **58.1** | **53.5** | **45.9** | | |
| 1,2-Dichloroethane (EDC) | 0.6 | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 3.8 U | 3.8 U | 3.8 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 1 UJ | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Carbon Tetrachloride | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 3.8 U | 3.8 U | 3.8 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 1 UJ | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| cis-1,2-Dichloroethene (cis-1,2-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 3.8 U | 3.8 U | 3.8 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 1 UJ | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.40 J** | **9.3** | **4.4** | **4.2** | **4.1** | |
| Tetrachloroethene (PCE; PERC) | 5 | **1.5** | **3.7** | **3.0** | **0.47 J** | **3.4** | **1.8** | **1.7** | **5.6** | **3.8 J** | **6.3** | **5.2** | **4.0** | **1.6** | **5** | 0.75 U | 0.75 U | 1 UJ | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Toluene | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | 0.75 U | 0.75 U | **0.64 J+** | 0.75 U | 3.8 U | 3.8 U | 3.8 U | 0.75 U | 0.75 U | **0.67 J+** | 0.75 U | 0.75 U | 1 UJ | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.66 J+** | |
| trans-1,2-Dichloroethene (trans-1,2-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 3.8 U | 3.8 U | 3.8 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 1 UJ | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **2** | |
| Trichloroethene (TCE) | 5 | **52.3** | **86.8** | **69.9** | **7.0 J** | **67.3** | **35** | **33.9** | **282** | **238** | **331** | **148** | **130** | **73** | **120** | 0.75 U | 0.75 U | 1 UJ | 0.75 U | 0.75 U | 0.75 U | **0.93 J** | **1.4** | **1.2** | **0.66 J** | **1.0** | **9.4** | **129.0** | **6.3** | |
| Vinyl Chloride (VC) | 2 | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 3.8 U | 3.8 U | 3.8 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 1 UJ | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| **MNA Parameters** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dissolved Hydrogen (nmol/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | **1.9** | NA | NA | NA | | |
| Acetylene | NS | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | **<0.50** | NA | NA | | |
| Alkalinity, Total (as $CaCO_3$) (mg/L)[1] | NS | **260** | NA | NA | NA | NA | NA | NA | **246** | NA | NA | NA | NA | NA | NA | **211** | NA | NA | NA | NA | NA | **168** | **198** | **195** | **159** | **134** | **185** | **213** | **184** | |
| Chloride (mg/L) | NS | **2.3** | NA | NA | NA | NA | NA | NA | 2 U | NA | NA | NA | NA | NA | NA | **27.6** | NA | NA | NA | NA | NA | **36.3** | **38.5** | **41.0** | **37.1** | **29.1 J-** | **27.3** | **29.8** | **43.1** | |
| Nitrate (mg/L) | NS | **0.74** | NA | NA | NA | NA | NA | NA | **4.5** | NA | NA | NA | NA | NA | NA | **0.66** | NA | NA | NA | NA | NA | **0.90** | 0.06 U | 0.2 U | 0.06 U | 0.06 U | 0.06 U | 0.14 U | 0.25 U | |
| Sulfate (mg/L) | NS | **7.7 J** | NA | NA | NA | NA | NA | NA | **7.2** | NA | NA | NA | NA | NA | NA | **30.4 J** | NA | NA | NA | NA | NA | **15.5** | **21.4** | **22.1** | **21.5** | **3** | **20.4** | 12.1 | **21.3** | |
| Methane (µg/L) | NS | **1.4 J** | NA | NA | NA | NA | NA | NA | 0.25 U | NA | NA | NA | NA | NA | NA | **0.17 J** | NA | NA | NA | NA | NA | **0.82** | **1.6** | **2.2** | **1.3 J+** | **179** | **8.6** | **112** | 0.94 U | |
| Ethane (µg/L) | NS | 0.5 U | NA | NA | NA | NA | NA | NA | 0.5 U | NA | NA | NA | NA | NA | NA | 0.5 U | NA | NA | NA | NA | NA | **0.34 J** | 0.5 U | 0.5 U | 0.5 U | **14.7** | **2.0 J** | **2.3 J** | 1.92 U | |
| Ethene (µg/L) | NS | 0.75 U | NA | NA | NA | NA | NA | NA | 0.75 U | NA | NA | NA | NA | NA | NA | 0.75 U | NA | NA | NA | NA | NA | 0.75 U | 0.75 U | 0.8 U | **0.2 J** | **1.7 J** | 2.4 U | 1.1 J | 2.64 U | |
| Total Organic Carbon (mg/L) | NS | **3.9** | NA | NA | NA | NA | NA | NA | **2.2** | NA | NA | NA | NA | NA | NA | **2.5** | NA | NA | NA | NA | NA | **3.5** | **1.9** | **0.79 J** | **4.5** | **2 J+** | **1.2 J+** | **1.4** | **1.5** | |
| **Field Parameters** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| pH (pH Unit) | NS | 7.40 | 7.83 | 7.08 | 7.42 | 7.10 | 7.11 | 7.13 | 7.63 | 7.18 | 7.57 | 7.72 | 7.55 | 7.53 | 7.29 | 7.53 | 6.60 | 7.43 | 7.38 | 7.40 | 7.34 | 7.75 | 7.22 | 7.78 | 7.95 | 7.53 | 7.63 | 7.4 | 7.82 | |
| Turbidity (NTU) | NS | 85.7 | 26.3 | 30.8 | 4.25 | 4.67 | 5.96 | 39.9 | 3.79 | 40.1 | 120 | 57.9 | 384 | 389 | 79.5 | 13 | 15.1 | Over Range | 10.2 | 235 | 215 | 9.33 | 13.9 | 35.2 | 19.5 | 1.74 | 1.97 | 0.02 | 2.80 | |
| ORP (MeV) | NS | 184.8 | 136.1 | 103.5 | 95.5 | 224.5 | 109.6 | 139 | 115.6 | 178.4 | 88.6 | 81.7 | 166.5 | 91 | 129.0 | 134.3 | 169.4 | 189.4 | 269.4 | 156.0 | 151.3 | -80.2 | -93.2 | -108.6 | -147.3 | -149 | -144 | -169 | -179.0 | |
| Conductivity (mS/cm) | NS | 0.264 | 0.36 | 0.331 | 0.447 | 0.714 | 0.525 | 0.776 | 0.224 | 0.36 | 0.342 | 0.392 | 0.361 | 0.528 | 0.49 | 0.273 | 0.405 | 0.463 | 0.173 | 0.362 | 0.276 | 0.327 | 0.57 | 0.365 | 0.204 | 0.333 | 0.375 | 0.372 | 0.556 | |
| Dissolved Oxygen YSI (mg/L) | NS | 17.61 | 9.46 | 9.55 | 9.12 | 10.04 | 9.5 | 5.05 | 16.55 | 11.11 | 9.92 | 8.06 | 10.18 | 8.85 | 5.72 | 12.71 | 9.07 | 9.07 | 10.42 | 12.94 | 12.93 | 0.94 | 0.44 | 1.2 | 11.71 | 0.29 | 0.55 | 0.47 | 0 | |
| Groundwater Elevation (ft) | NS | 228.71 | 232.33 | 230.20 | 229.21 | 230.73 | 232.08 | 288.94 | 228.29 | 231.27 | - | - | 229.64 | 228.05 | 288.65 | 228.90 | 232.56 | 229.84 | 229.31 | 231.13 | 229.12 | 226.79 | 225.30 | 229.05 | 227.43 | 227.32 | 225.73 | 226.30 | 227.17 | |

**Table 3-3. Annual Site Wide Groundwater Sample Results**

| Analytes | NYSDEC Ambient Water Quality Standards and Guidance Value | MW-25 | | | | | | MW-26 | | | | | | | | MW-27 | | | | | | MW-36 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 11/16/2015 | 6/21/2017 | 6/21/2018 | 6/21/2019 | 6/18/2020 | 6/17/2021 | 11/17/2015 | 12/13/2016 | 6/26/2017 | 6/20/2018 | 6/20/2019 | 6/16/2020 | 6/15/2021 | 10/19/2022 | 11/11/2015 | 6/23/2017 | 6/19/2018 | 6/17/2019 | 6/15/2020 | 6/14/2021 | 12/2/2015 | 6/22/2017 | 6/21/2018 | 6/21/2019 | 6/18/2020 | 6/17/2021 |
| | | Upgradient | | | | | | Downgradient | | | | | | | | Downgradient | | | | | | Upgradient | | | | | |
| **VOCs (µg/L)** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | NA | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 3.8 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,1,1-Trichloroethane (1,1,1-TCA) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 3.8 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,1,2,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 3.8 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,1,2-Trichloroethane | 1 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | **0.81 J** | **0.73 J** | **0.34 J** | **0.49 J** | 3.8 U | **0.45 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,1-Dichloroethane (1,1-DCA) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 3.8 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,1-Dichloroethene (1,1-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.51 J** | 0.75 U | 0.75 U | 3.8 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,2-Dichloroethane (EDC) | 0.6 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 3.8 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| Carbon Tetrachloride | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 3.8 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| cis-1,2-Dichloroethene (cis-1,2-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 3.8 U | **0.61 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| Tetrachloroethene (PCE; PERC) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 3.8 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| Toluene | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.57 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.93 J+** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 3.8 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| trans-1,2-Dichloroethene (trans-1,2-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 3.8 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| Trichloroethene (TCE) | 5 | **96.7** | **76.7** | **80.3** | **87.1** | **88.7** | **70.9** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.59 J** | **189** | **211** | **32.6** | **136** | **179** | **150** | **1.0** | **0.81 J** | **1.7** | **2.0** | **1.7** | 0.75 U |
| Vinyl Chloride (VC) | 2 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 3.8 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| **MNA Parameters** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dissolved Hydrogen (nmol/L) | NS | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acetylene | NS | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Alkalinity, Total (as $CaCO_3$) (mg/L)[1] | NS | **198** | NA | NA | NA | NA | NA | **204** | **197** | **223** | **225** | **174** | **205** | **167** | **185** | **282** | NA | NA | NA | NA | NA | **197** | NA | NA | NA | NA | NA |
| Chloride (mg/L) | NS | **16.3** | NA | NA | NA | NA | NA | **45.2** | **44.9** | **133** | **49.1** | **32.2** | **37** | **2.9** | **23.9** | **13.8** | NA | NA | NA | NA | NA | **46.6** | NA | NA | NA | NA | NA |
| Nitrate (mg/L) | NS | **0.52** | NA | NA | NA | NA | NA | 0.06 U | **0.04 J** | 0.02 U | 0.06 U | 0.06 U | **0.10 J** | **0.32** | 0.25 U | **1.2** | NA | NA | NA | NA | NA | 0.06 U | NA | NA | NA | NA | NA |
| Sulfate (mg/L) | NS | **9** | NA | NA | NA | NA | NA | **25.1** | **24.6** | **20.9** | **16.3** | **9.5** | **14.5** | **2.5** | **18.1** | **22** | NA | NA | NA | NA | NA | **21.2 J-** | NA | NA | NA | NA | NA |
| Methane (µg/L) | NS | **0.45 J** | NA | NA | NA | NA | NA | **34.8** | **2.7** | **2.1** | **80** | **112** | **58.1** | 1.6 U | 0.94 U | **0.24 J** | NA | NA | NA | NA | NA | **25.6** | NA | NA | NA | NA | NA |
| Ethane (µg/L) | NS | 0.5 U | NA | NA | NA | NA | NA | 0.50 U | 0.5 U | 0.5 U | 0.5 U | 3.3 U | 3.3 U | 2.6 U | 1.92 U | 0.5 U | NA | NA | NA | NA | NA | **2.7** | NA | NA | NA | NA | NA |
| Ethene (µg/L) | NS | 0.75 U | NA | NA | NA | NA | NA | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 2.4 U | 2.4 U | 3.6 U | 2.64 U | 0.75 U | NA | NA | NA | NA | NA | **1.2 J** | NA | NA | NA | NA | NA |
| Total Organic Carbon (mg/L) | NS | **5.6** | NA | NA | NA | NA | NA | **9.3** | **2.6** | **30.7** | **0.5 J** | **6.4** | **4.0** | **21.4** | **7.2** | **2.9** | NA | NA | NA | NA | NA | **1.7** | NA | NA | NA | NA | NA |
| **Field Parameters** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| pH (pH Unit) | NS | 7.85 | 7.51 | 7.80 | 7.47 | 7.26 | 7.53 | 7.52 | 7.22 | 7.23 | 7.57 | 7.6 | 7.66 | 7.11 | 7.50 | 7.50 | 7.87 | 7.31 | 7.1 | 7.46 | 7.11 | 7.76 | 8.05 | 7.86 | 7.61 | 7.58 | 7.11 |
| Turbidity (NTU) | NS | 30.9 | 1.5 | 128 | 8.98 | 1.75 | 4.75 | 68.3 | 21.8 | 0.4 | 36.2 | 9.3 | 3.17 | 33.4 | 3.3 | 86.8 | 1.9 | 2.60 | 4.48 | 7.90 | 0.09 | 66.7 | 6.3 | 17.2 | 0.26 | 2.94 | 33.4 |
| ORP (MeV) | NS | 85.4 | 97.5 | 101.1 | 200.3 | 226.7 | 151.1 | -103.6 | -28.9 | -26.9 | -75.3 | -108.6 | -25.3 | 136.9 | 10 | 169.9 | 310.7 | 3.10 | 4.48 | 111 | 82 | -224.3 | -71.7 | 85.5 | 160.4 | 139 | 136.9 |
| Conductivity (mS/cm) | NS | 0.201 | 0.446 | 0.349 | 0.2 | 0.407 | 0.549 | 0.324 | 0.59 | 0.63 | 0.415 | 0.423 | 0.250 | 0.285 | 0.394 | 0.411 | 0.429 | 0.58 | 114.17 | 0.340 | 0.433 | 0.282 | 0.422 | 7.86 | 0.215 | 0.420 | 0.285 |
| Dissolved Oxygen YSI (mg/L) | NS | 11.25 | 4.6 | 7.6 | 8.22 | 9.14 | 8.22 | 0 | 0.33 | 0.62 | 1.38 | 0.3 | 4.81 | 5.4 | 0.05 | 21.89 | 5.3 | 1.31 | 1.07 | 3.86 | 0.64 | 5.29 | 1.08 | 3.27 | 2.33 | 4.13 | 5.46 |
| Groundwater Elevation (ft) | NS | 227.16 | 229.65 | 227.78 | 227.67 | 228.16 | 229.36 | 226.06 | 224.75 | 228.01 | 226.43 | 226.59 | 224.75 | 225.15 | 226.35 | 225.50 | 226.43 | 221.21 | 225.80 | 218.47 | 224.77 | 227.80 | 230.49 | 229.13 | 228.09 | 228.97 | 227.18 |

**Table 3-3. Annual Site Wide Groundwater Sample Results**

| Analytes | NYSDEC Ambient Water Quality Standards and Guidance Value | MW-28 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 12/1/2015 | 12/14/2016 | 6/27/2017 | 6/22/2018 | 6/19/2019 | 6/19/2020 | 6/16/2021 | 10/19/2022 |
| | | Downgradient | | | | | | | |
| **VOCs (µg/L)** | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 1.0 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | NA |
| 1,1,1-Trichloroethane (1,1,1-TCA) | 5 | **11.2** | **10.4** | **8.9 J+** | **10.5** | **8.0** | **6.6** | **3.7** | **7.2** |
| 1,1,2,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 1.0 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,1,2-Trichloroethane | 1 | **0.46 J** | 0.75 U | 1.0 U | **0.44 J** | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1-Dichloroethane (1,1-DCA) | 5 | **1.0** | **0.77 J** | **1.0 J+** | **0.86 J** | **1.2** | **0.92 J** | **0.75 U** | 0.5 U |
| 1,1-Dichloroethene (1,1-DCE) | 5 | **0.53 J** | **0.43 J** | **0.38 J** | **0.39 J** | 0.75 U | 0.75 U | 0.75 U | **0.26 J** |
| 1,2-Dichloroethane (EDC) | 0.6 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Carbon Tetrachloride | 5 | **0.61 J** | 0.75 U | 0.75 U | **0.75 J** | **0.36 J** | **0.44 J** | **0.75 U** | **0.52 J** |
| cis-1,2-Dichloroethene (cis-1,2-DCE) | 5 | **4.7** | **4.3** | **4.7 J+** | **4.9** | **5.8** | **3.8** | **0.73 J** | **3.3** |
| Tetrachloroethene (PCE; PERC) | 5 | **33** | **44.6** | **36.3 J+** | **38.7** | **31.9** | **25.5** | **19.3** | **27** |
| Toluene | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| trans-1,2-Dichloroethene (trans-1,2-DCE) | 5 | 0.75 U | **0.47 J** | **0.37 J** | **0.36 J** | 0.75 U | 0.75 U | **0.63 J** | **0.28 J** |
| Trichloroethene (TCE) | 5 | **182** | **196** | **195** | **214** | **172** | **140** | **260** | **220** |
| Vinyl Chloride (VC) | 2 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| **MNA Parameters** | | | | | | | | | |
| Dissolved Hydrogen (nmol/L) | NS | NA | NA | NA | NA | **2.7** | NA | NA | NA |
| Acetylene | NS | NA | NA | NA | 1 U | **<0.50** | NA | NA | NA |
| Alkalinity, Total (as $CaCO_3$) (mg/L)[1] | NS | **352** | **316** | **352** | **422** | **325** | **367** | **291** | **325** |
| Chloride (mg/L) | NS | **22.1** | **32.4** | **29.0** | **33.1** | **41.6** | **31.1** | **60.6** | **39.1** |
| Nitrate (mg/L) | NS | 0.06 U | **0.06 J** | **1.5** | **0.58** | 0.20 U | **0.36** | **0.82** | **0.78** |
| Sulfate (mg/L) | NS | **22.4** | **20.9** | **13.0** | **23.1** | **13.6** | **20.5** | **30.0** | **37.3** |
| Methane (µg/L) | NS | **3.4** | **3.0** | **1.0** | **1800** | 1.5 U | **471** | 1.6 U | 0.94 U |
| Ethane (µg/L) | NS | 0.5 U | **3.6** | 0.5 U | 0.5 U | 3.3 U | 3.3 U | 2.6 U | 1.92 U |
| Ethene (µg/L) | NS | 0.75 U | **1.3 J** | 0.75 U | 0.75 U | 2.4 U | 2.4 U | 3.6 U | **10.9 J+** |
| Total Organic Carbon (mg/L) | NS | **1.9** | **2.3** | **0.76 J** | **4.1** | **1.6 J+** | **2.1** | **1.0** | **2.4** |
| **Field Parameters** | | | | | | | | | |
| pH (pH Unit) | NS | 6.83 | 7.03 | 7.05 | 7.33 | 6.84 | 7.19 | 7.6 | 7.17 |
| Turbidity (NTU) | NS | 209 | 1.5 | -3 | 1.32 | 0.02 | 2.11 | 0.9 | 1.90 |
| ORP (MeV) | NS | 273.2 | 71.2 | 97.4 | 11.1 | 176.4 | 23.1 | 100.1 | 117 |
| Conductivity (mS/cm) | NS | 0.324 | 0.366 | 0.554 | 7.33 | 0.613 | 0.085 | 0.578 | 0.871 |
| Dissolved Oxygen YSI (mg/L) | NS | 6.75 | 3.94 | 7.59 | 0.63 | 0.89 | 0.35 | 9.85 | 2.33 |
| Groundwater Elevation (ft) | NS | 227.07 | 225.41 | 229.79 | 228.07 | 227.62 | 226.56 | 226.33 | 227.95 |

| Analytes | NYSDEC Ambient Water Quality Standards and Guidance Value | MW-29 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 12/1/2015 | 12/14/2016 | 6/27/2017 | 6/22/2018 | 6/19/2019 | 6/17/2020 | 6/16/2021 | 10/19/2022 |
| | | Upgradient | | | | | | | |
| **VOCs (µg/L)** | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 5 | 0.75 U | 3.8 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | NA |
| 1,1,1-Trichloroethane (1,1,1-TCA) | 5 | **12.4** | **14.0 J+** | **11.8 J+** | **11.8** | **8.7** | **5.8** | **2.8 J** | **7.7 J-** |
| 1,1,2,2-Tetrachloroethane | 5 | 0.75 U | 3.8 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | 0.75 UJ |
| 1,1,2-Trichloroethane | 1 | 0.75 U | 3.8 U | 0.75 U | **0.45 J** | 0.75 U | 0.75 U | 0.75 UJ | 0.5 UJ |
| 1,1-Dichloroethane (1,1-DCA) | 5 | **0.97 J** | 3.8 U | **1.0 J+** | **0.84 J** | **1.1** | **0.59 J** | 0.75 UJ | 0.5 UJ |
| 1,1-Dichloroethene (1,1-DCE) | 5 | **0.68 J** | 3.8 U | **0.63 J** | **0.48 J** | **0.35 J** | 0.75 U | 0.75 UJ | 0.75 UJ |
| 1,2-Dichloroethane (EDC) | 0.6 | 0.75 U | 3.8 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | 0.5 UJ |
| Carbon Tetrachloride | 5 | 0.75 U | 3.8 U | 0.75 U | **0.82 J** | **0.49 J** | **0.49 J** | 0.75 UJ | 0.75 UJ |
| cis-1,2-Dichloroethene (cis-1,2-DCE) | 5 | **4.9** | **6.1 J+** | **5.8 J+** | **5.1** | **5.4** | **2.9** | **0.95 J** | **3.3 J-** |
| Tetrachloroethene (PCE; PERC) | 5 | **33.2** | **30.8 J+** | **38.1 J+** | **35.4** | **29.7** | **24.3** | **9.5 J** | **29.8 J-** |
| Toluene | 5 | 0.75 U | 3.8 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | 0.5 UJ |
| trans-1,2-Dichloroethene (trans-1,2-DCE) | 5 | 0.75 U | 3.8 U | **0.70 J** | **0.59 J** | 0.75 U | 0.75 U | 0.47 J | 0.5 UJ |
| Trichloroethene (TCE) | 5 | **224** | **209 J+** | **264** | **248** | **161** | **102** | **155** | **210** |
| Vinyl Chloride (VC) | 2 | 0.75 U | 3.8 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 UJ | 0.5 UJ |
| **MNA Parameters** | | | | | | | | | |
| Dissolved Hydrogen (nmol/L) | NS | NA | NA | NA | NA | **1.5** | NA | NA | NA |
| Acetylene | NS | NA | NA | NA | 1.0 U | **<0.50** | NA | NA | NA |
| Alkalinity, Total (as $CaCO_3$) (mg/L)[1] | NS | **327** | **301** | **361** | **370** | **342** | **282** | **213** | **309** |
| Chloride (mg/L) | NS | **28.2** | **28.4** | **49.4** | **28** | **38.9** | **34.7** | **41.9** | **42.7** |
| Nitrate (mg/L) | NS | **0.1 J** | **0.26** | **1.3 J** | **0.38** | **0.26** | **0.64** | **0.6** | **0.59** |
| Sulfate (mg/L) | NS | **29.2** | **24.9** | **13.8** | **21** | **12.9** | **16** | **22.4** | **20.7** |
| Methane (µg/L) | NS | **13.9** | **0.62** | 0.05 U | **210** | 1.5 U | 1.5 U | **0.94 J** | **1.8 J+** |
| Ethane (µg/L) | NS | **0.81 J** | 0.5 U | 0.5 U | 0.5 U | 3.3 U | 3.3 U | 2.6 U | 1.92 U |
| Ethene (µg/L) | NS | **0.59 J** | 0.75 U | 0.75 U | 0.75 U | 2.4 U | 2.4 U | 3.6 U | 2.64 U |
| Total Organic Carbon (mg/L) | NS | **2.3** | **1.4** | **0.92 J** | **3.2** | **5.3** | **1.4 J+** | **5.3** | **2.4** |
| **Field Parameters** | | | | | | | | | |
| pH (pH Unit) | NS | 7.06 | 7.02 | 7.02 | 7.33 | 6.96 | 7.33 | 7.09 | 7.17 |
| Turbidity (NTU) | NS | 82.4 | 0.62 | 2.8 | 15.2 | 3.43 | 997.3 | 0 | 3.90 |
| ORP (MeV) | NS | -25.1 | 60.9 | 120.2 | 52.3 | 169.6 | 110.7 | -29.3 | 127 |
| Conductivity (mS/cm) | NS | 0.325 | 0.354 | 0.619 | 0.61 | 0.63 | 0.488 | 0.258 | 0.892 |
| Dissolved Oxygen YSI (mg/L) | NS | 4.29 | 6.17 | 7.12 | 2.98 | 2.23 | 5.25 | 2.21 | 1.43 |
| Groundwater Elevation (ft) | NS | 227.05 | 225.38 | 229.82 | 228.09 | 227.64 | 226.58 | 227.20 | 228.00 |

| Analytes | NYSDEC Ambient Water Quality Standards and Guidance Value | MW-30 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 12/1/2015 | 12/13/2016 | 6/26/2017 | 7/18/2018 | 6/19/2019 | 6/17/2020 | 6/15/2021 | 10/19/2022 |
| | | Downgradient | | | | | | | |
| **VOCs (µg/L)** | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | NA |
| 1,1,1-Trichloroethane (1,1,1-TCA) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1,2,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,1,2-Trichloroethane | 1 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1-Dichloroethane (1,1-DCA) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1-Dichloroethene (1,1-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,2-Dichloroethane (EDC) | 0.6 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Carbon Tetrachloride | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| cis-1,2-Dichloroethene (cis-1,2-DCE) | 5 | 0.75 U | 0.75 U | **0.61 J** | 0.75 U | 0.75 U | 0.75 U | **0.52 J** | **0.58 J** |
| Tetrachloroethene (PCE; PERC) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Toluene | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| trans-1,2-Dichloroethene (trans-1,2-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Trichloroethene (TCE) | 5 | **25.2** | **42.3** | **24.3** | **8.1** | **5.0** | **5.7** | **9.1** | **2.3** |
| Vinyl Chloride (VC) | 2 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| **MNA Parameters** | | | | | | | | | |
| Dissolved Hydrogen (nmol/L) | NS | NA | NA | NA | NA | **8.5** | NA | NA | NA |
| Acetylene | NS | NA | NA | NA | 1.0 UJ | **<0.50** | NA | NA | NA |
| Alkalinity, Total (as $CaCO_3$) (mg/L)[1] | NS | **143** | **319** | **154** | **58** | **65** | **48** | **106** | **42.5** |
| Chloride (mg/L) | NS | **38.4** | **182** | **49.6** | **38.8** | **37.6** | **47.6** | **36.6** | **55.7** |
| Nitrate (mg/L) | NS | 0.06 U | 0.06 U | 0.06 U | 0.06 U | 0.06 U | 0.06 U | 0.14 U | 0.25 U |
| Sulfate (mg/L) | NS | **35.9** | **2.9** | 2.0 U | **0.34 J** | 2.0 U | **1.1 J** | **7.5** | **1.8 J** |
| Methane (µg/L) | NS | **47.4** | **146** | **3210** | **3700** | **91.6** | **5630** | **4280** | **2800** |
| Ethane (µg/L) | NS | **4.7** | **5.4** | **36.7** | **52** | 3.3 U | **29.7** | **20.2** | 1.92 U |
| Ethene (µg/L) | NS | **2.2** | **3.3** | **12.7** | **6.3** | 2.4 U | **2.5** | **1.6 J** | **16.7 J+** |
| Total Organic Carbon (mg/L) | NS | **2.2** | **225** | **75.2** | **9.7 J** | **7.7** | **5.4** | **3.3** | **3.2** |
| **Field Parameters** | | | | | | | | | |
| pH (pH Unit) | NS | 8.91 | 6.83 | 7.77 | 8.28 | 7.8 | 8.68 | 8.06 | 8.36 |
| Turbidity (NTU) | NS | 58.2 | 3.55 | 3 | 950.5 | 0.81 | 1.45 | 0.3 | 20.01 |
| ORP (MeV) | NS | -278.4 | -166.3 | -173.3 | 12.1 | -164 | -202 | -182.3 | -224 |
| Conductivity (mS/cm) | NS | 0.21 | 1.41 | 0.32 | 0.238 | 0.23 | 0.06 | 0.313 | 0.279 |
| Dissolved Oxygen YSI (mg/L) | NS | 3.7 | 0.29 | 0.48 | 0.98 | 0.28 | 0.05 | 0.41 | 0 |
| Groundwater Elevation (ft) | NS | 226.98 | 225.35 | 229.44 | 227.80 | 227.52 | 226.19 | 226.70 | 228.39 |

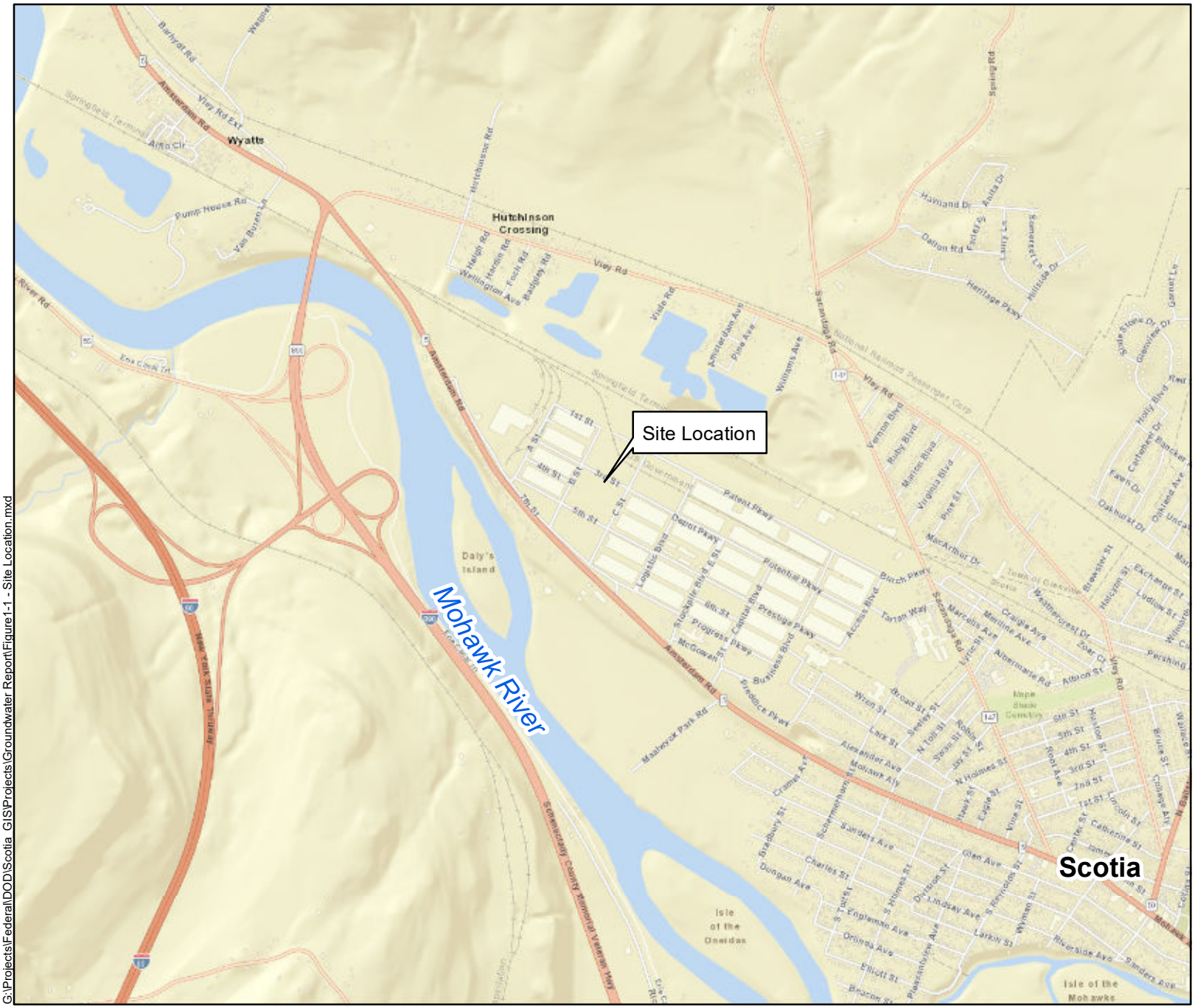
| Analytes | NYSDEC Ambient Water Quality Standards and Guidance Value | MW-31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 12/1/2015 | 12/14/2016 | 6/26/2017 | 6/21/2018 | 6/19/2019 | 6/17/2020 | 6/16/2021 | 10/19/2022 |
| | | Upgradient | | | | | | | |
| **VOCs (µg/L)** | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | NA |
| 1,1,1-Trichloroethane (1,1,1-TCA) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1,2,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,1,2-Trichloroethane | 1 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1-Dichloroethane (1,1-DCA) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1-Dichloroethene (1,1-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,2-Dichloroethane (EDC) | 0.6 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Carbon Tetrachloride | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| cis-1,2-Dichloroethene (cis-1,2-DCE) | 5 | 0.75 U | 0.75 U | **0.50 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.31 J** |
| Tetrachloroethene (PCE; PERC) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Toluene | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| trans-1,2-Dichloroethene (trans-1,2-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Trichloroethene (TCE) | 5 | **42.7** | **38.2** | **29.0** | **20.6** | **26.2** | **33.5** | **27.5** | **38.4** |
| Vinyl Chloride (VC) | 2 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| **MNA Parameters** | | | | | | | | | |
| Dissolved Hydrogen (nmol/L) | NS | NA | NA | NA | NA | **2** | NA | NA | NA |
| Acetylene | NS | NA | NA | NA | 1 U | **<0.50** | NA | NA | NA |
| Alkalinity, Total (as $CaCO_3$) (mg/L)[1] | NS | **178** | **222** | **150** | **169** | **142** | **160** | **212.0** | **145** |
| Chloride (mg/L) | NS | **41.9** | **56.6** | **31** | **39.9** | **45.9** | **41.4** | **40.6** | **48.5** |
| Nitrate (mg/L) | NS | 0.06 U | 0.06 U | 0.2 U | 0.06 U | 0.06 U | 0.06 U | 0.14 U | 0.25 U |
| Sulfate (mg/L) | NS | **26.3** | **10.9** | **5.6** | **7.8** | **10.2** | **9.6** | **8.5** | **10.7** |
| Methane (µg/L) | NS | **20.7** | **3.5** | **56.5** | **120** | **99.3** | **354** | **178** | **136** |
| Ethane (µg/L) | NS | **2.2** | **1.5** | **2.7** | **5.7** | **3.0 J** | **3.2 J** | **2.0 J** | 1.92 U |
| Ethene (µg/L) | NS | **0.91 J** | **0.84 J** | **3.2** | **2.4** | 2.4 U | 2.4 U | 3.6 U | 2.64 U |
| Total Organic Carbon (mg/L) | NS | **2.1** | **43.9** | **2.8** | **2.1** | 1.0 U | 1.0 U | **1.8** | **1.3** |
| **Field Parameters** | | | | | | | | | |
| pH (pH Unit) | NS | 7.80 | 7.20 | 9.79 | 7.83 | 7.8 | 7.81 | 7.51 | 7.97 |
| Turbidity (NTU) | NS | 51.7 | 8.03 | 4.6 | 2.6 | 0.69 | 14.42 | 0.00 | 1.9 |
| ORP (MeV) | NS | -319.7 | -163.1 | -283.2 | -155.1 | -165.3 | -148.0 | -141.2 | -189.0 |
| Conductivity (mS/cm) | NS | 0.243 | 0.348 | 0.28 | 0.324 | 0.402 | 0.325 | 0.379 | 0.444 |
| Dissolved Oxygen YSI (mg/L) | NS | 1.29 | 0.28 | 0.7 | 0.22 | 0.15 | 0.91 | 0.4 | 0.00 |
| Groundwater Elevation (ft) | NS | 226.95 | 225.40 | 229.52 | 227.84 | 227.55 | 226.33 | 227.75 | 229.02 |

**Table 3-3. Annual Site Wide Groundwater Sample Results**

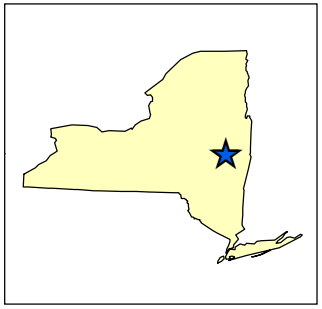
| Analytes | NYSDEC Ambient Water Quality Standards and Guidance Value | MW-32 | | | | | | | | MW-33 | | | | | | | | MW-34 | | | | | | | | MW-35 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 11/30/2015 | 3/21/2017 | 6/26/2017 | 6/21/2018 | 6/20/2019 | 6/17/2020 | 6/15/2021 | 10/19/2022 | 11/24/2015 | 12/14/2016 | 6/26/2017 | 6/21/2018 | 6/19/2019 | 6/17/2020 | 6/15/2021 | 10/19/2022 | 11/24/2015 | 12/13/2016 | 6/26/2017 | 6/20/2018 | 6/20/2019 | 6/16/2020 | 6/15/2021 | 10/19/2022 | 11/24/2015 | 12/15/2016 | 6/26/2017 | 6/20/2018 | 6/20/2019 | 6/16/2020 | 6/14/2021 | 10/19/2022 |
| | | Downgradient | | | | | | | | Upgradient | | | | | | | | Downgradient | | | | | | | | Upgradient | | | | | | | |
| **VOCs (µg/L)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | NA | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | NA | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | NA | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | NA |
| 1,1,1-Trichloroethane (1,1,1-TCA) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1,2,2-Tetrachloroethane | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,1,2-Trichloroethane | 1 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1-Dichloroethane (1,1-DCA) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| 1,1-Dichloroethene (1,1-DCE) | 5 | 0.75 U | **0.40 J** | **0.48 J** | 0.75 U | **0.34 J** | 0.75 U | 0.75 U | **0.29 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| 1,2-Dichloroethane (EDC) | 0.6 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Carbon Tetrachloride | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| cis-1,2-Dichloroethene (cis-1,2-DCE) | 5 | 0.75 U | **1.2** | **1.3** | **0.62 J** | **0.83 J** | **0.89 J** | **0.70 J** | **1.7** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **5.0** | 0.75 U | **0.95 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| Tetrachloroethene (PCE; PERC) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | **0.42 J** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Toluene | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.8 J+** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | **0.72 J+** | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| trans-1,2-Dichloroethene (trans-1,2-DCE) | 5 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| Trichloroethene (TCE) | 5 | **150** | **191** | **130** | **64.1** | **118** | **149** | **134.0** | **110** | **133** | **93.5** | **152** | **178** | **97.4** | **165** | **149** | **140** | **17.7** | **41.3** | **34.0** | **31.3** | **1.1** | **18.9** | **3.9 J** | **22.5** | **31.9** | **31.8** | **43.8 J+** | **39.4** | **34.8** | **42.9** | **39.6** | **44** |
| Vinyl Chloride (VC) | 2 | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| **MNA Parameters** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dissolved Hydrogen (nmol/L) | NS | NA | NA | NA | NA | **3.70** | NA | NA | NA | NA | NA | NA | NA | **3.3** | NA | NA | NA | NA | NA | NA | NA | **2.2** | NA | NA | NA | NA | NA | NA | NA | **1.4** | NA | NA | NA |
| Acetylene | NS | NA | NA | NA | 1 U | **<0.50** | NA | NA | NA | NA | NA | NA | 1 U | **<0.50** | NA | NA | NA | NA | NA | NA | 1 U | **<0.50** | NA | NA | NA | NA | NA | NA | 1 U | **<0.50** | NA | NA | NA |
| Alkalinity, Total (as $CaCO_3$) (mg/L)[1] | NS | **196** | **214** | **129** | **128** | **134** | **169** | **178.0** | **152.0** | **172** | **218** | **205** | **215** | **172** | **201** | **209** | **183** | **99** | **191** | **201** | **226** | **194** | **146** | **247** | **182** | **181** | **223** | **202** | **197** | **174** | **177** | **168** | **181** |
| Chloride (mg/L) | NS | **35.6** | **84.6** | **38.0** | **29.5** | **24.1 J-** | **32.1** | **36.1** | **35.7** | **41.8** | **43.2** | **22.8** | **22.5** | **21.2** | **25.8** | **35.0** | **33.5** | **48.5** | **62.3** | **15.7** | **16.3** | **6.6 J-** | **13.8** | **3.4** | **13.8** | **42.2** | **53.9** | **17.1** | **15.7** | **21.2 J-** | **26.1** | **63.7** | **22.7** |
| Nitrate (mg/L) | NS | 0.06 U | **0.02 J** | 0.2 U | 0.06 U | 0.06 U | 0.06 U | 0.1 U | 0.25 U | 0.06 U | 0.06 U | **0.32** | **0.42** | **0.42** | **0.46** | **0.62** | **0.67** | **0.56** | **0.06 J** | 0.2 U | 0.06 U | 0.06 U | 0.06 U | **0.10 J** | 0.25 U | 0.06 U | **0.040 J** | **0.66** | **0.64** | **0.38** | **0.54** | **3.8** | **0.82** |
| Sulfate (mg/L) | NS | **21.1** | **0.68 J** | 2 U | **2.3** | **8.6** | **11.5** | **9.6** | **10.0** | **25.1** | **8.2** | **11.8** | **14.3** | **10.9** | **13.6** | **12.8** | **12.9** | **64.3** | **23.8** | **13.4** | **11.2** | 2.0 U | **3.5** | **3.9** | **10.4** | **48.1** | **7.2** | **13.6** | **10.7** | **9.8** | **10.3** | **21.9** | **10** |
| Methane (µg/L) | NS | **6.8** | **309** | **817** | **130** | **2190** | **232** | **2570** | **545** | **64** | **3.4** | **16** | **17** | **4.7** | **4.8** | 1.6 U | 0.94 U | **14.5** | **1.2** | **12.4** | **35** | **419** | **1740** | **1.5 J** | **22.7 J** | **13.8** | **0.90** | **7.2** | **23** | **38.3** | **59** | **5.1** | 0.94 U |
| Ethane (µg/L) | NS | **0.5 J** | **19.3** | **35.9** | **2** | **12.1** | **4.5** | **8.7** | 1.92 U | **7** | **0.25 J** | 0.5 U | 0.5 U | 3.3 U | 3.3 U | 2.6 U | 1.92 U | **2.2** | 0.5 U | 0.5 U | 0.5 U | **0.77 J** | **3.6** | 2.6 U | 1.92 U | **2.9** | 0.5 U | 0.5 U | 0.5 U | 3.3 U | 3.3 U | 2.6 U | 1.92 U |
| Ethene (µg/L) | NS | 0.75 U | **10.3** | **15.6** | **0.25 J** | **1.7 J** | 2.4 U | **1.8 J** | **4.2 J+** | **3.6** | **0.48 J** | 0.75 U | 0.75 U | **1.2 J** | 2.4 U | 3.6 U | 2.64 U | **1.8** | 0.75 U | 0.75 U | 0.75 U | **1.1 J** | 2.4 U | 3.6 U | 2.64 U | **1.6** | 0.75 U | 0.75 U | 0.75 U | 2.4 U | 2.4 U | 3.6 U | 2.64 U |
| Total Organic Carbon (mg/L) | NS | **2.6** | **98** | **22** | **6.4** | **1.4 J+** | 1.0 U | **1.1** | **1.6** | **8.1** | **30.9** | **0.54 J** | **1.6** | **1.8 J+** | 1.0 U | **1.0** | **1.4** | **5.9** | **12** | **3.3** | **0.93 J** | **8.3** | **3.8** | **11.1** | **3.0** | **7.7** | **18.3** | **0.75** J | **0.6 J** | **1.2 J+** | 1.0 U | **1.0** | **1.3** |
| **Field Parameters** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| pH (pH Unit) | NS | 8.00 | 7.54 | 9.28 | 8.03 | 7.77 | 7.75 | 7.71 | 7.77 | 8.39 | 7.18 | 8.8 | 7.66 | 7.21 | 7.3 | 7.54 | 7.50 | 12.68 | 7.14 | 7.26 | 7.30 | 8.91 | 8.59 | 6.99 | 7.44 | 9.68 | 7.09 | 7.66 | 7.55 | 7.42 | 7.56 | 7.33 | 7.47 |
| Turbidity (NTU) | NS | 180 | 4.01 | 5.1 | 0.02 | 0.02 | 0.66 | 0.02 | 51.10 | 23.1 | 9.31 | 3.4 | 2.78 | 7.84 | 3.99 | 0.02 | 1.20 | 44.7 | 3.23 | -4 | 1.4 | 5.55 | 3.16 | 1.32 | 1.90 | 381 | 5.99 | 38.2 | 25.8 | 12.1 | 3.9 | 0.1 | 3.60 |
| ORP (MeV) | NS | -234.2 | -140.7 | -238.7 | -149.4 | -165.3 | -151.9 | -182.3 | -179.0 | -471.2 | -126.8 | 44.9 | 17.6 | 2.8 | 196 | 70.7 | 37.0 | -185.4 | -8.4 | -139.4 | -76.3 | -140.1 | -87.4 | 187.9 | -98.0 | -404 | -167.9 | -10.6 | 69.5 | -37.1 | 101.2 | 66.3 | 62.0 |
| Conductivity (mS/cm) | NS | 0.239 | 0.64 | 0.261 | 0.206 | 0.32 | 0.124 | 0.429 | 0.388 | 0.247 | 0.303 | 0.35 | 0.382 | 0.374 | 0.322 | 0.422 | 0.439 | 0.361 | 0.63 | 0.332 | 0.332 | 0.368 | 0.17 | 0.39 | 0.380 | 0.287 | 0.329 | 0.324 | 0.335 | 0.361 | 0.394 | 0.246 | 0.404 |
| Dissolved Oxygen YSI (mg/L) | NS | 0.64 | 1.77 | 2.5 | 8.26 | 0.3 | 1.39 | 0.41 | 0.00 | 0.92 | 0.41 | 2.99 | 3.41 | 0.65 | 7.05 | 4.7 | 3.29 | 6.9 | 1.12 | 0.46 | 1.31 | 0.35 | 0.17 | 5.55 | 0.00 | 0.79 | 0.41 | 3.67 | 3.54 | 1.82 | 6.44 | 0.99 | 3.35 |
| Groundwater Elevation (ft) | NS | 226.86 | 223.70 | 229.05 | 227.45 | 227.39 | 225.93 | 226.27 | 227.30 | 226.89 | 225.51 | 229.11 | 227.51 | 227.42 | 226.07 | 226.29 | 227.23 | 226.73 | 225.48 | 228.66 | 227.03 | 227.21 | 225.45 | 225.66 | 227.49 | 226.69 | 225.46 | 228.68 | 227.04 | 227.26 | 225.66 | 225.75 | 227.36 |

# Figures

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VICINITY MAP



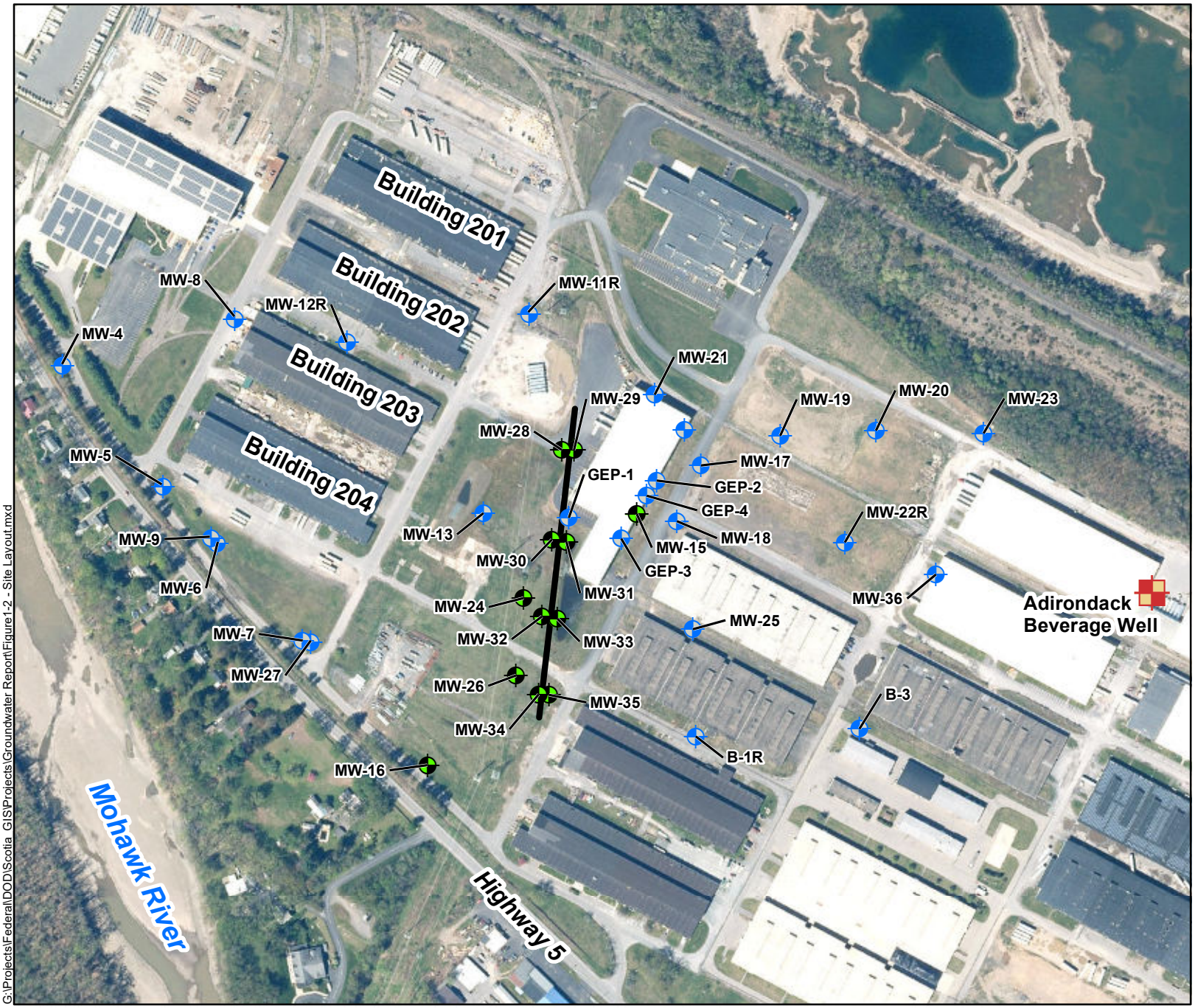
0 0.25 0.5
Miles

N

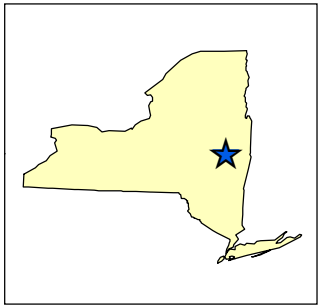
**Figure 1-1**
**SITE LOCATION**
Former Scotia Navy Depot

Map Date: 5/25/2023

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VICINITY MAP



## Legend

- PRB Location
- Compliance Well
- Monitoring Well

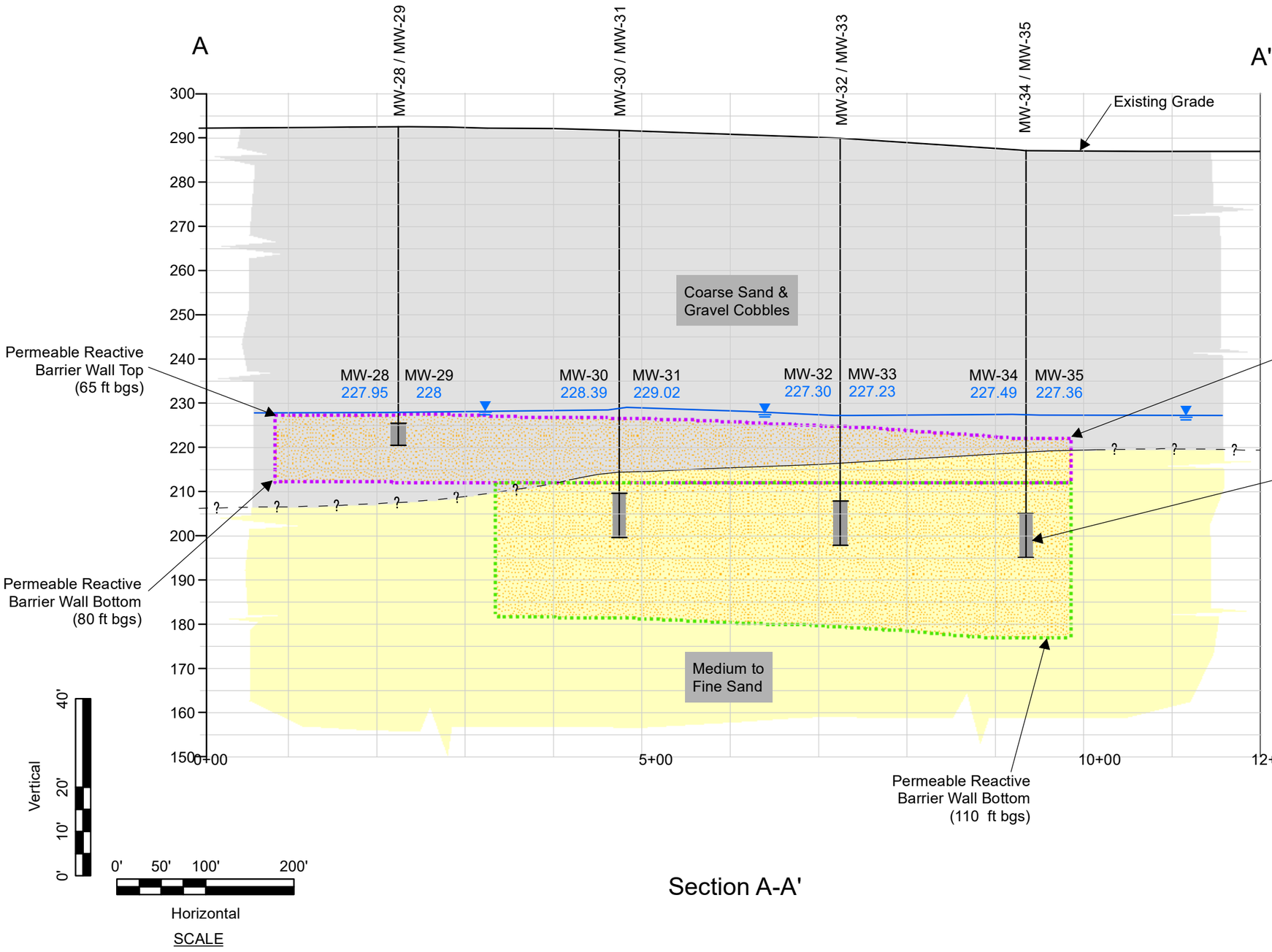
0 250 500
Feet

N

**Figure 1-2**
**SITE FEATURES**
Former Scotia Navy Depot

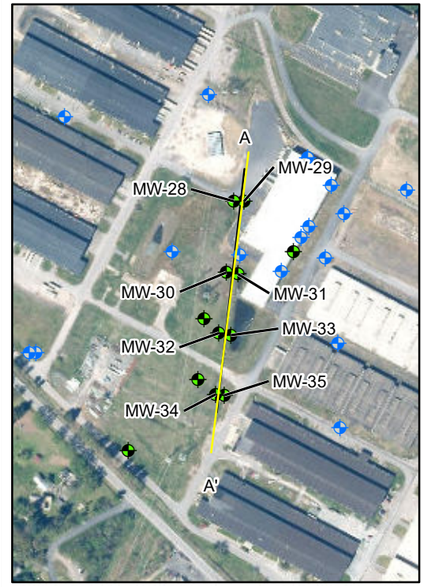
Map Date: 5/12/2023

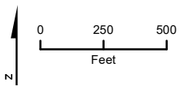
G:\Projects\Federal\DOD\Scotia_GIS\Projects\Groundwater Report\Figure1-2 - Site Layout.mxd




Section A-A'

VICINITY MAP




**Inset Legend**

- PRB Location
- Cross Section Baseline
- Compliance Well
- Monitoring Well

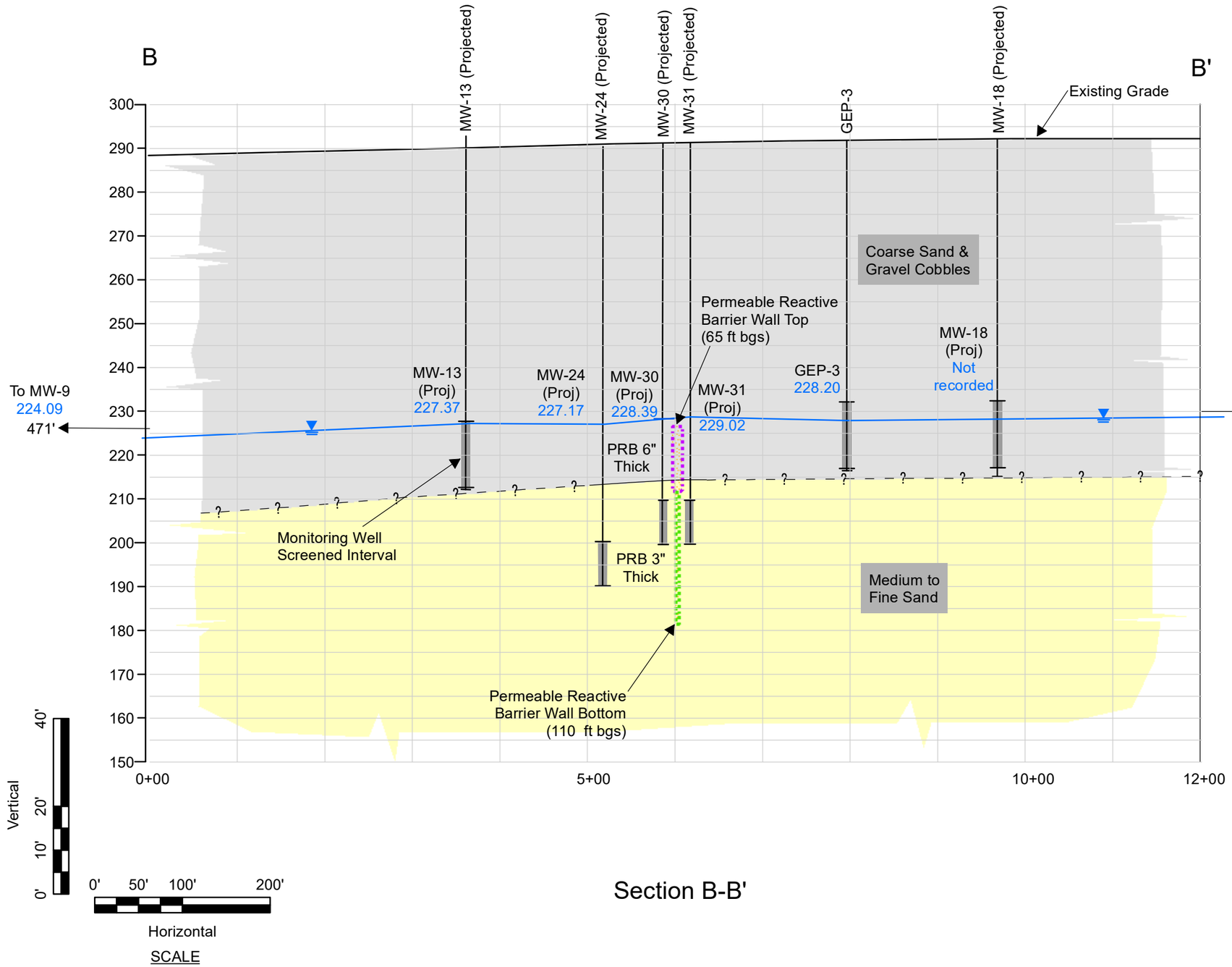
**Cross Section Legend**

- Coarse sand & gravel, cobbles
- Medium to fine sand
- PRB - 3" thick
- PRB - 6" thick
- Groundwater Table

**Figure 2-1a**
**COMPLIANCE MONITORING WELLS AND PRB WALL PROFILE GROUNDWATER SECTION A-A'**
Former Scotia Navy Depot

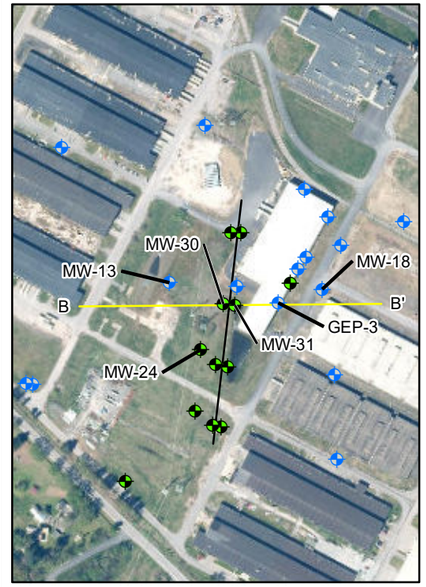
Map Date: 5/12/2023

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Section B-B'

VICINITY MAP




N

0 250 500
Feet

**Inset Legend**

- PRB Location
- Cross Section Baseline
- Compliance Well
- Monitoring Well

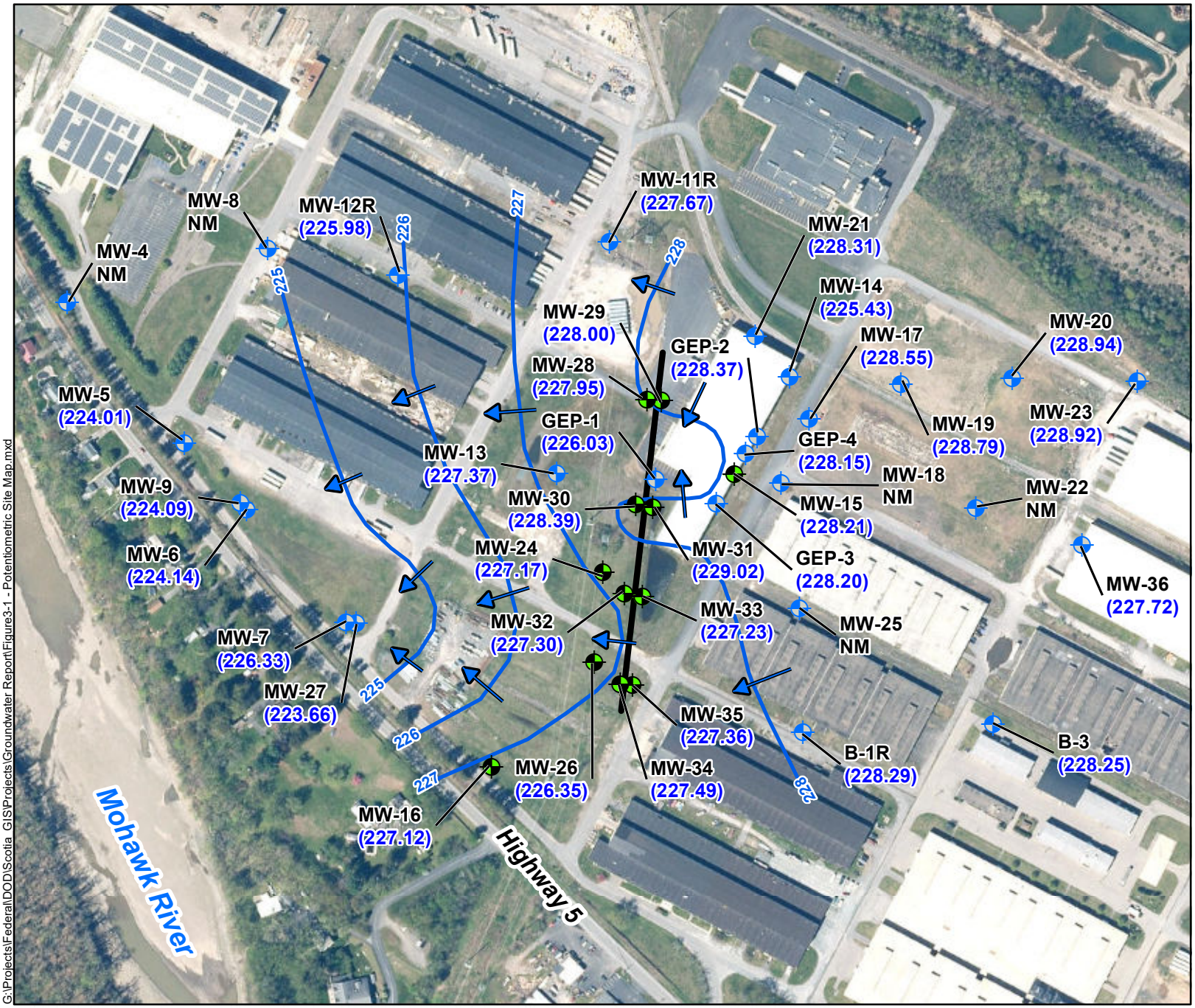
**Cross Section Legend**

- Coarse sand & gravel, cobbles
- Medium to fine sand
- PRB - 3" thick
- PRB - 6" thick
- Groundwater Table

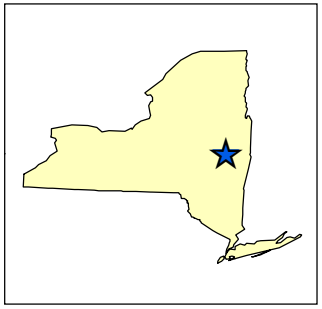
**Figure 2-1b**
**COMPLIANCE MONITORING WELLS AND PRB WALL PROFILE GROUNDWATER SECTION B-B'**
Former Scotia Navy Depot

Map Date: 5/12/2023

G:\Projects\FederalDOD\Scotia_GIS\Projects\Groundwater Report\Figure2-1b_GroundwaterSectionB_B1.mxd




VICINITY MAP



## Legend

- PRB Location
- Compliance Well
- Monitoring Well
- Groundwater Elevation Contour (ft amsl)
- Groundwater Flow Direction

NM = Not measured

0 250 500
Feet

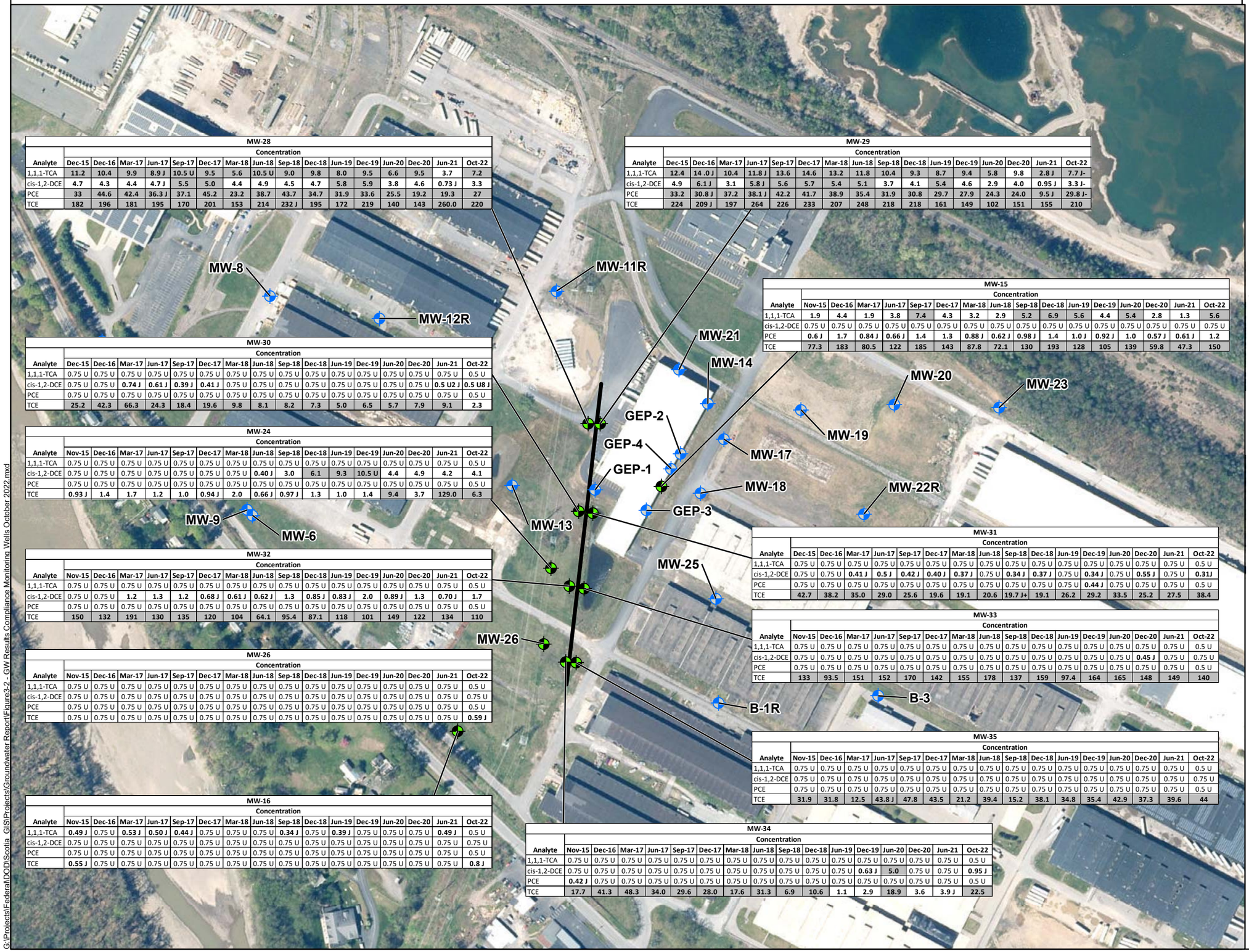
N

**Figure 3-1**
**POTENTIOMETRIC SITE MAP**
**October 2022**
Former Scotia Navy Depot

Map Date: 5/12/2023

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**MW-28**

| Analyte | Concentration | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dec-15 | Dec-16 | Mar-17 | Jun-17 | Sep-17 | Dec-17 | Mar-18 | Jun-18 | Sep-18 | Dec-18 | Jun-19 | Dec-19 | Jun-20 | Dec-20 | Jun-21 | Oct-22 |
| 1,1,1-TCA | 11.2 | 10.4 | 9.9 | 8.9 J | 10.5 U | 9.5 | 5.6 | 10.5 U | 9.0 | 9.8 | 8.0 | 9.5 | 6.6 | 9.5 | 3.7 | 7.2 |
| cis-1,2-DCE | 4.7 | 4.3 | 4.4 | 4.7 J | 5.5 | 5.0 | 4.4 | 4.9 | 4.5 | 4.7 | 5.8 | 5.9 | 3.8 | 4.6 | 0.73 J | 3.3 |
| PCE | 33 | 44.6 | 42.4 | 36.3 J | 37.1 | 45.2 | 23.2 | 38.7 | 43.7 | 34.7 | 31.9 | 33.6 | 25.5 | 19.2 | 19.3 | 27 |
| TCE | 182 | 196 | 181 | 195 | 170 | 201 | 153 | 214 | 232 J | 195 | 172 | 219 | 140 | 143 | 260.0 | 220 |

**MW-29**

| Analyte | Concentration | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dec-15 | Dec-16 | Mar-17 | Jun-17 | Sep-17 | Dec-17 | Mar-18 | Jun-18 | Sep-18 | Dec-18 | Jun-19 | Dec-19 | Jun-20 | Dec-20 | Jun-21 | Oct-22 |
| 1,1,1-TCA | 12.4 | 14 .0 J | 10.4 | 11.8 J | 13.6 | 14.6 | 13.2 | 11.8 | 10.4 | 9.3 | 8.7 | 9.4 | 5.8 | 9.8 | 2.8 J | 7.7 J- |
| cis-1,2-DCE | 4.9 | 6.1 J | 3.1 | 5.8 J | 5.6 | 5.7 | 5.4 | 5.1 | 3.7 | 4.1 | 5.4 | 4.6 | 2.9 | 4.0 | 0.95 J | 3.3 J- |
| PCE | 33.2 | 30.8 J | 37.2 | 38.1 J | 42.2 | 41.7 | 38.9 | 35.4 | 31.9 | 30.8 | 29.7 | 27.9 | 24.3 | 24.0 | 9.5 J | 29.8 J- |
| TCE | 224 | 209 J | 197 | 264 | 226 | 233 | 207 | 248 | 218 | 218 | 161 | 149 | 102 | 151 | 155 | 210 |

**MW-15**

| Analyte | Concentration | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Nov-15 | Dec-16 | Mar-17 | Jun-17 | Sep-17 | Dec-17 | Mar-18 | Jun-18 | Sep-18 | Dec-18 | Jun-19 | Dec-19 | Jun-20 | Dec-20 | Jun-21 | Oct-22 |
| 1,1,1-TCA | 1.9 | 4.4 | 1.9 | 3.8 | 7.4 | 4.3 | 3.2 | 2.9 | 5.2 | 6.9 | 5.6 | 4.4 | 5.4 | 2.8 | 1.3 | 5.6 |
| cis-1,2-DCE | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| PCE | 0.6 J | 1.7 | 0.84 J | 0.66 J | 1.4 | 1.3 | 0.88 J | 0.62 J | 0.98 J | 1.4 | 1.0 J | 0.92 J | 1.0 | 0.57 J | 0.61 J | 1.2 |
| TCE | 77.3 | 183 | 80.5 | 122 | 185 | 143 | 87.8 | 72.1 | 130 | 193 | 128 | 105 | 139 | 59.8 | 47.3 | 150 |

**MW-30**

| Analyte | Concentration | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dec-15 | Dec-16 | Mar-17 | Jun-17 | Sep-17 | Dec-17 | Mar-18 | Jun-18 | Sep-18 | Dec-18 | Jun-19 | Dec-19 | Jun-20 | Dec-20 | Jun-21 | Oct-22 |
| 1,1,1-TCA | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| cis-1,2-DCE | 0.75 U | 0.75 U | 0.74 J | 0.61 J | 0.39 J | 0.41 J | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U2 J | 0.5 U8 J |
| PCE | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| TCE | 25.2 | 42.3 | 66.3 | 24.3 | 18.4 | 19.6 | 9.8 | 8.1 | 8.2 | 7.3 | 5.0 | 6.5 | 5.7 | 7.9 | 9.1 | 2.3 |

**MW-31**

| Analyte | Concentration | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dec-15 | Dec-16 | Mar-17 | Jun-17 | Sep-17 | Dec-17 | Mar-18 | Jun-18 | Sep-18 | Dec-18 | Jun-19 | Dec-19 | Jun-20 | Dec-20 | Jun-21 | Oct-22 |
| 1,1,1-TCA | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| cis-1,2-DCE | 0.75 U | 0.75 U | 0.41 J | 0.5 J | 0.42 J | 0.40 J | 0.37 J | 0.75 U | 0.34 J | 0.37 J | 0.75 U | 0.34 J | 0.75 U | 0.55 J | 0.75 U | 0.31J |
| PCE | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.44 J | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| TCE | 42.7 | 38.2 | 35.0 | 29.0 | 25.6 | 19.6 | 19.1 | 20.6 | 19.7 J+ | 19.1 | 26.2 | 29.2 | 33.5 | 25.2 | 27.5 | 38.4 |

**MW-24**

| Analyte | Concentration | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Nov-15 | Dec-16 | Mar-17 | Jun-17 | Sep-17 | Dec-17 | Mar-18 | Jun-18 | Sep-18 | Dec-18 | Jun-19 | Dec-19 | Jun-20 | Dec-20 | Jun-21 | Oct-22 |
| 1,1,1-TCA | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| cis-1,2-DCE | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.40 J | 3.0 | 6.1 | 9.3 | 10.5 U | 4.4 | 4.9 | 4.2 | 4.1 |
| PCE | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| TCE | 0.93 J | 1.4 | 1.7 | 1.2 | 1.0 | 0.94 J | 2.0 | 0.66 J | 0.97 J | 1.3 | 1.0 | 1.4 | 9.4 | 3.7 | 129.0 | 6.3 |

**MW-33**

| Analyte | Concentration | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Nov-15 | Dec-16 | Mar-17 | Jun-17 | Sep-17 | Dec-17 | Mar-18 | Jun-18 | Sep-18 | Dec-18 | Jun-19 | Dec-19 | Jun-20 | Dec-20 | Jun-21 | Oct-22 |
| 1,1,1-TCA | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| cis-1,2-DCE | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.45 J | 0.75 U | 0.5 U |
| PCE | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| TCE | 133 | 93.5 | 151 | 152 | 170 | 142 | 155 | 178 | 137 | 159 | 97.4 | 164 | 165 | 148 | 149 | 140 |

**MW-32**

| Analyte | Concentration | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Nov-15 | Dec-16 | Mar-17 | Jun-17 | Sep-17 | Dec-17 | Mar-18 | Jun-18 | Sep-18 | Dec-18 | Jun-19 | Dec-19 | Jun-20 | Dec-20 | Jun-21 | Oct-22 |
| 1,1,1-TCA | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| cis-1,2-DCE | 0.75 U | 0.75 U | 1.2 | 1.3 | 1.2 | 0.68 J | 0.61 J | 0.62 J | 1.3 | 0.85 J | 0.83 J | 2.0 | 0.89 J | 1.3 | 0.70 J | 1.7 |
| PCE | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| TCE | 150 | 132 | 191 | 130 | 135 | 120 | 104 | 64.1 | 95.4 | 87.1 | 118 | 101 | 149 | 122 | 134 | 110 |

**MW-35**

| Analyte | Concentration | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Nov-15 | Dec-16 | Mar-17 | Jun-17 | Sep-17 | Dec-17 | Mar-18 | Jun-18 | Sep-18 | Dec-18 | Jun-19 | Dec-19 | Jun-20 | Dec-20 | Jun-21 | Oct-22 |
| 1,1,1-TCA | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| cis-1,2-DCE | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| PCE | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| TCE | 31.9 | 31.8 | 12.5 | 43.8 J | 47.8 | 43.5 | 21.2 | 39.4 | 15.2 | 38.1 | 34.8 | 35.4 | 42.9 | 37.3 | 39.6 | 44 |

**MW-26**

| Analyte | Concentration | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Nov-15 | Dec-16 | Mar-17 | Jun-17 | Sep-17 | Dec-17 | Mar-18 | Jun-18 | Sep-18 | Dec-18 | Jun-19 | Dec-19 | Jun-20 | Dec-20 | Jun-21 | Oct-22 |
| 1,1,1-TCA | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| cis-1,2-DCE | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| PCE | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| TCE | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.59 J |

**MW-34**

| Analyte | Concentration | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Nov-15 | Dec-16 | Mar-17 | Jun-17 | Sep-17 | Dec-17 | Mar-18 | Jun-18 | Sep-18 | Dec-18 | Jun-19 | Dec-19 | Jun-20 | Dec-20 | Jun-21 | Oct-22 |
| 1,1,1-TCA | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| cis-1,2-DCE | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.63 J | 5.0 | 0.75 U | 0.75 U | 0.95 J |
| PCE | 0.42 J | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| TCE | 17.7 | 41.3 | 48.3 | 34.0 | 29.6 | 28.0 | 17.6 | 31.3 | 6.9 | 10.6 | 1.1 | 2.9 | 18.9 | 3.6 | 3.9 J | 22.5 |

**MW-16**

| Analyte | Concentration | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Nov-15 | Dec-16 | Mar-17 | Jun-17 | Sep-17 | Dec-17 | Mar-18 | Jun-18 | Sep-18 | Dec-18 | Jun-19 | Dec-19 | Jun-20 | Dec-20 | Jun-21 | Oct-22 |
| 1,1,1-TCA | 0.49 J | 0.75 U | 0.53 J | 0.50 J | 0.44 J | 0.75 U | 0.75 U | 0.75 U | 0.34 J | 0.75 U | 0.39 J | 0.75 U | 0.75 U | 0.75 U | 0.49 J | 0.5 U |
| cis-1,2-DCE | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U |
| PCE | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.5 U |
| TCE | 0.55 J | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.75 U | 0.8 J |

VICINITY MAP



## Legend

- PRB Location
- Compliance Well
- Monitoring Well

| Analyte | NYSDEC Ambient Water Quality Standards and Guidance Value |
|---|---|
| 1,1,1-TCA | 5 |
| cis-1,2-DCE | 5 |
| PCE | 5 |
| TCE | 5 |

Note:
1,1,1-TCA = 1,1,1-Trichloroethane
cis-1,2-DCE = cis-1,2-Dichloroethene
PCE = Tetrachloroethene
TCE = Trichloroethene
J - Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
J+ - The result is an estimated quantity, likely to be biased high.
U - Indicates that the analyte was not detected (ND).
Detected concentrations are in **bold font**.
Detections exceeding the NYSDEC Ambient Water Quality Standards (AWQS) are highlighted in gray.

0 250 500
Feet

N

**Figure 3-2**
**GROUNDWATER RESULTS - COMPLIANCE MONITORING WELLS OCTOBER 2022**
Former Scotia Navy Depot

Map Date: 3/1/2023

G:\Projects\Federal\DOD\Scotia_GIS\Projects\Groundwater Report\Figure3-2_GW Results Compliance Monitoring Wells October 2022.mxd

| MW-12 R | |
|---|---|
| Analyte | 10/18/2022 |
| 1,1,1-Trichloroethane | **2.1** |
| Carbon Tetrachloride | **3.6** |
| cis-1,2-Dichloroethene | 0.75 U |
| Tetrachloroethene | **1.30** |
| Trichloroethene | **6.8** |

| MW-11 R | |
|---|---|
| Analyte | 10/18/2022 |
| 1,1,1-Trichloroethane | **0.32 J** |
| Carbon Tetrachloride | **4.9** |
| cis-1,2-Dichloroethene | 0.75 U |
| Tetrachloroethene | 0.5 U |
| Trichloroethene | **0.41 J** |

| MW-29 | |
|---|---|
| Analyte | 10/19/2022 |
| 1,1,1-Trichloroethane | **7.7 J-** |
| Carbon Tetrachloride | 0.75 UJ |
| cis-1,2-Dichloroethene | **3.3 J-** |
| Tetrachloroethene | **29.8 J-** |
| Trichloroethene | **210 J-** |

| GEP-1 | |
|---|---|
| Analyte | 10/20/2022 |
| 1,1,1-Trichloroethane | **6.5** |
| Carbon Tetrachloride | 0.75 U |
| cis-1,2-Dichloroethene | 0.75 U |
| Tetrachloroethene | **1.1** |
| Trichloroethene | **130** |

| GEP-2 | |
|---|---|
| Analyte | 10/18/2022 |
| 1,1,1-Trichloroethane | **16.1** |
| Carbon Tetrachloride | **0.5 J** |
| cis-1,2-Dichloroethene | **1.8** |
| Tetrachloroethene | **5.3** |
| Trichloroethene | **210** |

| MW-19 | |
|---|---|
| Analyte | 10/18/2022 |
| 1,1,1-Trichloroethane | **3.3** |
| Carbon Tetrachloride | 0.75 U |
| cis-1,2-Dichloroethene | 0.75 U |
| Tetrachloroethene | 0.5 U |
| Trichloroethene | **6.9** |

| MW-28 | |
|---|---|
| Analyte | 10/19/2022 |
| 1,1,1-Trichloroethane | **7.2** |
| Carbon Tetrachloride | **0.52 J** |
| cis-1,2-Dichloroethene | **3.3** |
| Tetrachloroethene | **27** |
| Trichloroethene | **220** |

| MW-20 | |
|---|---|
| Analyte | 10/18/2022 |
| 1,1,1-Trichloroethane | 0.5 U |
| Carbon Tetrachloride | 0.75 U |
| cis-1,2-Dichloroethene | 0.75 U |
| Tetrachloroethene | **1.7** |
| Trichloroethene | **33.9** |

| MW-5 | |
|---|---|
| Analyte | 10/18/2022 |
| 1,1,1-Trichloroethane | 0.5 U |
| Carbon Tetrachloride | 0.75 U |
| cis-1,2-Dichloroethene | 0.75 U |
| Tetrachloroethene | 0.5 U |
| Trichloroethene | 0.5 U |

| MW-30 | |
|---|---|
| Analyte | 10/19/2022 |
| 1,1,1-Trichloroethane | 0.5 U |
| Carbon Tetrachloride | 0.75 U |
| cis-1,2-Dichloroethene | **0.58 J** |
| Tetrachloroethene | 0.5 U |
| Trichloroethene | **2.3** |

| MW-17 | |
|---|---|
| Analyte | 10/18/2022 |
| 1,1,1-Trichloroethane | **8** |
| Carbon Tetrachloride | 0.75 U |
| cis-1,2-Dichloroethene | **0.91 J** |
| Tetrachloroethene | 0.5 U |
| Trichloroethene | **6.9** |

| MW-9 | |
|---|---|
| Analyte | 10/18/2022 |
| 1,1,1-Trichloroethane | 0.5 U |
| Carbon Tetrachloride | 0.75 U |
| cis-1,2-Dichloroethene | 0.75 U |
| Tetrachloroethene | 0.5 U |
| Trichloroethene | 0.5 U |

| MW-24 | |
|---|---|
| Analyte | 10/19/2022 |
| 1,1,1-Trichloroethane | 0.5 U |
| Carbon Tetrachloride | 0.75 U |
| cis-1,2-Dichloroethene | **4.1** |
| Tetrachloroethene | 0.5 U |
| Trichloroethene | **6.3** |

| GEP-4 | |
|---|---|
| Analyte | 10/18/2022 |
| 1,1,1-Trichloroethane | **13.9** |
| Carbon Tetrachloride | **0.54 J** |
| cis-1,2-Dichloroethene | **0.29 J** |
| Tetrachloroethene | **3.6** |
| Trichloroethene | **340** |

| MW-6 | |
|---|---|
| Analyte | 10/18/2022 |
| 1,1,1-Trichloroethane | **0.57 J** |
| Carbon Tetrachloride | 0.75 U |
| cis-1,2-Dichloroethene | 0.75 U |
| Tetrachloroethene | 0.5 U |
| Trichloroethene | **30.1** |

| MW-32 | |
|---|---|
| Analyte | 10/19/2022 |
| 1,1,1-Trichloroethane | 0.5 U |
| Carbon Tetrachloride | 0.75 U |
| cis-1,2-Dichloroethene | **1.7** |
| Tetrachloroethene | 0.5 U |
| Trichloroethene | **110** |

| MW-31 | |
|---|---|
| Analyte | 10/19/2022 |
| 1,1,1-Trichloroethane | 0.5 U |
| Carbon Tetrachloride | 0.75 U |
| cis-1,2-Dichloroethene | **0.31 J** |
| Tetrachloroethene | 0.5 U |
| Trichloroethene | **38.4** |

| MW-15 | |
|---|---|
| Analyte | 10/19/2022 |
| 1,1,1-Trichloroethane | **5.6** |
| Carbon Tetrachloride | **0.38 J** |
| cis-1,2-Dichloroethene | 0.75 U |
| Tetrachloroethene | **1.2** |
| Trichloroethene | **150** |

| MW-22R | |
|---|---|
| Analyte | 10/18/2022 |
| 1,1,1-Trichloroethane | 0.5 U |
| Carbon Tetrachloride | 0.75 U |
| cis-1,2-Dichloroethene | 0.75 U |
| Tetrachloroethene | **5** |
| Trichloroethene | **120** |

| MW-7 | |
|---|---|
| Analyte | 10/18/2022 |
| 1,1,1-Trichloroethane | 0.5 U |
| Carbon Tetrachloride | 0.75 U |
| cis-1,2-Dichloroethene | 0.75 U |
| Tetrachloroethene | 0.5 U |
| Trichloroethene | 0.5 U |

| MW-26 | |
|---|---|
| Analyte | 10/19/2022 |
| 1,1,1-Trichloroethane | 0.5 U |
| Carbon Tetrachloride | 0.75 U |
| cis-1,2-Dichloroethene | 0.75 U |
| Tetrachloroethene | 0.5 U |
| Trichloroethene | **0.59 J** |

| MW-16 | |
|---|---|
| Analyte | 10/19/2022 |
| 1,1,1-Trichloroethane | 0.5 U |
| Carbon Tetrachloride | 0.75 U |
| cis-1,2-Dichloroethene | 0.75 U |
| Tetrachloroethene | 0.5 U |
| Trichloroethene | **0.8 J** |

| MW-34 | |
|---|---|
| Analyte | 10/19/2022 |
| 1,1,1-Trichloroethane | 0.5 U |
| Carbon Tetrachloride | 0.75 U |
| cis-1,2-Dichloroethene | **0.95 J** |
| Tetrachloroethene | 0.5 U |
| Trichloroethene | **22.5** |

| MW-35 | |
|---|---|
| Analyte | 10/19/2022 |
| 1,1,1-Trichloroethane | 0.5 U |
| Carbon Tetrachloride | 0.75 U |
| cis-1,2-Dichloroethene | 0.75 U |
| Tetrachloroethene | 0.5 U |
| Trichloroethene | **44** |

| MW-33 | |
|---|---|
| Analyte | 10/19/2022 |
| 1,1,1-Trichloroethane | 0.5 U |
| Carbon Tetrachloride | 0.75 U |
| cis-1,2-Dichloroethene | 0.75 U |
| Tetrachloroethene | 0.5 U |
| Trichloroethene | **140** |

| MW-B-3 | |
|---|---|
| Analyte | 10/20/2022 |
| 1,1,1-Trichloroethane | 0.5 U |
| Carbon Tetrachloride | 0.75 U |
| cis-1,2-Dichloroethene | 0.75 U |
| Tetrachloroethene | **0.54 J** |
| Trichloroethene | **0.57 J** |

MW-8
MW-4
MW-21
MW-23
MW-14
MW-18
MW-13
GEP-3
MW-36
Adirondack Beverage Well
MW-27
MW-25
B-1R

VICINITY MAP



## Legend

- PRB Location
- Compliance Well
- Monitoring Well

| Analyte | NYSDEC Ambient Water Quality Standards and Guidance Value |
|---|---|
| 1,1,1-Trichloroethane | 5 |
| Carbon Tetrachloride | 5 |
| cis-1,2-Dichloroethene | 5 |
| Tetrachloroethene | 5 |
| Trichloroethene | 5 |

Note:
J = Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit
J+ = The result is an estimated quantity, likely to be biased high.
J- = The result is an estimated quantity, likely to be biased low.
U = Indicates that the analyte was not detected (ND).
Detected concentrations are in **bold font**.
Detections exceeding the NYSDEC Ambient Water Quality Standards (AWQS) are highlighted in gray.

0 250 500
Feet
N

**Figure 3-3**
**GROUNDWATER RESULTS - SITE WIDE**
**OCTOBER 2022**
Former Scotia Navy Depot

Map Date: 5/25/2023

G:\Projects\Federal\DOD\Scotia_GIS\Projects\Groundwater Report\Figure3-3 - Groundwater Results – Site Wide – October 2022.mxd

# Appendix A

## Field Calibration Forms

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**FIELD CALIBRATION FORM**

Site Name: Scotia Depot

| | |
|---|---|
| INSTRUMENT: Mini RAE | INSTRUMENT ID No: 043989 |
| OPERATOR: M. Wright | WEATHER: 37 cloudy |
| SPAN GAS TYPE: Isobutylene | DATE: 10/20/22 |
| CALIBRATION NOTES: | |
| Zero cal = 0.0 ppm | |
| Span cal = 100.0 ppm | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| COMMENTS: | |
| NONE | |
| | |
| | |
| | |
| | |
| SIGNATURE: [signature] | DATE: 10/20/22 |

**FIELD CALIBRATION FORM**

Site Name: Scotia Depot

| | |
|---|---|
| INSTRUMENT: Mini RAE | INSTRUMENT ID No: 043989 |
| OPERATOR: M. Wright | WEATHER: 30 clouds |
| SPAN GAS TYPE: Isobutylene | DATE: 10/19/22 |
| CALIBRATION NOTES: | |
| zero cal = 0.0 ppm | |
| span cal = 100.2 ppm | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| COMMENTS: | |
| NONE | |
| | |
| | |
| | |
| | |
| SIGNATURE: | DATE: 10/19/22 |

**FIELD CALIBRATION FORM**

Site Name: Scotia Depot

| | |
|---|---|
| INSTRUMENT: Mini RAE | INSTRUMENT ID No: 043989 |
| OPERATOR: M. Wright | WEATHER: 40 cloudy |
| SPAN GAS TYPE: Isobutylene | DATE: 10/18/22 |
| CALIBRATION NOTES: | |
| Zero cal = 0.1 ppm | |
| Span cal = 100.0 ppm | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| COMMENTS: | |
| NONE | |
| | |
| | |
| | |
| | |
| SIGNATURE: | DATE: 10/18/22 |

**FIELD CALIBRATION FORM**

Site Name: Scotia Navy Depot

| | |
|---|---|
| INSTRUMENT: PID mini RAE | INSTRUMENT ID No: 043989 |
| OPERATOR: Mike Wright | WEATHER: 40 clouds |
| SPAN GAS TYPE: Isobutylene | DATE: 10/17/22 |
| CALIBRATION NOTES: | |
| Zero cal = 0.0 ppm | |
| Span cal = 100.0 ppm | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| COMMENTS: | |
| NONE | |
| | |
| | |
| | |
| | |
| SIGNATURE: | DATE: 10/17/22 |

**FIELD CALIBRATION FORM**
**Horiba U-52**
**pH, CONDUCTIVITY, AND TURBIDITY**

| CALIBRATION |
|---|
| DATE: 10/18 |
| TIME: 0700 |
| METER ID: 21101 |

**pH CALIBRATION**

| pH STANDARD | INITIAL READING | FINAL READING |
|---|---|---|
| 4.0 | 4.05 | 3.93 |

**CONDUCTIVITY CALIBARATION**

| CONDUCTIVITY STANDARD | STANDARD READING | FINAL READING |
|---|---|---|
| 4.49 | 4.81 | 4.51 |

**TURBIDITY CALIBRATION**

| STANDARD | INITIAL READING | FINAL READING |
|---|---|---|
| 0 NTU | 0.2 | 0.0 |

**COMMENTS**

NONE

**SIGNATURE**

**FIELD CALIBRATION FORM**
**Horiba U-52**
**pH, CONDUCTIVITY, AND TURBIDITY**

| CALIBRATION |
|---|
| DATE: 10/19/20 |
| TIME: 0700 |
| METER ID: 21101 |

**pH CALIBRATION**

| pH STANDARD | INITIAL READING | FINAL READING |
|---|---|---|
| 4.0 | 3.98 | 4.01 |

**CONDUCTIVITY CALIBARATION**

| CONDUCTIVITY STANDARD | STANDARD READING | FINAL READING |
|---|---|---|
| 4.49 | 4.96 | 4.47 |

**TURBIDITY CALIBRATION**

| STANDARD | INITIAL READING | FINAL READING |
|---|---|---|
| 0 NTU | 0.0 | 0.0 |

**COMMENTS**

NONE

**SIGNATURE**

**FIELD CALIBRATION FORM**
**Horiba U-52**
**pH, CONDUCTIVITY, AND TURBIDITY**

| CALIBRATION |
|---|
| DATE: 10/20/22 |
| TIME: 0700 |
| METER ID: 21101 |

**pH CALIBRATION**

| pH STANDARD | INITIAL READING | FINAL READING |
|---|---|---|
| 4.0 | 4.12 | 4.02 |

**CONDUCTIVITY CALIBARATION**

| CONDUCTIVITY STANDARD | STANDARD READING | FINAL READING |
|---|---|---|
| 4.49 | 4.56 | 4.45 |

**TURBIDITY CALIBRATION**

| STANDARD | INITIAL READING | FINAL READING |
|---|---|---|
| 0 NTU | 1.9 | 0.0 |

**COMMENTS**

NONE

**SIGNATURE**

**FIELD CALIBRATION FORM**
**Horiba U-52**
**pH, CONDUCTIVITY, AND TURBIDITY**

| CALIBRATION | |
|---|---|
| DATE: | 10/18/22 |
| TIME: | 0700 |
| METER ID: | 45687 |

**pH CALIBRATION**

| pH STANDARD | INITIAL READING | FINAL READING |
|---|---|---|
| 4.0 | 4.91 | 3.99 |

**CONDUCTIVITY CALIBARATION**

| CONDUCTIVITY STANDARD | STANDARD READING | FINAL READING |
|---|---|---|
| 4.49 | 4.56 | 4.47 |

**TURBIDITY CALIBRATION**

| STANDARD | INITIAL READING | FINAL READING |
|---|---|---|
| 0 NTU | 8.4 | 0.0 |

**COMMENTS**

NONE

**SIGNATURE**

**FIELD CALIBRATION FORM**
**Horiba U-52**
**pH, CONDUCTIVITY, AND TURBIDITY**

| CALIBRATION | |
|---|---|
| DATE: | 10/19/22 |
| TIME: | 0700 |
| METER ID: | 45687 |

**pH CALIBRATION**

| pH STANDARD | INITIAL READING | FINAL READING |
|---|---|---|
| 4.0 | 4.13 | 4.01 |

**CONDUCTIVITY CALIBARATION**

| CONDUCTIVITY STANDARD | STANDARD READING | FINAL READING |
|---|---|---|
| 4.49 | 4.39 | 4.50 |

**TURBIDITY CALIBRATION**

| STANDARD | INITIAL READING | FINAL READING |
|---|---|---|
| 0 NTU | 2.3 | 0.0 |

**COMMENTS**

NONE

**SIGNATURE**

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# Appendix B

# Groundwater Sample Collection Field Forms

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# WELL PURGING AND SAMPLING RECORD

| | | | |
|---|---|---|---|
| Site Name/Location | Scotia Depot | Project No: | Page 1 of 1 |
| Well ID | MW-B-3 | Date 10/20/22 | Time 0850 |
| Well Site Description | DLA | | |
| Weather/Temp | 45 sun | | |
| Field Technician | MW | | |

## WELL CONSTRUCTION DATA

| | | | |
|---|---|---|---|
| TOC Elevation (ft amsl) | | Screened Interval (ft bgs) | 47.5 - 67.5 |
| Well Diameter (in.) | 2 | Nominal Borehole Diameter (in.) | 8 |

## FIELD MEASUREMENTS

| | | | |
|---|---|---|---|
| Well Depth (gauge after sampling) (ft) | 63.45 | Gallons per foot of depth | 0.163 |
| Depth to product (ft) | NA | Static water level (ft) | 58.80 |
| Product column height (ft) | / | Water column height (ft) | 4.67 |
| Product volume (Gallons) | | Water volume (Gallons) | 0.76 |

## PURGE INFORMATION

| | | | |
|---|---|---|---|
| Pump Type / ID | Geosub 2 | Water Quality Meter Type / ID | Horiba U-52 |
| Pump Intake Depth (ft) | 61 | Flow-Thru Cell Volume (L) | 1 |
| Purge Start Time | 855 | Appearance/Odor (Start) | clear none |
| Purge End Time | 0925 | Appearance/Odor (End) | clear NONE |
| Average Purge Rate (mL/min) | 300 | Total Drawdown (ft) | 0.07 |
| Well Went Dry (Y/N) | N | Stop Time | Volume removed (L) |
| Recovery Time | | Recovery Rate (mL/min) | Restart Purge Time |
| Total Volume Removed (L) | 9.0 | Total Pump Time (min) | 30 |

| Date | Time | Purge Rate (mL/min) | Volume Removed (LPM) | pH (+/-0.1) | Cond. (µS/cm) (+- 3%) | Temp. (°C) (+- 3%) | ORP (mV) (+/- 10) | Turbidity (NTU) +/-10% or <5 NTU | DO (mg/L) +/-10% or <0.5 mg/L | Depth to Water (ft below TOC) |
|---|---|---|---|---|---|---|---|---|---|---|
| 10/20 | 0855 | 300 | - | 7.72 | 0.319 | 12.03 | 154 | 17.7 | 7.69 | 58.80 |
| | 0900 | - | 1.5 | 7.60 | 0.320 | 12.20 | 154 | 15.1 | 7.03 | 58.82 |
| | 0905 | - | 3.0 | 7.64 | 0.319 | 12.37 | 152 | 12.1 | 6.69 | 58.82 |
| | 0910 | - | 4.5 | 7.67 | 0.317 | 12.57 | 149 | 11.3 | 6.43 | 58.82 |
| | 0915 | - | 6.0 | 7.72 | 0.317 | 13.91 | 148 | 0.0 | 7.47 | 58.82 |
| | 0920 | - | 7.5 | 7.73 | 0.320 | 13.99 | 148 | 0.0 | 7.40 | 58.87 |
| | 0925 | - | 9.0 | 7.74 | 0.321 | 14.12 | 147 | 0.0 | 7.31 | 58.87 |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

COMMENTS _____

## SAMPLE COLLECTION

| | | | |
|---|---|---|---|
| Sample Date | 10/20/22 | Sample Time | 0925 |
| Sample ID | FSNP-MW-B-3-20221020 | | |
| QA/QC Collected / ID | NA | Sample Appearance/Odor | NONE / clear |
| Analyses | | | |
| Sampler | MW | Signature | |

# WELL PURGING AND SAMPLING RECORD

| | | |
|---|---|---|
| Site Name/Location Scotia Navy Depot | Project No: | Page 1 of |
| Well ID MW-5 | Date 10/18/22 | Time 0800 |
| Well Site Description grass stick up | | |
| Weather/Temp 40 clouds | | |
| Field Technician MW | | |

## WELL CONSTRUCTION DATA

| | |
|---|---|
| TOC Elevation (ft amsl) | Screened Interval (ft bgs) 62.5 - 72.5 |
| Well Diameter (in.) 2 | Nominal Borehole Diameter (in.) 8 |

## FIELD MEASUREMENTS

| | |
|---|---|
| Well Depth (gauge after sampling) (ft) 75.84 | Gallons per foot of depth 0.163 |
| Depth to product (ft) N/A | Static water level (ft) 66.36 |
| Product column height (ft) N/A | Water column height (ft) 9.48 |
| Product volume (Gallons) N/A | Water volume (Gallons) 1.55 |

## PURGE INFORMATION

| | | |
|---|---|---|
| Pump Type / ID Geosub 2 | | Water Quality Meter Type / ID Horiba U-52 @ 21101 |
| Pump Intake Depth (ft) 69 ft | | Flow-Thru Cell Volume (L) 1 |
| Purge Start Time 0805 | | Appearance/Odor (Start) clear / NONE |
| Purge End Time 0845 | | Appearance/Odor (End) clear / NONE |
| Average Purge Rate (mL/min) 300 | | Total Drawdown (ft) 0.02 |
| Well Went Dry (Y/N) | Stop Time | Volume removed (L) |
| Recovery Time | Recovery Rate (mL/min) | Restart Purge Time |
| Total Volume Removed (L) 12 | | Total Pump Time (min) 40 |

| Date | Time | Purge Rate (mL/min) | Volume Removed (LPM) | pH (+/-0.1) | Cond. (µS/cm) (+- 3%) | Temp. (°C) (+- 3%) | ORP (mV) (+/- 10) | Turbidity (NTU) +/-10% or <5 NTU | DO (mg/L) +/-10% or <0.5 mg/L | Depth to Water (ft below TOC) |
|---|---|---|---|---|---|---|---|---|---|---|
| 10/18 | 0805 | 300 | – | 6.88 | 0.442 | 13.30 | 205 | 207 | 8.32 | 66.36 |
| – | 0810 | – | 1.5 | 7.01 | 0.435 | 14.97 | 207 | 173 | 7.07 | 66.36 |
| – | 0815 | – | 3.0 | 7.05 | 0.433 | 15.46 | 205 | 113 | 6.79 | 66.37 |
| – | 0820 | – | 4.5 | 7.12 | 0.432 | 15.76 | 199 | 46.4 | 6.57 | 66.37 |
| – | 0825 | – | 6.0 | 7.18 | 0.431 | 16.16 | 186 | 18.8 | 5.73 | 66.37 |
| – | 0830 | – | 7.5 | 7.20 | 0.432 | 16.03 | 181 | 9.9 | 6.12 | 66.37 |
| – | 0835 | – | 9.0 | 7.24 | 0.432 | 16.15 | 168 | 2.1 | 5.33 | 66.37 |
| – | 0840 | – | 10.5 | 7.29 | 0.431 | 16.27 | 161 | 0.0 | 5.20 | 66.38 |
| – | 0845 | – | 12 | 7.32 | 0.431 | 16.29 | 159 | 0.0 | 5.13 | 66.38 |
| – | | | | | | | | | | |
| – | | | | | | | | | | |

COMMENTS NONE

## SAMPLE COLLECTION

| | |
|---|---|
| Sample Date 10/18/22 | Sample Time 0845 |
| Sample ID FSNP-MW-5-20221018 | |
| QA/QC Collected / ID Dup FSNP-FD-01-20221018 | Sample Appearance/Odor clear / NONE |
| Analyses VOC | |
| Sampler MW | Signature |

# WELL PURGING AND SAMPLING RECORD

| | | | |
|---|---|---|---|
| Site Name/Location | Scotia Navy Depot | Project No: | Page 1 of |
| Well ID | MW-6 | Date 10/18/22 | Time 0900 |
| Well Site Description | grass near MW-9 | | |
| Weather/Temp | 42 clouds | | |
| Field Technician | MW | | |

## WELL CONSTRUCTION DATA

| | | | |
|---|---|---|---|
| TOC Elevation (ft amsl) | | Screened Interval (ft bgs) | 58.5-68.5 |
| Well Diameter (in.) | 2 | Nominal Borehole Diameter (in.) | 8 |

## FIELD MEASUREMENTS

| | | | |
|---|---|---|---|
| Well Depth (gauge after sampling) (ft) | 71.49 | Gallons per foot of depth | 0.163 |
| Depth to product (ft) | N/A | Static water level (ft) | 64.65 |
| Product column height (ft) | | Water column height (ft) | 6.84 |
| Product volume (Gallons) | | Water volume (Gallons) | 1.12 |

## PURGE INFORMATION

| | | | |
|---|---|---|---|
| Pump Type / ID | Geosub 2 | Water Quality Meter Type / ID | Horiba U-52 21101 |
| Pump Intake Depth (ft) | 65 ft | Flow-Thru Cell Volume (L) | 1 |
| Purge Start Time | 0905 | Appearance/Odor (Start) | clear / NONE |
| Purge End Time | 0940 | Appearance/Odor (End) | clear / NONE |
| Average Purge Rate (mL/min) | 250 | Total Drawdown (ft) | 0.03 |
| Well Went Dry (Y/N) | N | Stop Time | Volume removed (L) |
| Recovery Time | | Recovery Rate (mL/min) | Restart Purge Time |
| Total Volume Removed (L) | 8.75 | Total Pump Time (min) | 35 |

| Date | Time | Purge Rate (mL/min) | Volume Removed (LPM) | pH (+/-0.1) | Cond. (µS/cm) (+- 3%) | Temp. (°C) (+- 3%) | ORP (mV) (+/- 10) | Turbidity (NTU) +/-10% or <5 NTU | DO (mg/L) +/-10% or <0.5 mg/L | Depth to Water (ft below TOC) |
|---|---|---|---|---|---|---|---|---|---|---|
| 10/18 | 0905 | 250 | — | 7.32 | 0.629 | 12.63 | 105 | 134 | 8.09 | 64.65 |
| " | 0910 | " | 1.25 | 7.17 | 0.643 | 12.54 | 91 | 46.9 | 7.88 | 64.67 |
| " | 0915 | " | 2.50 | 7.16 | 0.651 | 12.71 | 100 | 24.5 | 7.96 | 64.67 |
| " | 0920 | " | 3.75 | 7.17 | 0.657 | 12.87 | 111 | 18.6 | 7.70 | 64.67 |
| " | 0925 | " | 5.0 | 7.24 | 0.657 | 12.94 | 120 | 11.1 | 7.72 | 64.68 |
| " | 0930 | " | 6.25 | 7.20 | 0.656 | 13.00 | 123 | 4.9 | 7.52 | 64.68 |
| " | 0935 | " | 7.5 | 7.21 | 0.655 | 13.05 | 127 | 4.2 | 7.52 | 64.68 |
| " | 0940 | " | 8.75 | 7.22 | 0.655 | 13.07 | 129 | 4.5 | 7.54 | 64.68 |
| " | | " | | | | | | | | |
| " | | " | | | | | | | | |
| " | | " | | | | | | | | |

COMMENTS NONE

## SAMPLE COLLECTION

| | | | |
|---|---|---|---|
| Sample Date | 10/18/22 | Sample Time | 0940 |
| Sample ID | FSNO-MW-6-20221018 | | |
| QA/QC Collected / ID | N/A | Sample Appearance/Odor | clear / NONE |
| Analyses | VOC | | |
| Sampler | MW | Signature | |

# WELL PURGING AND SAMPLING RECORD

| | | |
|---|---|---|
| Site Name/Location | Project No: | Page of |
| Well ID MW-7 | Date 10/18/22 | Time 0745 |
| Well Site Description | | |
| Weather/Temp Cloudy 43°F | | |
| Field Technician JG | | |

## WELL CONSTRUCTION DATA

| | |
|---|---|
| TOC Elevation (ft amsl) | Screened Interval (ft bgs) 61-71 |
| Well Diameter (in.) 2 | Nominal Borehole Diameter (in.) 8 |

## FIELD MEASUREMENTS

| | |
|---|---|
| Well Depth (gauge after sampling) (ft) 70.08 | Gallons per foot of depth 0.163 |
| Depth to product (ft) NA | Static water level (ft) 62.93 |
| Product column height (ft) NA | Water column height (ft) 7.15 |
| Product volume (Gallons) NA | Water volume (Gallons) 1.17 |

## PURGE INFORMATION

| | | |
|---|---|---|
| Pump Type / ID Grosub 2 | | Water Quality Meter Type / ID Horiba U-52 |
| Pump Intake Depth (ft) 66 | | Flow-Thru Cell Volume (L) 1 |
| Purge Start Time 0745 | | Appearance/Odor (Start) clear / NONE |
| Purge End Time 0840 | | Appearance/Odor (End) clear / NONE |
| Average Purge Rate (mL/min) 0.3 | | Total Drawdown (ft) - |
| Well Went Dry (Y/N) N | Stop Time - | Volume removed (L) 18.0 |
| Recovery Time - | Recovery Rate (mL/min) - | Restart Purge Time - |
| Total Volume Removed (L) - | | Total Pump Time (min) 55 |

| Date | Time | Purge Rate (mL/min) | Volume Removed (LPM) | pH (+/-0.1) | Cond. (µS/cm) (+- 3%) | Temp. (°C) (+- 3%) | ORP (mV) (+/- 10) | Turbidity (NTU) +/-10% or <5 NTU | DO (mg/L) +/-10% or <0.5 mg/L | Depth to Water (ft below TOC) |
|---|---|---|---|---|---|---|---|---|---|---|
| 10/18 | 0745 | 0.3 | 1.5 | 7.21 | 0.676 | 12.92 | 211 | 278 | 6.04 | 63.14 |
| " | 0750 | 0.3 | 3.0 | 7.22 | 0.680 | 12.75 | 210 | 300 | 5.60 | 63.15 |
| " | 0755 | 0.3 | 4.5 | 7.22 | 0.679 | 13.18 | 206 | 429 | 6.06 | 63.09 |
| " | 0800 | 0.3 | 6.0 | 7.22 | 0.684 | 13.52 | 205 | 397 | 5.99 | 63.09 |
| " | 0805 | " | 7.5 | 7.22 | 0.687 | 13.75 | 203 | 336 | 5.30 | 63.09 |
| " | 0810 | " | 9.0 | 7.24 | 0.692 | 13.53 | 202 | 318 | 4.74 | 63.09 |
| " | 0815 | " | 10.5 | 7.22 | 0.688 | 14.00 | 201 | 250 | 6.03 | 63.09 |
| " | 0820 | " | 12.0 | 7.22 | 0.686 | 14.77 | 201 | ~~150~~ | ~~5.48~~ | 63.09 |
| " | 0825 | " | 13.5 | 7.22 | 0.687 | 14.39 | ~~203~~ | 135 | 5.09 | 63.09 |
| " | 0830 | " | 15.0 | 7.22 | 0.688 | 14.38 | 203 | 65.5 | 5.09 | 63.09 |
| " | 0835 | " | 16.5 | 7.22 | 0.688 | 14.38 | ~~201~~ | ~~100~~ 61.9 | 5.11 | 63.09 |

COMMENTS _____

## SAMPLE COLLECTION

| | |
|---|---|
| Sample Date 10/18 | Sample Time 0840 |
| Sample ID FSNP-MW-7-20221018 | |
| QA/QC Collected / ID - | Sample Appearance/Odor Clear / NONE |
| Analyses | |
| Sampler JG | Signature Jennifer Gray |

# WELL PURGING AND SAMPLING RECORD

| | | | |
|---|---|---|---|
| Site Name/Location | Scotia Depot | Project No: | Page of |
| Well ID | MW-9 | Date 10/18 | Time 0900 |
| Well Site Description | | | |
| Weather/Temp | 40 F | | |
| Field Technician | JG | | |

## WELL CONSTRUCTION DATA

| | | | |
|---|---|---|---|
| TOC Elevation (ft amsl) | | Screened Interval (ft bgs) | 110 - 120 |
| Well Diameter (in.) | 2 | Nominal Borehole Diameter (in.) | 8 |

## FIELD MEASUREMENTS

| | | | |
|---|---|---|---|
| Well Depth (gauge after sampling) (ft) | 110.99 | Gallons per foot of depth | 0.163 |
| Depth to product (ft) | NA | Static water level (ft) | 64.44 |
| Product column height (ft) | NA | Water column height (ft) | 46.55 |
| Product volume (Gallons) | NA | Water volume (Gallons) | 7.58 |

## PURGE INFORMATION

| | | | |
|---|---|---|---|
| Pump Type / ID | Geo sub 2 | Water Quality Meter Type / ID | Horiba - U-52 |
| Pump Intake Depth (ft) | 115 | Flow-Thru Cell Volume (L) | 1 |
| Purge Start Time | 0900 | Appearance/Odor (Start) | clear none |
| Purge End Time | 0950 | Appearance/Odor (End) | clear none |
| Average Purge Rate (mL/min) | 0.3 | Total Drawdown (ft) | - |
| Well Went Dry (Y/N) | - | Stop Time | - |
| Recovery Time | - | Recovery Rate (mL/min) | - |
| Total Volume Removed (L) | - | Total Pump Time (min) | 50 |

| Date | Time | Purge Rate (mL/min) | Volume Removed (LPM) | pH (+/-0.1) | Cond. (µS/cm) (+- 3%) | Temp. (°C) (+- 3%) | ORP (mV) (+/- 10) | Turbidity (NTU) +/-10% or <5 NTU | DO (mg/L) +/-10% or <0.5 mg/L | Depth to Water (ft below TOC) |
|---|---|---|---|---|---|---|---|---|---|---|
| 10/18 | 0900 | 0.3 | 1.5 | 7.70 | 0.548 | 12.27 | -114 | 195 | 0.23 | 64.35 |
| " | 0905 | 0.3 | 3.0 | 7.83 | 0.556 | 12.50 | -140 | 141 | 0.00 | 64.17 |
| " | 0910 | " | 4.5 | 7.84 | 0.556 | 12.66 | -143 | 109 | 0.00 | 64.17 |
| " | 0915 | " | 6.0 | 7.83 | 0.555 | 12.73 | -142 | 91.1 | 0.00 | 64.17 |
| " | 0920 | " | 7.5 | 7.82 | 0.555 | 12.25 | -140 | 78.2 | 0.00 | 64.17 |
| " | 0925 | " | 9.0 | 7.81 | 0.554 | 12.80 | -139 | 62.2 | 0.00 | 64.17 |
| " | 0930 | " | 10.5 | 7.82 | 0.554 | 12.79 | -139 | 54.7 | 0.00 | 64.17 |
| " | 0935 | " | 12 | 7.83 | 0.554 | 12.83 | -140 | 48.0 | 0.00 | 64.17 |
| " | 0940 | " | 13.5 | 7.83 | 0.554 | 12.84 | -140 | 42.7 | 0.00 | 64.17 |
| " | 0945 | " | 15.0 | 7.83 | 0.555 | 12.84 | -140 | 40.9 | 0.00 | 64.17 |
| " | 0950 | " | 16.5 | 7.83 | 0.554 | 12.84 | -140 | 39.8 | 0.00 | 64.17 |

COMMENTS _____

## SAMPLE COLLECTION

| | | | |
|---|---|---|---|
| Sample Date | 10/18 | Sample Time | 0935 |
| Sample ID | FSND - MW-9 - 20221018 | | |
| QA/QC Collected / ID | | Sample Appearance/Odor | clear none |
| Analyses | | | |
| Sampler | JG | Signature | |

# WELL PURGING AND SAMPLING RECORD

| | | | |
|---|---|---|---|
| Site Name/Location | Scotia Navy Depot | Project No: | Page 1 of |
| Well ID | MW-11R | Date 10/18/22 | Time 1005 |
| Well Site Description | Rail Road Tracks | | |
| Weather/Temp | 45 clouds | | |
| Field Technician | MW | | |

## WELL CONSTRUCTION DATA

| | |
|---|---|
| TOC Elevation (ft amsl) | Screened Interval (ft bgs) 65 - 80 |
| Well Diameter (in.) 2 | Nominal Borehole Diameter (in.) 8 |

## FIELD MEASUREMENTS

| | |
|---|---|
| Well Depth (gauge after sampling) (ft) 79.84 | Gallons per foot of depth 0.163 |
| Depth to product (ft) N/A | Static water level (ft) 67.90 |
| Product column height (ft) | Water column height (ft) 11.94 |
| Product volume (Gallons) | Water volume (Gallons) 1.94 |

## PURGE INFORMATION

| | | |
|---|---|---|
| Pump Type / ID Geosub 2 | | Water Quality Meter Type / ID Horiba U-52 21101 |
| Pump Intake Depth (ft) 73 | | Flow-Thru Cell Volume (L) 1 |
| Purge Start Time 1010 | | Appearance/Odor (Start) Turbid / None |
| Purge End Time 1055 | | Appearance/Odor (End) Clear / None |
| Average Purge Rate (mL/min) 300 | | Total Drawdown (ft) |
| Well Went Dry (Y/N) | Stop Time | Volume removed (L) |
| Recovery Time | Recovery Rate (mL/min) | Restart Purge Time |
| Total Volume Removed (L) 13.5 | | Total Pump Time (min) 45 |

| Date | Time | Purge Rate (mL/min) | Volume Removed (LPM) | pH (+/-0.1) | Cond. (µS/cm) (+- 3%) | Temp. (°C) (+- 3%) | ORP (mV) (+/- 10) | Turbidity (NTU) +/-10% or <5 NTU | DO (mg/L) +/-10% or <0.5 mg/L | Depth to Water (ft below TOC) |
|---|---|---|---|---|---|---|---|---|---|---|
| 10/18 | 1010 | 300 | - | 7.55 | 0.550 | 12.52 | 137 | >1000 | 6.57 | 67.94 |
| " | 1015 | - | 1.5 | 7.49 | 0.551 | 13.02 | 141 | >1000 | 6.04 | 67.96 |
| " | 1020 | - | 3.0 | 7.49 | 0.540 | 14.02 | 143 | 581 | 6.00 | 67.96 |
| " | 1025 | - | 4.5 | 7.55 | 0.539 | 14.39 | 142 | 525 | 6.19 | 67.96 |
| " | 1030 | - | 6.0 | 7.52 | 0.536 | 14.58 | 144 | 341 | 5.89 | 67.96 |
| " | 1035 | - | 7.5 | 7.53 | 0.537 | 14.69 | 142 | 151 | 5.59 | 67.96 |
| " | 1040 | - | 9.0 | 7.57 | 0.534 | 14.89 | 137 | 49.3 | 5.94 | 67.96 |
| " | 1045 | - | 10.5 | 7.58 | 0.530 | 14.90 | 131 | 25.4 | 5.95 | 67.96 |
| " | 1050 | - | 12.0 | 7.59 | 0.525 | 14.99 | 130 | 34.8 | 5.04 | 67.96 |
| " | 1055 | - | 13.5 | 7.60 | 0.521 | 15.02 | 128 | 33.7 | 5.00 | 67.97 |
| " | | | | | | | | | | |

COMMENTS _____

## SAMPLE COLLECTION

| | |
|---|---|
| Sample Date 10/18/22 | Sample Time 1055 |
| Sample ID FSNO-MW-11R-20221018 | |
| QA/QC Collected / ID N/A | Sample Appearance/Odor Clear / None |
| Analyses VOC | |
| Sampler MW | Signature |

# WELL PURGING AND SAMPLING RECORD

| | | |
|---|---|---|
| Site Name/Location Scotia Depot | Project No: | Page of |
| Well ID MW-12R | Date 10/18 | Time 1015 |
| Well Site Description | | |
| Weather/Temp 40 F | | |
| Field Technician JG | | |

## WELL CONSTRUCTION DATA

| | |
|---|---|
| TOC Elevation (ft amsl) | Screened Interval (ft bgs) 60-80 |
| Well Diameter (in.) 2 | Nominal Borehole Diameter (in.) 8 |

## FIELD MEASUREMENTS

| | |
|---|---|
| Well Depth (gauge after sampling) (ft) 79.30 | Gallons per foot of depth 0.163 |
| Depth to product (ft) NA | Static water level (ft) 66.36 |
| Product column height (ft) / | Water column height (ft) 12.94 |
| Product volume (Gallons) / | Water volume (Gallons) 2.11 |

## PURGE INFORMATION

| | | |
|---|---|---|
| Pump Type / ID Geo Sub 2 | | Water Quality Meter Type / ID Horiba U-52 |
| Pump Intake Depth (ft) 70 | | Flow-Thru Cell Volume (L) 1 |
| Purge Start Time 1013 | | Appearance/Odor (Start) Clear None |
| Purge End Time 1105 | | Appearance/Odor (End) Clear None |
| Average Purge Rate (mL/min) 0.3 | | Total Drawdown (ft) — |
| Well Went Dry (Y/N) / | Stop Time | Volume removed (L) 16.5 |
| Recovery Time / | Recovery Rate (mL/min) / | Restart Purge Time — |
| Total Volume Removed (L) / | | Total Pump Time (min) 50 |

| Date | Time | Purge Rate (mL/min) | Volume Removed (LPM) | pH (+/-0.1) | Cond. (µS/cm) (+- 3%) | Temp. (°C) (+- 3%) | ORP (mV) (+/- 10) | Turbidity (NTU) +/-10% or <5 NTU | DO (mg/L) +/-10% or <0.5 mg/L | Depth to Water (ft below TOC) |
|---|---|---|---|---|---|---|---|---|---|---|
| 10/18 | 1015 | 0.3 | 1.5 | 7.65 | 0.547 | 13.45 | 95 | 796 | 6.02 | 66.49 |
| " | 1020 | 0.3 | 3.0 | 7.60 | 0.565 | 14.43 | 116 | 162 | 5.49 | 66.41 |
| " | 1025 | 0.3 | 4.5 | 7.60 | 0.569 | 14.75 | 128 | 85.4 | 5.51 | 66.41 |
| " | 1030 | " | 6.0 | 7.59 | 0.571 | 14.97 | 135 | 53.9 | 5.41 | 66.41 |
| " | 1035 | " | 7.5 | 7.59 | 0.570 | 15.12 | 142 | 34.2 | 5.42 | 66.41 |
| " | 1040 | " | 9.0 | 7.59 | 0.570 | 15.05 | 144 | 24.2 | 5.59 | 66.41 |
| " | 1045 | " | 10.5 | 7.59 | 0.570 | 15.10 | 146 | 18.3 | 5.47 | 66.41 |
| " | 1050 | " | 12.0 | 7.59 | 0.570 | 15.12 | 147 | 14.8 | 5.47 | 66.41 |
| " | 1055 | " | 13.5 | 7.59 | 0.570 | 15.10 | 147 | 9.8 | 5.48 | 66.41 |
| " | 1100 | " | 15 | 7.58 | 0.571 | 15.11 | 146 | 6.2 | 5.48 | 66.41 |
| " | 1105 | " | 16.5 | 7.58 | 0.570 | 15.10 | 147 | 4.8 | 5.47 | 66.41 |

COMMENTS _____

## SAMPLE COLLECTION

| | |
|---|---|
| Sample Date 10/18/22 | Sample Time 1105 |
| Sample ID FSDD-MW-12R-20221018 | |
| QA/QC Collected / ID MS/MSD | Sample Appearance/Odor Clear None |
| Analyses All | |
| Sampler JM | Signature |

# WELL PURGING AND SAMPLING RECORD

| | | | |
|---|---|---|---|
| Site Name/Location | Scotia Depot | Project No: | Page 1 of 1 |
| Well ID | MW-14 | Date 10/20/22 | Time 0800 |
| Well Site Description | near blue building | | |
| Weather/Temp | 40 clouds | | |
| Field Technician | MW | | |

## WELL CONSTRUCTION DATA

| | | | |
|---|---|---|---|
| TOC Elevation (ft amsl) | | Screened Interval (ft bgs) | 65-80 |
| Well Diameter (in.) | 2 | Nominal Borehole Diameter (in.) | 8 |

## FIELD MEASUREMENTS

| | | | |
|---|---|---|---|
| Well Depth (gauge after sampling) (ft) | 76.50 | Gallons per foot of depth | 0.163 |
| Depth to product (ft) | NA | Static water level (ft) | 65.78 |
| Product column height (ft) | | Water column height (ft) | 10.7 |
| Product volume (Gallons) | | Water volume (Gallons) | 1.74 |

## PURGE INFORMATION

| | | | |
|---|---|---|---|
| Pump Type / ID | Bailer | Water Quality Meter Type / ID | Horiba - U52 |
| Pump Intake Depth (ft) | — | Flow-Thru Cell Volume (L) | — |
| Purge Start Time | | Appearance/Odor (Start) | clear / none |
| Purge End Time | | Appearance/Odor (End) | Turbid / none |
| Average Purge Rate (mL/min) | — | Total Drawdown (ft) | |
| Well Went Dry (Y/N) | Stop Time | Volume removed (L) | |
| Recovery Time | Recovery Rate (mL/min) | Restart Purge Time | |
| Total Volume Removed (L) | — | Total Pump Time (min) | — |

| Date | Time | Purge Rate (mL/min) | Volume Removed (LPM) | pH (+/-0.1) | Cond. (µS/cm) (+- 3%) | Temp. (°C) (+- 3%) | ORP (mV) (+/- 10) | Turbidity (NTU) +/-10% or <5 NTU | DO (mg/L) +/-10% or <0.5 mg/L | Depth to Water (ft below TOC) |
|---|---|---|---|---|---|---|---|---|---|---|
| 10/20 | 1 | — | — | 7.42 | 0.722 | 12.51 | 163 | 107 | 5.53 | — |
| — | 2 | — | — | 7.45 | 0.721 | 12.61 | 163 | 724 | 5.78 | — |
| — | 3 | — | — | 7.29 | 0.701 | 12.96 | 162 | 369 | 5.96 | — |
| — | 4 | — | — | 7.35 | 0.722 | 12.74 | 164 | 512 | 6.27 | — |
| — | 5 | — | — | 7.38 | 0.723 | 12.80 | 164 | 428 | 6.34 | — |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

COMMENTS Sampled with Bailer

## SAMPLE COLLECTION

| | | | |
|---|---|---|---|
| Sample Date | 10/20/22 | Sample Time | 0815 |
| Sample ID | FSND-MW-14-20221020 | | |
| QA/QC Collected / ID | NA | Sample Appearance/Odor | Turbid |
| Analyses | | | |
| Sampler | MW | Signature | |

# WELL PURGING AND SAMPLING RECORD

| | | | |
|---|---|---|---|
| Site Name/Location | Scotia Depot | Project No: | Page of |
| Well ID | MW-15 | Date 10/19/22 | Time 0730 |
| Well Site Description | | | |
| Weather/Temp | 40 F | | |
| Field Technician | JG | | |

## WELL CONSTRUCTION DATA

| | | | |
|---|---|---|---|
| TOC Elevation (ft amsl) | - | Screened Interval (ft bgs) | 65-80 |
| Well Diameter (in.) | 2 | Nominal Borehole Diameter (in.) | 8 |

## FIELD MEASUREMENTS

| | | | |
|---|---|---|---|
| Well Depth (gauge after sampling) (ft) | 80.71 | Gallons per foot of depth | 0.163 |
| Depth to product (ft) | NA | Static water level (ft) | 64.51 |
| Product column height (ft) | / | Water column height (ft) | 16.2 |
| Product volume (Gallons) | / | Water volume (Gallons) | 2.64 |

## PURGE INFORMATION

| | | | |
|---|---|---|---|
| Pump Type / ID | Geo Sub 2 | Water Quality Meter Type / ID | Horiba U-52 |
| Pump Intake Depth (ft) | 72 | Flow-Thru Cell Volume (L) | / |
| Purge Start Time | 0730 | Appearance/Odor (Start) | Clear/None |
| Purge End Time | 0825 | Appearance/Odor (End) | Clear/None |
| Average Purge Rate (mL/min) | 300 | Total Drawdown (ft) | |
| Well Went Dry (Y/N) | / | Stop Time / | Volume removed (L) 14.5 |
| Recovery Time | / | Recovery Rate (mL/min) / | Restart Purge Time / |
| Total Volume Removed (L) | / | Total Pump Time (min) | 55 |

| Date | Time | Purge Rate (mL/min) | Volume Removed (LPM) | pH (+/-0.1) | Cond. (µS/cm) (+- 3%) | Temp. (°C) (+- 3%) | ORP (mV) (+/- 10) | Turbidity (NTU) +/-10% or <5 NTU | DO (mg/L) +/-10% or <0.5 mg/L | Depth to Water (ft below TOC) |
|---|---|---|---|---|---|---|---|---|---|---|
| 10/19 | 0730 | 0.3 | 1.5 | 7.62 | 0.566 | 12.47 | 148 | 71000 | 5.42 | 64.43 |
| " | 0735 | " | 3.0 | 7.60 | 0.563 | 12.66 | 153 | >1000 | 5.24 | 64.43 |
| " | 0740 | " | 4.5 | 7.57 | 0568 | 12.88 | 155 | 644 | 4.37 | 64.43 |
| " | 0745 | " | 6.0 | 7.56 | 0.575 | 13.06 | 156 | 374 | 4.85 | 64.43 |
| " | 0750 | " | 7.5 | 7.55 | 0.579 | 13.07 | 157 | 250 | 4.71 | 64.43 |
| " | 0755 | " | 9.0 | 7.54 | 0.586 | 13.08 | 159 | 144 | 4.66 | 64.43 |
| " | 0800 | " | 10.5 | 7.53 | 0590 | 13.32 | 160 | 90.1 | 4.57 | 64.43 |
| " | 0805 | " | 12 | 7.52 | 0.590 | 13.11 | 160 | 61.7 | 4.49 | 64.43 |
| " | 0810 | " | 13.5 | 7.51 | 0.590 | 13.17 | 160 | 38.2 | 4.48 | 64.43 |
| " | 0815 | " | 15 | 7.51 | 0.590 | 13.11 | 159 | 15.1 | 4.48 | 64.43 |
| " | 0820 | " | 16.5 | 7.52 | 0.590 | 13.10 | 160 | 4.8 | 4.47 | 64.43 |

COMMENTS _____

## SAMPLE COLLECTION

| | | | |
|---|---|---|---|
| Sample Date | 10/19 | Sample Time | 0825 |
| Sample ID | FSNO-MW-15-20221019 | | |
| QA/QC Collected / ID | - | Sample Appearance/Odor | Clear/None |
| Analyses | | | |
| Sampler | JG | Signature | |

# WELL PURGING AND SAMPLING RECORD

| | | |
|---|---|---|
| Site Name/Location Scotia Navy Depot | Project No: | Page 1 of 1 |
| Well ID MW-16 | Date 10/19/22 | Time 0700 |
| Well Site Description grass, stick up | | |
| Weather/Temp 35 clouds | | |
| Field Technician MW | | |

## WELL CONSTRUCTION DATA

| | |
|---|---|
| TOC Elevation (ft amsl) | Screened Interval (ft bgs) 55-70 |
| Well Diameter (in.) 2 | Nominal Borehole Diameter (in.) 8 |

## FIELD MEASUREMENTS

| | |
|---|---|
| Well Depth (gauge after sampling) (ft) 69.44 | Gallons per foot of depth 0.163 |
| Depth to product (ft) NA | Static water level (ft) 61.35 |
| Product column height (ft) | Water column height (ft) 8.09 |
| Product volume (Gallons) | Water volume (Gallons) 1.32 |

## PURGE INFORMATION

| | |
|---|---|
| Pump Type / ID Grosub 2 | Water Quality Meter Type / ID Horiba - U52 021101 |
| Pump Intake Depth (ft) 65 | Flow-Thru Cell Volume (L) 1 |
| Purge Start Time 0710 | Appearance/Odor (Start) Clear / None |
| Purge End Time 0755 | Appearance/Odor (End) Clear / None |
| Average Purge Rate (mL/min) 300 | Total Drawdown (ft) 0.02 |

| | | |
|---|---|---|
| Well Went Dry (Y/N) | Stop Time | Volume removed (L) |
| Recovery Time | Recovery Rate (mL/min) | Restart Purge Time |

| | |
|---|---|
| Total Volume Removed (L) 13.5 | Total Pump Time (min) 45 |

| Date | Time | Purge Rate (mL/min) | Volume Removed (LPM) | pH (+/-0.1) | Cond. (µS/cm) (+- 3%) | Temp. (°C) (+- 3%) | ORP (mV) (+/- 10) | Turbidity (NTU) +/-10% or <5 NTU | DO (mg/L) +/-10% or <0.5 mg/L | Depth to Water (ft below TOC) |
|---|---|---|---|---|---|---|---|---|---|---|
| 10/19/22 | 0710 | 300 | - | 7.51 | 0.616 | 8.02 | 192 | 214 | 10.25 | 61.35 |
| - | 0715 | - | 1.5 | 7.36 | 0.624 | 8.50 | 190 | 140 | 10.17 | 61.35 |
| - | 0720 | - | 3.0 | 7.30 | 0.625 | 9.03 | 183 | 117 | 10.17 | 61.36 |
| - | 0725 | - | 4.5 | 7.28 | 0.617 | 9.52 | 172 | 63.3 | 9.94 | 61.36 |
| - | 0730 | - | 6.0 | 7.28 | 0.604 | 9.95 | 152 | 28.0 | 9.76 | 61.36 |
| - | 0735 | - | 7.5 | 7.28 | 0.602 | 9.56 | 142 | 17.5 | 9.58 | 61.36 |
| - | 0740 | - | 9.0 | 7.27 | 0.601 | 9.99 | 136 | 12.5 | 8.86 | 61.37 |
| - | 0745 | - | 10.5 | 7.27 | 0.601 | 10.31 | 132 | 4.9 | 8.75 | 61.37 |
| - | 0750 | - | 12.0 | 7.26 | 0.599 | 10.56 | 130 | 3.2 | 8.71 | 61.37 |
| - | 0755 | - | 13.5 | 7.26 | 0.597 | 10.61 | 127 | 1.7 | 8.61 | 61.37 |
| | | | | | | | | | | |

COMMENTS NONE

## SAMPLE COLLECTION

| | |
|---|---|
| Sample Date 10/19/22 | Sample Time 0755 |
| Sample ID ENG-MW-16-20221019 | |
| QA/QC Collected / ID MS/MSD | Sample Appearance/Odor Clear / None |
| Analyses | |
| Sampler MW | Signature |

# WELL PURGING AND SAMPLING RECORD

| | | | |
|---|---|---|---|
| Site Name/Location | Scotia Depot | Project No: | Page of |
| Well ID | MW-17 | Date 10/18 | Time 1130 |
| Well Site Description | | | |
| Weather/Temp | 40 F | | |
| Field Technician | JG | | |

## WELL CONSTRUCTION DATA

| | | | |
|---|---|---|---|
| TOC Elevation (ft amsl) | | Screened Interval (ft bgs) | 60-75 |
| Well Diameter (in.) | 2 | Nominal Borehole Diameter (in.) | 8 |

## FIELD MEASUREMENTS

| | | | |
|---|---|---|---|
| Well Depth (gauge after sampling) (ft) | 73.14 | Gallons per foot of depth | 0.163 |
| Depth to product (ft) | NA | Static water level (ft) | 63.50 |
| Product column height (ft) | / | Water column height (ft) | 9.64 |
| Product volume (Gallons) | / | Water volume (Gallons) | 1.57 |

## PURGE INFORMATION

| | | | |
|---|---|---|---|
| Pump Type / ID | Geo Sub | Water Quality Meter Type / ID | Horiba U-52 |
| Pump Intake Depth (ft) | 67 | Flow-Thru Cell Volume (L) | 1 |
| Purge Start Time | 1130 | Appearance/Odor (Start) | Clear None |
| Purge End Time | 1225 | Appearance/Odor (End) | clear None |
| Average Purge Rate (mL/min) | 0.3 | Total Drawdown (ft) | — |
| Well Went Dry (Y/N) | / | Stop Time 1225 | Volume removed (L) 18.0 |
| Recovery Time | / | Recovery Rate (mL/min) — | Restart Purge Time — |
| Total Volume Removed (L) | — | Total Pump Time (min) 55 | |

| Date | Time | Purge Rate (mL/min) | Volume Removed (LPM) | pH (+/-0.1) | Cond. (µS/cm) (+- 3%) | Temp. (°C) (+- 3%) | ORP (mV) (+/- 10) | Turbidity (NTU) +/-10% or <5 NTU | DO (mg/L) +/-10% or <0.5 mg/L | Depth to Water (ft below TOC) |
|---|---|---|---|---|---|---|---|---|---|---|
| 10/18 | 1130 | 0.3 | 1.5 | 7.45 | 0.567 | 15.51 | 132 | 235 | 4.42 | 63.62 |
| 10/18 | 1135 | 0.3 | 3.0 | 7.45 | 0.567 | 15.59 | 130 | 210 | 4.51 | 63.61 |
| " | 1140 | " | 4.5 | 7.44 | 0.565 | 15.62 | 131 | 201 | 4.56 | 63.61 |
| " | 1145 | " | 6.0 | 7.44 | 0.566 | 16.36 | 128 | 169 | 4.09 | 63.61 |
| " | 1150 | " | 7.5 | 7.43 | 0.568 | 16.65 | 129 | 106 | 3.86 | 63.61 |
| " | 1155 | " | 9.0 | 7.43 | 0.567 | 16.87 | 129 | 93.2 | 3.82 | 63.61 |
| " | 1206 | " | 10.5 | 7.43 | 0.565 | 17.09 | 129 | 84.8 | 3.79 | 63.61 |
| " | 1208 | " | 12 | 7.43 | 0.564 | 17.27 | 128 | 76.6 | 3.76 | 63.61 |
| " | 1210 | " | 13.5 | 7.43 | 0.563 | 17.29 | 128 | 75.3 | 3.77 | 63.61 |
| " | 1218 | " | 15 | 7.43 | 0.563 | 17.31 | 128 | 74.8 | 3.75 | 63.61 |
| " | 1220 | " | 16.5 | 7.43 | 0.563 | 17.33 | 127 | 73.9 | 3.75 | 63.61 |

COMMENTS _____

## SAMPLE COLLECTION

| | | | |
|---|---|---|---|
| Sample Date | 10/18/22 | Sample Time | 1225 |
| Sample ID | FSNP-MW-17-20221018 | | |
| QA/QC Collected / ID | — | Sample Appearance/Odor | clear / None |
| Analyses | VOC | | |
| Sampler | JG | Signature | |

# WELL PURGING AND SAMPLING RECORD

| | | |
|---|---|---|
| Site Name/Location Scotia Navy Depot | Project No: | Page 1 of |
| Well ID MW-19 | Date 10/18/22 | Time 1200 |
| Well Site Description open field flush mount | | |
| Weather/Temp 50 sun | | |
| Field Technician MW | | |

## WELL CONSTRUCTION DATA

| | |
|---|---|
| TOC Elevation (ft amsl) | Screened Interval (ft bgs) 62-77 |
| Well Diameter (in.) 2 | Nominal Borehole Diameter (in.) 8 |

## FIELD MEASUREMENTS

| | |
|---|---|
| Well Depth (gauge after sampling) (ft) 75.96 | Gallons per foot of depth 0.163 |
| Depth to product (ft) N/A | Static water level (ft) 67.55 |
| Product column height (ft) — | Water column height (ft) 7.78 |
| Product volume (Gallons) — | Water volume (Gallons) 1.27 |

## PURGE INFORMATION

| | |
|---|---|
| Pump Type / ID Geosub 2 | Water Quality Meter Type / ID Horiba U-52 21101 |
| Pump Intake Depth (ft) 73 | Flow-Thru Cell Volume (L) 1 |
| Purge Start Time 1200 | Appearance/Odor (Start) clear / NONE |
| Purge End Time 1245 | Appearance/Odor (End) clear / None |
| Average Purge Rate (mL/min) 300 | Total Drawdown (ft) 0.02 |

| | | |
|---|---|---|
| Well Went Dry (Y/N) | Stop Time | Volume removed (L) |
| Recovery Time | Recovery Rate (mL/min) | Restart Purge Time |
| Total Volume Removed (L) 13.5 | Total Pump Time (min) 45 | |

| Date | Time | Purge Rate (mL/min) | Volume Removed (LPM) | pH (+/-0.1) | Cond. (µS/cm) (+- 3%) | Temp. (°C) (+- 3%) | ORP (mV) (+/- 10) | Turbidity (NTU) +/-10% or <5 NTU | DO (mg/L) +/-10% or <0.5 mg/L | Depth to Water (ft below TOC) |
|---|---|---|---|---|---|---|---|---|---|---|
| 10/18 | 1200 | 300 | — | 7.40 | 0.581 | 15.59 | 141 | 149 | 6.11 | 67.55 |
| — | 1205 | — | 1.5 | 7.28 | 0.598 | 15.65 | 139 | 126 | 5.95 | 67.56 |
| — | 1210 | — | 3.0 | 7.35 | 0.609 | 16.49 | 142 | 123 | 5.91 | 67.56 |
| — | 1215 | — | 4.5 | 7.33 | 0.604 | 16.52 | 143 | 120 | 6.93 | 67.56 |
| — | 1220 | — | 6.0 | 7.27 | 0.604 | 16.52 | 143 | 91.5 | 5.19 | 67.56 |
| — | 1225 | — | 7.5 | 7.27 | 0.603 | 17.54 | 142 | 94.5 | 6.71 | 67.56 |
| — | 1230 | — | 9.0 | 7.27 | 0.602 | 17.61 | 142 | 92.9 | 6.29 | 67.57 |
| — | 1235 | — | 10.5 | 7.27 | 0.598 | 17.70 | 144 | 96.9 | 6.24 | 67.57 |
| — | 1240 | — | 12.0 | 7.27 | 0.594 | 17.68 | 145 | 98.9 | 6.21 | 67.57 |
| — | 1245 | — | 13.5 | 7.27 | 0.592 | 17.66 | 145 | 94.6 | 6.19 | 67.57 |
| — | | — | | | | | | | | |

COMMENTS _____

## SAMPLE COLLECTION

| | |
|---|---|
| Sample Date 10/18/22 | Sample Time 1245 |
| Sample ID FSNG - MW-19 - 20221018 | |
| QA/QC Collected / ID N/A | Sample Appearance/Odor clear / none |
| Analyses VOC | |
| Sampler MW | Signature |

# WELL PURGING AND SAMPLING RECORD

| | | | |
|---|---|---|---|
| Site Name/Location | Scotia Depot | Project No: | Page of |
| Well ID | MW-20 | Date 10/18 | Time 1330 |
| Well Site Description | | | |
| Weather/Temp | 40 F | | |
| Field Technician | JG | | |

## WELL CONSTRUCTION DATA

| | |
|---|---|
| TOC Elevation (ft amsl) | Screened Interval (ft bgs) 63-78 |
| Well Diameter (in.) 2 | Nominal Borehole Diameter (in.) 8 |

## FIELD MEASUREMENTS

| | |
|---|---|
| Well Depth (gauge after sampling) (ft) 76.00 | Gallons per foot of depth 0.163 |
| Depth to product (ft) NA | Static water level (ft) |
| Product column height (ft) | Water column height (ft) 69.40 |
| Product volume (Gallons) / | Water volume (Gallons) |

## PURGE INFORMATION

| | | |
|---|---|---|
| Pump Type / ID | | Water Quality Meter Type / ID Horiba U-52 |
| Pump Intake Depth (ft) 78 | | Flow-Thru Cell Volume (L) 1 |
| Purge Start Time 1335 | | Appearance/Odor (Start) C/N |
| Purge End Time 1430 | | Appearance/Odor (End) Clear/None |
| Average Purge Rate (mL/min) 300 | | Total Drawdown (ft) - |
| Well Went Dry (Y/N) - | Stop Time 1430 | Volume removed (L) 18.0 |
| Recovery Time - | Recovery Rate (mL/min) - | Restart Purge Time - |
| Total Volume Removed (L) - | | Total Pump Time (min) 55 |

| Date | Time | Purge Rate (mL/min) | Volume Removed (LPM) | pH (+/-0.1) | Cond. (µS/cm) (+- 3%) | Temp. (°C) (+- 3%) | ORP (mV) (+/- 10) | Turbidity (NTU) +/-10% or <5 NTU | DO (mg/L) +/-10% or <0.5 mg/L | Depth to Water (ft below TOC) |
|---|---|---|---|---|---|---|---|---|---|---|
| 10/18 | 1335 | 0.3 | 1.5 | 7.20 | 0.755 | 16.25 | 167 | 357 | 5.20 | 69.45 |
| 10/18 | 1340 | 0.3 | 3.0 | 7.15 | 0.780 | 15.20 | 150 | 236 | 5.13 | 69.40 |
| " | 1345 | " | 4.5 | 7.14 | 0.780 | 14.56 | 135 | 175 | 5.06 | 69.40 |
| " | 1350 | " | 6.0 | 7.13 | 0.782 | 14.68 | 135 | 136 | 5.01 | 69.40 |
| " | 1355 | " | 7.5 | 7.13 | 0.779 | 14.49 | 134 | 134 | 5.14 | 69.40 |
| " | 1400 | " | 9.0 | 7.13 | 0.778 | 14.46 | 136 | 136 | 5.09 | 69.40 |
| " | 1405 | " | 10.5 | 7.13 | 0.777 | 14.49 | 139 | 55.2 | 5.07 | 69.40 |
| " | 1410 | " | 12.0 | 7.13 | 0.777 | 14.47 | 139 | 42.2 | 5.07 | 69.40 |
| " | 1415 | " | 13.5 | 7.13 | 0.776 | 14.49 | 138 | 41.8 | 5.06 | 69.40 |
| " | 1420 | " | 15.0 | 7.12 | 0.776 | 14.49 | 138 | 41.1 | 5.05 | 69.40 |
| " | 1425 | " | 16.5 | 7.13 | 0.776 | 14.50 | 139 | 39.9 | 5.05 | 69.40 |

COMMENTS _____

## SAMPLE COLLECTION

| | |
|---|---|
| Sample Date 10/18 | Sample Time 1430 |
| Sample ID PSNO-MW-20-20221018 | |
| QA/QC Collected / ID - | Sample Appearance/Odor Clear None |
| Analyses VOC | |
| Sampler JG | Signature |

# WELL PURGING AND SAMPLING RECORD

| | | |
|---|---|---|
| Site Name/Location Scotia Navy Depot | Project No: | Page 1 of 2 |
| Well ID MW-22R | Date 10/18/22 | Time 1340 |
| Well Site Description open Field cheese property | | |
| Weather/Temp 55 sun | | |
| Field Technician MW | | |

## WELL CONSTRUCTION DATA

| | |
|---|---|
| TOC Elevation (ft amsl) 77.66 | Screened Interval (ft bgs) 63-78 |
| Well Diameter (in.) 2 | Nominal Borehole Diameter (in.) 8 |

## FIELD MEASUREMENTS

| | |
|---|---|
| Well Depth (gauge after sampling) (ft) | Gallons per foot of depth 0.163 |
| Depth to product (ft) N/A | Static water level (ft) 67.71 |
| Product column height (ft) / | Water column height (ft) 9.95 |
| Product volume (Gallons) / | Water volume (Gallons) 1.62 |

## PURGE INFORMATION

| | | |
|---|---|---|
| Pump Type / ID Geosub 2 | | Water Quality Meter Type / ID Horiba U-52 |
| Pump Intake Depth (ft) 73 | | Flow-Thru Cell Volume (L) 1 |
| Purge Start Time 1340 | | Appearance/Odor (Start) Turbid / NONE |
| Purge End Time 1490 | | Appearance/Odor (End) Clear / NONE |
| Average Purge Rate (mL/min) 300 | | Total Drawdown (ft) |
| Well Went Dry (Y/N) N | Stop Time | Volume removed (L) |
| Recovery Time | Recovery Rate (mL/min) | Restart Purge Time |
| Total Volume Removed (L) 18 | | Total Pump Time (min) 100 |

| Date | Time | Purge Rate (mL/min) | Volume Removed (LPM) | pH (+/-0.1) | Cond. (µS/cm) (+- 3%) | Temp. (°C) (+- 3%) | ORP (mV) (+/- 10) | Turbidity (NTU) +/-10% or <5 NTU | DO (mg/L) +/-10% or <0.5 mg/L | Depth to Water (ft below TOC) |
|---|---|---|---|---|---|---|---|---|---|---|
| 10/18/22 | 1340 | 300 | — | 7.63 | 0.453 | 18.94 | 148 | ~~7100~~ | 6.56 | 67.71 |
| — | 1345 | — | 1.5 | 7.49 | 0.459 | 18.28 | 142 | 7100 | 5.55 | 67.71 |
| — | 1350 | — | 3.0 | 7.40 | 0.468 | 17.81 | 139 | >1000 | 5.49 | 67.71 |
| — | 1355 | — | 4.5 | 7.35 | 0.471 | 17.72 | 137 | 606 | 5.39 | 67.73 |
| — | 1400 | — | 6.0 | 7.36 | 0.470 | 17.78 | 133 | 395 | 5.00 | 67.73 |
| — | 1405 | — | 7.5 | 7.35 | 0.470 | 17.80 | 134 | 380 | 4.97 | 67.73 |
| — | 1410 | — | 9.0 | 7.36 | 0.469 | 17.73 | 134 | 323 | 4.90 | 67.73 |
| — | 1415 | — | 10.5 | 7.35 | 0.472 | 17.27 | 131 | 242 | 4.90 | 67.73 |
| — | 1420 | — | 12.0 | 7.34 | 0.475 | 17.16 | 131 | 95.6 | 4.99 | 67.73 |
| — | 1425 | — | 13.5 | 7.33 | 0.479 | 17.01 | 131 | 86.4 | 5.36 | 67.73 |
| — | 1430 | — | 150 | 7.32 | 0.485 | 16.95 | 130 | 78.4 | 5.88 | 67.73 |

COMMENTS Flush Horiba at 1415

## SAMPLE COLLECTION

| | |
|---|---|
| Sample Date | Sample Time 1440 |
| Sample ID FSNO-MW-22R-20221018 | |
| QA/QC Collected / ID N/A | Sample Appearance/Odor Clear/None |
| Analyses VOC | |
| Sampler MW | Signature |

# WELL PURGING AND SAMPLING RECORD

| | | |
|---|---|---|
| Site Name/Location | Project No: | Page 2 of 2 |
| Well ID MW-2212 | Date | Time |
| Well Site Description | | |
| Weather/Temp | SAME AS PAGE 1 | |
| Field Technician | | |

## WELL CONSTRUCTION DATA

| | |
|---|---|
| TOC Elevation (ft amsl) | Screened Interval (ft bgs) |
| Well Diameter (in.) | Nominal Borehole Diameter (in.) |

## FIELD MEASUREMENTS

| | |
|---|---|
| Well Depth (gauge after sampling) (ft) | Gallons per foot of depth |
| Depth to product (ft) | Static water level (ft) |
| Product column height (ft) | Water column height (ft) |
| Product volume (Gallons) | Water volume (Gallons) |

## PURGE INFORMATION

| | | |
|---|---|---|
| Pump Type / ID | | Water Quality Meter Type / ID |
| Pump Intake Depth (ft) | | Flow-Thru Cell Volume (L) |
| Purge Start Time | | Appearance/Odor (Start) |
| Purge End Time | | Appearance/Odor (End) |
| Average Purge Rate (mL/min) | | Total Drawdown (ft) |
| Well Went Dry (Y/N) | Stop Time | Volume removed (L) |
| Recovery Time | Recovery Rate (mL/min) | Restart Purge Time |
| Total Volume Removed (L) | | Total Pump Time (min) |

| Date | Time | Purge Rate (mL/min) | Volume Removed (LPM) | pH (+/-0.1) | Cond. (µS/cm) (+- 3%) | Temp. (°C) (+- 3%) | ORP (mV) (+/- 10) | Turbidity (NTU) +/-10% or <5 NTU | DO (mg/L) +/-10% or <0.5 mg/L | Depth to Water (ft below TOC) |
|---|---|---|---|---|---|---|---|---|---|---|
| 10/14 | 1435 | 300 | 14.5 | 7.32 | 0.486 | 14.49 | 130 | 75.6 | 5.79 | 67.71 |
| — | 1440 | — | 14.00 | 7.24 | 0.490 | 14.20 | 129 | 79.6 | 5.72 | 67.1 |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
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| | | | | | | | | | | |

COMMENTS _____

## SAMPLE COLLECTION

| | |
|---|---|
| Sample Date | Sample Time 1440 |
| Sample ID | |
| QA/QC Collected / ID | Sample Appearance/Odor |
| Analyses | |
| Sampler | Signature |

# WELL PURGING AND SAMPLING RECORD

| | | | |
|---|---|---|---|
| Site Name/Location | Soto Navy Depot | Project No: | Page of |
| Well ID | MW-24 | Date 10/19 | Time |
| Well Site Description | | | |
| Weather/Temp | 40F | | |
| Field Technician | JG | | |

## WELL CONSTRUCTION DATA

| | | | |
|---|---|---|---|
| TOC Elevation (ft amsl) | | Screened Interval (ft bgs) | 90-100 |
| Well Diameter (in.) | 2 | Nominal Borehole Diameter (in.) | 8 |

## FIELD MEASUREMENTS

| | | | |
|---|---|---|---|
| Well Depth (gauge after sampling) (ft) | 113.39 | Gallons per foot of depth | 0.163 |
| Depth to product (ft) | NA | Static water level (ft) | 65.78 |
| Product column height (ft) | / | Water column height (ft) | 48.11 |
| Product volume (Gallons) | | Water volume (Gallons) | 7.84 |

## PURGE INFORMATION

| | | | |
|---|---|---|---|
| Pump Type / ID | Geo Sub 2 | Water Quality Meter Type / ID | Horiba U-52 |
| Pump Intake Depth (ft) | 95 | Flow-Thru Cell Volume (L) | / |
| Purge Start Time | 1445 | Appearance/Odor (Start) | Clear / NONE |
| Purge End Time | 1540 | Appearance/Odor (End) | Clear NONE |
| Average Purge Rate (mL/min) | 300 | Total Drawdown (ft) | / |
| Well Went Dry (Y/N) | N | Stop Time | — |
| Recovery Time | — | Recovery Rate (mL/min) | — |
| Total Volume Removed (L) | — | Total Pump Time (min) | 55 |

| Date | Time | Purge Rate (mL/min) | Volume Removed (LPM) | pH (+/-0.1) | Cond. (µS/cm) (+- 3%) | Temp. (°C) (+- 3%) | ORP (mV) (+/- 10) | Turbidity (NTU) +/-10% or <5 NTU | DO (mg/L) +/-10% or <0.5 mg/L | Depth to Water (ft below TOC) |
|---|---|---|---|---|---|---|---|---|---|---|
| 10/19 | 1445 | 0.3 | 1.5 | 7.83 | 0.549 | 12.70 | -168 | 332 | 0.00 | 65.41 |
| 10/19 | 1450 | " | 3 | 7.83 | 0.549 | 12.78 | -170 | 207 | 0.00 | 65.38 |
| " | 1455 | " | 4.5 | 7.83 | 0.552 | 12.89 | -173 | 109 | 0.00 | 65.31 |
| " | 1500 | " | 6 | 7.83 | 0.553 | 12.92 | -174 | 65.1 | 0.00 | 65.31 |
| " | 1505 | " | 7.5 | 7.83 | 0.554 | 12.92 | -175 | 42.7 | 0.00 | 65.31 |
| " | 1510 | " | 9 | 7.83 | 0.555 | 12.92 | -176 | 31.1 | 0.00 | 65.31 |
| " | 1515 | " | 10.5 | 7.83 | 0.556 | 12.99 | -177 | 18.1 | 0.00 | 65.31 |
| " | 1520 | " | 12 | 7.82 | 0.556 | 12.99 | -178 | 12.8 | 0.00 | 65.31 |
| " | 1525 | " | 13.5 | 7.83 | 0.556 | 12.99 | -178 | 9.4 | 0.00 | 65.31 |
| " | 1530 | " | 15 | 7.83 | 0.556 | 12.99 | -178 | 4.7 | 0.00 | 65.31 |
| " | 1535 | " | 16.5 | 7.82 | 0.556 | 13.00 | -179 | 2.8 | 0.00 | 65.31 |

COMMENTS

## SAMPLE COLLECTION

| | | | |
|---|---|---|---|
| Sample Date | 10/19 | Sample Time | 1540 |
| Sample ID | FSNO-MW-24-20221019 | | |
| QA/QC Collected / ID | | Sample Appearance/Odor | Clear / NONE |
| Analyses | | | |
| Sampler | JG | Signature | James Gray |

# WELL PURGING AND SAMPLING RECORD

| | | |
|---|---|---|
| Site Name/Location Scotia Navy Depot | Project No: | Page 1 of 1 |
| Well ID MW-26 | Date 10/19/22 | Time 1040 |
| Well Site Description Near power lines | | |
| Weather/Temp 40 cloudy | | |
| Field Technician MW | | |

## WELL CONSTRUCTION DATA

| | |
|---|---|
| TOC Elevation (ft amsl) | Screened Interval (ft bgs) 100-110 |
| Well Diameter (in.) 2 | Nominal Borehole Diameter (in.) 8 |

## FIELD MEASUREMENTS

| | |
|---|---|
| Well Depth (gauge after sampling) (ft) 108.75 | Gallons per foot of depth 0.163 |
| Depth to product (ft) NA | Static water level (ft) 60.12 |
| Product column height (ft) / | Water column height (ft) 48.63 |
| Product volume (Gallons) / | Water volume (Gallons) 7.93 |

## PURGE INFORMATION

| | |
|---|---|
| Pump Type / ID Geosub 2 | Water Quality Meter Type / ID Horiba U-52 21101 |
| Pump Intake Depth (ft) 105 | Flow-Thru Cell Volume (L) 1 |
| Purge Start Time 1050 | Appearance/Odor (Start) Clear / NONE |
| Purge End Time 1120 | Appearance/Odor (End) Clear / NONE |
| Average Purge Rate (mL/min) 300 | Total Drawdown (ft) |

| | | |
|---|---|---|
| Well Went Dry (Y/N) N | Stop Time | Volume removed (L) |
| Recovery Time | Recovery Rate (mL/min) | Restart Purge Time |
| Total Volume Removed (L) 9.0 | Total Pump Time (min) 30 | |

| Date | Time | Purge Rate (mL/min) | Volume Removed (LPM) | pH (+/-0.1) | Cond. (µS/cm) (+- 3%) | Temp. (°C) (+- 3%) | ORP (mV) (+/- 10) | Turbidity (NTU) +/-10% or <5 NTU | DO (mg/L) +/-10% or <0.5 mg/L | Depth to Water (ft below TOC) |
|---|---|---|---|---|---|---|---|---|---|---|
| 10/19 | 1050 | 300 | — | 7.62 | 0.326 | 12.37 | 122 | 127 | 5.49 | 60.12 |
| — | 1055 | — | 1.5 | 7.58 | 0.335 | 12.39 | 119 | 110 | 3.36 | 60.12 |
| — | 1100 | — | 3.0 | 7.47 | 0.359 | 12.63 | 85 | 4.7 | 0.72 | 60.12 |
| — | 1105 | — | 4.5 | 7.48 | 0.376 | 12.90 | 40 | 5.4 | 0.36 | 60.13 |
| — | 1110 | — | 6.0 | 7.48 | 0.384 | 12.97 | 17 | 4.1 | 0.12 | 60.13 |
| — | 1115 | — | 7.5 | 7.49 | 0.388 | 13.04 | 13 | 2.9 | 0.07 | 60.13 |
| — | 1120 | — | 9.0 | 7.50 | 0.394 | 13.13 | 10 | 3.3 | 0.05 | 60.13 |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

COMMENTS _____

## SAMPLE COLLECTION

| | |
|---|---|
| Sample Date 10/19/22 | Sample Time 1120 |
| Sample ID ENV-MW-26-20221019 | |
| QA/QC Collected / ID N/A | Sample Appearance/Odor Clear/NONE |
| Analyses | |
| Sampler MW | Signature |

# WELL PURGING AND SAMPLING RECORD

| | | | |
|---|---|---|---|
| Site Name/Location | MW-28 | Project No: | Page of |
| Well ID | Scatra Depot | Date 10/19/22 | Time 0845 |
| Well Site Description | | | |
| Weather/Temp | 40 F | | |
| Field Technician | JG | | |

## WELL CONSTRUCTION DATA

| | | | |
|---|---|---|---|
| TOC Elevation (ft amsl) | | Screened Interval (ft bgs) | 67-72 |
| Well Diameter (in.) | 2 | Nominal Borehole Diameter (in.) | 8 |

## FIELD MEASUREMENTS

| | | | |
|---|---|---|---|
| Well Depth (gauge after sampling) (ft) | 72.58 | Gallons per foot of depth | 0.163 |
| Depth to product (ft) | NA | Static water level (ft) | 65.70 |
| Product column height (ft) | / | Water column height (ft) | 6.88 |
| Product volume (Gallons) | / | Water volume (Gallons) | 1.12 |

## PURGE INFORMATION

| | | | |
|---|---|---|---|
| Pump Type / ID | Geosub 2 | Water Quality Meter Type / ID | Horiba U52 |
| Pump Intake Depth (ft) | 70 | Flow-Thru Cell Volume (L) | 1 |
| Purge Start Time | 0850 | Appearance/Odor (Start) | clear NOE |
| Purge End Time | 0945 | Appearance/Odor (End) | clear/NOE |
| Average Purge Rate (mL/min) | 300 | Total Drawdown (ft) | - |
| Well Went Dry (Y/N) | Y | Stop Time | ✓ |
| Recovery Time | ✓ | Recovery Rate (mL/min) | - |
| Total Volume Removed (L) | - | Total Pump Time (min) | 55 |

| Date | Time | Purge Rate (mL/min) | Volume Removed (LPM) | pH (+/-0.1) | Cond. (µS/cm) (+- 3%) | Temp. (°C) (+- 3%) | ORP (mV) (+/- 10) | Turbidity (NTU) +/-10% or <5 NTU | DO (mg/L) +/-10% or <0.5 mg/L | Depth to Water (ft below TOC) |
|---|---|---|---|---|---|---|---|---|---|---|
| 10/19 | 0850 | 0.3 | 1.5 | 7.19 | 0.883 | 12.14 | 155 | 175 | 4.23 | 65.57 |
| " | 0855 | 0.3 | 3 | 7.12 | 0.884 | 13.75 | 90 | 68.7 | 2.73 | 65.89 |
| " | 0900 | " | 4.5 | 7.14 | 0.888 | 13.01 | 95 | 57.2 | 2.55 | 65.89 |
| " | 0905 | " | 6 | 7.16 | 0.892 | 12.38 | 98 | 42.5 | 2.48 | 65.89 |
| " | 0910 | " | 7.5 | 7.16 | 0.887 | 12.27 | 103 | 27.0 | 2.45 | 65.89 |
| " | 0915 | " | 9 | 7.26 | 0879 | 13.37 | 105 | 105 | 3.95 | 65.89 |
| " | 0920 | " | 10.5 | 7.17 | 0.870 | 15.49 | 118 | 20.0 | 2.81 | 65.89 |
| " | 0925 | " | 12 | 7.17 | 0.881 | 14.63 | 117 | 13.5 | 2.41 | 65.89 |
| " | 0930 | " | 13.5 | 7.17 | 0.872 | 14.70 | 117 | 8.3 | 2.34 | 65.89 |
| " | 0935 | " | 15 | 7.17 | 0.871 | 14.71 | 117 | 4.5 | 2.33 | 65.89 |
| " | 0940 | " | 16.5 | 7.17 | 0.871 | 14.72 | 117 | 1.9 | 2.33 | 65.89 |

COMMENTS DUP

## SAMPLE COLLECTION

| | | | |
|---|---|---|---|
| Sample Date | 10/19 | Sample Time | 0945 |
| Sample ID | FSND-MW-28-20221019 | | |
| QA/QC Collected / ID | - | Sample Appearance/Odor | Clear/NONE |
| Analyses | | | |
| Sampler | JG | Signature | |

# WELL PURGING AND SAMPLING RECORD

| | | | |
|---|---|---|---|
| Site Name/Location | Scotia Depot | Project No: | Page 1 of 1 |
| Well ID | MW-29 | Date 10/19 | Time 1045 |
| Well Site Description | | | |
| Weather/Temp | 40 F | | |
| Field Technician | JG | | |

## WELL CONSTRUCTION DATA

| | | | |
|---|---|---|---|
| TOC Elevation (ft amsl) | | Screened Interval (ft bgs) | 67-72 |
| Well Diameter (in.) | 2 | Nominal Borehole Diameter (in.) | 8 |

## FIELD MEASUREMENTS

| | | | |
|---|---|---|---|
| Well Depth (gauge after sampling) (ft) | 72.35 | Gallons per foot of depth | 0.163 |
| Depth to product (ft) | NA | Static water level (ft) | 65.05 |
| Product column height (ft) | / | Water column height (ft) | 5.30 |
| Product volume (Gallons) | / | Water volume (Gallons) | 0.864 |

## PURGE INFORMATION

| | | | | | |
|---|---|---|---|---|---|
| Pump Type / ID | Grogan's | | | Water Quality Meter Type / ID | Horiba U-52 |
| Pump Intake Depth (ft) | 70 | | | Flow-Thru Cell Volume (L) | / |
| Purge Start Time | 1045 | | | Appearance/Odor (Start) | Clear / NONE |
| Purge End Time | 1140 | | | Appearance/Odor (End) | Clear / NONE |
| Average Purge Rate (mL/min) | 300 | | | Total Drawdown (ft) | - |
| Well Went Dry (Y/N) | N | Stop Time | - | Volume removed (L) | 16.5 |
| Recovery Time | - | Recovery Rate (mL/min) | - | Restart Purge Time | / |
| Total Volume Removed (L) | - | | | Total Pump Time (min) | 55 |

| Date | Time | Purge Rate (mL/min) | Volume Removed (LPM) | pH (+/-0.1) | Cond. (µS/cm) (+- 3%) | Temp. (°C) (+- 3%) | ORP (mV) (+/- 10) | Turbidity (NTU) +/-10% or <5 NTU | DO (mg/L) +/-10% or <0.5 mg/L | Depth to Water (ft below TOC) |
|---|---|---|---|---|---|---|---|---|---|---|
| 10/19 | 1045 | 0.3 | 1.5 | 7.23 | 0.707 | 12.55 | 148 | 521 | 2.98 | 65.25 |
| " | 1050 | " | 3 | 7.16 | 0.864 | 13.39 | 128 | 370 | 2.62 | 65.26 |
| " | 1055 | " | 4.5 | 7.15 | 0.876 | 13.63 | 122 | 214 | 2.10 | 65.26 |
| " | 1100 | " | 6 | 7.16 | 0.884 | 13.41 | 123 | 200 | 1.69 | 65.26 |
| " | 1105 | " | 7.5 | 7.16 | 0.898 | 12.96 | 123 | 164 | 1.44 | 65.26 |
| " | 1110 | " | 9 | 7.17 | 0.889 | 13.99 | 125 | 125 | 1.55 | 65.26 |
| " | 1115 | " | 10.5 | 7.16 | 0.892 | 13.88 | 127 | 99.5 | 1.45 | 65.26 |
| " | 1120 | " | 12 | 7.16 | 0.893 | 13.89 | 127 | 82.5 | 1.43 | 65.26 |
| " | 1125 | " | 13.5 | 7.17 | 0.891 | 13.89 | 127 | 11.4 | 1.44 | 65.26 |
| " | 1130 | " | 15 | 7.17 | 0.892 | 13.90 | 127 | 9.1 | 1.43 | 65.26 |
| " | 1135 | " | 16.5 | 7.17 | 0.892 | 13.90 | 127 | 3.9 | 1.43 | 65.26 |

COMMENTS _____

## SAMPLE COLLECTION

| | | | |
|---|---|---|---|
| Sample Date | 10/19/22 | Sample Time | 1140 |
| Sample ID | FSND-MW-29-20221019 | | |
| QA/QC Collected / ID | - | Sample Appearance/Odor | Clear NONE |
| Analyses | | | |
| Sampler | JG | Signature | |

# WELL PURGING AND SAMPLING RECORD

| | | |
|---|---|---|
| Site Name/Location Scotia Depot | Project No: | Page of |
| Well ID MW-30 | Date 10/19 | Time |
| Well Site Description | | |
| Weather/Temp 40 F | | |
| Field Technician JG | | |

## WELL CONSTRUCTION DATA

| | |
|---|---|
| TOC Elevation (ft amsl) | Screened Interval (ft bgs) 82-92 |
| Well Diameter (in.) 2 | Nominal Borehole Diameter (in.) 8 |

## FIELD MEASUREMENTS

| | |
|---|---|
| Well Depth (gauge after sampling) (ft) 91.33 | Gallons per foot of depth 0.163 |
| Depth to product (ft) NA | Static water level (ft) 64.45 |
| Product column height (ft) / | Water column height (ft) 26.88 |
| Product volume (Gallons) / | Water volume (Gallons) 4.38 |

## PURGE INFORMATION

| | | |
|---|---|---|
| Pump Type / ID Grosus 2 | | Water Quality Meter Type / ID Horiba U-52 |
| Pump Intake Depth (ft) 87 | | Flow-Thru Cell Volume (L) / |
| Purge Start Time 1210 | | Appearance/Odor (Start) Clear/NONE |
| Purge End Time 1305 | | Appearance/Odor (End) Clear/NONE |
| Average Purge Rate (mL/min) 300 | | Total Drawdown (ft) – |
| Well Went Dry (Y/N) N | Stop Time / | Volume removed (L) 16.5 |
| Recovery Time / | Recovery Rate (mL/min) / | Restart Purge Time – |
| Total Volume Removed (L) / | | Total Pump Time (min) 55 |

| Date | Time | Purge Rate (mL/min) | Volume Removed (LPM) | pH (+/-0.1) | Cond. (µS/cm) (+- 3%) | Temp. (°C) (+- 3%) | ORP (mV) (+/- 10) | Turbidity (NTU) +/-10% or <5 NTU | DO (mg/L) +/-10% or <0.5 mg/L | Depth to Water (ft below TOC) |
|---|---|---|---|---|---|---|---|---|---|---|
| 10/19 | 1210 | 0.3 | 1.5 | 7.92 | 0.376 | 12.52 | -165 | 51.4 | 0.87 | 64.65 |
| " | 1215 | " | 3 | 7.99 | 0.356 | 12.49 | -182 | 34.7 | 0.46 | 64.68 |
| " | 1220 | " | 4.5 | 8.08 | 0.333 | 12.48 | -205 | 26.4 | 0.00 | 64.68 |
| " | 1225 | " | 6 | 8.16 | 0.305 | 12.89 | -212 | 21.3 | 0.00 | 64.71 |
| " | 1230 | " | 7.5 | 8.20 | 0.297 | 12.95 | -214 | 21.9 | 0.00 | 64.71 |
| " | 1235 | " | 9 | 8.31 | 0.282 | 13.04 | -221 | 19.4 | 0.00 | 64.71 |
| " | 1240 | " | 10.5 | 8.34 | 0.279 | 13.04 | -223 | 19.9 | 0.00 | 64.71 |
| " | 1245 | " | 12 | 8.35 | 0.279 | 13.04 | -222 | 19.8 | 0.00 | 64.71 |
| " | 1250 | " | 13.5 | 8.37 | 0.278 | 13.05 | -222 | 19.9 | 0.00 | 64.71 |
| " | 1255 | " | 15 | 8.36 | 0.279 | 13.05 | -223 | 20.0 | 0.00 | 64.71 |
| " | 1300 | " | 16.5 | 8.36 | 0.279 | 13.04 | -224 | 20.01 | 0.00 | 64.71 |

COMMENTS _____

## SAMPLE COLLECTION

| | |
|---|---|
| Sample Date 10/19/22 | Sample Time 1305 |
| Sample ID FSND-MW-30-20221019 | |
| QA/QC Collected / ID | Sample Appearance/Odor Clear NONE |
| Analyses | |
| Sampler JG | Signature |

# WELL PURGING AND SAMPLING RECORD

| | | | |
|---|---|---|---|
| Site Name/Location | Scotia Depot | Project No: | Page of |
| Well ID | MW-31 | Date 10/19 | Time |
| Well Site Description | | | |
| Weather/Temp | 40 F | | |
| Field Technician | JG | | |

## WELL CONSTRUCTION DATA

| | | | |
|---|---|---|---|
| TOC Elevation (ft amsl) | | Screened Interval (ft bgs) | 82-92 |
| Well Diameter (in.) | 2 | Nominal Borehole Diameter (in.) | 8 |

## FIELD MEASUREMENTS

| | | | |
|---|---|---|---|
| Well Depth (gauge after sampling) (ft) | 90.65 | Gallons per foot of depth | 0.163 |
| Depth to product (ft) | / | Static water level (ft) | 63.25 |
| Product column height (ft) | / | Water column height (ft) | 27.4 |
| Product volume (Gallons) | | Water volume (Gallons) | 4.46 |

## PURGE INFORMATION

| | | | |
|---|---|---|---|
| Pump Type / ID | Geo sub | Water Quality Meter Type / ID | Horiba U-52 |
| Pump Intake Depth (ft) | 87 | Flow-Thru Cell Volume (L) | 1 |
| Purge Start Time | 1315 | Appearance/Odor (Start) | clear / NONE |
| Purge End Time | 1410 | Appearance/Odor (End) | clear / NONE |
| Average Purge Rate (mL/min) | 30 | Total Drawdown (ft) | — |
| Well Went Dry (Y/N) | N | Stop Time — | Volume removed (L) 14.5 |
| Recovery Time | — | Recovery Rate (mL/min) — | Restart Purge Time — |
| Total Volume Removed (L) | — | Total Pump Time (min) | — |

| Date | Time | Purge Rate (mL/min) | Volume Removed (LPM) | pH (+/-0.1) | Cond. (µS/cm) (+- 3%) | Temp. (°C) (+- 3%) | ORP (mV) (+/- 10) | Turbidity (NTU) +/-10% or <5 NTU | DO (mg/L) +/-10% or <0.5 mg/L | Depth to Water (ft below TOC) |
|---|---|---|---|---|---|---|---|---|---|---|
| 10/19 | 1315 | 0.3 | 1.5 | 7.95 | 0.440 | 12.29 | -163 | 26.6 | 0.00 | 63.63 |
| " | 1320 | 0.3 | 3 | 7.95 | 0.441 | 12.42 | -167 | 24.1 | 0.80 | 63.67 |
| " | 1325 | " | 4.5 | 7.97 | 0.446 | 12.67 | -174 | 12.4 | 0.00 | 63.67 |
| " | 1330 | " | 6 | 7.99 | 0.452 | 12.71 | -181 | 7.3 | 0.00 | 63.67 |
| " | 1335 | " | 7.5 | 7.99 | 0.453 | 12.72 | -183 | 5.2 | 0.08 | 64.02 |
| " | 1340 | " | 9 | 7.99 | 0.454 | 12.73 | -185 | 4.9 | 0.00 | 64.61 |
| " | 1345 | " | 10.5 | 8.00 | 0.453 | 12.75 | -187 | 2.9 | 0.00 | 64.61 |
| " | 1350 | " | 12 | 7.98 | 0.453 | 12.76 | -188 | 2.2 | 0.00 | 64.61 |
| " | 1355 | " | 13.5 | 7.97 | 0.453 | 12.76 | -189 | 2.1 | 0.00 | 64.61 |
| " | 1400 | " | 15 | 7.97 | 0.453 | 12.77 | -189 | 2.1 | 0.00 | 64.61 |
| " | 1405 | " | 16.5 | 7.97 | 0.444 | 12.77 | -189 | 1.9 | 0.00 | 64.61 |

COMMENTS _____

## SAMPLE COLLECTION

| | | | |
|---|---|---|---|
| Sample Date | 10/19/22 | Sample Time | 1410 |
| Sample ID | FSNS-MW-31-20221019 | | |
| QA/QC Collected / ID | | Sample Appearance/Odor | clear / NONE |
| Analyses | | | |
| Sampler | JG | Signature | |

# WELL PURGING AND SAMPLING RECORD

| | | |
|---|---|---|
| Site Name/Location Scotia Navy Depot | Project No: | Page 1 of 1 |
| Well ID MW-32 | Date 10/19 | Time 1220 |
| Well Site Description | | |
| Weather/Temp 40 cloudy | | |
| Field Technician MW | | |

## WELL CONSTRUCTION DATA

| | |
|---|---|
| TOC Elevation (ft amsl) | Screened Interval (ft bgs) 82-92 |
| Well Diameter (in.) 2 | Nominal Borehole Diameter (in.) 8 |

## FIELD MEASUREMENTS

| | |
|---|---|
| Well Depth (gauge after sampling) (ft) 91.58 | Gallons per foot of depth 0.163 |
| Depth to product (ft) NA | Static water level (ft) 62.60 |
| Product column height (ft) / | Water column height (ft) 28.98 |
| Product volume (Gallons) / | Water volume (Gallons) 4.72 |

## PURGE INFORMATION

| | |
|---|---|
| Pump Type / ID Geosub 2 | Water Quality Meter Type / ID Horiba U-52 |
| Pump Intake Depth (ft) 87 | Flow-Thru Cell Volume (L) 1 |
| Purge Start Time 1230 | Appearance/Odor (Start) Turbid / NONE |
| Purge End Time 1300 | Appearance/Odor (End) clear / NONE |
| Average Purge Rate (mL/min) 300 | Total Drawdown (ft) 0.01 |

| | | |
|---|---|---|
| Well Went Dry (Y/N) N | Stop Time | Volume removed (L) |
| Recovery Time | Recovery Rate (mL/min) | Restart Purge Time |
| Total Volume Removed (L) 9.0 | Total Pump Time (min) 30 | |

| Date | Time | Purge Rate (mL/min) | Volume Removed (LPM) | pH (+/-0.1) | Cond. (µS/cm) (+- 3%) | Temp. (°C) (+- 3%) | ORP (mV) (+/- 10) | Turbidity (NTU) +/-10% or <5 NTU | DO (mg/L) +/-10% or <0.5 mg/L | Depth to Water (ft below TOC) |
|---|---|---|---|---|---|---|---|---|---|---|
| 10/19/22 | 1230 | 300 | — | 7.74 | 0.309 | 14.44 | -94 | 207 | 1.42 | 62.60 |
| " | 1235 | — | 1.5 | 7.80 | 0.380 | 14.14 | -100 | 117 | 0.79 | 62.60 |
| " | 1240 | — | 3.0 | 7.79 | 0.380 | 14.15 | -164 | 51.3 | 0.07 | 62.60 |
| " | 1245 | — | 4.5 | 7.78 | 0.382 | 14.03 | -175 | 52.5 | 0.00 | 62.61 |
| " | 1250 | — | 6.0 | 7.77 | 0.387 | 14.03 | -177 | 53.7 | 0.00 | 62.61 |
| " | 1255 | — | 7.5 | 7.77 | 0.387 | 14.03 | -178 | 53.1 | 0.00 | 62.61 |
| " | 1300 | — | 9.0 | 7.77 | 0.388 | 14.02 | -179 | 51.1 | 0.00 | 62.61 |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

COMMENTS _____

## SAMPLE COLLECTION

| | |
|---|---|
| Sample Date 10/19/22 | Sample Time 1300 |
| Sample ID FSNO-MW-32-20221019 | |
| QA/QC Collected / ID NA | Sample Appearance/Odor clear None |
| Analyses | |
| Sampler MW | Signature |

# WELL PURGING AND SAMPLING RECORD

| | | | |
|---|---|---|---|
| Site Name/Location | Scotia Depot | Project No: | Page 1 of 1 |
| Well ID | MW-33 | Date 10/19/22 | Time 1335 |
| Well Site Description | | | |
| Weather/Temp | 45 cloudy | | |
| Field Technician | MW | | |

## WELL CONSTRUCTION DATA

| | | | |
|---|---|---|---|
| TOC Elevation (ft amsl) | | Screened Interval (ft bgs) | 82-92 |
| Well Diameter (in.) | 2 | Nominal Borehole Diameter (in.) | 8 |

## FIELD MEASUREMENTS

| | | | |
|---|---|---|---|
| Well Depth (gauge after sampling) (ft) | 92.25 | Gallons per foot of depth | 0.163 |
| Depth to product (ft) | NA | Static water level (ft) | 62.85 |
| Product column height (ft) | / | Water column height (ft) | 29.4 |
| Product volume (Gallons) | / | Water volume (Gallons) | 4.79 |

## PURGE INFORMATION

| | | | |
|---|---|---|---|
| Pump Type / ID | Grosub 2 | Water Quality Meter Type / ID | Horiba U-52 |
| Pump Intake Depth (ft) | 87 | Flow-Thru Cell Volume (L) | 1 |
| Purge Start Time | 1345 | Appearance/Odor (Start) | clear / None |
| Purge End Time | 1420 | Appearance/Odor (End) | clear / None |
| Average Purge Rate (mL/min) | 300 | Total Drawdown (ft) | — |
| Well Went Dry (Y/N) | N | Stop Time | Volume removed (L) |
| Recovery Time | | Recovery Rate (mL/min) | Restart Purge Time |
| Total Volume Removed (L) | 10.5 | Total Pump Time (min) | 35 |

| Date | Time | Purge Rate (mL/min) | Volume Removed (LPM) | pH (+/-0.1) | Cond. (µS/cm) (+- 3%) | Temp. (°C) (+- 3%) | ORP (mV) (+/- 10) | Turbidity (NTU) +/-10% or <5 NTU | DO (mg/L) +/-10% or <0.5 mg/L | Depth to Water (ft below TOC) |
|---|---|---|---|---|---|---|---|---|---|---|
| 10/19/22 | 1345 | 300 | — | 7.77 | 0.415 | 14.70 | 82 | 12.4 | 3.83 | 62.85 |
| — | 1340 | — | 1.5 | | | | | | | |
| — | 1355 | — | 3.0 | 7.63 | 0.422 | 14.44 | 9 | 7.0 | 3.36 | 62.85 |
| — | 1400 | — | 4.5 | 7.60 | 0.428 | 14.24 | 15 | 6.1 | 3.30 | 62.83 |
| — | 1405 | — | 6.0 | 7.54 | 0.435 | 14.17 | 19 | 4.2 | 3.28 | 62.83 |
| 10/19/22 | 1410 | — | 7.5 | 7.52 | 0.436 | 14.17 | 30 | 2.6 | 3.28 | 62.83 |
| 10/19/22 | 1415 | — | 9.0 | 7.51 | 0.437 | 14.19 | 34 | 1.6 | 3.26 | 62.83 |
| — | 1420 | — | 10.5 | 7.50 | 0.439 | 14.20 | 37 | 1.2 | 3.29 | 62.83 |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

COMMENTS _____

## SAMPLE COLLECTION

| | | | |
|---|---|---|---|
| Sample Date | 10/19/22 | Sample Time | 1420 |
| Sample ID | FSNO-MW-33-20221019 | | |
| QA/QC Collected / ID | | Sample Appearance/Odor | clear / None |
| Analyses | | | |
| Sampler | MW | Signature | MW |

# WELL PURGING AND SAMPLING RECORD

| | | | |
|---|---|---|---|
| Site Name/Location | Scotia Navy Depot | Project No: | Page 1 of 1 |
| Well ID | MW-34 | Date 10/19/22 | Time 0845 |
| Well Site Description | near power line | | |
| Weather/Temp | 35 sun | | |
| Field Technician | MW | | |

## WELL CONSTRUCTION DATA

| | | | |
|---|---|---|---|
| TOC Elevation (ft amsl) | | Screened Interval (ft bgs) | 82-92 |
| Well Diameter (in.) | 2 | Nominal Borehole Diameter (in.) | 8 |

## FIELD MEASUREMENTS

| | | | |
|---|---|---|---|
| Well Depth (gauge after sampling) (ft) | 98.15 | Gallons per foot of depth | 0.163 |
| Depth to product (ft) | N/A | Static water level (ft) | 60.82 |
| Product column height (ft) | / | Water column height (ft) | 27.33 |
| Product volume (Gallons) | / | Water volume (Gallons) | 4.45 |

## PURGE INFORMATION

| | | | |
|---|---|---|---|
| Pump Type / ID | Geosub 2 | Water Quality Meter Type / ID | Horiba U-52 |
| Pump Intake Depth (ft) | 80 | Flow-Thru Cell Volume (L) | 1 |
| Purge Start Time | 0850 | Appearance/Odor (Start) | clear / NONE |
| Purge End Time | 0930 | Appearance/Odor (End) | clear / NONE |
| Average Purge Rate (mL/min) | 300 | Total Drawdown (ft) | |
| Well Went Dry (Y/N) | Stop Time | Volume removed (L) | |
| Recovery Time | Recovery Rate (mL/min) | Restart Purge Time | |
| Total Volume Removed (L) | 12.0 | Total Pump Time (min) | 40 |

| Date | Time | Purge Rate (mL/min) | Volume Removed (LPM) | pH (+/-0.1) | Cond. (µS/cm) (+- 3%) | Temp. (°C) (+- 3%) | ORP (mV) (+/- 10) | Turbidity (NTU) +/-10% or <5 NTU | DO (mg/L) +/-10% or <0.5 mg/L | Depth to Water (ft below TOC) |
|---|---|---|---|---|---|---|---|---|---|---|
| 10/19/22 | 0850 | 300 | – | 7.49 | 0.384 | 10.36 | 138 | 10.6 | 2.42 | 60.82 |
| – | 0855 | – | 1.5 | 7.39 | 0.375 | 12.12 | 45 | 34.1 | 0.09 | 60.85 |
| – | 0900 | – | 3.0 | 7.39 | 0.372 | 12.32 | 40 | 24.6 | 0.00 | 60.85 |
| – | 0905 | – | 4.5 | 7.40 | 0.371 | 12.40 | -21 | 20.4 | 0.00 | 60.85 |
| – | 0910 | – | 6.0 | 7.40 | 0.371 | 12.45 | -75 | 17.3 | 0.00 | 60.85 |
| – | 0915 | – | 7.5 | 7.41 | 0.374 | 12.52 | -86 | 10.6 | 0.00 | 60.85 |
| – | 0920 | – | 9.0 | 7.42 | 0.377 | 12.61 | -90 | 4.9 | 0.00 | 60.85 |
| – | 0925 | – | 10.5 | 7.43 | 0.378 | 12.65 | -93 | 2.4 | 0.00 | 60.85 |
| – | 0930 | – | 12.0 | 7.44 | 0.380 | 12.73 | -98 | 1.9 | 0.00 | 60.85 |
| | | | | | | | | | | |
| | | | | | | | | | | |

COMMENTS NONE

## SAMPLE COLLECTION

| | | | |
|---|---|---|---|
| Sample Date | 10/19/22 | Sample Time | 0930 |
| Sample ID | FSNP-MW-34-20221019 | | |
| QA/QC Collected / ID | Dup -03 | Sample Appearance/Odor | clear/NONE |
| Analyses | | | |
| Sampler | MW | Signature | |

# WELL PURGING AND SAMPLING RECORD

| | | | |
|---|---|---|---|
| Site Name/Location | Scotia Depot | Project No: | Page 1 of 1 |
| Well ID | MW-35 | Date 10/19/22 | Time 1510 |
| Well Site Description | grass | | |
| Weather/Temp | 40 sun | | |
| Field Technician | MW | | |

## WELL CONSTRUCTION DATA

| | | | |
|---|---|---|---|
| TOC Elevation (ft amsl) | | Screened Interval (ft bgs) | 82-92 |
| Well Diameter (in.) | 2 | Nominal Borehole Diameter (in.) | 8 |

## FIELD MEASUREMENTS

| | | | |
|---|---|---|---|
| Well Depth (gauge after sampling) (ft) | 92.30 | Gallons per foot of depth | 0.163 |
| Depth to product (ft) | NA | Static water level (ft) | 59.72 |
| Product column height (ft) | / | Water column height (ft) | 32.58 |
| Product volume (Gallons) | / | Water volume (Gallons) | 5.31 |

## PURGE INFORMATION

| | | | |
|---|---|---|---|
| Pump Type / ID | Geo Sub 2 | Water Quality Meter Type / ID | Horiba |
| Pump Intake Depth (ft) | 87 | Flow-Thru Cell Volume (L) | 1 |
| Purge Start Time | 1515 | Appearance/Odor (Start) | Turbid / none |
| Purge End Time | 1605 | Appearance/Odor (End) | clear / none |
| Average Purge Rate (mL/min) | 300 | Total Drawdown (ft) | |
| Well Went Dry (Y/N) | N | Stop Time | Volume removed (L) |
| Recovery Time | | Recovery Rate (mL/min) | Restart Purge Time |
| Total Volume Removed (L) | 15.0 | Total Pump Time (min) | 50 |

| Date | Time | Purge Rate (mL/min) | Volume Removed (LPM) | pH (+/-0.1) | Cond. (µS/cm) (+- 3%) | Temp. (°C) (+- 3%) | ORP (mV) (+/- 10) | Turbidity (NTU) +/-10% or <5 NTU | DO (mg/L) +/-10% or <0.5 mg/L | Depth to Water (ft below TOC) |
|---|---|---|---|---|---|---|---|---|---|---|
| 10/19/22 | 1515 | 300 | — | 7.62 | 0.557 | 13.46 | -68 | >1000 | 3.75 | 59.72 |
| — | 1520 | — | 1.5 | 7.53 | 0.396 | 13.43 | -22 | 457 | 3.43 | 59.75 |
| — | 1525 | — | 3.0 | 7.52 | 0.394 | 13.48 | 6 | 212 | 3.55 | 59.75 |
| — | 1530 | — | 4.5 | 7.49 | 0.394 | 13.47 | 17 | 128 | 3.55 | 59.75 |
| — | 1535 | — | 6.0 | 7.48 | 0.395 | 13.42 | 30 | 69.2 | 3.67 | 59.75 |
| — | 1540 | — | 7.5 | 7.49 | 0.397 | 13.36 | 41 | 34.6 | 3.53 | 59.75 |
| — | 1545 | — | 9.0 | 7.49 | 0.399 | 13.36 | 47 | 17.6 | 3.53 | 59.75 |
| — | 1550 | — | 10.5 | 7.48 | 0.401 | 13.33 | 53 | 9.7 | 3.46 | 59.75 |
| — | 1555 | — | 12.0 | 7.48 | 0.403 | 13.29 | 59 | 5.0 | 3.41 | 59.75 |
| — | 1600 | — | 13.5 | 7.47 | 0.403 | 13.31 | 58 | 4.7 | 3.78 | 59.75 |
| — | 1605 | — | 15.0 | 7.47 | 0.404 | 13.30 | 62 | 3.6 | 3.35 | 59.75 |

COMMENTS _____

## SAMPLE COLLECTION

| | | | |
|---|---|---|---|
| Sample Date | 10/19/22 | Sample Time | 1605 |
| Sample ID | FSND-MW-35-20221019 | | |
| QA/QC Collected / ID | N/A | Sample Appearance/Odor | clear none |
| Analyses | | | |
| Sampler | MW | Signature | |

# WELL PURGING AND SAMPLING RECORD

| | | | |
|---|---|---|---|
| Site Name/Location | Scotia Navy Depot | Project No: | Page 1 of 1 |
| Well ID | GEP-1 | Date 10/20/22 | Time 0830 |
| Well Site Description | pavement | | |
| Weather/Temp | 40 F | | |
| Field Technician | MW | | |

## WELL CONSTRUCTION DATA

| | | | |
|---|---|---|---|
| TOC Elevation (ft amsl) | | Screened Interval (ft bgs) | 20-80 |
| Well Diameter (in.) | 2 | Nominal Borehole Diameter (in.) | 8 |

## FIELD MEASUREMENTS

| | | | |
|---|---|---|---|
| Well Depth (gauge after sampling) (ft) | 74.50 | Gallons per foot of depth | .163 |
| Depth to product (ft) | NA | Static water level (ft) | 65.18 |
| Product column height (ft) | | Water column height (ft) | |
| Product volume (Gallons) | | Water volume (Gallons) | |

## PURGE INFORMATION

| | | | |
|---|---|---|---|
| Pump Type / ID | Bailer | Water Quality Meter Type / ID | Horiba U-52 |
| Pump Intake Depth (ft) | | Flow-Thru Cell Volume (L) | — |
| Purge Start Time | | Appearance/Odor (Start) | Clear/NONE |
| Purge End Time | | Appearance/Odor (End) | Clear/NONE |
| Average Purge Rate (mL/min) | | Total Drawdown (ft) | — |
| Well Went Dry (Y/N) | Stop Time | Volume removed (L) | — |
| Recovery Time | Recovery Rate (mL/min) | Restart Purge Time | — |
| Total Volume Removed (L) | | Total Pump Time (min) | — |

| Date | Time | Purge Rate (mL/min) | Volume Removed (LPM) | pH (+/-0.1) | Cond. (µS/cm) (+- 3%) | Temp. (°C) (+- 3%) | ORP (mV) (+/- 10) | Turbidity (NTU) +/-10% or <5 NTU | DO (mg/L) +/-10% or <0.5 mg/L | Depth to Water (ft below TOC) |
|---|---|---|---|---|---|---|---|---|---|---|
| 10/20/22 | 0830 | — | — | 7.63 | 0.329 | 10.53 | 165 | 102 | 5.68 | — |
| 10/20/22 | 0835 | — | — | 7.77 | 0.330 | 10.53 | 176 | 208.7 | 5.50 | — |
| 10/20/22 | 0840 | — | — | 7.71 | 0.334 | 11.01 | 194 | 129.6 | 5.38 | — |
| 10/20/22 | 0845 | — | — | 7.69 | 0.341 | 11.34 | 136 | 112.4 | 5.24 | — |
| 10/20/22 | 0850 | — | — | 7.61 | 0.334 | 11.24 | 145 | 98.6 | 5.09 | — |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

COMMENTS _____

## SAMPLE COLLECTION

| | | | |
|---|---|---|---|
| Sample Date | 10/20/22 | Sample Time | |
| Sample ID | FSNO-GEP-1-20221020 | | |
| QA/QC Collected / ID | — | Sample Appearance/Odor | Clear/NONE |
| Analyses | | | |
| Sampler | MW | Signature | |

# WELL PURGING AND SAMPLING RECORD

| | | | |
|---|---|---|---|
| Site Name/Location | Scotia Navy Depot | Project No: | Page of |
| Well ID | GEP-2 | Date 10/18/22 | Time 1445 |
| Well Site Description | | | |
| Weather/Temp | 40 F | | |
| Field Technician | JG | | |

## WELL CONSTRUCTION DATA

| | |
|---|---|
| TOC Elevation (ft amsl) | Screened Interval (ft bgs) 60.6 - 75.6 |
| Well Diameter (in.) 2 | Nominal Borehole Diameter (in.) 8 |

## FIELD MEASUREMENTS

| | |
|---|---|
| Well Depth (gauge after sampling) (ft) ~~65.56~~ 74.64 | Gallons per foot of depth 0.163 |
| Depth to product (ft) NA | Static water level (ft) 65.56 |
| Product column height (ft) / | Water column height (ft) 9.08 |
| Product volume (Gallons) / | Water volume (Gallons) 1.48 |

## PURGE INFORMATION

| | | | |
|---|---|---|---|
| Pump Type / ID | Grosub 2 | Water Quality Meter Type / ID | Horiba - U-52 |
| Pump Intake Depth (ft) | 72 | Flow-Thru Cell Volume (L) | / |
| Purge Start Time | 1445 | Appearance/Odor (Start) | clear/NONE |
| Purge End Time | 1640 | Appearance/Odor (End) | clear/NONE |
| Average Purge Rate (mL/min) | 300 | Total Drawdown (ft) | / |
| Well Went Dry (Y/N) N | Stop Time / | Volume removed (L) | 18.0 |
| Recovery Time / | Recovery Rate (mL/min) / | Restart Purge Time | / |
| Total Volume Removed (L) / | | Total Pump Time (min) | 55 |

| Date | Time | Purge Rate (mL/min) | Volume Removed (LPM) | pH (+/-0.1) | Cond. (µS/cm) (+- 3%) | Temp. (°C) (+- 3%) | ORP (mV) (+/- 10) | Turbidity (NTU) +/-10% or <5 NTU | DO (mg/L) +/-10% or <0.5 mg/L | Depth to Water (ft below TOC) |
|---|---|---|---|---|---|---|---|---|---|---|
| 10/18 | 1445 | 0.3 | 1.5 | 7.43 | 0.520 | 14.82 | 143 | 952 | 5.48 | 65.65 |
| 10/18 | 1450 | 0.3 | 3 | 7.41 | 0.523 | 14.74 | 144 | 900 | 5.48 | 65.65 |
| " | 1455 | 0.3 | 4.5 | 7.39 | 0.532 | 14.66 | 145 | 680 | 5.15 | 65.65 |
| " | 1500 | " | 6 | 7.38 | 0.541 | 14.80 | 148 | 392 | 5.00 | 65.65 |
| " | 1505 | " | 7.5 | 7.37 | 0.551 | 14.93 | 151 | 249 | 4.92 | 65.65 |
| " | 1510 | " | 9 | 7.37 | 0.557 | 14.95 | 157 | 197 | 4.92 | 65.65 |
| " | 1515 | " | 10.5 | 7.37 | 0.558 | 14.99 | 160 | 132 | 4.78 | 65.65 |
| " | 1520 | " | 12 | 7.37 | 0.560 | 15.09 | 163 | 97.2 | 4.64 | 65.65 |
| " | 1525 | " | 13.5 | 7.37 | 0.561 | 15.10 | 166 | 82.5 | 4.73 | 65.65 |
| " | 1530 | " | 15 | 7.37 | 0.560 | 15.10 | 166 | 30.9 | 4.73 | 65.65 |
| " | 1535 | " | 16.5 | 7.37 | 0.560 | 15.10 | 165 | 4.9 | | 65.65 |

COMMENTS _____

## SAMPLE COLLECTION

| | |
|---|---|
| Sample Date 10/18 | Sample Time 1540 |
| Sample ID FSNO - GEP-2 - 20221018 | |
| QA/QC Collected / ID — | Sample Appearance/Odor clear/NONE |
| Analyses | |
| Sampler JG | Signature |

# WELL PURGING AND SAMPLING RECORD

| | | | |
|---|---|---|---|
| Site Name/Location | Scotia Navy Depot | Project No: | Page 1 of 1 |
| Well ID | GEP-4 | Date 10/18/22 | Time 1510 |
| Well Site Description | near Blue building | | |
| Weather/Temp | 55 clouds | | |
| Field Technician | MW | | |

## WELL CONSTRUCTION DATA

| | |
|---|---|
| TOC Elevation (ft amsl) | Screened Interval (ft bgs) 60.15 |
| Well Diameter (in.) 2 | Nominal Borehole Diameter (in.) 8 |

## FIELD MEASUREMENTS

| | |
|---|---|
| Well Depth (gauge after sampling) (ft) 67.37 | Gallons per foot of depth 0.163 |
| Depth to product (ft) N/A | Static water level (ft) 64.88 |
| Product column height (ft) | Water column height (ft) 2.5 |
| Product volume (Gallons) | Water volume (Gallons) 0.41 |

## PURGE INFORMATION

| | | |
|---|---|---|
| Pump Type / ID Geo sub 2 | | Water Quality Meter Type / ID Horiba U-52 |
| Pump Intake Depth (ft) 67 | | Flow-Thru Cell Volume (L) 1 |
| Purge Start Time 1515 | | Appearance/Odor (Start) Turbid / None |
| Purge End Time 1545 | | Appearance/Odor (End) clear None |
| Average Purge Rate (mL/min) 300 | | Total Drawdown (ft) |
| Well Went Dry (Y/N) N | Stop Time | Volume removed (L) |
| Recovery Time | Recovery Rate (mL/min) | Restart Purge Time |
| Total Volume Removed (L) 9.0 | | Total Pump Time (min) 30 |

| Date | Time | Purge Rate (mL/min) | Volume Removed (LPM) | pH (+/-0.1) | Cond. (µS/cm) (+- 3%) | Temp. (°C) (+- 3%) | ORP (mV) (+/- 10) | Turbidity (NTU) +/-10% or <5 NTU | DO (mg/L) +/-10% or <0.5 mg/L | Depth to Water (ft below TOC) |
|---|---|---|---|---|---|---|---|---|---|---|
| 10/18/22 | 1515 | 300 | – | 7.52 | 0.494 | 14.96 | 157 | 560 | 7.09 | 64.88 |
| – | 1520 | – | 1.5 | 7.36 | 0.498 | 14.79 | 160 | 303 | 6.81 | 64.90 |
| – | 1525 | – | 3.0 | 7.26 | 0.502 | 14.99 | 161 | 24.1 | 6.24 | 64.91 |
| – | 1530 | – | 4.5 | 7.26 | 0.057 | 5.01 | 161 | 22.7 | 6.50 | 64.91 |
| – | 1535 | – | 6.0 | 7.24 | 0.508 | 14.93 | 159 | 5.0 | 6.24 | 64.91 |
| – | 1540 | – | 7.5 | 7.23 | 0.507 | 14.87 | 157 | 1.5 | 6.18 | 64.91 |
| – | 1545 | – | 9.0 | 7.22 | 0.506 | 14.81 | 156 | 4.2 | 6.25 | 64.91 |
| – | | – | | | | | | | | |
| – | | – | | | | | | | | |
| – | | – | | | | | | | | |
| – | | – | | | | | | | | |

COMMENTS None

## SAMPLE COLLECTION

| | |
|---|---|
| Sample Date 10/18/22 | Sample Time 1545 |
| Sample ID FSNO-GEP-4-20221018 | |
| QA/QC Collected / ID N/A | Sample Appearance/Odor Clear / None |
| Analyses VOC | |
| Sampler MW | Signature |

# Appendix C

# Hydraulic Gradient and Velocity Calculations

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## Hydraulic Gradient and Velocity Calculations

**Hydraulic Gradient Calculation**

$$hydraulic\ gradient = \frac{change\ in\ groundwater\ elevation}{change\ in\ distance} = \frac{\Delta h}{\Delta L}$$

| October 2022 Data | | GW Elevation (ft) | Delta Elevation (ft) | Delta Distance (ft) | Gradient | Average Gradient (ft/ft) |
|---|---|---|---|---|---|---|
| Pair 1 | B-1R | 228.29 | 1.94 | 590 | 0.003288136 | **0.002243** |
| | MW-26 | 226.35 | | | | |
| Pair 2 | GEP-3 | 228.20 | 0.83 | 420 | 0.001976190 | |
| | MW-13 | 227.37 | | | | |
| Pair 3 | MW-17 | 228.55 | 0.60 | 410 | 0.001463415 | |
| | MW-28 | 227.95 | | | | |

**Groundwater Darcy Velocity**

$$Darcy\ Velocty = K \times hydraulic\ gradient = K \times \frac{\Delta h}{\Delta L}$$

| | |
|---|---|
| Low Hydraulic Conductivity (K) | 15.66 |
| High Hydraulic Conductivity (K) | 193.8 |

| | |
|---|---|
| Darcy Velocity Low (ft/day) | 0.04 |
| Darcy Velocity High (ft/day) | 0.43 |

**Seepage Velocity**

$$\text{Seepage } Velocty = \frac{K \times hydraulic\ gradient}{n} = \frac{Darcy\ Velocity}{n}$$

| | |
|---|---|
| Porosity (n) | 0.4 |

| | |
|---|---|
| **Seepage Velocity Low (ft/day)** | **0.09** |
| **Seepage Velocity High (ft/day)** | **1.09** |

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# Appendix D

# Full Laboratory Analytical Results

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# ANALYTICAL RESULTS SUMMARY

GENERAL CHEMISTRY
METALS
GC SEMI-VOLATILES

**PROJECT NAME : SCOTIA, NY - ANNUAL TESTING**

**EA ENGINEERING SCIENCE & TECHNOLOGY**

**269 W. Jefferson Street**

**Syracuse, NY - 13202**

**Phone No: 315-431-4610**

**ORDER ID : N5212**

**ATTENTION : Jim Hayward**

NELAP ACCREDITED TNI LABORATORY

ANAB ACCREDITED ISO/IEC 17025 DOD ELAP

CHEMTECH

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8.2) Lab Certificate 110

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# Cover Page

**Order ID :** N5212

**Project ID :** Scotia, NY - Annual Testing

**Client :** EA Engineering Science & Technology

| Lab Sample Number | Client Sample Number |
|---|---|
| N5212-01 | FSND-MW-16-20221019 |
| N5212-02 | FSND-MW-16-20221019 |
| N5212-03 | FSND-MW-16-20221019 MS |
| N5212-04 | FSND-MW-16-20221019 MSD |
| N5212-05 | FSND-MW-16-20221019 MS |
| N5212-06 | FSND-MW-16-20221019 MSD |
| N5212-07 | FSND-MW-34-20221019 |
| N5212-08 | FSND-MW-34-20221019 |
| N5212-09 | FSND-FD-03-20221019 |
| N5212-10 | FSND-FD-03-20221019 |
| N5212-11 | FSND-FD-02-20221019 |
| N5212-12 | FSND-FD-02-20221019 |
| N5212-13 | FSND-MW-15-20221019 |
| N5212-14 | FSND-MW-15-20221019 |
| N5212-15 | FSND-MW-28-20221019 |
| N5212-16 | FSND-MW-28-20221019 |
| N5212-17 | FSND-MW-26-20221019 |
| N5212-18 | FSND-MW-26-20221019 |
| N5212-19 | FSND-MW-32-20221019 |
| N5212-20 | FSND-MW-32-20221019 |
| N5212-21 | FSND-MW-29-20221019 |
| N5212-22 | FSND-MW-29-20221019 |
| N5212-23 | FSND-MW-30-20221019 |
| N5212-24 | FSND-MW-30-20221019 |
| N5212-25 | FSND-MW-31-20221019 |
| N5212-26 | FSND-MW-31-20221019 |
| N5212-27 | FSND-MW-33-20221019 |
| N5212-28 | FSND-MW-33-20221019 |
| N5212-29 | FSND-MW-35-20221019 |
| N5212-30 | FSND-MW-35-20221019 |

I certify that the data package is in compliance with the terms and conditions of the contract,both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : N. N. Pandya

**APPROVED**
*By Nimisha Pandya QA/QC Supervisor at 12:38 pm, Nov 04, 2022*

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

# Cover Page

**Order ID :** N5212

**Project ID :** Scotia, NY - Annual Testing

**Client :** EA Engineering Science & Technology

| Lab Sample Number | Client Sample Number |
|---|---|
| N5212-31 | FSND-MW-24-20221019 |
| N5212-32 | FSND-MW-24-20221019 |
| N5212-33 | FSND-RB-20221019 |
| N5212-34 | FSND-RB-20221019 |

I certify that the data package is in compliance with the terms and conditions of the contract,both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : N. N. Pandya

APPROVED
*By Nimisha Pandya QA/QC Supervisor at 12:39 pm, Nov 04, 2022*

Date: 11/4/2022

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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# CASE NARRATIVE

**EA Engineering Science & Technology**
**Project Name: Scotia, NY - Annual Testing**
**Project # N/A**
**Chemtech Project # N5212**
**Test Name: Gases**

**A. Number of Samples and Date of Receipt:**
34 Water samples were received on 10/20/2022.

**B. Parameters**
According to the Chain of Custody document, the following analyses were requested: Alkalinity, Anions Group1, Dissolved Metals Group5, Gases, Metals Group3, TOC and VOC-TCLVOA-10. This data package contains results for Gases.

**C. Analytical Techniques:**
RT-U Plot 30m X 0.32mmThe analysis of Gasess was based on method RSK-175 and extraction was done based on method 3510.

**D. QA/ QC Samples:**
The Holding Times were met for all analysis.
The Retention Times were acceptable for all samples.
The MS recoveries met the requirements for all compounds.
The MSD recoveries met the acceptable requirements.
The RPD met criteria.
The Blank Spike met requirements for all samples.
The Blank analysis did not indicate the presence of lab contamination.
The Initial Calibration met the requirements .
The Continuous Calibration met the requirements .

Samples FSND-MW-32-20221019, FSND-MW-30-20221019 and FSND-MW-31-20221019 were diluted due to high concentrations.

**E. Additional Comments:**
The not QT review data is reported in the Miscellaneous.

**F. Manual Integration Comments:**
Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

---

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed

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above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature N. N. Pandya

APPROVED
By Nimisha Pandya QA/QC Supervisor at 12:39 pm, Nov 04, 2022

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# CASE NARRATIVE

**EA Engineering Science & Technology**
**Project Name: Scotia, NY - Annual Testing**
**Project # N/A**
**Chemtech Project # N5212**
**Test Name: Dissolved Metals Group5,Metals Group3**

**A. Number of Samples and Date of Receipt:**
34 Water samples were received on 10/20/2022.

**B. Parameters:**
According to the Chain of Custody document, the following analyses were requested: Alkalinity, Anions Group1, Dissolved Metals Group5, Gases, Metals Group3, and TOC .This data package contains results for Dissolved Metals Group5,Metals Group3.

**C. Analytical Techniques:**
The analysis of Dissolved Metals Group5,Metals Group3 was based on method 6010D and digestion based on method 3010 (waters).

**D. QA/ QC Samples:**
The Holding Times were met for all analysis.
The Blank Spike met requirements for all samples.
The Duplicate analysis met criteria for all samples.
The Matrix Spike (FSND-MW-16-20221019MS) analysis met criteria for all samples except for Iron due to chemical interference during digestion process.
The Matrix Spike Duplicate (FSND-MW-16-20221019MSD) analysis met criteria for all samples except for Iron due to chemical interference during digestion process.
The Blank analysis did not indicate the presence of lab contamination.
The Calibration met the requirements.
The Serial Dilution met the acceptable requirements.

**E. Additional Comments:**
Sample - N5212-01, N5212-07, N5212-09, N5212-11, N5212-13, N5212-15, N5212-17, N5212-19, N5212-21, N5212-23, N5212-25, N5212-27, N5212-29, N5212-31, N5212-33 were analyzed as Total Metals and sample - N5212-02, N5212-08, N5212-10, N5212-12, N5212-14, N5212-16, N5212-18, N5212-20, N5212-22, N5212-24, N5212-26, N5212-28, N5212-30, N5212-32, N5212-34 were analyzed as Dissolve Metals.

In analytical sequence LB122626, The % recovery was outside of acceptance limit for all elements of CCV05 but, no any samples associated under this CCV.

In analytical sequence LB122626, CCB08 fail for all elements but, no any samples associated under this CCB.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature N. N. Pandya

APPROVED
By Nimisha Pandya QA/QC Supervisor at 12:39 pm, Nov 04, 2022

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# CASE NARRATIVE

**EA Engineering Science & Technology**
**Project Name: Scotia, NY - Annual Testing**
**Project # N/A**
**Chemtech Project # N5212**
**Test Name: Alkalinity,Anions Group1,TOC**

**A. Number of Samples and Date of Receipt:**
34 Water samples were received on 10/20/2022.

**B. Parameters:**
According to the Chain of Custody document, the following analyses were requested: Alkalinity, Anions Group1, Dissolved Metals Group5, Gases, Metals Group3, and TOC . This data package contains results for Alkalinity,Anions Group1,TOC.

**C. Analytical Techniques:**
The analysis of Anions Group1 was based on method 9056A, The analysis of TOC was based on method 9060A and The analysis of Alkalinity was based on method SM2320 B.

**D. QA/ QC Samples:**
The Holding Times were met for all analysis.
Sample FSND-MW-34-20221019 was diluted due to high concentrations for Chloride &
Sample FSND-FD-03-20221019 was diluted due to high concentrations for Chloride &
Sample FSND-FD-02-20221019 was diluted due to high concentrations for Chloride &
Sample FSND-MW-15-20221019 was diluted due to high concentrations for Chloride &
Sample FSND-MW-28-20221019 was diluted due to high concentrations for Chloride &
Sample FSND-MW-26-20221019 was diluted due to high concentrations for Chloride &
Sample FSND-MW-32-20221019 was diluted due to high concentrations for Chloride &
Sample FSND-MW-29-20221019 was diluted due to high concentrations for Chloride &
Sample FSND-MW-30-20221019 was diluted due to high concentrations for Chloride &
Sample FSND-MW-31-20221019 was diluted due to high concentrations for Chloride &
Sample FSND-MW-33-20221019 was diluted due to high concentrations for Chloride &
Sample FSND-MW-35-20221019 was diluted due to high concentrations for Chloride &
Sample FSND-MW-24-20221019 was diluted due to high concentrations for Chloride.
The Blank Spike met requirements for all samples.
The Duplicate analysis met criteria for all samples.
The Matrix Spike analysis met criteria for all samples.
The Matrix Spike Duplicate analysis met criteria for all samples.
The Blank analysis did not indicate the presence of lab contamination.
The Calibration met the requirements.

**E. Additional Comments:**

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature N. N. Pandya

APPROVED
By Nimisha Pandya QA/QC Supervisor at 12:40 pm, Nov 04, 2022

# DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following " Results Qualifiers" are used:

| | |
|---|---|
| **J** | Indicates the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL). |
| **U** | Indicates the analyte was analyzed for, but not detected. |
| **ND** | Indicates the analyte was analyzed for, but not detected |
| **E** | Indicates the reported value is estimated because of the presence of interference |
| **M** | Indicates Duplicate injection precision not met. |
| **N** | Indicates the spiked sample recovery is not within control limits. |
| **S** | Indicates the reported value was determined by the Method of Standard Addition (MSA). |
| * | Indicates that the duplicate analysis is not within control limits. |
| + | Indicates the correlation coefficient for the MSA is less than 0.995. |
| **D** | Indicates the reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range. |
| **M** | Method qualifiers<br>**"P"** for ICP instrument<br>**"PM"** for ICP when Microwave Digestion is used<br>**"CV"** for Manual Cold Vapor AA<br>**"AV"** for automated Cold Vapor AA<br>**"CA"** for MIDI-Distillation Spectrophotometric<br>**"AS"** for Semi –Automated Spectrophotometric<br>**"C"** for Manual Spectrophotometric<br>**"T"** for Titrimetric<br>**"NR"** for analyte not required to be analyzed |
| **OR** | Indicates the analyte's concentration exceeds the calibrated range of the instrument for that specific analysis. |
| **Q** | Indicates the LCS did not meet the control limits requirements |
| H | Sample Analysis Out Of Hold Time |

## DATA REPORTING QUALIFIERS- ORGANIC

For reporting results, the following " Results Qualifiers" are used:

| | |
|---|---|
| Value | If the result is a value greater than or equal to the detection limit, report the value |
| **U** | Indicates the compound was analyzed for but was not detected. Report the minimum detection limit for the sample with the U, i.e. "10 U". This is not necessarily the instrument detection limit attainable for this particular sample based on any concentration or dilution that may have been required. |
| **ND** | Indicates the analyte was analyzed for, but not detected |
| **J** | Indicates an estimated value**.** This flag is used:<br>(1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed.)<br>(2) When the mass spectral data indicated the identification, however the result was less than the specified detection limit greater than zero. If the detection limit was 10ug/L and a concentration of 3 ug/L was calculated report as 3 J. This is flag is used when similar situation arise on any organic parameter i.e. Pest, PCB and others. |
| **B** | Indicates the analyte was found in the blank as well as the sample report as "12 B". |
| **E** | Indicates the analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis. |
| **D** | This flag identifies all compounds identified in an analysis at a secondary dilution factor. |
| **P** | This flag is used for Pesticide/PCB target analyte when there is >25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form 1 and flagged with a "P". |
| **N** | This flag indicates presumptive evidence of a compound. This is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It applies to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the flag is not used. |
| **A** | This flag indicates that a Tentatively Identified Compound is a suspected aldol-condensation product. |
| **Q** | Indicates the LCS did not meet the control limits requirements |

## APPENDIX A

## QA REVIEW GENERAL DOCUMENTATION

**Project #:** N5212

| | Completed |
|---|---|
| **For thorough review, the report must have the following:** | |
| **GENERAL:** | |
| **Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)** | ✓ |
| **Check chain-of-custody for proper relinquish/return of samples** | ✓ |
| **Is the chain of custody signed and complete** | ✓ |
| **Check internal chain-of-custody for proper relinquish/return of samples /sample extracts** | ✓ |
| **Collect information for each project id from server. Were all requirements followed** | ✓ |
| **COVER PAGE:** | |
| **Do numbers of samples correspond to the number of samples in the Chain of Custody on login page** | ✓ |
| **Do lab numbers and client Ids on cover page agree with the Chain of Custody** | ✓ |
| **CHAIN OF CUSTODY:** | |
| **Do requested analyses on Chain of Custody agree with form I results** | ✓ |
| **Do requested analyses on Chain of Custody agree with the log-in page** | ✓ |
| **Were the correct method log-in for analysis according to the Analytical Request and Chain of Castody** | ✓ |
| **Were the samples received within hold time** | ✓ |
| **Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle** | ✓ |
| **ANALYTICAL:** | |
| **Was method requirement followed?** | ✓ |
| **Was client requirement followed?** | ✓ |
| **Does the case narrative summarize all QC failure?** | ✓ |
| **All runlogs and manual integration are reviewed for requirements** | ✓ |
| **All manual calculations and /or hand notations verified** | ✓ |

**1st Level QA Review Signature:** SOHIL JODHANI **Date:** 11/04/2022

**2nd Level QA Review Signature:** N. N. Pandya

APPROVED
By Nimisha Pandya QA/QC Supervisor at 12:40 pm, Nov 04, 2022

**Date:**

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Hit Summary Sheet
**SW-846**

**SDG No.:** N5212 **Order ID:** N5212

**Client:** EA Engineering Science & Technology **Project ID:** Scotia, NY - Annual Testing

| Sample ID | Client ID | Parameter | Concentration | C | MDL | LOD | RDL | Units |
|---|---|---|---|---|---|---|---|---|
| **Client ID : FSND-MW-16-20221019** | | | | | | | | |
| N5212-01 | FSND-MW-16-20221( Water | Ethane | 2.20 | J | 0.42 | 1.92 | 9.60 | ug/L |
| N5212-01 | FSND-MW-16-20221( Water | Ethylene | 2.30 | J | 0.63 | 2.64 | 13.2 | ug/L |
| N5212-01 | FSND-MW-16-20221( Water | Methane | 0.73 | J | 0.42 | 0.94 | 4.70 | ug/L |
| | | **Total Concentration:** | **5.230** | | | | | |
| **Client ID : FSND-MW-34-20221019** | | | | | | | | |
| N5212-07 | FSND-MW-34-20221( Water | Methane | 22.7 | | 0.42 | 0.94 | 4.70 | ug/L |
| | | **Total Concentration:** | **22.700** | | | | | |
| **Client ID : FSND-FD-03-20221019** | | | | | | | | |
| N5212-09 | FSND-FD-03-202210 Water | Ethylene | 8.60 | J | 0.63 | 2.64 | 13.2 | ug/L |
| N5212-09 | FSND-FD-03-202210 Water | Methane | 39.0 | | 0.42 | 0.94 | 4.70 | ug/L |
| | | **Total Concentration:** | **47.600** | | | | | |
| **Client ID : FSND-FD-02-20221019** | | | | | | | | |
| N5212-11 | FSND-FD-02-202210 Water | Ethylene | 16.9 | | 0.63 | 2.64 | 13.2 | ug/L |
| | | **Total Concentration:** | **16.900** | | | | | |
| **Client ID : FSND-MW-15-20221019** | | | | | | | | |
| N5212-13 | FSND-MW-15-20221( Water | Ethylene | 10.4 | J | 0.63 | 2.64 | 13.2 | ug/L |
| N5212-13 | FSND-MW-15-20221( Water | Methane | 1.50 | J | 0.42 | 0.94 | 4.70 | ug/L |
| | | **Total Concentration:** | **11.900** | | | | | |
| **Client ID : FSND-MW-28-20221019** | | | | | | | | |
| N5212-15 | FSND-MW-28-20221( Water | Ethylene | 10.9 | J | 0.63 | 2.64 | 13.2 | ug/L |
| | | **Total Concentration:** | **10.900** | | | | | |
| **Client ID : FSND-MW-32-20221019** | | | | | | | | |
| N5212-19 | FSND-MW-32-20221( Water | Ethylene | 4.20 | J | 0.63 | 2.64 | 13.2 | ug/L |
| N5212-19 | FSND-MW-32-20221( Water | Methane | 430 | E | 0.42 | 0.94 | 4.70 | ug/L |
| | | **Total Concentration:** | **434.200** | | | | | |
| **Client ID : FSND-MW-32-20221019DL** | | | | | | | | |
| N5212-19DL | FSND-MW-32-20221( Water | Methane | 545 | D | 8.40 | 18.8 | 94.0 | ug/L |
| | | **Total Concentration:** | **545.000** | | | | | |
| **Client ID : FSND-MW-29-20221019** | | | | | | | | |
| N5212-21 | FSND-MW-29-20221( Water | Methane | 1.80 | J | 0.42 | 0.94 | 4.70 | ug/L |
| | | **Total Concentration:** | **1.800** | | | | | |

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# Hit Summary Sheet
**SW-846**

**SDG No.:** N5212 **Order ID:** N5212

**Client:** EA Engineering Science & Technology **Project ID:** Scotia, NY - Annual Testing

| Sample ID | Client ID | | Parameter | Concentration | C | MDL | LOD | RDL | Units |
|---|---|---|---|---|---|---|---|---|---|
| **Client ID : FSND-MW-30-20221019** | | | | | | | | | |
| N5212-23 | FSND-MW-30-20221( | Water | Ethylene | 16.7 | | 0.63 | 2.64 | 13.2 | ug/L |
| N5212-23 | FSND-MW-30-20221( | Water | Methane | 2000 | E | 0.42 | 0.94 | 4.70 | ug/L |
| | | | **Total Concentration:** | **2,016.700** | | | | | |
| **Client ID : FSND-MW-30-20221019DL** | | | | | | | | | |
| N5212-23DL | FSND-MW-30-20221( | Water | Methane | 2800 | D | 42.0 | 94.0 | 470 | ug/L |
| | | | **Total Concentration:** | **2,800.000** | | | | | |
| **Client ID : FSND-MW-31-20221019** | | | | | | | | | |
| N5212-25 | FSND-MW-31-20221( | Water | Methane | 98.6 | E | 0.42 | 0.94 | 4.70 | ug/L |
| | | | **Total Concentration:** | **98.600** | | | | | |
| **Client ID : FSND-MW-31-20221019DL** | | | | | | | | | |
| N5212-25DL | FSND-MW-31-20221( | Water | Methane | 136 | D | 1.68 | 3.76 | 18.8 | ug/L |
| | | | **Total Concentration:** | **136.000** | | | | | |
| **Client ID : FSND-RB-20221019** | | | | | | | | | |
| N5212-33 | FSND-RB-20221019 | Water | Ethane | 1.40 | J | 0.42 | 1.92 | 9.60 | ug/L |
| N5212-33 | FSND-RB-20221019 | Water | Ethylene | 4.50 | J | 0.63 | 2.64 | 13.2 | ug/L |
| N5212-33 | FSND-RB-20221019 | Water | Methane | 4.00 | J | 0.42 | 0.94 | 4.70 | ug/L |
| | | | **Total Concentration:** | **9.900** | | | | | |

# SAMPLE DATA

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# Report of Analysis

| | | | | |
|---|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 | |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 | |
| Client Sample ID: | FSND-MW-16-20221019 | SDG No.: | N5212 | |
| Lab Sample ID: | N5212-01 | Matrix: | Water | |
| Analytical Method: | RSK175 | % Moisture: | 100 | Decanted: |
| Water Phase Vol : | 36 mL | Test: | Gases | |
| Gas Phase Vol : | 4 mL | | | |

| File ID/Qc Batch: | Dilution: | Date Analyzed |
|---|---|---|
| FA003575.D | 1 | 10/27/22 10:20 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 74-84-0 | Ethane | 2.20 | J | 0.42 | 1.92 | 9.60 | ug/L |
| 74-85-1 | Ethylene | 2.30 | J | 0.63 | 2.64 | 13.2 | ug/L |
| 74-82-8 | Methane | 0.73 | J | 0.42 | 0.94 | 4.70 | ug/L |

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.
() = Laboratory InHouse Limit

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# Report of Analysis

| | | | | |
|---|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 | |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 | |
| Client Sample ID: | FSND-MW-34-20221019 | SDG No.: | N5212 | |
| Lab Sample ID: | N5212-07 | Matrix: | Water | |
| Analytical Method: | RSK175 | % Moisture: | 100 | Decanted: |
| Water Phase Vol : | 36 mL | Test: | Gases | |
| Gas Phase Vol : | 4 mL | | | |

| File ID/Qc Batch: | Dilution: | Date Analyzed |
|---|---|---|
| FA003578.D | 1 | 10/27/22 11:04 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 74-84-0 | Ethane | 1.92 | U | 0.42 | 1.92 | 9.60 | ug/L |
| 74-85-1 | Ethylene | 2.64 | U | 0.63 | 2.64 | 13.2 | ug/L |
| 74-82-8 | Methane | 22.7 | | 0.42 | 0.94 | 4.70 | ug/L |

Comments:

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# Report of Analysis

| | | | | |
|---|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 | |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 | |
| Client Sample ID: | FSND-FD-03-20221019 | SDG No.: | N5212 | |
| Lab Sample ID: | N5212-09 | Matrix: | Water | |
| Analytical Method: | RSK175 | % Moisture: | 100 | Decanted: |
| Water Phase Vol : | 36 mL | Test: | Gases | |
| Gas Phase Vol : | 4 mL | | | |

| File ID/Qc Batch: | Dilution: | Date Analyzed |
|---|---|---|
| FA003579.D | 1 | 10/27/22 11:20 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 74-84-0 | Ethane | 1.92 | U | 0.42 | 1.92 | 9.60 | ug/L |
| 74-85-1 | Ethylene | 8.60 | J | 0.63 | 2.64 | 13.2 | ug/L |
| 74-82-8 | Methane | 39.0 | | 0.42 | 0.94 | 4.70 | ug/L |

Comments:

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# Report of Analysis

| | | | | |
|---|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 | |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 | |
| Client Sample ID: | FSND-FD-02-20221019 | SDG No.: | N5212 | |
| Lab Sample ID: | N5212-11 | Matrix: | Water | |
| Analytical Method: | RSK175 | % Moisture: | 100 | Decanted: |
| Water Phase Vol : | 36 mL | Test: | Gases | |
| Gas Phase Vol : | 4 mL | | | |

| File ID/Qc Batch: | Dilution: | Date Analyzed |
|---|---|---|
| FA003580.D | 1 | 10/27/22 11:26 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 74-84-0 | Ethane | 1.92 | U | 0.42 | 1.92 | 9.60 | ug/L |
| 74-85-1 | Ethylene | 16.9 | | 0.63 | 2.64 | 13.2 | ug/L |
| 74-82-8 | Methane | 0.94 | U | 0.42 | 0.94 | 4.70 | ug/L |

Comments:

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S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.
() = Laboratory InHouse Limit

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# Report of Analysis

| | | | | |
|---|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 | |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 | |
| Client Sample ID: | FSND-MW-15-20221019 | SDG No.: | N5212 | |
| Lab Sample ID: | N5212-13 | Matrix: | Water | |
| Analytical Method: | RSK175 | % Moisture: | 100 | Decanted: |
| Water Phase Vol : | 36 mL | Test: | Gases | |
| Gas Phase Vol : | 4 mL | | | |

| File ID/Qc Batch: | Dilution: | Date Analyzed |
|---|---|---|
| FA003581.D | 1 | 10/27/22 11:31 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 74-84-0 | Ethane | 1.92 | U | 0.42 | 1.92 | 9.60 | ug/L |
| 74-85-1 | Ethylene | 10.4 | J | 0.63 | 2.64 | 13.2 | ug/L |
| 74-82-8 | Methane | 1.50 | J | 0.42 | 0.94 | 4.70 | ug/L |

Comments:

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() = Laboratory InHouse Limit

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# Report of Analysis

| | | | | |
|---|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 | |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 | |
| Client Sample ID: | FSND-MW-28-20221019 | SDG No.: | N5212 | |
| Lab Sample ID: | N5212-15 | Matrix: | Water | |
| Analytical Method: | RSK175 | % Moisture: | 100 | Decanted: |
| Water Phase Vol : | 36 mL | Test: | Gases | |
| Gas Phase Vol : | 4 mL | | | |

| File ID/Qc Batch: | Dilution: | Date Analyzed |
|---|---|---|
| FA003583.D | 1 | 10/27/22 11:53 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 74-84-0 | Ethane | 1.92 | U | 0.42 | 1.92 | 9.60 | ug/L |
| 74-85-1 | Ethylene | 10.9 | J | 0.63 | 2.64 | 13.2 | ug/L |
| 74-82-8 | Methane | 0.94 | U | 0.42 | 0.94 | 4.70 | ug/L |

Comments:

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# Report of Analysis

| | | | | |
|---|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 | |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 | |
| Client Sample ID: | FSND-MW-26-20221019 | SDG No.: | N5212 | |
| Lab Sample ID: | N5212-17 | Matrix: | Water | |
| Analytical Method: | RSK175 | % Moisture: | 100 | Decanted: |
| Water Phase Vol : | 36 mL | Test: | Gases | |
| Gas Phase Vol : | 4 mL | | | |

| File ID/Qc Batch: | Dilution: | Date Analyzed |
|---|---|---|
| FA003584.D | 1 | 10/27/22 11:59 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 74-84-0 | Ethane | 1.92 | U | 0.42 | 1.92 | 9.60 | ug/L |
| 74-85-1 | Ethylene | 2.64 | U | 0.63 | 2.64 | 13.2 | ug/L |
| 74-82-8 | Methane | 0.94 | U | 0.42 | 0.94 | 4.70 | ug/L |

Comments:

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# Report of Analysis

| | | | | |
|---|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 | |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 | |
| Client Sample ID: | FSND-MW-32-20221019 | SDG No.: | N5212 | |
| Lab Sample ID: | N5212-19 | Matrix: | Water | |
| Analytical Method: | RSK175 | % Moisture: | 100 | Decanted: |
| Water Phase Vol : | 36 mL | Test: | Gases | |
| Gas Phase Vol : | 4 mL | | | |

| File ID/Qc Batch: | Dilution: | Date Analyzed |
|---|---|---|
| FA003585.D | 1 | 10/27/22 12:04 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 74-84-0 | Ethane | 1.92 | U | 0.42 | 1.92 | 9.60 | ug/L |
| 74-85-1 | Ethylene | 4.20 | J | 0.63 | 2.64 | 13.2 | ug/L |
| 74-82-8 | Methane | 430 | E | 0.42 | 0.94 | 4.70 | ug/L |

Comments:

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-32-20221019DL | SDG No.: | N5212 |
| Lab Sample ID: | N5212-19DL | Matrix: | Water |
| Analytical Method: | RSK175 | % Moisture: | 100 Decanted: |
| Water Phase Vol : | 36 mL | Test: | Gases |
| Gas Phase Vol : | 4 mL | | |

| File ID/Qc Batch: | Dilution: | Date Analyzed |
|---|---|---|
| FA003586.D | 20 | 10/27/22 12:10 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 74-84-0 | Ethane | 38.4 | UD | 8.40 | 38.4 | 192 | ug/L |
| 74-85-1 | Ethylene | 52.8 | UD | 12.6 | 52.8 | 264 | ug/L |
| 74-82-8 | Methane | 545 | D | 8.40 | 18.8 | 94.0 | ug/L |

Comments:

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# Report of Analysis

| | | | | |
|---|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 | |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 | |
| Client Sample ID: | FSND-MW-29-20221019 | SDG No.: | N5212 | |
| Lab Sample ID: | N5212-21 | Matrix: | Water | |
| Analytical Method: | RSK175 | % Moisture: | 100 | Decanted: |
| Water Phase Vol : | 36 mL | Test: | Gases | |
| Gas Phase Vol : | 4 mL | | | |

| File ID/Qc Batch: | Dilution: | Date Analyzed |
|---|---|---|
| FA003587.D | 1 | 10/27/22 12:35 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 74-84-0 | Ethane | 1.92 | U | 0.42 | 1.92 | 9.60 | ug/L |
| 74-85-1 | Ethylene | 2.64 | U | 0.63 | 2.64 | 13.2 | ug/L |
| 74-82-8 | Methane | 1.80 | J | 0.42 | 0.94 | 4.70 | ug/L |

Comments:

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# Report of Analysis

| | | | | |
|---|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 | |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 | |
| Client Sample ID: | FSND-MW-30-20221019 | SDG No.: | N5212 | |
| Lab Sample ID: | N5212-23 | Matrix: | Water | |
| Analytical Method: | RSK175 | % Moisture: | 100 | Decanted: |
| Water Phase Vol : | 36 mL | Test: | Gases | |
| Gas Phase Vol : | 4 mL | | | |

| File ID/Qc Batch: | Dilution: | Date Analyzed |
|---|---|---|
| FA003588.D | 1 | 10/27/22 12:40 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 74-84-0 | Ethane | 1.92 | U | 0.42 | 1.92 | 9.60 | ug/L |
| 74-85-1 | Ethylene | 16.7 | | 0.63 | 2.64 | 13.2 | ug/L |
| 74-82-8 | Methane | 2000 | E | 0.42 | 0.94 | 4.70 | ug/L |

Comments:

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# Report of Analysis

| | | | | |
|---|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 | |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 | |
| Client Sample ID: | FSND-MW-30-20221019DL | SDG No.: | N5212 | |
| Lab Sample ID: | N5212-23DL | Matrix: | Water | |
| Analytical Method: | RSK175 | % Moisture: | 100 | Decanted: |
| Water Phase Vol : | 36 mL | Test: | Gases | |
| Gas Phase Vol : | 4 mL | | | |

| File ID/Qc Batch: | Dilution: | Date Analyzed |
|---|---|---|
| FA003589.D | 100 | 10/27/22 12:45 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 74-84-0 | Ethane | 192 | UD | 42.0 | 192 | 960 | ug/L |
| 74-85-1 | Ethylene | 264 | UD | 63.0 | 264 | 1320 | ug/L |
| 74-82-8 | Methane | 2800 | D | 42.0 | 94.0 | 470 | ug/L |

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.
() = Laboratory InHouse Limit

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# Report of Analysis

| | | | | |
|---|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 | |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 | |
| Client Sample ID: | FSND-MW-31-20221019 | SDG No.: | N5212 | |
| Lab Sample ID: | N5212-25 | Matrix: | Water | |
| Analytical Method: | RSK175 | % Moisture: | 100 | Decanted: |
| Water Phase Vol : | 36 mL | Test: | Gases | |
| Gas Phase Vol : | 4 mL | | | |

| File ID/Qc Batch: | Dilution: | Date Analyzed |
|---|---|---|
| FA003590.D | 1 | 10/27/22 12:52 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 74-84-0 | Ethane | 1.92 | U | 0.42 | 1.92 | 9.60 | ug/L |
| 74-85-1 | Ethylene | 2.64 | U | 0.63 | 2.64 | 13.2 | ug/L |
| 74-82-8 | Methane | 98.6 | E | 0.42 | 0.94 | 4.70 | ug/L |

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.
() = Laboratory InHouse Limit

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# Report of Analysis

| | | | | |
|---|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 | |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 | |
| Client Sample ID: | FSND-MW-31-20221019DL | SDG No.: | N5212 | |
| Lab Sample ID: | N5212-25DL | Matrix: | Water | |
| Analytical Method: | RSK175 | % Moisture: | 100 | Decanted: |
| Water Phase Vol : | 36 mL | Test: | Gases | |
| Gas Phase Vol : | 4 mL | | | |

| File ID/Qc Batch: | Dilution: | Date Analyzed |
|---|---|---|
| FA003591.D | 4 | 10/27/22 12:56 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 74-84-0 | Ethane | 7.68 | UD | 1.68 | 7.68 | 38.4 | ug/L |
| 74-85-1 | Ethylene | 10.6 | UD | 2.52 | 10.6 | 52.8 | ug/L |
| 74-82-8 | Methane | 136 | D | 1.68 | 3.76 | 18.8 | ug/L |

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.
() = Laboratory InHouse Limit

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# Report of Analysis

| | | | | |
|---|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 | |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 | |
| Client Sample ID: | FSND-MW-33-20221019 | SDG No.: | N5212 | |
| Lab Sample ID: | N5212-27 | Matrix: | Water | |
| Analytical Method: | RSK175 | % Moisture: | 100 | Decanted: |
| Water Phase Vol : | 36 mL | Test: | Gases | |
| Gas Phase Vol : | 4 mL | | | |

| File ID/Qc Batch: | Dilution: | Date Analyzed |
|---|---|---|
| FA003592.D | 1 | 10/27/22 13:01 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 74-84-0 | Ethane | 1.92 | U | 0.42 | 1.92 | 9.60 | ug/L |
| 74-85-1 | Ethylene | 2.64 | U | 0.63 | 2.64 | 13.2 | ug/L |
| 74-82-8 | Methane | 0.94 | U | 0.42 | 0.94 | 4.70 | ug/L |

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.
() = Laboratory InHouse Limit

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# Report of Analysis

| | | | | |
|---|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 | |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 | |
| Client Sample ID: | FSND-MW-35-20221019 | SDG No.: | N5212 | |
| Lab Sample ID: | N5212-29 | Matrix: | Water | |
| Analytical Method: | RSK175 | % Moisture: | 100 | Decanted: |
| Water Phase Vol : | 36 mL | Test: | Gases | |
| Gas Phase Vol : | 4 mL | | | |

| File ID/Qc Batch: | Dilution: | Date Analyzed |
|---|---|---|
| FA003594.D | 1 | 10/27/22 14:23 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 74-84-0 | Ethane | 1.92 | U | 0.42 | 1.92 | 9.60 | ug/L |
| 74-85-1 | Ethylene | 2.64 | U | 0.63 | 2.64 | 13.2 | ug/L |
| 74-82-8 | Methane | 0.94 | U | 0.42 | 0.94 | 4.70 | ug/L |

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.
() = Laboratory InHouse Limit

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# Report of Analysis

| | | | | |
|---|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 | |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 | |
| Client Sample ID: | FSND-MW-24-20221019 | SDG No.: | N5212 | |
| Lab Sample ID: | N5212-31 | Matrix: | Water | |
| Analytical Method: | RSK175 | % Moisture: | 100 | Decanted: |
| Water Phase Vol : | 36 mL | Test: | Gases | |
| Gas Phase Vol : | 4 mL | | | |

| File ID/Qc Batch: | Dilution: | Date Analyzed |
|---|---|---|
| FA003595.D | 1 | 10/27/22 14:37 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 74-84-0 | Ethane | 1.92 | U | 0.42 | 1.92 | 9.60 | ug/L |
| 74-85-1 | Ethylene | 2.64 | U | 0.63 | 2.64 | 13.2 | ug/L |
| 74-82-8 | Methane | 0.94 | U | 0.42 | 0.94 | 4.70 | ug/L |

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.
() = Laboratory InHouse Limit

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-RB-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-33 | Matrix: | Water |
| Analytical Method: | RSK175 | % Moisture: | 100 Decanted: |
| Water Phase Vol : | 36 mL | Test: | Gases |
| Gas Phase Vol : | 4 mL | | |

| File ID/Qc Batch: | Dilution: | Date Analyzed |
|---|---|---|
| FA003596.D | 1 | 10/27/22 15:02 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 74-84-0 | Ethane | 1.40 | J | 0.42 | 1.92 | 9.60 | ug/L |
| 74-85-1 | Ethylene | 4.50 | J | 0.63 | 2.64 | 13.2 | ug/L |
| 74-82-8 | Methane | 4.00 | J | 0.42 | 0.94 | 4.70 | ug/L |

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.
() = Laboratory InHouse Limit

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# LAB CHRONICLE

| | | | |
|---|---|---|---|
| **OrderID:** | N5212 | **OrderDate:** | 10/20/2022 9:48:00 AM |
| **Client:** | EA Engineering Science & Technology | **Project:** | Scotia, NY - Annual Testing |
| **Contact:** | Jim Hayward | **Location:** | D11,VOA Ref. #3 Water |

| LabID | ClientID | Matrix | Test | Method | Sample Date | Prep Date | Anal Date | Received |
|---|---|---|---|---|---|---|---|---|
| **N5212-01** | **FSND-MW-16-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Gases | RSK-175 | | | 10/27/22 | |
| **N5212-07** | **FSND-MW-34-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Gases | RSK-175 | | | 10/27/22 | |
| **N5212-09** | **FSND-FD-03-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Gases | RSK-175 | | | 10/27/22 | |
| **N5212-11** | **FSND-FD-02-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Gases | RSK-175 | | | 10/27/22 | |
| **N5212-13** | **FSND-MW-15-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Gases | RSK-175 | | | 10/27/22 | |
| **N5212-15** | **FSND-MW-28-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Gases | RSK-175 | | | 10/27/22 | |
| **N5212-17** | **FSND-MW-26-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Gases | RSK-175 | | | 10/27/22 | |
| **N5212-19** | **FSND-MW-32-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Gases | RSK-175 | | | 10/27/22 | |
| **N5212-19DL** | **FSND-MW-32-20221019DL** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Gases | RSK-175 | | | 10/27/22 | |

# LAB CHRONICLE

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **N5212-21** | **FSND-MW-29-20221019** | **Water** | | | **10/19/22** | | **10/20/22** |
| | | | Gases | RSK-175 | | 10/27/22 | |
| **N5212-23** | **FSND-MW-30-20221019** | **Water** | | | **10/19/22** | | **10/20/22** |
| | | | Gases | RSK-175 | | 10/27/22 | |
| **N5212-23DL** | **FSND-MW-30-20221019DL** | **Water** | | | **10/19/22** | | **10/20/22** |
| | | | Gases | RSK-175 | | 10/27/22 | |
| **N5212-25** | **FSND-MW-31-20221019** | **Water** | | | **10/19/22** | | **10/20/22** |
| | | | Gases | RSK-175 | | 10/27/22 | |
| **N5212-25DL** | **FSND-MW-31-20221019DL** | **Water** | | | **10/19/22** | | **10/20/22** |
| | | | Gases | RSK-175 | | 10/27/22 | |
| **N5212-27** | **FSND-MW-33-20221019** | **Water** | | | **10/19/22** | | **10/20/22** |
| | | | Gases | RSK-175 | | 10/27/22 | |
| **N5212-29** | **FSND-MW-35-20221019** | **Water** | | | **10/19/22** | | **10/20/22** |
| | | | Gases | RSK-175 | | 10/27/22 | |
| **N5212-31** | **FSND-MW-24-20221019** | **Water** | | | **10/19/22** | | **10/20/22** |
| | | | Gases | RSK-175 | | 10/27/22 | |
| **N5212-33** | **FSND-RB-20221019** | **Water** | | | **10/19/22** | | **10/20/22** |
| | | | Gases | RSK-175 | | 10/27/22 | |

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# Hit Summary Sheet
**SW-846**

**SDG No.:** N5212 **Order ID:** N5212

**Client:** EA Engineering Science & Technology **Project ID:** Scotia, NY - Annual Testing

| Sample ID | Client ID | Matrix | Parameter | Concentration | C | MDL | LOD | RDL | Units |
|---|---|---|---|---|---|---|---|---|---|
| **Client ID : FSND-MW-16-20221019** | | | | | | | | | |
| N5212-01 | FSND-MW-16-20221019 | Water | Iron | 269 | | 16.9 | 40.0 | 50.0 | ug/L |
| **Client ID : FSND-MW-16-20221019** | | | | | | | | | |
| N5212-02 | FSND-MW-16-20221019 | Water | Iron | 34.9 | J | 16.9 | 40.0 | 50.0 | ug/L |
| **Client ID : FSND-MW-34-20221019** | | | | | | | | | |
| N5212-07 | FSND-MW-34-20221019 | Water | Iron | 895 | | 16.9 | 40.0 | 50.0 | ug/L |
| **Client ID : FSND-MW-34-20221019** | | | | | | | | | |
| N5212-08 | FSND-MW-34-20221019 | Water | Iron | 979 | | 16.9 | 40.0 | 50.0 | ug/L |
| **Client ID : FSND-FD-03-20221019** | | | | | | | | | |
| N5212-09 | FSND-FD-03-20221019 | Water | Iron | 1020 | | 16.9 | 40.0 | 50.0 | ug/L |
| **Client ID : FSND-FD-03-20221019** | | | | | | | | | |
| N5212-10 | FSND-FD-03-20221019 | Water | Iron | 575 | | 16.9 | 40.0 | 50.0 | ug/L |
| **Client ID : FSND-FD-02-20221019** | | | | | | | | | |
| N5212-11 | FSND-FD-02-20221019 | Water | Iron | 52.6 | | 16.9 | 40.0 | 50.0 | ug/L |
| **Client ID : FSND-MW-15-20221019** | | | | | | | | | |
| N5212-13 | FSND-MW-15-20221019 | Water | Iron | 30.2 | J | 16.9 | 40.0 | 50.0 | ug/L |
| **Client ID : FSND-MW-28-20221019** | | | | | | | | | |
| N5212-15 | FSND-MW-28-20221019 | Water | Iron | 796 | | 16.9 | 40.0 | 50.0 | ug/L |
| **Client ID : FSND-MW-28-20221019** | | | | | | | | | |
| N5212-16 | FSND-MW-28-20221019 | Water | Iron | 307 | | 16.9 | 40.0 | 50.0 | ug/L |
| **Client ID : FSND-MW-26-20221019** | | | | | | | | | |
| N5212-17 | FSND-MW-26-20221019 | Water | Iron | 580 | | 16.9 | 40.0 | 50.0 | ug/L |
| **Client ID : FSND-MW-26-20221019** | | | | | | | | | |
| N5212-18 | FSND-MW-26-20221019 | Water | Iron | 431 | | 16.9 | 40.0 | 50.0 | ug/L |
| **Client ID : FSND-MW-32-20221019** | | | | | | | | | |
| N5212-19 | FSND-MW-32-20221019 | Water | Iron | 4660 | | 16.9 | 40.0 | 50.0 | ug/L |
| **Client ID : FSND-MW-32-20221019** | | | | | | | | | |
| N5212-20 | FSND-MW-32-20221019 | Water | Iron | 2570 | | 16.9 | 40.0 | 50.0 | ug/L |
| **Client ID : FSND-MW-29-20221019** | | | | | | | | | |
| N5212-21 | FSND-MW-29-20221019 | Water | Iron | 485 | | 16.9 | 40.0 | 50.0 | ug/L |

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# Hit Summary Sheet
**SW-846**



**SDG No.:** N5212 **Order ID:** N5212

**Client:** EA Engineering Science & Technology **Project ID:** Scotia, NY - Annual Testing

| Sample ID | Client ID | Matrix | Parameter | Concentration | C | MDL | LOD | RDL | Units |
|---|---|---|---|---|---|---|---|---|---|
| **Client ID : FSND-MW-29-20221019** | | | | | | | | | |
| N5212-22 | FSND-MW-29-20221019 | Water | Iron | 37.7 | J | 16.9 | 40.0 | 50.0 | ug/L |
| **Client ID : FSND-MW-30-20221019** | | | | | | | | | |
| N5212-23 | FSND-MW-30-20221019 | Water | Iron | 1430 | | 16.9 | 40.0 | 50.0 | ug/L |
| **Client ID : FSND-MW-30-20221019** | | | | | | | | | |
| N5212-24 | FSND-MW-30-20221019 | Water | Iron | 104 | | 16.9 | 40.0 | 50.0 | ug/L |
| **Client ID : FSND-MW-31-20221019** | | | | | | | | | |
| N5212-25 | FSND-MW-31-20221019 | Water | Iron | 1430 | | 16.9 | 40.0 | 50.0 | ug/L |
| **Client ID : FSND-MW-31-20221019** | | | | | | | | | |
| N5212-26 | FSND-MW-31-20221019 | Water | Iron | 827 | | 16.9 | 40.0 | 50.0 | ug/L |
| **Client ID : FSND-MW-33-20221019** | | | | | | | | | |
| N5212-27 | FSND-MW-33-20221019 | Water | Iron | 590 | | 16.9 | 40.0 | 50.0 | ug/L |
| **Client ID : FSND-MW-33-20221019** | | | | | | | | | |
| N5212-28 | FSND-MW-33-20221019 | Water | Iron | 117 | | 16.9 | 40.0 | 50.0 | ug/L |
| **Client ID : FSND-MW-35-20221019** | | | | | | | | | |
| N5212-29 | FSND-MW-35-20221019 | Water | Iron | 161 | | 16.9 | 40.0 | 50.0 | ug/L |
| **Client ID : FSND-MW-24-20221019** | | | | | | | | | |
| N5212-31 | FSND-MW-24-20221019 | Water | Iron | 1920 | | 16.9 | 40.0 | 50.0 | ug/L |
| **Client ID : FSND-MW-24-20221019** | | | | | | | | | |
| N5212-32 | FSND-MW-24-20221019 | Water | Iron | 1710 | | 16.9 | 40.0 | 50.0 | ug/L |
| **Client ID : FSND-RB-20221019** | | | | | | | | | |
| N5212-33 | FSND-RB-20221019 | Water | Iron | 347 | | 16.9 | 40.0 | 50.0 | ug/L |
| **Client ID : FSND-RB-20221019** | | | | | | | | | |
| N5212-34 | FSND-RB-20221019 | Water | Iron | 110 | | 16.9 | 40.0 | 50.0 | ug/L |

# SAMPLE DATA

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-16-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-01 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-89-6 | Iron | 269 | N | 1 | 16.9 | 40.0 | 50.0 | ug/L | 10/21/22 10:30 | 10/21/22 19:42 | SW6010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | Metals Group3 | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-16-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-02 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-89-6 | Iron | 34.9 | J | 1 | 16.9 | 40.0 | 50.0 | ug/L | 10/21/22 13:00 | 10/25/22 18:16 | SW6010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | Dissolved Metals Group5 | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-34-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-07 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-89-6 | Iron | 895 | N | 1 | 16.9 | 40.0 | 50.0 | ug/L | 10/21/22 10:30 | 10/21/22 20:05 | SW6010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | Metals Group3 | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-34-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-08 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-89-6 | Iron | 979 | | 1 | 16.9 | 40.0 | 50.0 | ug/L | 10/21/22 13:00 | 10/21/22 21:52 | SW6010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | Dissolved Metals Group5 | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-FD-03-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-09 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-89-6 | Iron | 1020 | N | 1 | 16.9 | 40.0 | 50.0 | ug/L | 10/21/22 10:30 | 10/21/22 20:16 | SW6010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | Metals Group3 | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-FD-03-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-10 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-89-6 | Iron | 575 | | 1 | 16.9 | 40.0 | 50.0 | ug/L | 10/21/22 13:00 | 10/25/22 18:20 | SW6010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | Dissolved Metals Group5 | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-FD-02-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-11 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-89-6 | Iron | 52.6 | N | 1 | 16.9 | 40.0 | 50.0 | ug/L | 10/21/22 10:30 | 10/21/22 20:20 | SW6010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | Metals Group3 | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-FD-02-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-12 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-89-6 | Iron | 40.0 | U | 1 | 16.9 | 40.0 | 50.0 | ug/L | 10/21/22 13:00 | 10/25/22 18:24 | SW6010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |

Comments: Dissolved Metals Group5

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-15-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-13 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-89-6 | Iron | 30.2 | JN | 1 | 16.9 | 40.0 | 50.0 | ug/L | 10/21/22 10:30 | 10/21/22 20:24 | SW6010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | Metals Group3 | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-15-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-14 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-89-6 | Iron | 40.0 | U | 1 | 16.9 | 40.0 | 50.0 | ug/L | 10/21/22 13:00 | 10/25/22 18:28 | SW6010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |

Comments: Dissolved Metals Group5

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-28-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-15 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-89-6 | Iron | 796 | N | 1 | 16.9 | 40.0 | 50.0 | ug/L | 10/21/22 10:30 | 10/21/22 20:28 | SW6010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | Metals Group3 | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-28-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-16 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-89-6 | Iron | 307 | | 1 | 16.9 | 40.0 | 50.0 | ug/L | 10/21/22 13:00 | 10/21/22 22:07 | SW6010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | Dissolved Metals Group5 | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-26-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-17 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-89-6 | Iron | 580 | N | 1 | 16.9 | 40.0 | 50.0 | ug/L | 10/21/22 10:30 | 10/21/22 20:32 | SW6010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | Metals Group3 | | | | |

U = Not Detected
LOQ = Limit of Quantitation
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LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-26-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-18 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-89-6 | Iron | 431 | | 1 | 16.9 | 40.0 | 50.0 | ug/L | 10/21/22 13:00 | 10/21/22 22:11 | SW6010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |

Comments: Dissolved Metals Group5

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-32-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-19 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-89-6 | Iron | 4660 | N | 1 | 16.9 | 40.0 | 50.0 | ug/L | 10/21/22 10:30 | 10/21/22 20:35 | SW6010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | Metals Group3 | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-32-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-20 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-89-6 | Iron | 2570 | | 1 | 16.9 | 40.0 | 50.0 | ug/L | 10/21/22 13:00 | 10/21/22 22:15 | SW6010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | Dissolved Metals Group5 | | | | |

U = Not Detected
LOQ = Limit of Quantitation
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LOD = Limit of Detection
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Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-29-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-21 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-89-6 | Iron | 485 | N | 1 | 16.9 | 40.0 | 50.0 | ug/L | 10/21/22 10:30 | 10/21/22 20:39 | SW6010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | Metals Group3 | | | | |

U = Not Detected
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LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-29-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-22 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-89-6 | Iron | 37.7 | J | 1 | 16.9 | 40.0 | 50.0 | ug/L | 10/21/22 13:00 | 10/21/22 22:19 | SW6010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |

Comments: Dissolved Metals Group5

U = Not Detected
LOQ = Limit of Quantitation
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LOD = Limit of Detection
D = Dilution
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J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-30-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-23 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-89-6 | Iron | 1430 | N | 1 | 16.9 | 40.0 | 50.0 | ug/L | 10/21/22 10:30 | 10/21/22 20:43 | SW6010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | Metals Group3 | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-30-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-24 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-89-6 | Iron | 104 | | 1 | 16.9 | 40.0 | 50.0 | ug/L | 10/21/22 13:00 | 10/21/22 22:23 | SW6010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | Dissolved Metals Group5 | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-31-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-25 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-89-6 | Iron | 1430 | N | 1 | 16.9 | 40.0 | 50.0 | ug/L | 10/21/22 10:30 | 10/21/22 20:47 | SW6010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | Metals Group3 | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-31-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-26 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-89-6 | Iron | 827 | | 1 | 16.9 | 40.0 | 50.0 | ug/L | 10/21/22 13:00 | 10/21/22 22:34 | SW6010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | Dissolved Metals Group5 | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-33-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-27 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-89-6 | Iron | 590 | N | 1 | 16.9 | 40.0 | 50.0 | ug/L | 10/21/22 10:30 | 10/21/22 20:51 | SW6010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | Metals Group3 | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-33-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-28 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-89-6 | Iron | 117 | | 1 | 16.9 | 40.0 | 50.0 | ug/L | 10/21/22 13:00 | 10/21/22 22:38 | SW6010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | Dissolved Metals Group5 | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-35-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-29 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-89-6 | Iron | 161 | N | 1 | 16.9 | 40.0 | 50.0 | ug/L | 10/21/22 10:30 | 10/21/22 21:02 | SW6010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | Metals Group3 | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-35-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-30 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-89-6 | Iron | 40.0 | U | 1 | 16.9 | 40.0 | 50.0 | ug/L | 10/21/22 13:00 | 10/26/22 15:02 | SW6010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | Dissolved Metals Group5 | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-24-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-31 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-89-6 | Iron | 1920 | N | 1 | 16.9 | 40.0 | 50.0 | ug/L | 10/21/22 10:30 | 10/21/22 21:06 | SW6010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | Metals Group3 | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-24-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-32 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-89-6 | Iron | 1710 | | 1 | 16.9 | 40.0 | 50.0 | ug/L | 10/21/22 13:00 | 10/21/22 22:46 | SW6010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | Dissolved Metals Group5 | | | | |

U = Not Detected
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LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-RB-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-33 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-89-6 | Iron | 347 | N | 1 | 16.9 | 40.0 | 50.0 | ug/L | 10/21/22 10:30 | 10/21/22 21:10 | SW6010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | Metals Group3 | | | | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-RB-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-34 | Matrix: | Water |
| Level (low/med): | low | % Solid: | 0 |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7439-89-6 | Iron | 110 | | 1 | 16.9 | 40.0 | 50.0 | ug/L | 10/21/22 13:00 | 10/21/22 22:50 | SW6010 |

| | | | | | |
|---|---|---|---|---|---|
| Color Before: | Colorless | Clarity Before: | Clear | Texture: | |
| Color After: | Colorless | Clarity After: | Clear | Artifacts: | |
| Comments: | Dissolved Metals Group5 | | | | |

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J = Estimated Value
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E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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284 Sheffield Street, Mountainside, New Jersey - 07092
Phone: (908) 789 8900 Fax: (908) 789 8922



# LAB CHRONICLE

| | | | |
|---|---|---|---|
| **OrderID:** | N5212 | **OrderDate:** | 10/20/2022 9:48:00 AM |
| **Client:** | EA Engineering Science & Technology | **Project:** | Scotia, NY - Annual Testing |
| **Contact:** | Jim Hayward | **Location:** | D11,VOA Ref. #3 Water |

| LabID | ClientID | Matrix | Test | Method | Sample Date | Prep Date | Anal Date | Received |
|---|---|---|---|---|---|---|---|---|
| **N5212-01** | **FSND-MW-16-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Metals Group3 | 6010D | | 10/21/22 | 10/21/22 | |
| **N5212-02** | **FSND-MW-16-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Dissolved Metals Group5 | 6010D | | 10/21/22 | 10/25/22 | |
| **N5212-07** | **FSND-MW-34-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Metals Group3 | 6010D | | 10/21/22 | 10/21/22 | |
| **N5212-08** | **FSND-MW-34-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Dissolved Metals Group5 | 6010D | | 10/21/22 | 10/21/22 | |
| **N5212-09** | **FSND-FD-03-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Metals Group3 | 6010D | | 10/21/22 | 10/21/22 | |
| **N5212-10** | **FSND-FD-03-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Dissolved Metals Group5 | 6010D | | 10/21/22 | 10/25/22 | |
| **N5212-11** | **FSND-FD-02-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Metals Group3 | 6010D | | 10/21/22 | 10/21/22 | |
| **N5212-12** | **FSND-FD-02-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Dissolved Metals Group5 | 6010D | | 10/21/22 | 10/25/22 | |
| **N5212-13** | **FSND-MW-15-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Metals Group3 | 6010D | | 10/21/22 | 10/21/22 | |

# LAB CHRONICLE

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **N5212-14** | **FSND-MW-15-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Dissolved Metals Group5 | 6010D | | 10/21/22 | 10/25/22 | |
| **N5212-15** | **FSND-MW-28-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Metals Group3 | 6010D | | 10/21/22 | 10/21/22 | |
| **N5212-16** | **FSND-MW-28-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Dissolved Metals Group5 | 6010D | | 10/21/22 | 10/21/22 | |
| **N5212-17** | **FSND-MW-26-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Metals Group3 | 6010D | | 10/21/22 | 10/21/22 | |
| **N5212-18** | **FSND-MW-26-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Dissolved Metals Group5 | 6010D | | 10/21/22 | 10/21/22 | |
| **N5212-19** | **FSND-MW-32-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Metals Group3 | 6010D | | 10/21/22 | 10/21/22 | |
| **N5212-20** | **FSND-MW-32-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Dissolved Metals Group5 | 6010D | | 10/21/22 | 10/21/22 | |
| **N5212-21** | **FSND-MW-29-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Metals Group3 | 6010D | | 10/21/22 | 10/21/22 | |
| **N5212-22** | **FSND-MW-29-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Dissolved Metals Group5 | 6010D | | 10/21/22 | 10/21/22 | |
| **N5212-23** | **FSND-MW-30-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Metals Group3 | 6010D | | 10/21/22 | 10/21/22 | |
| **N5212-24** | **FSND-MW-30-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Dissolved Metals Group5 | 6010D | | 10/21/22 | 10/21/22 | |

# LAB CHRONICLE

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **N5212-25** | **FSND-MW-31-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Metals Group3 | 6010D | | 10/21/22 | 10/21/22 | |
| **N5212-26** | **FSND-MW-31-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Dissolved Metals Group5 | 6010D | | 10/21/22 | 10/21/22 | |
| **N5212-27** | **FSND-MW-33-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Metals Group3 | 6010D | | 10/21/22 | 10/21/22 | |
| **N5212-28** | **FSND-MW-33-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Dissolved Metals Group5 | 6010D | | 10/21/22 | 10/21/22 | |
| **N5212-29** | **FSND-MW-35-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Metals Group3 | 6010D | | 10/21/22 | 10/21/22 | |
| **N5212-30** | **FSND-MW-35-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Dissolved Metals Group5 | 6010D | | 10/21/22 | 10/26/22 | |
| **N5212-31** | **FSND-MW-24-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Metals Group3 | 6010D | | 10/21/22 | 10/21/22 | |
| **N5212-32** | **FSND-MW-24-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Dissolved Metals Group5 | 6010D | | 10/21/22 | 10/21/22 | |
| **N5212-33** | **FSND-RB-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Metals Group3 | 6010D | | 10/21/22 | 10/21/22 | |
| **N5212-34** | **FSND-RB-20221019** | **Water** | | | **10/19/22** | | | **10/20/22** |
| | | | Dissolved Metals Group5 | 6010D | | 10/21/22 | 10/21/22 | |

# SAMPLE DATA

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 07:55 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-16-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-01 | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity | 294 | | 1 | 1.00 | 1.00 | 2.00 | mg/L | | 10/25/22 13:21 | SM2320 B |
| Chloride | 4.30 | | 1 | 0.097 | 0.30 | 0.60 | mg/L | | 10/20/22 21:54 | 9056A |
| Nitrate | 1.90 | | 1 | 0.050 | 0.25 | 0.50 | mg/L | | 10/20/22 21:54 | 9056A |
| Sulfate | 34.1 | | 1 | 0.18 | 1.50 | 3.00 | mg/L | | 10/20/22 21:54 | 9056A |
| TOC | 1.60 | | 1 | 0.42 | 0.50 | 1.00 | mg/L | | 10/31/22 15:37 | 9060A |

Comments: The alkalinity to pH 4.24=294 mg CaCO3/L

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 09:30 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-34-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-07 | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity | 182 | | 1 | 1.00 | 1.00 | 2.00 | mg/L | | 10/25/22 13:39 | SM2320 B |
| Chloride | 14.9 | OR | 1 | 0.097 | 0.30 | 0.60 | mg/L | | 10/20/22 13:13 | 9056A |
| Nitrate | 0.25 | U | 1 | 0.050 | 0.25 | 0.50 | mg/L | | 10/20/22 13:13 | 9056A |
| Sulfate | 10.4 | | 1 | 0.18 | 1.50 | 3.00 | mg/L | | 10/20/22 13:13 | 9056A |
| TOC | 3.00 | | 1 | 0.42 | 0.50 | 1.00 | mg/L | | 10/31/22 13:31 | 9060A |

Comments: The alkalinity to pH 4.28=182 mg CaCO3/L

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 09:30 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-34-20221019DL | SDG No.: | N5212 |
| Lab Sample ID: | N5212-07DL | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 13.8 | D | 5 | 0.49 | 1.50 | 3.00 | mg/L | | 10/20/22 23:26 | 9056A |

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 00:00 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-FD-03-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-09 | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity | 180 | | 1 | 1.00 | 1.00 | 2.00 | mg/L | | 10/25/22 13:43 | SM2320 B |
| Chloride | 15.4 | OR | 1 | 0.097 | 0.30 | 0.60 | mg/L | | 10/20/22 13:44 | 9056A |
| Nitrate | 0.25 | U | 1 | 0.050 | 0.25 | 0.50 | mg/L | | 10/20/22 13:44 | 9056A |
| Sulfate | 10.2 | | 1 | 0.18 | 1.50 | 3.00 | mg/L | | 10/20/22 13:44 | 9056A |
| TOC | 2.90 | | 1 | 0.42 | 0.50 | 1.00 | mg/L | | 10/31/22 13:57 | 9060A |

Comments: The alkalinity to pH 4.36=180 mg CaCO3/L

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 00:00 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-FD-03-20221019DL | SDG No.: | N5212 |
| Lab Sample ID: | N5212-09DL | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 13.9 | D | 5 | 0.49 | 1.50 | 3.00 | mg/L | | 10/21/22 01:29 | 9056A |

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 00:00 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-FD-02-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-11 | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity | 336 | | 1 | 1.00 | 1.00 | 2.00 | mg/L | | 10/25/22 13:48 | SM2320 B |
| Chloride | 49.2 | OR | 1 | 0.097 | 0.30 | 0.60 | mg/L | | 10/20/22 14:14 | 9056A |
| Nitrate | 0.78 | | 1 | 0.050 | 0.25 | 0.50 | mg/L | | 10/20/22 14:14 | 9056A |
| Sulfate | 37.5 | | 1 | 0.18 | 1.50 | 3.00 | mg/L | | 10/20/22 14:14 | 9056A |
| TOC | 2.40 | | 1 | 0.42 | 0.50 | 1.00 | mg/L | | 10/31/22 14:22 | 9060A |

Comments: The alkalinity to pH 4.39=336 mg CaCO3/L

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 00:00 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-FD-02-20221019DL | SDG No.: | N5212 |
| Lab Sample ID: | N5212-11DL | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 39.9 | D | 10 | 0.97 | 3.00 | 6.00 | mg/L | | 10/21/22 01:59 | 9056A |

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 08:25 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-15-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-13 | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity | 201 | | 1 | 1.00 | 1.00 | 2.00 | mg/L | | 10/25/22 14:22 | SM2320 B |
| Chloride | 42.8 | OR | 1 | 0.097 | 0.30 | 0.60 | mg/L | | 10/20/22 14:45 | 9056A |
| Nitrate | 2.30 | | 1 | 0.050 | 0.25 | 0.50 | mg/L | | 10/20/22 14:45 | 9056A |
| Sulfate | 19.0 | | 1 | 0.18 | 1.50 | 3.00 | mg/L | | 10/20/22 14:45 | 9056A |
| TOC | 1.30 | | 1 | 0.42 | 0.50 | 1.00 | mg/L | | 10/31/22 14:47 | 9060A |

Comments: The alkalinity to pH 4.26=201 mg CaCO3/L

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 08:25 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-15-20221019DL | SDG No.: | N5212 |
| Lab Sample ID: | N5212-13DL | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 34.5 | D | 10 | 0.97 | 3.00 | 6.00 | mg/L | | 10/21/22 02:30 | 9056A |

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 09:45 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-28-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-15 | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity | 325 | | 1 | 1.00 | 1.00 | 2.00 | mg/L | | 10/25/22 14:27 | SM2320 B |
| Chloride | 48.6 | OR | 1 | 0.097 | 0.30 | 0.60 | mg/L | | 10/20/22 15:16 | 9056A |
| Nitrate | 0.78 | | 1 | 0.050 | 0.25 | 0.50 | mg/L | | 10/20/22 15:16 | 9056A |
| Sulfate | 37.3 | | 1 | 0.18 | 1.50 | 3.00 | mg/L | | 10/20/22 15:16 | 9056A |
| TOC | 2.40 | | 1 | 0.42 | 0.50 | 1.00 | mg/L | | 10/31/22 15:12 | 9060A |

Comments: The alkalinity to pH 4.33=325 mg CaCO3/L

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 09:45 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-28-20221019DL | SDG No.: | N5212 |
| Lab Sample ID: | N5212-15DL | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 39.1 | D | 10 | 0.97 | 3.00 | 6.00 | mg/L | | 10/21/22 03:01 | 9056A |

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 11:20 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-26-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-17 | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity | 185 | | 1 | 1.00 | 1.00 | 2.00 | mg/L | | 10/25/22 14:35 | SM2320 B |
| Chloride | 28.3 | OR | 1 | 0.097 | 0.30 | 0.60 | mg/L | | 10/20/22 15:46 | 9056A |
| Nitrate | 0.25 | U | 1 | 0.050 | 0.25 | 0.50 | mg/L | | 10/20/22 15:46 | 9056A |
| Sulfate | 18.1 | | 1 | 0.18 | 1.50 | 3.00 | mg/L | | 10/20/22 15:46 | 9056A |
| TOC | 7.20 | | 1 | 0.42 | 0.50 | 1.00 | mg/L | | 10/31/22 16:56 | 9060A |

Comments: The alkalinity to pH 4.30=185 mg CaCO3/L

U = Not Detected
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Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 11:20 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-26-20221019DL | SDG No.: | N5212 |
| Lab Sample ID: | N5212-17DL | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 23.9 | D | 5 | 0.49 | 1.50 | 3.00 | mg/L | | 10/21/22 03:31 | 9056A |

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 13:00 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-32-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-19 | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity | 152 | | 1 | 1.00 | 1.00 | 2.00 | mg/L | | 10/25/22 14:39 | SM2320 B |
| Chloride | 45.2 | OR | 1 | 0.097 | 0.30 | 0.60 | mg/L | | 10/20/22 16:17 | 9056A |
| Nitrate | 0.25 | U | 1 | 0.050 | 0.25 | 0.50 | mg/L | | 10/20/22 16:17 | 9056A |
| Sulfate | 10.0 | | 1 | 0.18 | 1.50 | 3.00 | mg/L | | 10/20/22 16:17 | 9056A |
| TOC | 1.60 | | 1 | 0.42 | 0.50 | 1.00 | mg/L | | 10/31/22 17:21 | 9060A |

Comments: The alkalinity to pH 4.37=152 mg CaCO3/L

U = Not Detected
LOQ = Limit of Quantitation
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D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 13:00 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-32-20221019DL | SDG No.: | N5212 |
| Lab Sample ID: | N5212-19DL | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 35.7 | D | 10 | 0.97 | 3.00 | 6.00 | mg/L | | 10/21/22 04:02 | 9056A |

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 11:40 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-29-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-21 | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity | 309 | | 1 | 1.00 | 1.00 | 2.00 | mg/L | | 10/25/22 14:43 | SM2320 B |
| Chloride | 55.4 | OR | 1 | 0.097 | 0.30 | 0.60 | mg/L | | 10/20/22 16:48 | 9056A |
| Nitrate | 0.59 | | 1 | 0.050 | 0.25 | 0.50 | mg/L | | 10/20/22 16:48 | 9056A |
| Sulfate | 20.7 | | 1 | 0.18 | 1.50 | 3.00 | mg/L | | 10/20/22 16:48 | 9056A |
| TOC | 2.40 | | 1 | 0.42 | 0.50 | 1.00 | mg/L | | 10/31/22 17:46 | 9060A |

Comments: The alkalinity to pH 4.26=309 mg CaCO3/L

U = Not Detected
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MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 11:40 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-29-20221019DL | SDG No.: | N5212 |
| Lab Sample ID: | N5212-21DL | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 42.7 | D | 10 | 0.97 | 3.00 | 6.00 | mg/L | | 10/21/22 12:06 | 9056A |

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 13:05 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-30-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-23 | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity | 42.5 | | 1 | 1.00 | 1.00 | 2.00 | mg/L | | 10/25/22 14:47 | SM2320 B |
| Chloride | 74.8 | OR | 1 | 0.097 | 0.30 | 0.60 | mg/L | | 10/20/22 18:50 | 9056A |
| Nitrate | 0.25 | U | 1 | 0.050 | 0.25 | 0.50 | mg/L | | 10/20/22 18:50 | 9056A |
| Sulfate | 1.80 | J | 1 | 0.18 | 1.50 | 3.00 | mg/L | | 10/20/22 18:50 | 9056A |
| TOC | 3.20 | | 1 | 0.42 | 0.50 | 1.00 | mg/L | | 10/31/22 18:11 | 9060A |

Comments: The alkalinity to pH 4.23=42.5 mg CaCO3/L

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 13:05 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-30-20221019DL | SDG No.: | N5212 |
| Lab Sample ID: | N5212-23DL | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 55.7 | D | 20 | 1.90 | 6.00 | 12.0 | mg/L | | 10/21/22 12:37 | 9056A |

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 14:10 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-31-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-25 | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity | 145 | | 1 | 1.00 | 1.00 | 2.00 | mg/L | | 10/25/22 13:52 | SM2320 B |
| Chloride | 60.7 | OR | 1 | 0.097 | 0.30 | 0.60 | mg/L | | 10/20/22 19:21 | 9056A |
| Nitrate | 0.25 | U | 1 | 0.050 | 0.25 | 0.50 | mg/L | | 10/20/22 19:21 | 9056A |
| Sulfate | 10.7 | | 1 | 0.18 | 1.50 | 3.00 | mg/L | | 10/20/22 19:21 | 9056A |
| TOC | 1.30 | | 1 | 0.42 | 0.50 | 1.00 | mg/L | | 10/31/22 18:36 | 9060A |

Comments: The alkalinity to pH 4.27=145 mg CaCO3/L

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 14:10 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-31-20221019DL | SDG No.: | N5212 |
| Lab Sample ID: | N5212-25DL | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 48.5 | D | 20 | 1.90 | 6.00 | 12.0 | mg/L | | 10/21/22 13:07 | 9056A |

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 14:20 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-33-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-27 | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity | 183 | | 1 | 1.00 | 1.00 | 2.00 | mg/L | | 10/25/22 13:58 | SM2320 B |
| Chloride | 40.6 | OR | 1 | 0.097 | 0.30 | 0.60 | mg/L | | 10/20/22 19:52 | 9056A |
| Nitrate | 0.67 | | 1 | 0.050 | 0.25 | 0.50 | mg/L | | 10/20/22 19:52 | 9056A |
| Sulfate | 12.9 | | 1 | 0.18 | 1.50 | 3.00 | mg/L | | 10/20/22 19:52 | 9056A |
| TOC | 1.40 | | 1 | 0.42 | 0.50 | 1.00 | mg/L | | 10/31/22 19:01 | 9060A |

Comments: The alkalinity to pH 4.25=183 mg CaCO3/L

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 14:20 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-33-20221019DL | SDG No.: | N5212 |
| Lab Sample ID: | N5212-27DL | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 33.5 | D | 10 | 0.97 | 3.00 | 6.00 | mg/L | | 10/21/22 13:38 | 9056A |

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 16:05 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-35-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-29 | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity | 181 | | 1 | 1.00 | 1.00 | 2.00 | mg/L | | 10/25/22 14:04 | SM2320 B |
| Chloride | 26.2 | OR | 1 | 0.097 | 0.30 | 0.60 | mg/L | | 10/20/22 20:22 | 9056A |
| Nitrate | 0.82 | | 1 | 0.050 | 0.25 | 0.50 | mg/L | | 10/20/22 20:22 | 9056A |
| Sulfate | 10.0 | | 1 | 0.18 | 1.50 | 3.00 | mg/L | | 10/20/22 20:22 | 9056A |
| TOC | 1.30 | | 1 | 0.42 | 0.50 | 1.00 | mg/L | | 10/31/22 19:26 | 9060A |

Comments: The alkalinity to pH 4.31=181 mg CaCO3/L

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 16:05 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-35-20221019DL | SDG No.: | N5212 |
| Lab Sample ID: | N5212-29DL | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 22.7 | D | 10 | 0.97 | 3.00 | 6.00 | mg/L | | 10/21/22 14:08 | 9056A |

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 15:40 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-24-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-31 | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity | 184 | | 1 | 1.00 | 1.00 | 2.00 | mg/L | | 10/25/22 14:10 | SM2320 B |
| Chloride | 53.1 | OR | 1 | 0.097 | 0.30 | 0.60 | mg/L | | 10/20/22 20:53 | 9056A |
| Nitrate | 0.25 | U | 1 | 0.050 | 0.25 | 0.50 | mg/L | | 10/20/22 20:53 | 9056A |
| Sulfate | 21.3 | | 1 | 0.18 | 1.50 | 3.00 | mg/L | | 10/20/22 20:53 | 9056A |
| TOC | 1.50 | | 1 | 0.42 | 0.50 | 1.00 | mg/L | | 10/31/22 19:50 | 9060A |

Comments: The alkalinity to pH 4.38=184 mg CaCO3/L

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 15:40 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-MW-24-20221019DL | SDG No.: | N5212 |
| Lab Sample ID: | N5212-31DL | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 43.1 | D | 10 | 0.97 | 3.00 | 6.00 | mg/L | | 10/21/22 14:39 | 9056A |

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 16:30 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/20/22 |
| Client Sample ID: | FSND-RB-20221019 | SDG No.: | N5212 |
| Lab Sample ID: | N5212-33 | Matrix: | Water |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity | 1.00 | U | 1 | 1.00 | 1.00 | 2.00 | mg/L | | 10/26/22 15:45 | SM2320 B |
| Chloride | 0.30 | U | 1 | 0.097 | 0.30 | 0.60 | mg/L | | 10/21/22 15:10 | 9056A |
| Nitrate | 0.25 | U | 1 | 0.050 | 0.25 | 0.50 | mg/L | | 10/21/22 15:10 | 9056A |
| Sulfate | 1.50 | U | 1 | 0.18 | 1.50 | 3.00 | mg/L | | 10/21/22 15:10 | 9056A |
| TOC | 0.96 | J | 1 | 0.42 | 0.50 | 1.00 | mg/L | | 11/03/22 13:17 | 9060A |

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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# LAB CHRONICLE

| | | | |
|---|---|---|---|
| **OrderID:** | N5212 | **OrderDate:** | 10/20/2022 9:48:00 AM |
| **Client:** | EA Engineering Science & Technology | **Project:** | Scotia, NY - Annual Testing |
| **Contact:** | Jim Hayward | **Location:** | D11,VOA Ref. #3 Water |

| LabID | ClientID | Matrix | Test | Method | Sample Date | Prep Date | Anal Date | Received |
|---|---|---|---|---|---|---|---|---|
| **N5212-01** | **FSND-MW-16-20221019** | **WATER** | | | **10/19/22 07:55** | | | **10/20/22** |
| | | | Alkalinity | SM2320 B | | | 10/25/22 13:21 | |
| | | | Anions Group1 | 9056A | | | 10/20/22 21:54 | |
| | | | TOC | 9060A | | | 10/31/22 15:37 | |
| **N5212-07** | **FSND-MW-34-20221019** | **WATER** | | | **10/19/22 09:30** | | | **10/20/22** |
| | | | Alkalinity | SM2320 B | | | 10/25/22 13:39 | |
| | | | Anions Group1 | 9056A | | | 10/20/22 13:13 | |
| | | | TOC | 9060A | | | 10/31/22 13:31 | |
| **N5212-07DL** | **FSND-MW-34-20221019DL** | **WATER** | | | **10/19/22 09:30** | | | **10/20/22** |
| | | | Anions Group1 | 9056A | | | 10/20/22 23:26 | |
| **N5212-09** | **FSND-FD-03-20221019** | **WATER** | | | **10/19/22 00:00** | | | **10/20/22** |
| | | | Alkalinity | SM2320 B | | | 10/25/22 13:43 | |
| | | | Anions Group1 | 9056A | | | 10/20/22 13:44 | |
| | | | TOC | 9060A | | | 10/31/22 13:57 | |
| **N5212-09DL** | **FSND-FD-03-20221019DL** | **WATER** | | | **10/19/22 00:00** | | | **10/20/22** |

# LAB CHRONICLE

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | Anions Group1 | 9056A | | 10/21/22 01:29 | |
| **N5212-11** | **FSND-FD-02-20221019** | **WATER** | | | **10/19/22 00:00** | | **10/20/22** |
| | | | Alkalinity | SM2320 B | | 10/25/22 13:48 | |
| | | | Anions Group1 | 9056A | | 10/20/22 14:14 | |
| | | | TOC | 9060A | | 10/31/22 14:22 | |
| **N5212-11DL** | **FSND-FD-02-20221019DL** | **WATER** | | | **10/19/22 00:00** | | **10/20/22** |
| | | | Anions Group1 | 9056A | | 10/21/22 01:59 | |
| **N5212-13** | **FSND-MW-15-20221019** | **WATER** | | | **10/19/22 08:25** | | **10/20/22** |
| | | | Alkalinity | SM2320 B | | 10/25/22 14:22 | |
| | | | Anions Group1 | 9056A | | 10/20/22 14:45 | |
| | | | TOC | 9060A | | 10/31/22 14:47 | |
| **N5212-13DL** | **FSND-MW-15-20221019DL** | **WATER** | | | **10/19/22 08:25** | | **10/20/22** |
| | | | Anions Group1 | 9056A | | 10/21/22 02:30 | |
| **N5212-15** | **FSND-MW-28-20221019** | **WATER** | | | **10/19/22 09:45** | | **10/20/22** |
| | | | Alkalinity | SM2320 B | | 10/25/22 14:27 | |
| | | | Anions Group1 | 9056A | | 10/20/22 15:16 | |
| | | | TOC | 9060A | | 10/31/22 15:12 | |
| **N5212-15DL** | **FSND-MW-28-20221019DL** | **WATER** | | | **10/19/22 09:45** | | **10/20/22** |
| | | | Anions Group1 | 9056A | | 10/21/22 03:01 | |

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# LAB CHRONICLE

| | | | | | | |
|---|---|---|---|---|---|---|
| **N5212-17** | **FSND-MW-26-20221019** | **WATER** | | **10/19/22 11:20** | | **10/20/22** |
| | | | Alkalinity | SM2320 B | | 10/25/22 14:35 |
| | | | Anions Group1 | 9056A | | 10/20/22 15:46 |
| | | | TOC | 9060A | | 10/31/22 16:56 |
| **N5212-17DL** | **FSND-MW-26-20221019DL** | **WATER** | | **10/19/22 11:20** | | **10/20/22** |
| | | | Anions Group1 | 9056A | | 10/21/22 03:31 |
| **N5212-19** | **FSND-MW-32-20221019** | **WATER** | | **10/19/22 13:00** | | **10/20/22** |
| | | | Alkalinity | SM2320 B | | 10/25/22 14:39 |
| | | | Anions Group1 | 9056A | | 10/20/22 16:17 |
| | | | TOC | 9060A | | 10/31/22 17:21 |
| **N5212-19DL** | **FSND-MW-32-20221019DL** | **WATER** | | **10/19/22 13:00** | | **10/20/22** |
| | | | Anions Group1 | 9056A | | 10/21/22 04:02 |
| **N5212-21** | **FSND-MW-29-20221019** | **WATER** | | **10/19/22 11:40** | | **10/20/22** |
| | | | Alkalinity | SM2320 B | | 10/25/22 14:43 |
| | | | Anions Group1 | 9056A | | 10/20/22 16:48 |
| | | | TOC | 9060A | | 10/31/22 17:46 |
| **N5212-21DL** | **FSND-MW-29-20221019DL** | **WATER** | | **10/19/22 11:40** | | **10/20/22** |
| | | | Anions Group1 | 9056A | | 10/21/22 12:06 |

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# LAB CHRONICLE

| | | | | | | |
|---|---|---|---|---|---|---|
| **N5212-23** | **FSND-MW-30-20221019** | **WATER** | | | **10/19/22 13:05** | **10/20/22** |
| | | | Alkalinity | SM2320 B | 10/25/22 14:47 | |
| | | | Anions Group1 | 9056A | 10/20/22 18:50 | |
| | | | TOC | 9060A | 10/31/22 18:11 | |
| **N5212-23DL** | **FSND-MW-30-20221019DL** | **WATER** | | | **10/19/22 13:05** | **10/20/22** |
| | | | Anions Group1 | 9056A | 10/21/22 12:37 | |
| **N5212-25** | **FSND-MW-31-20221019** | **WATER** | | | **10/19/22 14:10** | **10/20/22** |
| | | | Alkalinity | SM2320 B | 10/25/22 13:52 | |
| | | | Anions Group1 | 9056A | 10/20/22 19:21 | |
| | | | TOC | 9060A | 10/31/22 18:36 | |
| **N5212-25DL** | **FSND-MW-31-20221019DL** | **WATER** | | | **10/19/22 14:10** | **10/20/22** |
| | | | Anions Group1 | 9056A | 10/21/22 13:07 | |
| **N5212-27** | **FSND-MW-33-20221019** | **WATER** | | | **10/19/22 14:20** | **10/20/22** |
| | | | Alkalinity | SM2320 B | 10/25/22 13:58 | |
| | | | Anions Group1 | 9056A | 10/20/22 19:52 | |
| | | | TOC | 9060A | 10/31/22 19:01 | |
| **N5212-27DL** | **FSND-MW-33-20221019DL** | **WATER** | | | **10/19/22 14:20** | **10/20/22** |
| | | | Anions Group1 | 9056A | 10/21/22 13:38 | |
| **N5212-29** | **FSND-MW-35-20221019** | **WATER** | | | **10/19/22 16:05** | **10/20/22** |

# LAB CHRONICLE

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | Alkalinity | SM2320 B | | 10/25/22 14:04 |
| | | | Anions Group1 | 9056A | | 10/20/22 20:22 |
| | | | TOC | 9060A | | 10/31/22 19:26 |
| **N5212-29DL** | **FSND-MW-35-20221019DL** | **WATER** | | | **10/19/22 16:05** | **10/20/22** |
| | | | Anions Group1 | 9056A | | 10/21/22 14:08 |
| **N5212-31** | **FSND-MW-24-20221019** | **WATER** | | | **10/19/22 15:40** | **10/20/22** |
| | | | Alkalinity | SM2320 B | | 10/25/22 14:10 |
| | | | Anions Group1 | 9056A | | 10/20/22 20:53 |
| | | | TOC | 9060A | | 10/31/22 19:50 |
| **N5212-31DL** | **FSND-MW-24-20221019DL** | **WATER** | | | **10/19/22 15:40** | **10/20/22** |
| | | | Anions Group1 | 9056A | | 10/21/22 14:39 |
| **N5212-33** | **FSND-RB-20221019** | **WATER** | | | **10/19/22 16:30** | **10/20/22** |
| | | | Alkalinity | SM2320 B | | 10/26/22 15:45 |
| | | | Anions Group1 | 9056A | | 10/21/22 15:10 |
| | | | TOC | 9060A | | 11/03/22 13:17 |

# SHIPPING DOCUMENTS

# CHEMTECH
## CHAIN OF CUSTODY RECORD

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www.chemtech.net

CHEMTECH PROJECT NO. N5212 1
QUOTE NO.
COC Number 2036759

8
8.1

**CLIENT INFORMATION** (REPORT TO BE SENT TO:)

COMPANY: EA Engineering
ADDRESS: 269 W Jefferson St
CITY Syracuse STATE: NY ZIP: 13202
ATTENTION: Amanda Kohn
PHONE: FAX:

**CLIENT PROJECT INFORMATION**

PROJECT NAME: Scotia Navy Depot
PROJECT NO.: 16053004 LOCATION: Scotia NY
PROJECT MANAGER: Jim Hayward
e-mail: jhayward@eaest.com
PHONE: FAX:

**CLIENT BILLING INFORMATION**

BILL TO: mdina@eaest.com PO#: 16053004
ADDRESS: 25 Western Ave
CITY Marlboro STATE: NY ZIP: 12542
ATTENTION: PHONE: 914 475 0334

**DATA TURNAROUND INFORMATION**

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): _____ DAYS*
EDD: _____ DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

**DATA DELIVERABLE INFORMATION**

☐ Level 1 (Results Only) ☒ Level 4 (QC + Full Raw Data)
☐ Level 2 (Results + QC) ☐ NJ Reduced ☐ US EPA CLP
☐ Level 3 (Results + QC + Raw Data) ☐ NYS ASP A ☐ NYS ASP B ☐ Other _____
☒ EDD FORMAT _____

**ANALYSIS**

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|
| Alkalinity | Anions | metals | metals ASS | TOC | Dissolved gas | | | |

| CHEMTECH SAMPLE ID | PROJECT SAMPLE IDENTIFICATION | SAMPLE MATRIX | SAMPLE TYPE COMP | SAMPLE TYPE GRAB | SAMPLE COLLECTION DATE | SAMPLE COLLECTION TIME | # OF BOTTLES | PRESERVATIVES 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | FSND-MW-16-20221019 | GW | | X | 10/19 | 0755 | 824 | X | X | X | X | X | X | | | | MS/MSD |
| 2. | FSND-MW-34-20221019 | GW | | X | 10/19 | 0930 | 8 | X | X | X | X | X | X | | | | |
| 3. | FSND-FD-03-20221019 | GW | | X | 10/19 | — | 8 | X | X | X | X | X | X | | | | |
| 4. | FSND-FD-02-20221019 | GW | | X | 10/19 | — | 8 | X | X | X | X | X | X | | | | |
| 5. | FSND-MW-15-20221019 | GW | | X | 10/19 | 0825 | 8 | X | X | X | X | X | X | | | | |
| 6. | FSND-MW-28-20221019 | GW | | X | 10/19 | 0945 | 8 | X | X | X | X | X | X | | | | |
| 7. | FSND-MW-26-20221019 | GW | | X | 10/19 | 1120 | 8 | X | X | X | X | X | X | | | | |
| 8. | FSND-MW-32-20221019 | GW | | X | 10/19 | 1300 | 8 | X | X | X | X | X | X | | | | |
| 9. | FSND-MW-29-20221019 | GW | | X | 10/19 | 1140 | 8 | X | X | X | X | X | X | | | | |
| 10. | FSND-MW-30-20221019 | GW | | X | 10/19 | 1305 | 8 | X | X | X | X | X | X | | | | |

**PRESERVATIVES** — **COMMENTS**

← Specify Preservatives
A-HCl D-NaOH
B-HN03 E-ICE
C-H2SO4 F-OTHER

**SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY**

| | RELINQUISHED BY SAMPLER: | DATE/TIME: | RECEIVED BY: |
|---|---|---|---|
| 1. | | 10/19/22 1730 | 1. |
| 2. | FedEx | 10-20-22 0926 | 2. |
| 3. | | | 3. |

Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 2.1 °C
Comments:

Page ____ of ____

CLIENT: ☐ Hand Delivered ☐ Other _____
CHEMTECH: ☐ Picked Up ☐ Field Sampling

Shipment Complete ☐ YES ☐ NO

# CHEMTECH
## CHAIN OF CUSTODY RECORD

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CHEMTECH PROJECT NO.
QUOTE NO. N5212 2
COC Number 2036396

8
8.1

**CLIENT INFORMATION** (REPORT TO BE SENT TO:)

COMPANY:
ADDRESS: SAME
CITY STATE: ZIP:
ATTENTION: AS PAGE 1
PHONE: FAX:

**CLIENT PROJECT INFORMATION**

PROJECT NAME:
PROJECT NO.: LOCATION:
PROJECT MANAGER:
e-mail:
PHONE: FAX:

**CLIENT BILLING INFORMATION**

BILL TO: PO#:
ADDRESS:
CITY STATE: ZIP:
ATTENTION: PHONE:

**DATA TURNAROUND INFORMATION**

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): _____ DAYS*
EDD: _____ DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

**DATA DELIVERABLE INFORMATION**

❑ Level 1 (Results Only) ❑ Level 4 (QC + Full Raw Data)
❑ Level 2 (Results + QC) ❑ NJ Reduced ❑ US EPA CLP
❑ Level 3 (Results + QC + Raw Data) ❑ NYS ASP A ❑ NYS ASP B
❑ Other _____
❑ EDD FORMAT _____

**ANALYSIS**

1 Alkalinity 2 Anion 3 metals 4 metals Dissolved 5 TOC 6 Dissolved CO2 7 8 9

| CHEMTECH SAMPLE ID | PROJECT SAMPLE IDENTIFICATION | SAMPLE MATRIX | SAMPLE TYPE COMP | SAMPLE TYPE GRAB | SAMPLE COLLECTION DATE | SAMPLE COLLECTION TIME | # OF BOTTLES | PRESERVATIVES 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | E | E | B | B | C | C | | | | ← Specify Preservatives A-HCl D-NaOH B-HN03 E-ICE C-H2SO4 F-OTHER |
| 1. | FSND-MW-31-20221019 | GW | | X | 10/19 | 1410 | 8 | X | X | X | X | X | X | | | | |
| 2. | FSND-MW-33-20221019 | GW | | X | 10/19 | 1470 | 8 | X | X | X | X | X | X | | | | |
| 3. | FSND-MW-35-20221019 | GW | | X | 10/19 | 1605 | 8 | X | X | X | X | X | X | | | | |
| 4. | FSND-MW-24-20221019 | GW | | X | 10/19 | 1540 | 8 | X | X | X | X | X | X | | | | |
| 5. | FSND-RB-20221019 | W | | X | 10/19 | 1630 | 4 | X | X | X | X | X | X | | | | |
| 6. | | | | | | | | | | | | | | | | | |
| 7. | | | | | | | | | | | | | | | | | |
| 8. | | | | | | | | | | | | | | | | | |
| 9. | | | | | | | | | | | | | | | | | |
| 10. | | | | | | | | | | | | | | | | | |

**SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY**

| RELINQUISHED BY SAMPLER: | DATE/TIME: | RECEIVED BY: |
|---|---|---|
| 1. | 0926 10-20-22 | 1. |
| 2. | | 2. |
| 3. | | 3. |

Conditions of bottles or coolers at receipt: ❑ COMPLIANT ❑ NON COMPLIANT ❑ COOLER TEMP 2.1 °C
Comments:

Page ____ of ____

CLIENT: ❑ Hand Delivered ❑ Other _____
CHEMTECH: ❑ Picked Up ❑ Field Sampling

Shipment Complete ❑ YES ❑ NO

2/[illegible] WHITE - CHEMTECH COPY FOR RETURN TO CLIENT [illegible] CHEMTECH COPY PINK - SAMPLER COPY

# Laboratory Certification

| Certified By | License No. |
|---|---|
| | |
| CAS EPA CLP Contract | 68HERH20D0011 |
| | |
| Connecticut | PH-0649 |
| | |
| DOD ELAP (L-A-B) | L2219 |
| | |
| Maine | 2022022 |
| | |
| Maryland | 296 |
| | |
| New Hampshire | 255422 |
| | |
| New Jersey | 20012 |
| | |
| New York | 11376 |
| | |
| Pennsylvania | 68-00548 |
| | |
| Soil Permit | P330-21-00137 |
| | |
| Texas | T104704488-22-15 |

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# ANALYTICAL RESULTS SUMMARY

VOLATILE ORGANICS

**PROJECT NAME : SCOTIA, NY - ANNUAL TESTING**

**EA ENGINEERING SCIENCE & TECHNOLOGY**

**269 W. Jefferson Street**

**Syracuse, NY - 13202**

**Phone No: 315-431-4610**

**ORDER ID : N5248**

**ATTENTION : Jim Hayward**

NELAP ACCREDITED TNI LABORATORY

ANAB ACCREDITED ISO/IEC 17025 DOD ELAP

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# Cover Page

**Order ID :** N5248

**Project ID :** Scotia, NY - Annual Testing

**Client :** EA Engineering Science & Technology

| Lab Sample Number | Client Sample Number |
|---|---|
| N5248-01 | FSND-TB-20221018 |
| N5248-02 | FSND-MW-9-20221018 |
| N5248-03 | FSND-RB-20221018 |
| N5248-04 | FSND-MW-22R-20221018 |
| N5248-05 | FSND-MW-6-20221018 |
| N5248-06 | FSND-MW11R-20221018 |
| N5248-07 | FSND-GEP-2-20221018 |
| N5248-08 | FSND-MW-20-20221018 |
| N5248-09 | FSND-MW-17-20221018 |
| N5248-10 | FSND-MW-7-20221018 |
| N5248-11 | FSND-MW-5-20221018 |
| N5248-12 | FSND-FD-01-20221018 |
| N5248-13 | FSND-MW-12R-20221018 |
| N5248-14 | FSND-MW-19-20221018 |
| N5248-15 | FSND-GEP-4-20221018 |
| N5248-16 | FSND-MW-16-20221019 |
| N5248-17 | FSND-MW-34-20221019 |
| N5248-18 | FSND-FD-03-20221019 |
| N5248-19 | FSND-MW-15-20221019 |
| N5248-20 | FSND-MW-28-20221019 |
| N5248-23 | FSND-MW-12R-20221018MS |
| N5248-24 | FSND-MW-12R-20221018MSD |
| N5248-25 | FSND-MW-16-20221019MS |
| N5248-26 | FSND-MW-16-20221019MSD |

I certify that the data package is in compliance with the terms and conditions of the contract,both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : N. N. Pandya

APPROVED
*By Nimisha Pandya QA/QC Supervisor at 2:01 pm, Nov 04, 2022*

Date: 11/4/2022

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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# CASE NARRATIVE

**EA Engineering Science & Technology**
**Project Name: Scotia, NY - Annual Testing**
**Project # N/A**
**Chemtech Project # N5248**
**Test Name: VOC-TCLVOA-10**

**A. Number of Samples and Date of Receipt:**
24 Water samples were received on 10/21/2022.

**B. Parameters**
According to the Chain of Custody document, the following analyses were requested: VOC-TCLVOA-10. This data package contains results for VOC-TCLVOA-10.

**C. Analytical Techniques:**
The analysis performed on instrument MSVOA_X were done using GC column DB-624UI 20m 0.18mm 1.0 um. Cat#121-1324UIThe analysis of VOC-TCLVOA-10 was based on method 8260D.

**D. QA/ QC Samples:**
The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria except for FSND-MW-20-20221018RE [4-Bromofluorobenzene - 83%] VIAL A analyzed for mention samples but getting carry over from above sample therefore sample reanalyzed to confirm the failure where surrogate fail therefore lab reported both analysis, while for FSND-MW-16-20221019MS [1,2-Dichloroethane-d4 - 130%] parent sample passing for surrogate therefore no corrective action taken.

The Internal Standards Areas met the acceptable requirements.
The Retention Times were acceptable for all samples.

The MS {N5248-25MS} with File ID: VX032324.D recoveries met the requirements for all compounds except for 1,2-Dibromo-3-Chloropropane[131%], Methyl tert-butyl Ether[133%] and Methylcyclohexane[65%] due to matrix interference.

The MSD recoveries met the acceptable requirements .
The sample # FSND-MW-16-20221019MS is failing for 1,2-Dibromo-3-Chloropropan, Methyl tert-butyl Ether, Methylcyclohexane and the original sample(FSND-MW-16-20221019) is reported with M flag for this compounds.

The RPD for {N5248-26MSD} with File ID: VX032325.D met criteria except for 1,1,2,2-Tetrachloroethane[21%], 1,1,2-Trichlorotrifluoroethane[26%], Cyclohexane[31%] and Methylcyclohexane[41%] due to difference in results of MS and MSD.

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The Blank Spike met requirements for all samples .
The Blank Spike Duplicate met requirements for all samples .
The Blank analysis did not indicate the presence of lab contamination.

The %RSD is greater than 15% in the Initial Calibration method (82X101922W.M) for Chloromethane, t-1,3-Dichloropropene, Bromoform these compounds are passing on Linear Regression and Chloroethane this compound is passing on Quadratic Regression.

The Continuous Calibration File ID VX032280.D met the requirements except for Bromomethane are failing high but no positive hit in associate sample therefore no corrective action taken.

The Continuous Calibration File ID VX032328.D met the requirements except for Dibromochloromethane are failing high but no positive hit in associate sample therefore no corrective action taken.

The Tuning criteria met requirements.

Samples FSND-GEP-2-20221018, FSND-GEP-4-20221018, FSND-MW-15-20221019 and FSND-MW-28-20221019 were diluted due to high concentrations.

**E. Additional Comments:**
The not QT review data is reported in the Miscellaneous.

Please use %D calculated based on Avg RF and CCRF for all compounds using Average Response Factor when the %RSD value for a compound is <15% for the Initial Calibration curve and use %D calculated based on Amount added and Calculated amount for all compounds using Linear Regression when the %RSD value for a compound is > 15% for the Initial Calibration curve for SW-846 analysis.

**F. Manual Integration Comments:**
Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

---

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature N. N. Pandya

**APPROVED**
*By Nimisha Pandya QA/QC Supervisor at 2:01 pm, Nov 04, 2022*

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## DATA REPORTING QUALIFIERS- ORGANIC

For reporting results, the following " Results Qualifiers" are used:

| | |
|---|---|
| Value | If the result is a value greater than or equal to the detection limit, report the value |
| **U** | Indicates the compound was analyzed for but was not detected. Report the minimum detection limit for the sample with the U, i.e. "10 U". This is not necessarily the instrument detection limit attainable for this particular sample based on any concentration or dilution that may have been required. |
| **ND** | Indicates the analyte was analyzed for, but not detected |
| **J** | Indicates an estimated value**.** This flag is used:<br>(1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed.)<br>(2) When the mass spectral data indicated the identification, however the result was less than the specified detection limit greater than zero. If the detection limit was 10ug/L and a concentration of 3 ug/L was calculated report as 3 J. This is flag is used when similar situation arise on any organic parameter i.e. Pest, PCB and others. |
| **B** | Indicates the analyte was found in the blank as well as the sample report as "12 B". |
| **E** | Indicates the analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis. |
| **D** | This flag identifies all compounds identified in an analysis at a secondary dilution factor. |
| **P** | This flag is used for Pesticide/PCB target analyte when there is >25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form 1 and flagged with a "P". |
| **N** | This flag indicates presumptive evidence of a compound. This is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It applies to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the flag is not used. |
| **A** | This flag indicates that a Tentatively Identified Compound is a suspected aldol-condensation product. |
| **Q** | Indicates the LCS did not meet the control limits requirements |

## APPENDIX A

## QA REVIEW GENERAL DOCUMENTATION

**Project #:** N5248

| | Completed |
|---|---|
| **For thorough review, the report must have the following:** | |
| **GENERAL:** | |
| **Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)** | ✓ |
| **Check chain-of-custody for proper relinquish/return of samples** | ✓ |
| **Is the chain of custody signed and complete** | ✓ |
| **Check internal chain-of-custody for proper relinquish/return of samples /sample extracts** | ✓ |
| **Collect information for each project id from server. Were all requirements followed** | ✓ |
| **COVER PAGE:** | |
| **Do numbers of samples correspond to the number of samples in the Chain of Custody on login page** | ✓ |
| **Do lab numbers and client Ids on cover page agree with the Chain of Custody** | ✓ |
| **CHAIN OF CUSTODY:** | |
| **Do requested analyses on Chain of Custody agree with form I results** | ✓ |
| **Do requested analyses on Chain of Custody agree with the log-in page** | ✓ |
| **Were the correct method log-in for analysis according to the Analytical Request and Chain of Castody** | ✓ |
| **Were the samples received within hold time** | ✓ |
| **Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle** | ✓ |
| **ANALYTICAL:** | |
| **Was method requirement followed?** | ✓ |
| **Was client requirement followed?** | ✓ |
| **Does the case narrative summarize all QC failure?** | ✓ |
| **All runlogs and manual integration are reviewed for requirements** | ✓ |
| **All manual calculations and /or hand notations verified** | ✓ |

**1st Level QA Review Signature:** SOHIL JODHANI **Date:** 11/04/2022

**2nd Level QA Review Signature:** N. N. Pandya **Date:**

APPROVED
By Nimisha Pandya QA/QC Supervisor at 2:02 pm, Nov 04, 2022

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

# Hit Summary Sheet
**SW-846**

**SDG No.:** N5248

**Client:** EA Engineering Science & Technology

| Sample ID | Client ID | Matrix | Parameter | | Concentration | C | MDL | LOD | RDL | Units |
|---|---|---|---|---|---|---|---|---|---|---|
| **Client ID:** | **FSND-TB-20221018** | | | | | | | | | |
| N5248-01 | FSND-TB-2022101 | Water | Acetone | | 1.40 | J | 1.20 | 3.80 | 5.00 | ug/L |
| N5248-01 | FSND-TB-2022101 | Water | Methylene Chloride | | 0.69 | J | 0.18 | 0.50 | 1.00 | ug/L |
| N5248-01 | FSND-TB-2022101 | Water | Ethyl Benzene | | 0.31 | J | 0.17 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | | 2.40 | | | | | |
| N5248-01 | FSND-TB-2022101 | Water | 1,2,4-Trimethylbenzene | * | 0.25 | J | 0.18 | | 1.00 | ug/L |
| | | | **Total Tics :** | | 0.25 | | | | | |
| | | | **Total Concentration:** | | 2.65 | | | | | |
| **Client ID:** | **FSND-MW-9-20221018** | | | | | | | | | |
| N5248-02 | FSND-MW-9-2022 | Water | Toluene | | 1.30 | | 0.17 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | | 1.30 | | | | | |
| | | | **Total Concentration:** | | 1.30 | | | | | |
| **Client ID:** | **FSND-RB-20221018** | | | | | | | | | |
| N5248-03 | FSND-RB-2022101 | Water | Benzene | | 0.46 | J | 0.16 | 0.50 | 1.00 | ug/L |
| N5248-03 | FSND-RB-2022101 | Water | Toluene | | 3.10 | | 0.17 | 0.50 | 1.00 | ug/L |
| N5248-03 | FSND-RB-2022101 | Water | Ethyl Benzene | | 0.27 | J | 0.17 | 0.50 | 1.00 | ug/L |
| N5248-03 | FSND-RB-2022101 | Water | m/p-Xylenes | | 1.00 | J | 0.33 | 1.00 | 2.00 | ug/L |
| N5248-03 | FSND-RB-2022101 | Water | o-Xylene | | 0.41 | J | 0.18 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | | 5.24 | | | | | |
| N5248-03 | FSND-RB-2022101 | Water | 1,2,4-Trimethylbenzene | * | 0.24 | J | 0.18 | | 1.00 | ug/L |
| | | | **Total Tics :** | | 0.24 | | | | | |
| | | | **Total Concentration:** | | 5.48 | | | | | |
| **Client ID:** | **FSND-MW-22R-20221018** | | | | | | | | | |
| N5248-04 | FSND-MW-22R-20 | Water | Acetone | | 2.10 | J | 1.20 | 3.80 | 5.00 | ug/L |
| N5248-04 | FSND-MW-22R-20 | Water | Trichloroethene | | 120 | | 0.27 | 0.50 | 1.00 | ug/L |
| N5248-04 | FSND-MW-22R-20 | Water | Toluene | | 0.67 | J | 0.17 | 0.50 | 1.00 | ug/L |
| N5248-04 | FSND-MW-22R-20 | Water | Tetrachloroethene | | 5.00 | | 0.18 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | | 128 | | | | | |
| N5248-04 | FSND-MW-22R-20 | Water | Isopropyl Alcohol | * | 6.10 | J | 0 | | 1.00 | ug/L |
| | | | **Total Tics :** | | 6.10 | | | | | |
| | | | **Total Concentration:** | | 134 | | | | | |
| **Client ID:** | **FSND-MW-6-20221018** | | | | | | | | | |
| N5248-05 | FSND-MW-6-2022 | Water | Acetone | | 1.40 | J | 1.20 | 3.80 | 5.00 | ug/L |
| N5248-05 | FSND-MW-6-2022 | Water | 1,1,1-Trichloroethane | | 0.57 | J | 0.18 | 0.50 | 1.00 | ug/L |
| N5248-05 | FSND-MW-6-2022 | Water | Trichloroethene | | 30.1 | | 0.27 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | | 32.1 | | | | | |
| | | | **Total Concentration:** | | 32.1 | | | | | |
| **Client ID:** | **FSND-MW11R-20221018** | | | | | | | | | |
| N5248-06 | FSND-MW11R-202 | Water | Acetone | | 2.00 | J | 1.20 | 3.80 | 5.00 | ug/L |
| N5248-06 | FSND-MW11R-202 | Water | Carbon Tetrachloride | | 4.90 | | 0.18 | 0.75 | 1.00 | ug/L |

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# Hit Summary Sheet
**SW-846**

**SDG No.:** N5248

**Client:** EA Engineering Science & Technology

| Sample ID | Client ID | Matrix | Parameter | Concentration | C | MDL | LOD | RDL | Units |
|---|---|---|---|---|---|---|---|---|---|
| N5248-06 | FSND-MW11R-202 | Water | Chloroform | 0.95 | J | 0.18 | 0.75 | 1.00 | ug/L |
| N5248-06 | FSND-MW11R-202 | Water | 1,1,1-Trichloroethane | 0.32 | J | 0.18 | 0.50 | 1.00 | ug/L |
| N5248-06 | FSND-MW11R-202 | Water | Trichloroethene | 0.41 | J | 0.27 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | 8.58 | | | | | |
| | | | **Total Concentration:** | 8.58 | | | | | |
| **Client ID:** | **FSND-GEP-2-20221018** | | | | | | | | |
| N5248-07 | FSND-GEP-2-2022 | Water | 1,1-Dichloroethene | 0.69 | J | 0.23 | 0.75 | 1.00 | ug/L |
| N5248-07 | FSND-GEP-2-2022 | Water | Acetone | 1.70 | J | 1.20 | 3.80 | 5.00 | ug/L |
| N5248-07 | FSND-GEP-2-2022 | Water | Carbon Tetrachloride | 0.50 | J | 0.18 | 0.75 | 1.00 | ug/L |
| N5248-07 | FSND-GEP-2-2022 | Water | cis-1,2-Dichloroethene | 1.80 | | 0.17 | 0.75 | 1.00 | ug/L |
| N5248-07 | FSND-GEP-2-2022 | Water | Chloroform | 0.77 | J | 0.18 | 0.75 | 1.00 | ug/L |
| N5248-07 | FSND-GEP-2-2022 | Water | 1,1,1-Trichloroethane | 16.1 | | 0.18 | 0.50 | 1.00 | ug/L |
| N5248-07 | FSND-GEP-2-2022 | Water | Trichloroethene | 220 | E | 0.27 | 0.50 | 1.00 | ug/L |
| N5248-07 | FSND-GEP-2-2022 | Water | 1,1,2-Trichloroethane | 0.28 | J | 0.19 | 0.50 | 1.00 | ug/L |
| N5248-07 | FSND-GEP-2-2022 | Water | Tetrachloroethene | 5.30 | | 0.18 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | 247 | | | | | |
| | | | **Total Concentration:** | 247 | | | | | |
| **Client ID:** | **FSND-GEP-2-20221018DL** | | | | | | | | |
| N5248-07DL | FSND-GEP-2-2022 | Water | Trichloroethene | 210 | D | 1.40 | 2.50 | 5.00 | ug/L |
| N5248-07DL | FSND-GEP-2-2022 | Water | Tetrachloroethene | 5.20 | D | 0.90 | 2.50 | 5.00 | ug/L |
| | | | **Total Voc :** | 215 | | | | | |
| | | | **Total Concentration:** | 215 | | | | | |
| **Client ID:** | **FSND-MW-20-20221018** | | | | | | | | |
| N5248-08 | FSND-MW-20-202 | Water | Acetone | 2.20 | J | 1.20 | 3.80 | 5.00 | ug/L |
| N5248-08 | FSND-MW-20-202 | Water | Trichloroethene | 33.9 | | 0.27 | 0.50 | 1.00 | ug/L |
| N5248-08 | FSND-MW-20-202 | Water | Toluene | 0.64 | J | 0.17 | 0.50 | 1.00 | ug/L |
| N5248-08 | FSND-MW-20-202 | Water | Tetrachloroethene | 1.70 | | 0.18 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | 38.4 | | | | | |
| | | | **Total Concentration:** | 38.4 | | | | | |
| **Client ID:** | **FSND-MW-20-20221018RE** | | | | | | | | |
| N5248-08RE | FSND-MW-20-202 | Water | Trichloroethene | 35.7 | | 0.27 | 0.50 | 1.00 | ug/L |
| N5248-08RE | FSND-MW-20-202 | Water | Toluene | 0.66 | J | 0.17 | 0.50 | 1.00 | ug/L |
| N5248-08RE | FSND-MW-20-202 | Water | Tetrachloroethene | 1.90 | | 0.18 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | 38.3 | | | | | |
| | | | **Total Concentration:** | 38.3 | | | | | |
| **Client ID:** | **FSND-MW-17-20221018** | | | | | | | | |
| N5248-09 | FSND-MW-17-202 | Water | Acetone | 1.50 | J | 1.20 | 3.80 | 5.00 | ug/L |
| N5248-09 | FSND-MW-17-202 | Water | cis-1,2-Dichloroethene | 0.91 | J | 0.17 | 0.75 | 1.00 | ug/L |
| N5248-09 | FSND-MW-17-202 | Water | 1,1,1-Trichloroethane | 8.00 | | 0.18 | 0.50 | 1.00 | ug/L |
| N5248-09 | FSND-MW-17-202 | Water | Trichloroethene | 6.90 | | 0.27 | 0.50 | 1.00 | ug/L |

# Hit Summary Sheet
**SW-846**

**SDG No.:** N5248

**Client:** EA Engineering Science & Technology

| Sample ID | Client ID | Matrix | Parameter | Concentration | C | MDL | LOD | RDL | Units |
|---|---|---|---|---|---|---|---|---|---|
| N5248-09 | FSND-MW-17-202 | Water | Toluene | 0.99 | J | 0.17 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | 18.3 | | | | | |
| | | | **Total Concentration:** | 18.3 | | | | | |
| **Client ID:** | **FSND-MW-7-20221018** | | | | | | | | |
| N5248-10 | FSND-MW-7-2022 | Water | Toluene | 0.68 | J | 0.17 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | 0.68 | | | | | |
| | | | **Total Concentration:** | 0.68 | | | | | |
| **Client ID:** | **FSND-MW-5-20221018** | | | | | | | | |
| N5248-11 | FSND-MW-5-2022 | Water | Chloroform | 2.90 | | 0.18 | 0.75 | 1.00 | ug/L |
| N5248-11 | FSND-MW-5-2022 | Water | Bromodichloromethane | 3.60 | | 0.18 | 0.50 | 1.00 | ug/L |
| N5248-11 | FSND-MW-5-2022 | Water | Dibromochloromethane | 3.80 | | 0.18 | 0.50 | 1.00 | ug/L |
| N5248-11 | FSND-MW-5-2022 | Water | Bromoform | 3.40 | | 0.16 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | 13.7 | | | | | |
| | | | **Total Concentration:** | 13.7 | | | | | |
| **Client ID:** | **FSND-FD-01-20221018** | | | | | | | | |
| N5248-12 | FSND-FD-01-2022 | Water | Chloroform | 3.00 | | 0.18 | 0.75 | 1.00 | ug/L |
| N5248-12 | FSND-FD-01-2022 | Water | Bromodichloromethane | 3.60 | | 0.18 | 0.50 | 1.00 | ug/L |
| N5248-12 | FSND-FD-01-2022 | Water | Dibromochloromethane | 3.80 | | 0.18 | 0.50 | 1.00 | ug/L |
| N5248-12 | FSND-FD-01-2022 | Water | Bromoform | 3.40 | | 0.16 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | 13.8 | | | | | |
| | | | **Total Concentration:** | 13.8 | | | | | |
| **Client ID:** | **FSND-MW-12R-20221018** | | | | | | | | |
| N5248-13 | FSND-MW-12R-20 | Water | Acetone | 2.30 | J | 1.20 | 3.80 | 5.00 | ug/L |
| N5248-13 | FSND-MW-12R-20 | Water | trans-1,2-Dichloroethene | 0.26 | J | 0.20 | 0.50 | 1.00 | ug/L |
| N5248-13 | FSND-MW-12R-20 | Water | Carbon Tetrachloride | 3.60 | | 0.18 | 0.75 | 1.00 | ug/L |
| N5248-13 | FSND-MW-12R-20 | Water | Chloroform | 0.32 | J | 0.18 | 0.75 | 1.00 | ug/L |
| N5248-13 | FSND-MW-12R-20 | Water | 1,1,1-Trichloroethane | 2.10 | | 0.18 | 0.50 | 1.00 | ug/L |
| N5248-13 | FSND-MW-12R-20 | Water | Trichloroethene | 6.80 | | 0.27 | 0.50 | 1.00 | ug/L |
| N5248-13 | FSND-MW-12R-20 | Water | Toluene | 0.69 | J | 0.17 | 0.50 | 1.00 | ug/L |
| N5248-13 | FSND-MW-12R-20 | Water | Tetrachloroethene | 1.30 | | 0.18 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | 17.4 | | | | | |
| | | | **Total Concentration:** | 17.4 | | | | | |
| **Client ID:** | **FSND-MW-19-20221018** | | | | | | | | |
| N5248-14 | FSND-MW-19-202 | Water | 1,1,1-Trichloroethane | 3.30 | | 0.18 | 0.50 | 1.00 | ug/L |
| N5248-14 | FSND-MW-19-202 | Water | Trichloroethene | 6.90 | | 0.27 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | 10.2 | | | | | |
| | | | **Total Concentration:** | 10.2 | | | | | |
| **Client ID:** | **FSND-GEP-4-20221018** | | | | | | | | |
| N5248-15 | FSND-GEP-4-2022 | Water | 1,1-Dichloroethene | 0.60 | J | 0.23 | 0.75 | 1.00 | ug/L |
| N5248-15 | FSND-GEP-4-2022 | Water | Carbon Tetrachloride | 0.54 | J | 0.18 | 0.75 | 1.00 | ug/L |

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# Hit Summary Sheet
**SW-846**

**SDG No.:** N5248

**Client:** EA Engineering Science & Technology

| Sample ID | Client ID | Matrix | Parameter | | Concentration | C | MDL | LOD | RDL | Units |
|---|---|---|---|---|---|---|---|---|---|---|
| N5248-15 | FSND-GEP-4-2022 | Water | cis-1,2-Dichloroethene | | 0.29 | J | 0.17 | 0.75 | 1.00 | ug/L |
| N5248-15 | FSND-GEP-4-2022 | Water | Chloroform | | 0.42 | J | 0.18 | 0.75 | 1.00 | ug/L |
| N5248-15 | FSND-GEP-4-2022 | Water | 1,1,1-Trichloroethane | | 13.9 | | 0.18 | 0.50 | 1.00 | ug/L |
| N5248-15 | FSND-GEP-4-2022 | Water | Trichloroethene | | 360 | E | 0.27 | 0.50 | 1.00 | ug/L |
| N5248-15 | FSND-GEP-4-2022 | Water | Tetrachloroethene | | 3.60 | | 0.18 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | | 379 | | | | | |
| N5248-15 | FSND-GEP-4-2022 | Water | 1,1-Dichloropropene | * | 5.60 | J | 0.16 | | 1.00 | ug/L |
| | | | **Total Tics :** | | 5.60 | | | | | |
| | | | **Total Concentration:** | | 385 | | | | | |
| **Client ID:** | **FSND-GEP-4-20221018DL** | | | | | | | | | |
| N5248-15DL | FSND-GEP-4-2022 | Water | Trichloroethene | | 340 | D | 2.70 | 5.00 | 10.0 | ug/L |
| | | | **Total Voc :** | | 340 | | | | | |
| | | | **Total Concentration:** | | 340 | | | | | |
| **Client ID:** | **FSND-MW-16-20221019** | | | | | | | | | |
| N5248-16 | FSND-MW-16-202 | Water | Trichloroethene | | 0.80 | J | 0.27 | 0.50 | 1.00 | ug/L |
| N5248-16 | FSND-MW-16-202 | Water | Toluene | | 0.44 | J | 0.17 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | | 1.24 | | | | | |
| | | | **Total Concentration:** | | 1.24 | | | | | |
| **Client ID:** | **FSND-MW-34-20221019** | | | | | | | | | |
| N5248-17 | FSND-MW-34-202 | Water | cis-1,2-Dichloroethene | | 0.95 | J | 0.17 | 0.75 | 1.00 | ug/L |
| N5248-17 | FSND-MW-34-202 | Water | Trichloroethene | | 22.5 | | 0.27 | 0.50 | 1.00 | ug/L |
| N5248-17 | FSND-MW-34-202 | Water | Toluene | | 0.72 | J | 0.17 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | | 24.2 | | | | | |
| | | | **Total Concentration:** | | 24.2 | | | | | |
| **Client ID:** | **FSND-FD-03-20221019** | | | | | | | | | |
| N5248-18 | FSND-FD-03-2022 | Water | cis-1,2-Dichloroethene | | 0.93 | J | 0.17 | 0.75 | 1.00 | ug/L |
| N5248-18 | FSND-FD-03-2022 | Water | Trichloroethene | | 21.6 | | 0.27 | 0.50 | 1.00 | ug/L |
| N5248-18 | FSND-FD-03-2022 | Water | Toluene | | 0.69 | J | 0.17 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | | 23.2 | | | | | |
| | | | **Total Concentration:** | | 23.2 | | | | | |
| **Client ID:** | **FSND-MW-15-20221019** | | | | | | | | | |
| N5248-19 | FSND-MW-15-202 | Water | 1,1-Dichloroethene | | 0.25 | J | 0.23 | 0.75 | 1.00 | ug/L |
| N5248-19 | FSND-MW-15-202 | Water | Carbon Tetrachloride | | 0.38 | J | 0.18 | 0.75 | 1.00 | ug/L |
| N5248-19 | FSND-MW-15-202 | Water | 1,1,1-Trichloroethane | | 5.60 | | 0.18 | 0.50 | 1.00 | ug/L |
| N5248-19 | FSND-MW-15-202 | Water | Trichloroethene | | 150 | E | 0.27 | 0.50 | 1.00 | ug/L |
| N5248-19 | FSND-MW-15-202 | Water | Tetrachloroethene | | 1.20 | | 0.18 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | | 157 | | | | | |
| | | | **Total Concentration:** | | 157 | | | | | |
| **Client ID:** | **FSND-MW-15-20221019DL** | | | | | | | | | |
| N5248-19DL | FSND-MW-15-202 | Water | Trichloroethene | | 150 | D | 1.40 | 2.50 | 5.00 | ug/L |
| | | | **Total Voc :** | | 150 | | | | | |

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# Hit Summary Sheet
**SW-846**

**SDG No.:** N5248

**Client:** EA Engineering Science & Technology

| Sample ID | Client ID | Matrix | Parameter | Concentration | C | MDL | LOD | RDL | Units |
|---|---|---|---|---|---|---|---|---|---|
| | | | **Total Concentration:** | 150 | | | | | |
| **Client ID:** | **FSND-MW-28-20221019** | | | | | | | | |
| N5248-20 | FSND-MW-28-202 | Water | 1,1-Dichloroethene | 0.26 | J | 0.23 | 0.75 | 1.00 | ug/L |
| N5248-20 | FSND-MW-28-202 | Water | trans-1,2-Dichloroethene | 0.28 | J | 0.20 | 0.50 | 1.00 | ug/L |
| N5248-20 | FSND-MW-28-202 | Water | Carbon Tetrachloride | 0.52 | J | 0.18 | 0.75 | 1.00 | ug/L |
| N5248-20 | FSND-MW-28-202 | Water | cis-1,2-Dichloroethene | 3.30 | | 0.17 | 0.75 | 1.00 | ug/L |
| N5248-20 | FSND-MW-28-202 | Water | Chloroform | 0.51 | J | 0.18 | 0.75 | 1.00 | ug/L |
| N5248-20 | FSND-MW-28-202 | Water | 1,1,1-Trichloroethane | 7.20 | | 0.18 | 0.50 | 1.00 | ug/L |
| N5248-20 | FSND-MW-28-202 | Water | Trichloroethene | 210 | E | 0.27 | 0.50 | 1.00 | ug/L |
| N5248-20 | FSND-MW-28-202 | Water | Tetrachloroethene | 27.1 | | 0.18 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | 249 | | | | | |
| | | | **Total Concentration:** | 249 | | | | | |
| **Client ID:** | **FSND-MW-28-20221019DL** | | | | | | | | |
| N5248-20DL | FSND-MW-28-202 | Water | Trichloroethene | 220 | D | 1.40 | 2.50 | 5.00 | ug/L |
| N5248-20DL | FSND-MW-28-202 | Water | Tetrachloroethene | 30.0 | D | 0.90 | 2.50 | 5.00 | ug/L |
| | | | **Total Voc :** | 250 | | | | | |
| | | | **Total Concentration:** | 250 | | | | | |

# SAMPLE DATA

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-TB-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032294.D | 1 | | 10/21/22 17:19 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 1.40 | J | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 0.75 | U | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.69 | J | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 0.75 | U | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 0.50 | U | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-TB-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032294.D | 1 | | 10/21/22 17:19 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.31 | J | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.00 | U | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | U | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 48.5 | | 81 - 118 | | 97% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 45.6 | | 80 - 119 | | 91% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 47.2 | | 89 - 112 | | 94% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 46.6 | | 85 - 114 | | 93% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 150000 | 5.556 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 228000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 201000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 94900 | 12.024 | | | | |
| **TENTATIVE IDENTIFIED COMPOUNDS** | | | | | | | |
| 95-63-6 | 1,2,4-Trimethylbenzene | 0.25 | J | | | 11.8 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-TB-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032294.D | 1 | | 10/21/22 17:19 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-9-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-02 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032296.D | 1 | | 10/21/22 18:06 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 3.80 | U | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 0.75 | U | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 0.75 | U | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 0.50 | U | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 1.30 | | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-9-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-02 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032296.D | 1 | | 10/21/22 18:06 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.00 | U | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | U | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 48.1 | | 81 - 118 | | 96% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 45.5 | | 80 - 119 | | 91% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 47.1 | | 89 - 112 | | 94% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 44.5 | | 85 - 114 | | 89% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 144000 | 5.555 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 217000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 186000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 85100 | 12.024 | | | | |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-9-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-02 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032296.D | 1 | | 10/21/22 18:06 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-RB-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-03 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032339.D | 1 | | 10/24/22 14:47 | VX102422 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 3.80 | U | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 0.75 | U | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 0.75 | U | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.46 | J | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 0.50 | U | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 3.10 | | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-RB-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-03 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032339.D | 1 | | 10/24/22 14:47 | VX102422 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.27 | J | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.00 | J | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.41 | J | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | U | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 46.7 | | 81 - 118 | | 93% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 46.5 | | 80 - 119 | | 93% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 46.4 | | 89 - 112 | | 93% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 43.4 | | 85 - 114 | | 87% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 132000 | 5.556 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 203000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 177000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 81600 | 12.024 | | | | |
| **TENTATIVE IDENTIFIED COMPOUNDS** | | | | | | | |
| 95-63-6 | 1,2,4-Trimethylbenzene | 0.24 | J | | | 11.8 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-RB-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-03 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032339.D | 1 | | 10/24/22 14:47 | VX102422 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-22R-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-04 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032297.D | 1 | | 10/21/22 18:29 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 2.10 | J | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 0.75 | U | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 0.75 | U | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 120 | | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 0.67 | J | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-22R-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-04 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032297.D | 1 | | 10/21/22 18:29 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 5.00 | | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.00 | U | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | U | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 48.9 | | 81 - 118 | | 98% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 45.3 | | 80 - 119 | | 91% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 46.4 | | 89 - 112 | | 93% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 44.5 | | 85 - 114 | | 89% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 141000 | 5.556 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 218000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 187000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 87200 | 12.024 | | | | |
| **TENTATIVE IDENTIFIED COMPOUNDS** | | | | | | | |
| 67-63-0 | Isopropyl Alcohol | 6.10 | J | | | 2.56 | ug/L |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-22R-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-04 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032297.D | 1 | | 10/21/22 18:29 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-6-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-05 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032298.D | 1 | | 10/21/22 18:52 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 1.40 | J | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 0.75 | U | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 0.75 | U | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 0.57 | J | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 30.1 | | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-6-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-05 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032298.D | 1 | | 10/21/22 18:52 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.00 | U | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | U | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 47.9 | | 81 - 118 | | 96% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 45.0 | | 80 - 119 | | 90% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 46.7 | | 89 - 112 | | 93% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 44.2 | | 85 - 114 | | 88% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 145000 | 5.556 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 220000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 188000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 86000 | 12.024 | | | | |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-6-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-05 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032298.D | 1 | | 10/21/22 18:52 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW11R-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-06 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032299.D | 1 | | 10/21/22 19:16 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 2.00 | J | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 0.75 | U | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 4.90 | | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 0.75 | U | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 0.95 | J | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 0.32 | J | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 0.41 | J | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW11R-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-06 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032299.D | 1 | | 10/21/22 19:16 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.00 | U | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | U | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 47.8 | | 81 - 118 | | 96% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 45.5 | | 80 - 119 | | 91% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 46.6 | | 89 - 112 | | 93% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 45.0 | | 85 - 114 | | 90% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 146000 | 5.556 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 224000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 194000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 89600 | 12.024 | | | | |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW11R-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-06 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032299.D | 1 | | 10/21/22 19:16 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-GEP-2-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-07 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032300.D | 1 | | 10/21/22 19:39 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 0.69 | J | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 1.70 | J | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 0.75 | U | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 0.50 | J | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 1.80 | | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 0.77 | J | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 16.1 | | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 220 | E | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-GEP-2-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-07 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032300.D | 1 | | 10/21/22 19:39 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.28 | J | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 5.30 | | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.00 | U | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | U | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 48.4 | | 81 - 118 | | 97% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 45.4 | | 80 - 119 | | 91% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 46.8 | | 89 - 112 | | 94% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 45.6 | | 85 - 114 | | 91% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 143000 | 5.55 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 223000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 194000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 90100 | 12.024 | | | | |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-GEP-2-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-07 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032300.D | 1 | | 10/21/22 19:39 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-GEP-2-20221018DL | SDG No.: | N5248 |
| Lab Sample ID: | N5248-07DL | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032335.D | 5 | | 10/24/22 13:13 | VX102422 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 2.50 | UD | 0.85 | 2.50 | 5.00 | ug/L |
| 74-87-3 | Chloromethane | 3.80 | UD | 1.00 | 3.80 | 5.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 2.50 | UD | 1.10 | 2.50 | 5.00 | ug/L |
| 74-83-9 | Bromomethane | 12.5 | UD | 7.90 | 12.5 | 25.0 | ug/L |
| 75-00-3 | Chloroethane | 3.80 | UD | 1.30 | 3.80 | 5.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 2.50 | UD | 1.00 | 2.50 | 5.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 2.50 | UD | 0.85 | 2.50 | 5.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 3.80 | UD | 1.20 | 3.80 | 5.00 | ug/L |
| 67-64-1 | Acetone | 18.8 | UD | 5.80 | 18.8 | 25.0 | ug/L |
| 75-15-0 | Carbon Disulfide | 3.80 | UD | 1.30 | 3.80 | 5.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 2.50 | UD | 0.90 | 2.50 | 5.00 | ug/L |
| 79-20-9 | Methyl Acetate | 3.80 | UD | 2.70 | 3.80 | 5.00 | ug/L |
| 75-09-2 | Methylene Chloride | 2.50 | UD | 0.90 | 2.50 | 5.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 2.50 | UD | 1.00 | 2.50 | 5.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 2.50 | UD | 1.00 | 2.50 | 5.00 | ug/L |
| 110-82-7 | Cyclohexane | 12.5 | UD | 6.10 | 12.5 | 25.0 | ug/L |
| 78-93-3 | 2-Butanone | 12.5 | UD | 4.10 | 12.5 | 25.0 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 3.80 | UD | 0.90 | 3.80 | 5.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 3.80 | UD | 0.85 | 3.80 | 5.00 | ug/L |
| 74-97-5 | Bromochloromethane | 3.80 | UD | 0.95 | 3.80 | 5.00 | ug/L |
| 67-66-3 | Chloroform | 3.80 | UD | 0.90 | 3.80 | 5.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 2.50 | UD | 0.90 | 2.50 | 5.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 2.50 | UD | 0.65 | 2.50 | 5.00 | ug/L |
| 71-43-2 | Benzene | 2.50 | UD | 0.80 | 2.50 | 5.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 2.50 | UD | 0.90 | 2.50 | 5.00 | ug/L |
| 79-01-6 | Trichloroethene | 210 | D | 1.40 | 2.50 | 5.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 2.50 | UD | 0.85 | 2.50 | 5.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 2.50 | UD | 0.90 | 2.50 | 5.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 12.5 | UD | 4.40 | 12.5 | 25.0 | ug/L |
| 108-88-3 | Toluene | 2.50 | UD | 0.85 | 2.50 | 5.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 2.50 | UD | 0.70 | 2.50 | 5.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 2.50 | UD | 0.80 | 2.50 | 5.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-GEP-2-20221018DL | SDG No.: | N5248 |
| Lab Sample ID: | N5248-07DL | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032335.D | 5 | | 10/24/22 13:13 | VX102422 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 2.50 | UD | 0.95 | 2.50 | 5.00 | ug/L |
| 591-78-6 | 2-Hexanone | 12.5 | UD | 3.80 | 12.5 | 25.0 | ug/L |
| 124-48-1 | Dibromochloromethane | 2.50 | UD | 0.90 | 2.50 | 5.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 2.50 | UD | 0.70 | 2.50 | 5.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 5.20 | D | 0.90 | 2.50 | 5.00 | ug/L |
| 108-90-7 | Chlorobenzene | 2.50 | UD | 0.85 | 2.50 | 5.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 2.50 | UD | 0.85 | 2.50 | 5.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 5.00 | UD | 1.70 | 5.00 | 10.0 | ug/L |
| 95-47-6 | o-Xylene | 2.50 | UD | 0.90 | 2.50 | 5.00 | ug/L |
| 100-42-5 | Styrene | 2.50 | UD | 0.65 | 2.50 | 5.00 | ug/L |
| 75-25-2 | Bromoform | 2.50 | UD | 0.80 | 2.50 | 5.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 2.50 | UD | 0.95 | 2.50 | 5.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 3.80 | UD | 1.20 | 3.80 | 5.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 2.50 | UD | 1.00 | 2.50 | 5.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 2.50 | UD | 0.95 | 2.50 | 5.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 2.50 | UD | 0.85 | 2.50 | 5.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 3.80 | UD | 2.10 | 3.80 | 5.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 2.50 | UD | 1.20 | 2.50 | 5.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 3.80 | UD | 1.70 | 3.80 | 5.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 47.2 | | 81 - 118 | | 94% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 46.4 | | 80 - 119 | | 93% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 46.5 | | 89 - 112 | | 93% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 44.6 | | 85 - 114 | | 89% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 140000 | 5.556 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 218000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 190000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 88500 | 12.024 | | | | |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-GEP-2-20221018DL | SDG No.: | N5248 |
| Lab Sample ID: | N5248-07DL | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032335.D | 5 | | 10/24/22 13:13 | VX102422 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-20-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-08 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032301.D | 1 | | 10/21/22 20:02 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 2.20 | J | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 0.75 | U | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 0.75 | U | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 33.9 | | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 0.64 | J | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-20-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-08 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032301.D | 1 | | 10/21/22 20:02 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 1.70 | | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.00 | U | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | U | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 48.0 | | 81 - 118 | | 96% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 44.8 | | 80 - 119 | | 90% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 46.8 | | 89 - 112 | | 94% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 45.7 | | 85 - 114 | | 91% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 151000 | 5.556 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 234000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 205000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 96000 | 12.024 | | | | |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-20-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-08 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032301.D | 1 | | 10/21/22 20:02 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-20-20221018RE | SDG No.: | N5248 |
| Lab Sample ID: | N5248-08RE | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032415.D | 1 | | 10/26/22 19:25 | VX102622 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 3.80 | U | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 0.75 | U | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 0.75 | U | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 35.7 | | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 0.66 | J | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-20-20221018RE | SDG No.: | N5248 |
| Lab Sample ID: | N5248-08RE | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032415.D | 1 | | 10/26/22 19:25 | VX102622 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 1.90 | | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.00 | U | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | U | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 47.6 | | 81 - 118 | | 95% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 44.8 | | 80 - 119 | | 90% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 47.1 | | 89 - 112 | | 94% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 41.5 | * | 85 - 114 | | 83% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 119000 | 5.556 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 193000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 165000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 75100 | 12.024 | | | | |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-20-20221018RE | SDG No.: | N5248 |
| Lab Sample ID: | N5248-08RE | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032415.D | 1 | | 10/26/22 19:25 | VX102622 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-17-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-09 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032302.D | 1 | | 10/21/22 20:25 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 1.50 | J | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 0.75 | U | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 0.91 | J | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 8.00 | | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 6.90 | | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 0.99 | J | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-17-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-09 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032302.D | 1 | | 10/21/22 20:25 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.00 | U | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | U | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 47.2 | | 81 - 118 | | 94% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 44.8 | | 80 - 119 | | 90% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 47.3 | | 89 - 112 | | 95% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 44.5 | | 85 - 114 | | 89% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 142000 | 5.556 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 217000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 190000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 85200 | 12.024 | | | | |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-17-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-09 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032302.D | 1 | | 10/21/22 20:25 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-7-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-10 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032311.D | 1 | | 10/22/22 01:19 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 3.80 | U | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 0.75 | U | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 0.75 | U | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 0.50 | U | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 0.68 | J | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-7-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-10 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032311.D | 1 | | 10/22/22 01:19 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.00 | U | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | U | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 47.3 | | 81 - 118 | | 95% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 45.0 | | 80 - 119 | | 90% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 46.5 | | 89 - 112 | | 93% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 44.3 | | 85 - 114 | | 89% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 148000 | 5.55 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 229000 | 6.757 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 198000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 89800 | 12.024 | | | | |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-7-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-10 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032311.D | 1 | | 10/22/22 01:19 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-5-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-11 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032312.D | 1 | | 10/22/22 01:42 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 3.80 | U | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 0.75 | U | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 0.75 | U | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 2.90 | | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 0.50 | U | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 3.60 | | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-5-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-11 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032312.D | 1 | | 10/22/22 01:42 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 3.80 | | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.00 | U | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 3.40 | | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | U | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 48.6 | | 81 - 118 | | 97% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 45.5 | | 80 - 119 | | 91% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 46.7 | | 89 - 112 | | 93% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 45.2 | | 85 - 114 | | 90% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 149000 | 5.556 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 232000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 201000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 93500 | 12.024 | | | | |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-5-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-11 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032312.D | 1 | | 10/22/22 01:42 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-FD-01-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-12 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032313.D | 1 | | 10/22/22 02:06 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 3.80 | U | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 0.75 | U | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 0.75 | U | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 3.00 | | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 0.50 | U | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 3.60 | | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-FD-01-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-12 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032313.D | 1 | | 10/22/22 02:06 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 3.80 | | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.00 | U | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 3.40 | | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | U | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 48.3 | | 81 - 118 | | 97% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 45.7 | | 80 - 119 | | 91% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 46.3 | | 89 - 112 | | 93% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 45.3 | | 85 - 114 | | 91% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 148000 | 5.55 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 230000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 202000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 91200 | 12.024 | | | | |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-FD-01-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-12 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032313.D | 1 | | 10/22/22 02:06 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-12R-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-13 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032314.D | 1 | | 10/22/22 02:29 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 2.30 | J | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 0.75 | U | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 0.26 | J | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 3.60 | | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 0.75 | U | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 0.32 | J | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 2.10 | | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 6.80 | | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 0.69 | J | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-12R-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-13 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032314.D | 1 | | 10/22/22 02:29 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 1.30 | | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.00 | U | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | U | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 48.2 | | 81 - 118 | | 96% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 45.2 | | 80 - 119 | | 90% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 46.5 | | 89 - 112 | | 93% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 44.4 | | 85 - 114 | | 89% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 147000 | 5.556 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 230000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 200000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 89200 | 12.024 | | | | |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-12R-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-13 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032314.D | 1 | | 10/22/22 02:29 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-19-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-14 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032315.D | 1 | | 10/22/22 02:52 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 3.80 | U | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 0.75 | U | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 0.75 | U | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 3.30 | | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 6.90 | | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-19-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-14 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032315.D | 1 | | 10/22/22 02:52 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.00 | U | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | U | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 48.3 | | 81 - 118 | | 97% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 44.8 | | 80 - 119 | | 90% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 47.2 | | 89 - 112 | | 94% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 45.3 | | 85 - 114 | | 91% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 158000 | 5.55 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 246000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 217000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 101000 | 12.024 | | | | |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-19-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-14 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032315.D | 1 | | 10/22/22 02:52 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-GEP-4-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-15 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032316.D | 1 | | 10/22/22 03:15 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 0.60 | J | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 3.80 | U | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 0.75 | U | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 0.54 | J | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 0.29 | J | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 0.42 | J | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 13.9 | | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 360 | E | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-GEP-4-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-15 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032316.D | 1 | | 10/22/22 03:15 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 3.60 | | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.00 | U | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | U | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 48.6 | | 81 - 118 | | 97% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 45.1 | | 80 - 119 | | 90% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 46.2 | | 89 - 112 | | 92% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 42.8 | | 85 - 114 | | 86% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 145000 | 5.556 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 227000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 193000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 84300 | 12.024 | | | | |
| **TENTATIVE IDENTIFIED COMPOUNDS** | | | | | | | |
| 563-58-6 | 1,1-Dichloropropene | 5.60 | J | | | 5.55 | ug/L |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-GEP-4-20221018 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-15 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032316.D | 1 | | 10/22/22 03:15 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-GEP-4-20221018DL | SDG No.: | N5248 |
| Lab Sample ID: | N5248-15DL | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032338.D | 10 | | 10/24/22 14:23 | VX102422 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 5.00 | UD | 1.70 | 5.00 | 10.0 | ug/L |
| 74-87-3 | Chloromethane | 7.50 | UD | 2.00 | 7.50 | 10.0 | ug/L |
| 75-01-4 | Vinyl Chloride | 5.00 | UD | 2.20 | 5.00 | 10.0 | ug/L |
| 74-83-9 | Bromomethane | 25.0 | UD | 15.7 | 25.0 | 50.0 | ug/L |
| 75-00-3 | Chloroethane | 7.50 | UD | 2.60 | 7.50 | 10.0 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 5.00 | UD | 2.00 | 5.00 | 10.0 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 5.00 | UD | 1.70 | 5.00 | 10.0 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 7.50 | UD | 2.30 | 7.50 | 10.0 | ug/L |
| 67-64-1 | Acetone | 37.5 | UD | 11.6 | 37.5 | 50.0 | ug/L |
| 75-15-0 | Carbon Disulfide | 7.50 | UD | 2.60 | 7.50 | 10.0 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 5.00 | UD | 1.80 | 5.00 | 10.0 | ug/L |
| 79-20-9 | Methyl Acetate | 7.50 | UD | 5.30 | 7.50 | 10.0 | ug/L |
| 75-09-2 | Methylene Chloride | 5.00 | UD | 1.80 | 5.00 | 10.0 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 5.00 | UD | 2.00 | 5.00 | 10.0 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 5.00 | UD | 2.00 | 5.00 | 10.0 | ug/L |
| 110-82-7 | Cyclohexane | 25.0 | UD | 12.1 | 25.0 | 50.0 | ug/L |
| 78-93-3 | 2-Butanone | 25.0 | UD | 8.20 | 25.0 | 50.0 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 7.50 | UD | 1.80 | 7.50 | 10.0 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 7.50 | UD | 1.70 | 7.50 | 10.0 | ug/L |
| 74-97-5 | Bromochloromethane | 7.50 | UD | 1.90 | 7.50 | 10.0 | ug/L |
| 67-66-3 | Chloroform | 7.50 | UD | 1.80 | 7.50 | 10.0 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 5.00 | UD | 1.80 | 5.00 | 10.0 | ug/L |
| 108-87-2 | Methylcyclohexane | 5.00 | UD | 1.30 | 5.00 | 10.0 | ug/L |
| 71-43-2 | Benzene | 5.00 | UD | 1.60 | 5.00 | 10.0 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 5.00 | UD | 1.80 | 5.00 | 10.0 | ug/L |
| 79-01-6 | Trichloroethene | 340 | D | 2.70 | 5.00 | 10.0 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 5.00 | UD | 1.70 | 5.00 | 10.0 | ug/L |
| 75-27-4 | Bromodichloromethane | 5.00 | UD | 1.80 | 5.00 | 10.0 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 25.0 | UD | 8.70 | 25.0 | 50.0 | ug/L |
| 108-88-3 | Toluene | 5.00 | UD | 1.70 | 5.00 | 10.0 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 5.00 | UD | 1.40 | 5.00 | 10.0 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 5.00 | UD | 1.60 | 5.00 | 10.0 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-GEP-4-20221018DL | SDG No.: | N5248 |
| Lab Sample ID: | N5248-15DL | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032338.D | 10 | | 10/24/22 14:23 | VX102422 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 5.00 | UD | 1.90 | 5.00 | 10.0 | ug/L |
| 591-78-6 | 2-Hexanone | 25.0 | UD | 7.60 | 25.0 | 50.0 | ug/L |
| 124-48-1 | Dibromochloromethane | 5.00 | UD | 1.80 | 5.00 | 10.0 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 5.00 | UD | 1.40 | 5.00 | 10.0 | ug/L |
| 127-18-4 | Tetrachloroethene | 5.00 | UD | 1.80 | 5.00 | 10.0 | ug/L |
| 108-90-7 | Chlorobenzene | 5.00 | UD | 1.70 | 5.00 | 10.0 | ug/L |
| 100-41-4 | Ethyl Benzene | 5.00 | UD | 1.70 | 5.00 | 10.0 | ug/L |
| 179601-23-1 | m/p-Xylenes | 10.0 | UD | 3.30 | 10.0 | 20.0 | ug/L |
| 95-47-6 | o-Xylene | 5.00 | UD | 1.80 | 5.00 | 10.0 | ug/L |
| 100-42-5 | Styrene | 5.00 | UD | 1.30 | 5.00 | 10.0 | ug/L |
| 75-25-2 | Bromoform | 5.00 | UD | 1.60 | 5.00 | 10.0 | ug/L |
| 98-82-8 | Isopropylbenzene | 5.00 | UD | 1.90 | 5.00 | 10.0 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 7.50 | UD | 2.30 | 7.50 | 10.0 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 5.00 | UD | 2.00 | 5.00 | 10.0 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 5.00 | UD | 1.90 | 5.00 | 10.0 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 5.00 | UD | 1.70 | 5.00 | 10.0 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 7.50 | UD | 4.20 | 7.50 | 10.0 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 5.00 | UD | 2.30 | 5.00 | 10.0 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 7.50 | UD | 3.30 | 7.50 | 10.0 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 47.7 | | 81 - 118 | | 95% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 46.7 | | 80 - 119 | | 93% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 46.3 | | 89 - 112 | | 93% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 42.8 | | 85 - 114 | | 86% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 132000 | 5.556 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 204000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 175000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 80800 | 12.024 | | | | |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/18/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-GEP-4-20221018DL | SDG No.: | N5248 |
| Lab Sample ID: | N5248-15DL | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032338.D | 10 | | 10/24/22 14:23 | VX102422 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-16-20221019 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-16 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032317.D | 1 | | 10/22/22 03:38 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 3.80 | U | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | UM | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 0.75 | U | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 0.75 | U | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | UM | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 0.80 | J | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 0.44 | J | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-16-20221019 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-16 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032317.D | 1 | | 10/22/22 03:38 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.00 | U | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | UM | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 48.2 | | 81 - 118 | | 96% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 45.0 | | 80 - 119 | | 90% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 46.5 | | 89 - 112 | | 93% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 44.7 | | 85 - 114 | | 89% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 148000 | 5.556 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 235000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 204000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 95200 | 12.024 | | | | |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-16-20221019 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-16 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032317.D | 1 | | 10/22/22 03:38 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-34-20221019 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-17 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032318.D | 1 | | 10/22/22 04:02 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 3.80 | U | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 0.75 | U | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 0.95 | J | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 22.5 | | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 0.72 | J | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-34-20221019 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-17 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032318.D | 1 | | 10/22/22 04:02 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.00 | U | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | U | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 48.4 | | 81 - 118 | | 97% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 44.9 | | 80 - 119 | | 90% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 46.4 | | 89 - 112 | | 93% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 43.8 | | 85 - 114 | | 88% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 146000 | 5.556 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 228000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 195000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 90800 | 12.024 | | | | |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-34-20221019 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-17 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032318.D | 1 | | 10/22/22 04:02 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-FD-03-20221019 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-18 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032319.D | 1 | | 10/22/22 04:25 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 3.80 | U | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 0.75 | U | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 0.93 | J | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 21.6 | | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 0.69 | J | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-FD-03-20221019 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-18 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032319.D | 1 | | 10/22/22 04:25 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.00 | U | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | U | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 48.3 | | 81 - 118 | | 97% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 45.1 | | 80 - 119 | | 90% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 46.4 | | 89 - 112 | | 93% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 44.4 | | 85 - 114 | | 89% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 143000 | 5.556 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 225000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 195000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 89400 | 12.024 | | | | |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-FD-03-20221019 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-18 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032319.D | 1 | | 10/22/22 04:25 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-15-20221019 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-19 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032320.D | 1 | | 10/22/22 04:48 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 0.25 | J | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 3.80 | U | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 0.75 | U | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 0.38 | J | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 0.75 | U | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 5.60 | | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 150 | E | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-15-20221019 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-19 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032320.D | 1 | | 10/22/22 04:48 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 1.20 | | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.00 | U | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | U | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 48.6 | | 81 - 118 | | 97% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 45.3 | | 80 - 119 | | 91% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 46.5 | | 89 - 112 | | 93% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 44.8 | | 85 - 114 | | 90% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 147000 | 5.556 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 233000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 204000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 95300 | 12.024 | | | | |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-15-20221019 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-19 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032320.D | 1 | | 10/22/22 04:48 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-15-20221019DL | SDG No.: | N5248 |
| Lab Sample ID: | N5248-19DL | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032336.D | 5 | | 10/24/22 13:37 | VX102422 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 2.50 | UD | 0.85 | 2.50 | 5.00 | ug/L |
| 74-87-3 | Chloromethane | 3.80 | UD | 1.00 | 3.80 | 5.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 2.50 | UD | 1.10 | 2.50 | 5.00 | ug/L |
| 74-83-9 | Bromomethane | 12.5 | UD | 7.90 | 12.5 | 25.0 | ug/L |
| 75-00-3 | Chloroethane | 3.80 | UD | 1.30 | 3.80 | 5.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 2.50 | UD | 1.00 | 2.50 | 5.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 2.50 | UD | 0.85 | 2.50 | 5.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 3.80 | UD | 1.20 | 3.80 | 5.00 | ug/L |
| 67-64-1 | Acetone | 18.8 | UD | 5.80 | 18.8 | 25.0 | ug/L |
| 75-15-0 | Carbon Disulfide | 3.80 | UD | 1.30 | 3.80 | 5.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 2.50 | UD | 0.90 | 2.50 | 5.00 | ug/L |
| 79-20-9 | Methyl Acetate | 3.80 | UD | 2.70 | 3.80 | 5.00 | ug/L |
| 75-09-2 | Methylene Chloride | 2.50 | UD | 0.90 | 2.50 | 5.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 2.50 | UD | 1.00 | 2.50 | 5.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 2.50 | UD | 1.00 | 2.50 | 5.00 | ug/L |
| 110-82-7 | Cyclohexane | 12.5 | UD | 6.10 | 12.5 | 25.0 | ug/L |
| 78-93-3 | 2-Butanone | 12.5 | UD | 4.10 | 12.5 | 25.0 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 3.80 | UD | 0.90 | 3.80 | 5.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 3.80 | UD | 0.85 | 3.80 | 5.00 | ug/L |
| 74-97-5 | Bromochloromethane | 3.80 | UD | 0.95 | 3.80 | 5.00 | ug/L |
| 67-66-3 | Chloroform | 3.80 | UD | 0.90 | 3.80 | 5.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 2.50 | UD | 0.90 | 2.50 | 5.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 2.50 | UD | 0.65 | 2.50 | 5.00 | ug/L |
| 71-43-2 | Benzene | 2.50 | UD | 0.80 | 2.50 | 5.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 2.50 | UD | 0.90 | 2.50 | 5.00 | ug/L |
| 79-01-6 | Trichloroethene | 150 | D | 1.40 | 2.50 | 5.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 2.50 | UD | 0.85 | 2.50 | 5.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 2.50 | UD | 0.90 | 2.50 | 5.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 12.5 | UD | 4.40 | 12.5 | 25.0 | ug/L |
| 108-88-3 | Toluene | 2.50 | UD | 0.85 | 2.50 | 5.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 2.50 | UD | 0.70 | 2.50 | 5.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 2.50 | UD | 0.80 | 2.50 | 5.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-15-20221019DL | SDG No.: | N5248 |
| Lab Sample ID: | N5248-19DL | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032336.D | 5 | | 10/24/22 13:37 | VX102422 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 2.50 | UD | 0.95 | 2.50 | 5.00 | ug/L |
| 591-78-6 | 2-Hexanone | 12.5 | UD | 3.80 | 12.5 | 25.0 | ug/L |
| 124-48-1 | Dibromochloromethane | 2.50 | UD | 0.90 | 2.50 | 5.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 2.50 | UD | 0.70 | 2.50 | 5.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 2.50 | UD | 0.90 | 2.50 | 5.00 | ug/L |
| 108-90-7 | Chlorobenzene | 2.50 | UD | 0.85 | 2.50 | 5.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 2.50 | UD | 0.85 | 2.50 | 5.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 5.00 | UD | 1.70 | 5.00 | 10.0 | ug/L |
| 95-47-6 | o-Xylene | 2.50 | UD | 0.90 | 2.50 | 5.00 | ug/L |
| 100-42-5 | Styrene | 2.50 | UD | 0.65 | 2.50 | 5.00 | ug/L |
| 75-25-2 | Bromoform | 2.50 | UD | 0.80 | 2.50 | 5.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 2.50 | UD | 0.95 | 2.50 | 5.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 3.80 | UD | 1.20 | 3.80 | 5.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 2.50 | UD | 1.00 | 2.50 | 5.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 2.50 | UD | 0.95 | 2.50 | 5.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 2.50 | UD | 0.85 | 2.50 | 5.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 3.80 | UD | 2.10 | 3.80 | 5.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 2.50 | UD | 1.20 | 2.50 | 5.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 3.80 | UD | 1.70 | 3.80 | 5.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 47.0 | | 81 - 118 | | 94% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 46.4 | | 80 - 119 | | 93% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 47.1 | | 89 - 112 | | 94% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 43.6 | | 85 - 114 | | 87% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 134000 | 5.556 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 207000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 181000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 84400 | 12.024 | | | | |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-15-20221019DL | SDG No.: | N5248 |
| Lab Sample ID: | N5248-19DL | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032336.D | 5 | | 10/24/22 13:37 | VX102422 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-28-20221019 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-20 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032321.D | 1 | | 10/22/22 05:11 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 0.26 | J | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 3.80 | U | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 0.75 | U | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 0.28 | J | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 0.52 | J | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 3.30 | | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 0.51 | J | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 7.20 | | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 210 | E | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-28-20221019 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-20 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032321.D | 1 | | 10/22/22 05:11 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 27.1 | | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.00 | U | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | U | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 48.4 | | 81 - 118 | | 97% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 45.2 | | 80 - 119 | | 90% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 46.9 | | 89 - 112 | | 94% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 44.6 | | 85 - 114 | | 89% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 142000 | 5.556 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 221000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 194000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 88300 | 12.024 | | | | |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-28-20221019 | SDG No.: | N5248 |
| Lab Sample ID: | N5248-20 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032321.D | 1 | | 10/22/22 05:11 | VX102122 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-28-20221019DL | SDG No.: | N5248 |
| Lab Sample ID: | N5248-20DL | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032337.D | 5 | | 10/24/22 14:00 | VX102422 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 2.50 | UD | 0.85 | 2.50 | 5.00 | ug/L |
| 74-87-3 | Chloromethane | 3.80 | UD | 1.00 | 3.80 | 5.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 2.50 | UD | 1.10 | 2.50 | 5.00 | ug/L |
| 74-83-9 | Bromomethane | 12.5 | UD | 7.90 | 12.5 | 25.0 | ug/L |
| 75-00-3 | Chloroethane | 3.80 | UD | 1.30 | 3.80 | 5.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 2.50 | UD | 1.00 | 2.50 | 5.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 2.50 | UD | 0.85 | 2.50 | 5.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 3.80 | UD | 1.20 | 3.80 | 5.00 | ug/L |
| 67-64-1 | Acetone | 18.8 | UD | 5.80 | 18.8 | 25.0 | ug/L |
| 75-15-0 | Carbon Disulfide | 3.80 | UD | 1.30 | 3.80 | 5.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 2.50 | UD | 0.90 | 2.50 | 5.00 | ug/L |
| 79-20-9 | Methyl Acetate | 3.80 | UD | 2.70 | 3.80 | 5.00 | ug/L |
| 75-09-2 | Methylene Chloride | 2.50 | UD | 0.90 | 2.50 | 5.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 2.50 | UD | 1.00 | 2.50 | 5.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 2.50 | UD | 1.00 | 2.50 | 5.00 | ug/L |
| 110-82-7 | Cyclohexane | 12.5 | UD | 6.10 | 12.5 | 25.0 | ug/L |
| 78-93-3 | 2-Butanone | 12.5 | UD | 4.10 | 12.5 | 25.0 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 3.80 | UD | 0.90 | 3.80 | 5.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 3.80 | UD | 0.85 | 3.80 | 5.00 | ug/L |
| 74-97-5 | Bromochloromethane | 3.80 | UD | 0.95 | 3.80 | 5.00 | ug/L |
| 67-66-3 | Chloroform | 3.80 | UD | 0.90 | 3.80 | 5.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 2.50 | UD | 0.90 | 2.50 | 5.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 2.50 | UD | 0.65 | 2.50 | 5.00 | ug/L |
| 71-43-2 | Benzene | 2.50 | UD | 0.80 | 2.50 | 5.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 2.50 | UD | 0.90 | 2.50 | 5.00 | ug/L |
| 79-01-6 | Trichloroethene | 220 | D | 1.40 | 2.50 | 5.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 2.50 | UD | 0.85 | 2.50 | 5.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 2.50 | UD | 0.90 | 2.50 | 5.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 12.5 | UD | 4.40 | 12.5 | 25.0 | ug/L |
| 108-88-3 | Toluene | 2.50 | UD | 0.85 | 2.50 | 5.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 2.50 | UD | 0.70 | 2.50 | 5.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 2.50 | UD | 0.80 | 2.50 | 5.00 | ug/L |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-28-20221019DL | SDG No.: | N5248 |
| Lab Sample ID: | N5248-20DL | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032337.D | 5 | | 10/24/22 14:00 | VX102422 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 2.50 | UD | 0.95 | 2.50 | 5.00 | ug/L |
| 591-78-6 | 2-Hexanone | 12.5 | UD | 3.80 | 12.5 | 25.0 | ug/L |
| 124-48-1 | Dibromochloromethane | 2.50 | UD | 0.90 | 2.50 | 5.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 2.50 | UD | 0.70 | 2.50 | 5.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 30.0 | D | 0.90 | 2.50 | 5.00 | ug/L |
| 108-90-7 | Chlorobenzene | 2.50 | UD | 0.85 | 2.50 | 5.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 2.50 | UD | 0.85 | 2.50 | 5.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 5.00 | UD | 1.70 | 5.00 | 10.0 | ug/L |
| 95-47-6 | o-Xylene | 2.50 | UD | 0.90 | 2.50 | 5.00 | ug/L |
| 100-42-5 | Styrene | 2.50 | UD | 0.65 | 2.50 | 5.00 | ug/L |
| 75-25-2 | Bromoform | 2.50 | UD | 0.80 | 2.50 | 5.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 2.50 | UD | 0.95 | 2.50 | 5.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 3.80 | UD | 1.20 | 3.80 | 5.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 2.50 | UD | 1.00 | 2.50 | 5.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 2.50 | UD | 0.95 | 2.50 | 5.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 2.50 | UD | 0.85 | 2.50 | 5.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 3.80 | UD | 2.10 | 3.80 | 5.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 2.50 | UD | 1.20 | 2.50 | 5.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 3.80 | UD | 1.70 | 3.80 | 5.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 46.6 | | 81 - 118 | | 93% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 46.2 | | 80 - 119 | | 92% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 46.5 | | 89 - 112 | | 93% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 43.6 | | 85 - 114 | | 87% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 129000 | 5.556 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 201000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 173000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 78200 | 12.024 | | | | |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-28-20221019DL | SDG No.: | N5248 |
| Lab Sample ID: | N5248-20DL | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032337.D | 5 | | 10/24/22 14:00 | VX102422 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

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# LAB CHRONICLE

| | | | |
|---|---|---|---|
| **OrderID:** | N5248 | **OrderDate:** | 10/21/2022 12:13:00 PM |
| **Client:** | EA Engineering Science & Technology | **Project:** | Scotia, NY - Annual Testing |
| **Contact:** | Jim Hayward | **Location:** | D11,VOA Ref. #3 Water |

| LabID | ClientID | Matrix | Test | Method | Sample Date | Prep Date | Anal Date | Received |
|---|---|---|---|---|---|---|---|---|
| **N5248-01** | **FSND-TB-20221018** | **Water** | | | **10/18/22** | | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | | 10/21/22 | |
| **N5248-02** | **FSND-MW-9-20221018** | **Water** | | | **10/18/22** | | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | | 10/21/22 | |
| **N5248-03** | **FSND-RB-20221018** | **Water** | | | **10/18/22** | | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | | 10/24/22 | |
| **N5248-04** | **FSND-MW-22R-20221018** | **Water** | | | **10/18/22** | | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | | 10/21/22 | |
| **N5248-05** | **FSND-MW-6-20221018** | **Water** | | | **10/18/22** | | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | | 10/21/22 | |
| **N5248-06** | **FSND-MW11R-20221018** | **Water** | | | **10/18/22** | | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | | 10/21/22 | |
| **N5248-07** | **FSND-GEP-2-20221018** | **Water** | | | **10/18/22** | | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | | 10/21/22 | |
| **N5248-07DL** | **FSND-GEP-2-20221018DL** | **Water** | | | **10/18/22** | | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | | 10/24/22 | |
| **N5248-08** | **FSND-MW-20-20221018** | **Water** | | | **10/18/22** | | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | | 10/21/22 | |
| **N5248-08RE** | **FSND-MW-20-20221018RE** | **Water** | | | **10/18/22** | | | **10/21/22** |

## LAB CHRONICLE

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | VOC-TCLVOA-10 | 8260-Low | | 10/26/22 | |
| **N5248-09** | **FSND-MW-17-20221018** | **Water** | | | **10/18/22** | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | 10/21/22 | |
| **N5248-10** | **FSND-MW-7-20221018** | **Water** | | | **10/18/22** | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | 10/22/22 | |
| **N5248-11** | **FSND-MW-5-20221018** | **Water** | | | **10/18/22** | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | 10/22/22 | |
| **N5248-12** | **FSND-FD-01-20221018** | **Water** | | | **10/18/22** | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | 10/22/22 | |
| **N5248-13** | **FSND-MW-12R-20221018** | **Water** | | | **10/18/22** | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | 10/22/22 | |
| **N5248-14** | **FSND-MW-19-20221018** | **Water** | | | **10/18/22** | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | 10/22/22 | |
| **N5248-15** | **FSND-GEP-4-20221018** | **Water** | | | **10/18/22** | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | 10/22/22 | |
| **N5248-15DL** | **FSND-GEP-4-20221018DL** | **Water** | | | **10/18/22** | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | 10/24/22 | |
| **N5248-16** | **FSND-MW-16-20221019** | **Water** | | | **10/19/22** | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | 10/22/22 | |
| **N5248-17** | **FSND-MW-34-20221019** | **Water** | | | **10/19/22** | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | 10/22/22 | |
| **N5248-18** | **FSND-FD-03-20221019** | **Water** | | | **10/19/22** | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | 10/22/22 | |

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# LAB CHRONICLE

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **N5248-19** | **FSND-MW-15-20221019** | **Water** | | | **10/19/22** | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | 10/22/22 | |
| **N5248-19DL** | **FSND-MW-15-20221019DL** | **Water** | | | **10/19/22** | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | 10/24/22 | |
| **N5248-20** | **FSND-MW-28-20221019** | **Water** | | | **10/19/22** | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | 10/22/22 | |
| **N5248-20DL** | **FSND-MW-28-20221019DL** | **Water** | | | **10/19/22** | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | 10/24/22 | |

# SHIPPING DOCUMENTS

# CHEMTECH
## CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
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www.chemtech.net

CHEMTECH PROJECT NO.
QUOTE NO. N5248
COC Number 2036760

(1)

### CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: EA Engineering
ADDRESS: 269 West Jefferson St
CITY Syracuse STATE: NY ZIP: 13202
ATTENTION: Amanda ~~Kbert~~ Kohn
PHONE: FAX:

### CLIENT PROJECT INFORMATION

PROJECT NAME: Former Scotia Navy Dept
PROJECT NO.: 160530104 LOCATION: Scotia NY
PROJECT MANAGER: Jim Hayward
e-mail: jhayward@eaest.com
PHONE: FAX:

### CLIENT BILLING INFORMATION

BILL TO: mdina@eaest.com PO#: 160530104
ADDRESS: 25 Western Ave ~~Marlboro~~
CITY Marlboro STATE: NY ZIP: 12542
ATTENTION: PHONE: 914 475 0334

### DATA TURNAROUND INFORMATION

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): _____ DAYS*
EDD: _____ DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

### DATA DELIVERABLE INFORMATION

- ☐ Level 1 (Results Only)
- ☐ Level 2 (Results + QC)
- ☐ Level 3 (Results + QC + Raw Data)
- ☒ Level 4 (QC + Full Raw Data)
- ☐ NJ Reduced ☐ US EPA CLP
- ☐ NYS ASP A ☐ NYS ASP B
- ☐ Other _____
- ☒ EDD FORMAT _____

### ANALYSIS

1 VOC (SW 8260 D) 2 3 4 5 6 7 8 9

### PRESERVATIVES

A

### COMMENTS

← Specify Preservatives
A-HCl D-NaOH
B-HN03 E-ICE
C-H2SO4 F-OTHER

| | CHEMTECH SAMPLE ID | PROJECT SAMPLE IDENTIFICATION | SAMPLE MATRIX | SAMPLE TYPE COMP | SAMPLE TYPE GRAB | SAMPLE COLLECTION DATE | SAMPLE COLLECTION TIME | # OF BOTTLES | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | | FSND-TB-20221018 | W | | X | 10/18/22 | — | 2 | X | | | | | | | | |
| 2. | | FSND-MW-9-20221018 | GW | | X | 10/18/22 | 0933 | 2 | X | | | | | | | | |
| 3. | | FSND-RB-20221018 | W | | X | 10/18/22 | 1600 | 2 | X | | | | | | | | |
| 4. | | FSND-MW-22R-20221018 | GW | | X | 10/18/22 | 1440 | 2 | X | | | | | | | | |
| 5. | | FSND-MW-6-20221018 | GW | | X | 10/18/22 | 0940 | 2 | X | | | | | | | | |
| 6. | | FSND-MW-11R-20221018 | GW | | X | 10/18/22 | 1055 | 2 | X | | | | | | | | |
| 7. | | FSND-GEP-2-20221018 | GW | | X | 10/18/22 | 1540 | 2 | X | | | | | | | | |
| 8. | | FSND-MW-20-20221018 | GW | | X | 10/18/22 | ~~1430~~ | 2 | X | | | | | | | | |
| 9. | | FSND-MW-17-20221018 | GW | | X | 10/18/22 | 1225 | 2 | X | | | | | | | | |
| 10. | | FSND-MW-7-20221018 | GW | | X | 10/18/22 | 0940 | 2 | X | | | | | | | | |

### SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

| | DATE/TIME | RECEIVED BY |
|---|---|---|
| 1. RELINQUISHED BY SAMPLER: | 10/20/22 1300 | 1. |
| 2. RELINQUISHED BY SAMPLER: | 0721 10-21-2022 | 2. |
| 3. RELINQUISHED BY SAMPLER: | | 3. |

Conditions of bottles or coolers at receipt: ☒ COMPLIANT ☒ NON COMPLIANT ☐ COOLER TEMP 5.1 °C
Comments:

Page ____ of ____

CLIENT: ☐ Hand Delivered ☒ Other _____
CHEMTECH: ☐ Picked Up ☐ Field Sampling

Shipment Complete ☐ YES ☐ NO

2/6 N5248 WHITE - CHEMTECH COPY FOR RETURN TO CLIENT YELLOW - CHEMTECH COPY PINK - SAMPLER COPY



6
6.1

# CHEMTECH
## CHAIN OF CUSTODY RECORD

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CHEMTECH PROJECT NO.
QUOTE NO. N5248
COC Number 2036761

(2)

6
6.1

**CLIENT INFORMATION** (REPORT TO BE SENT TO:)

COMPANY: SAME AS PAGE 1
ADDRESS:
CITY STATE: ZIP:
ATTENTION:
PHONE: FAX:

**CLIENT PROJECT INFORMATION**

PROJECT NAME:
PROJECT NO.: LOCATION:
PROJECT MANAGER:
e-mail:
PHONE: FAX:

**CLIENT BILLING INFORMATION**

BILL TO: PO#:
ADDRESS:
CITY STATE: ZIP:
ATTENTION: PHONE:

**DATA TURNAROUND INFORMATION**

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): _____ DAYS*
EDD: _____ DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

**DATA DELIVERABLE INFORMATION**

❑ Level 1 (Results Only) ❑ Level 4 (QC + Full Raw Data)
❑ Level 2 (Results + QC) ❑ NJ Reduced ❑ US EPA CLP
❑ Level 3 (Results + QC + Raw Data) ❑ NYS ASP A ❑ NYS ASP B
❑ Other _____
❑ EDD FORMAT _____

**ANALYSIS**

VOC (SW8260C)

**PRESERVATIVES**

| CHEMTECH SAMPLE ID | PROJECT SAMPLE IDENTIFICATION | SAMPLE MATRIX | SAMPLE TYPE COMP | SAMPLE TYPE GRAB | SAMPLE COLLECTION DATE | SAMPLE COLLECTION TIME | # OF BOTTLES | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | A | | | | | | | | | ← Specify Preservatives A-HCl D-NaOH B-HN03 E-ICE C-H2SO4 F-OTHER |
| 1. | FSND - MW-5 - 20221018 | GW | | X | 10/18/22 | 0845 | 2 | X | | | | | | | | | |
| 2. | FSND - FD-01 - 20221018 | GW | | X | 10/18/22 | — | 2 | X | | | | | | | | | |
| 3. | FSND - MW-12R - 20221018 | GW | | X | 10/18/22 | 1110 | 6 | X | | | | | | | | | MS/MSD |
| 4. | FSND - MW-19 - 20221018 | GW | | X | 10/18/22 | 1245 | 2 | X | | | | | | | | | |
| 5. | FSND - [redacted] GEP-4 - 20221018 | GW | | X | 10/18/22 | 1545 | 2 | X | | | | | | | | | |
| 6. | FSND - MW-16 - 20221019 | GW | | X | 10/19/22 | 0755 | 6 | X | | | | | | | | | MS/MSD |
| 7. | FSND - MW-34 - 20221019 | GW | | X | 10/19/22 | 0930 | 2 | X | | | | | | | | | |
| 8. | FSND - FD-03 - 20221019 | GW | | X | 10/19/22 | — | 2 | X | | | | | | | | | |
| 9. | FSND - MW-15 - 20221019 | GW | | X | 10/19/22 | 0825 | 2 | X | | | | | | | | | |
| 10. | FSND - MW-28 - 20221019 | GW | | X | 10/19/22 | 0945 | 2 | X | | | | | | | | | |

**SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY**

| RELINQUISHED BY SAMPLER: | DATE/TIME: | RECEIVED BY: |
|---|---|---|
| 1. | | 1. |
| RELINQUISHED BY SAMPLER: 2. | DATE/TIME: 0721 10.21.2022 | RECEIVED BY: 2. |
| RELINQUISHED BY SAMPLER: 3. | DATE/TIME: | RECEIVED BY: 3. |

Conditions of bottles or coolers at receipt: X COMPLIANT ❑ NON COMPLIANT ❑ COOLER TEMP 5.1 °C
Comments:

Page ____ of ____

CLIENT: ❑ Hand Delivered X Other _____
CHEMTECH: ❑ Picked Up ❑ Field Sampling

Shipment Complete X YES ❑ NO

2/6/2020 WHITE - CHEMTECH COPY FOR RETURN TO CLIENT YELLOW - CHEMTECH COPY PINK - SAMPLER COPY

# CHEMTECH
## CHAIN OF CUSTODY RECORD

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CHEMTECH PROJECT NO.
QUOTE NO. 05249
COC Number 2036758

(3)

6
6.1

**CLIENT INFORMATION** (REPORT TO BE SENT TO:)
COMPANY: Same AS PAGE 1
ADDRESS:
CITY STATE: ZIP:
ATTENTION:
PHONE: FAX:

**CLIENT PROJECT INFORMATION**
PROJECT NAME:
PROJECT NO.: LOCATION:
PROJECT MANAGER:
e-mail:
PHONE: FAX:

**CLIENT BILLING INFORMATION**
BILL TO: PO#:
ADDRESS:
CITY STATE: ZIP:
ATTENTION: PHONE:

**DATA TURNAROUND INFORMATION**
FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): _____ DAYS*
EDD: _____ DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

**DATA DELIVERABLE INFORMATION**
❑ Level 1 (Results Only) ❑ Level 4 (QC + Full Raw Data)
❑ Level 2 (Results + QC) ❑ NJ Reduced ❑ US EPA CLP
❑ Level 3 (Results + QC + Raw Data) ❑ NYS ASP A ❑ NYS ASP B ❑ Other _____
❑ EDD FORMAT _____

**ANALYSIS**
VOC (SW8260C)

| CHEMTECH SAMPLE ID | PROJECT SAMPLE IDENTIFICATION | SAMPLE MATRIX | SAMPLE TYPE COMP | SAMPLE TYPE GRAB | SAMPLE COLLECTION DATE | SAMPLE COLLECTION TIME | # OF BOTTLES | PRESERVATIVES A | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | FSND-FD-02-~~[illegible]~~20221019 | GW | | X | 10/19/21 | — | 2 | X | | | | | | | | | | |
| 2. | FSND-MW-26-20221019 | GW | | X | 10/19 | 1120 | 2 | X | | | | | | | | | | |
| 3. | FSND-MW-32-20221019 | GW | | X | 10/19 | 1300 | 2 | X | | | | | | | | | | |
| 4. | FSND-MW-29-20221019 | GW | | X | 10/19 | 1140 | 2 | X | | | | | | | | | | |
| 5. | FSND-MW-30-20221019 | GW | | X | 10/19 | 1305 | 2 | X | | | | | | | | | | |
| 6. | FSND-MW-31-20221019 | GW | | X | 10/19 | 1410 | 2 | X | | | | | | | | | | |
| 7. | FSND-MW-33-20221019 | GW | | X | 10/19 | 1120 | 2 | X | | | | | | | | | | |
| 8. | FSND-MW-35-20221019 | GW | | X | 10/19 | 1605 | ~~2~~ | X | | | | | | | | | | |
| 9. | FSND-MW-24-20221019 | GW | | X | 10/19 | 1540 | 2 | X | | | | | | | | | | |
| 10. | FSND-RB-20221019 | W | | X | 10/19 | 1430 | 2 | X | | | | | | | | | | |

PRESERVATIVES: A-HCl B-HN03 C-H2SO4 D-NaOH E-ICE F-OTHER
← Specify Preservatives

**SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY**

| RELINQUISHED BY SAMPLER: | DATE/TIME: | RECEIVED BY: |
|---|---|---|
| 1. | | 1. |
| 2. | 0721 10.21.2021 | 2. |
| 3. | | 3. |

Conditions of bottles or coolers at receipt: ✓ COMPLIANT ❑ NON COMPLIANT ❑ COOLER TEMP 5.1 °C
Comments:

Page ____ of ____

CLIENT: ❑ Hand Delivered ✓ Other _____
CHEMTECH: ❑ Picked Up ❑ Field Sampling

Shipment Complete ✓ YES ❑ NO

# CHEMTECH
## CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 • Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO.
QUOTE NO. N5249
COC Number 2036397

(4)

6
6.1

**CLIENT INFORMATION** (REPORT TO BE SENT TO:)

COMPANY:
ADDRESS: Same As Page 1
CITY STATE: ZIP:
ATTENTION:
PHONE: FAX:

**CLIENT PROJECT INFORMATION**

PROJECT NAME:
PROJECT NO.: LOCATION:
PROJECT MANAGER:
e-mail:
PHONE: FAX:

**CLIENT BILLING INFORMATION**

BILL TO: PO#:
ADDRESS:
CITY STATE: ZIP:
ATTENTION: PHONE:

**DATA TURNAROUND INFORMATION**

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): _____ DAYS*
EDD: _____ DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

**DATA DELIVERABLE INFORMATION**

- ❑ Level 1 (Results Only)
- ❑ Level 2 (Results + QC)
- ❑ Level 3 (Results + QC + Raw Data)
- ❑ Level 4 (QC + Full Raw Data)
- ❑ NJ Reduced ❑ US EPA CLP
- ❑ NYS ASP A ❑ NYS ASP B
- ❑ Other _____
- ❑ EDD FORMAT _____

**ANALYSIS**

**PRESERVATIVES**

**COMMENTS**

← Specify Preservatives
A-HCl D-NaOH
B-HN03 E-ICE
C-H2SO4 F-OTHER

| CHEMTECH SAMPLE ID | PROJECT SAMPLE IDENTIFICATION | SAMPLE MATRIX | SAMPLE TYPE COMP | SAMPLE TYPE GRAB | SAMPLE COLLECTION DATE | SAMPLE COLLECTION TIME | # OF BOTTLES | 1 VOC | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | FSND-MW-14-20221020 | GW | | X | 10/20/22 | 0915 | 2 | X | | | | | | | | |
| 2. | FSND-GEP-1-20221020 | GW | | X | 10/20/22 | 0835 | 2 | X | | | | | | | | |
| 3. | FSND-MW-B-3-20221020 | GW | | X | 10/20/22 | 0925 | 2 | X | | | | | | | | |
| 4. | FSND-RB-20221020 | W | | X | 10/20/22 | 1000 | 2 | X | | | | | | | | |
| 5. | | | | | | | | | | | | | | | | |
| 6. | | | | | | | | | | | | | | | | |
| 7. | | | | | | | | | | | | | | | | |
| 8. | | | | | | | | | | | | | | | | |
| 9. | | | | | | | | | | | | | | | | |
| 10. | | | | | | | | | | | | | | | | |

**SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY**

| RELINQUISHED BY SAMPLER: | DATE/TIME: | RECEIVED BY: |
|---|---|---|
| 1. | | 1. |
| 2. | 0721 10-21-2022 | 2. L. Cotton |
| 3. | | 3. |

Conditions of bottles or coolers at receipt: ❑ COMPLIANT ❑ NON COMPLIANT ❑ COOLER TEMP _____ °C
Comments:

Page ____ of ____

CLIENT: ❑ Hand Delivered ❑ Other _____
CHEMTECH: ❑ Picked Up ❑ Field Sampling

Shipment Complete ❑ YES ❑ NO

**From:** Kohn, Amanda <akohn@eaest.com>
**Sent:** Friday, October 21, 2022 1:37 PM
**To:** Samantha@chemtech.net; 'Jordan Hedvat'; Hayward, Jim
**Subject:** RE: EA_Scotia Estimate

Hi Samantha,

Yes, FSND-FD-01-20221018 sample on the COC is the sample labeled FSND-MW-5-20221018.

Thank you,
Amanda

---

**From:** Samantha Beazley <Samantha@chemtech.net>
**Sent:** Friday, October 21, 2022 12:45 PM
**To:** Kohn, Amanda <akohn@eaest.com>; 'Jordan Hedvat' <jordan@chemtech.net>; Hayward, Jim <jhayward@eaest.com>
**Subject:** RE: EA_Scotia Estimate

Good afternoon,

We receive all the VOC samples except “FSND-FD-01-20221018”. However we did receive two sets of samples “FSND-MW-5-20221018”. Is one of these supposed to be labeled for FD? I attached a picture of the double samples received. Please confirm how the lab should proceed.

Respectfully,

Samantha Beazley
Project Manager

CHEMTECH

284 Sheffield St. | Mountainside, NJ 07092
Direct: (908) 728-3148
samantha@chemtech.net | www.chemtech.net

Your Opinion Matters! Please Give Us Your Feedback

**From:** Kohn, Amanda <akohn@eaest.com>
**Sent:** Thursday, October 20, 2022 4:09 PM
**To:** Jordan Hedvat <jordan@chemtech.net>; Samantha Beazley <samantha@chemtech.net>; Hayward, Jim <jhayward@eaest.com>
**Subject:** RE: EA_Scotia Estimate

Hi Jordan,

Correct,
Anions - Method 9056A
TOC - Method 9060A
Iron - Method 6010D
Dissolved Iron - Method 6010D
Alkalinity Method SM2320B

The VOC samples were shipped today, you should be receiving those tomorrow.

Thank you,
Amanda

**From:** Jordan Hedvat <jordan@chemtech.net>
**Sent:** Thursday, October 20, 2022 4:05 PM
**To:** Kohn, Amanda <akohn@eaest.com>; Samantha Beazley <samantha@chemtech.net>; Hayward, Jim <jhayward@eaest.com>
**Subject:** Fwd: EA_Scotia Estimate

Hi again,

To reiterate previously mentioned notes, we are analyzing the following tests with methods based on DOD certification:

Anions - Method 9056A
TOC - Method 9060A
Iron - Method 6010D
Dissolved Iron - Method 6010D

We are running Alkalinity by Method SM2320B, but we are not DOD certified for this analysis.

Note, we are not analyzing VOC for any of these samples received on 10/20 as this test was not checked off on COC.

Thanks,

Jordan Hedvat

CHEMTECH

284 Sheffield St. | Mountainside, NJ 07092
Direct: (908) 728-3144
jordan@chemtech.net | www.chemtech.net

Your Opinion Matters! Please Give Us Your Feedback

Begin forwarded message:

**From:** Jordan Hedvat <jordan@chemtech.net>
**Date:** April 5, 2022 at 10:43:00 AM EDT
**To:** "Kohn, Amanda" <akohn@eaest.com>
**Cc:** "Hayward, Jim" <jhayward@eaest.com>
**Subject: RE: EA_Scotia Estimate**

Hi Amanda,

*We are DOD certified for Anions by 9056A, and TOC by 9060/9060A. We do not analyze preserved samples for Nitrate/Nitrite, so holding time will be 48 hours.*

*We are not DOD certified for Alkalinity.*

Thanks,

Jordan Hedvat

CHEMTECH

284 Sheffield St. | Mountainside, NJ 07092
Direct: (908) 728-3144
jordan@chemtech.net | www.chemtech.net

<image001.jpg>

Your Opinion Matters! Please Give Us Your Feedback

**From:** Kohn, Amanda <akohn@eaest.com>
**Sent:** Friday, April 1, 2022 4:25 PM
**To:** Jordan Hedvat <jordan@chemtech.net>
**Cc:** Hayward, Jim <jhayward@eaest.com>
**Subject:** RE: EA_Scotia Estimate

Hi Jordan,

Some follow-ups for the Scotia project. For alkalinity, method 300.0 (chloride, nitrate, sulfate) and TOC, do you have another method that is DoD ELAP certified? We could do chloride and sulfate by EPA 9056A, however we would prefer a nitrate combo with nitrite to allow for a longer holding time if possible. For TOC, we could do EPA 9060/9060A.

We are looking more into the dissolved hydrogen, as the method provided is not an EPA method. I will let you know if we still need this analysis.

For the air TO-15 SIM, we no longer need this analysis, so we won't need this subcontracted out.

Thank you,
Amanda

**From:** Kohn, Amanda
**Sent:** Friday, April 1, 2022 1:42 PM
**To:** Jordan Hedvat <jordan@chemtech.net>
**Cc:** Hayward, Jim <jhayward@eaest.com>
**Subject:** RE: EA_Scotia Estimate

Hi Jordan,

I wanted to follow-up with you on the Scotia project. Do you have a lab PM yet for this project? For the lab worksheets, we need these in DoD ELAP format, does the lab have those available for DoD-certified analyses? Also, are you able to subcontract out the dissolved hydrogen and TO-15 SIM analyses? We will need the subcontract lab's info and QAPP worksheets as well.

Thank you,
Amanda

**From:** Kohn, Amanda
**Sent:** Monday, March 28, 2022 4:44 PM
**To:** Jordan Hedvat <jordan@chemtech.net>
**Cc:** Hayward, Jim <jhayward@eaest.com>; Robertson, Jo Ann <jrobertson@eaest.com>; Gannon, Patrick <pgannon@eaest.com>
**Subject:** RE: EA_Scotia Estimate

Hi Jordan,

The standard TO-15 limits are too high for our project action limits. Can ChemTech sub out TO-15 SIM analysis? Also are you able to sub out the Dissolved Hydrogen (AM20GAX)?

Thank you,
Amanda

**From:** Jordan Hedvat <jordan@chemtech.net>
**Sent:** Friday, March 11, 2022 3:46 PM
**To:** Kohn, Amanda <akohn@eaest.com>
**Cc:** Hayward, Jim <jhayward@eaest.com>; Robertson, Jo Ann <jrobertson@eaest.com>; Gannon, Patrick <pgannon@eaest.com>
**Subject:** RE: EA_Scotia Estimate

Hi Amanda,

We just signed the PO for the Scotia NY project and I see on the bid sheet created by EA that TO-15 was listed by SIM method. I know we sent the limits for all the requested analyses, I just want to confirm and make sure that you saw we do not run TO-15 by SIM, just standard. But if you are ok with the limits provided then that will be all.

Thank you

Jordan Hedvat

CHEMTECH

284 Sheffield St. | Mountainside, NJ 07092
Direct: (908) 728-3144
jordan@chemtech.net | www.chemtech.net

<image001.jpg>

Your Opinion Matters! Please Give Us Your Feedback

**From:** Jordan Hedvat <jordan@chemtech.net>
**Sent:** Thursday, March 10, 2022 11:20 AM
**To:** 'Kohn, Amanda' <akohn@eaest.com>
**Cc:** 'Hayward, Jim' <jhayward@eaest.com>; 'Robertson, Jo Ann' <jrobertson@eaest.com>; 'Gannon, Patrick' <pgannon@eaest.com>
**Subject:** RE: EA_Scotia Estimate

Good morning Amanda,

See attached required documents as per your e-mail below.

- We do not analyze for Dissolved Hydrogen (AM20GAX).

Certifications: DOD and NYSDOH attached.

Notes:

- TO-15 – Not certified for DOD. We are certified for NYSDOH.
- Alkalinity – Not certified for DOD. We are certified for NYSDOH.
- Method 300.0 – Not certified for DOD. We are certified for NYSDOH.
- TOC SM5310B – Not certified for DOD. We are certified for NYSDOH.

Thanks,

Jordan Hedvat

CHEMTECH

284 Sheffield St. | Mountainside, NJ 07092
Direct: (908) 728-3144
jordan@chemtech.net | www.chemtech.net

<image001.jpg>

Your Opinion Matters! Please Give Us Your Feedback

**From:** Kohn, Amanda <akohn@eaest.com>
**Sent:** Monday, March 7, 2022 12:31 PM
**To:** Jordan@chemtech.net
**Cc:** Hayward, Jim <jhayward@eaest.com>; Robertson, Jo Ann <jrobertson@eaest.com>; Gannon, Patrick <pgannon@eaest.com>
**Subject:** RE: EA_Scotia Estimate

Good Afternoon Jordan,

I'm following up with you at the request of Jim Hayward regarding Scotia, NY project. We are starting our QAPP and need some info/files from Chemtech so that we can populate the laboratory worksheets. The list of analyses for this project is as follows: aqueous samples for VOCs (EPA Method 8260C), total organic carbon (EPA SM 5310B), alkalinity (EPA SM 2320B), chloride/nitrate/sulfate (EPA Method 300.0), dissolved gases (Method RSK 175), total and dissolved iron (EPA Method 6010), and dissolved hydrogen (EPA Method AM20GAX); and air samples for VOCs (TO-15 Selective Ion Monitoring). Can you please provide laboratory SOPs, certifications (DoD ELAP and NYSDOH ELAP), and the following laboratory worksheets/tables/information for these analyses:

Worksheet #12 Measurement Performance Criteria Tables
Worksheet #15 Reference Limits and Evaluation Tables
Worksheet #19/30 Sample Containers, Preservation, and Hold Times
Worksheet #23 Analytical SOPs Table
Worksheet #24 Analytical Instrument Calibration Table
Worksheet #25 Analytical Instrument and Equipment Maintenance, Testing, and Inspection Table
Worksheet #28 Quality Control Samples Table

Thank you,
Amanda

---

**From:** Hayward, Jim <jhayward@eaest.com>
**Sent:** Monday, March 7, 2022 9:52 AM
**To:** Kohn, Amanda <akohn@eaest.com>
**Subject:** Fwd: EA_Scotia Estimate

Get Outlook for iOS

---

**From:** Hayward, Jim

**Sent:** Friday, March 4, 2022 2:03:28 PM

**To:** Shaw, Sarah <sshaw@eaest.com>

**Subject:** FW: EA_Scotia Estimate

Hi Sarah – sorry, forgot to include the lab POC and contact info in the PR we just set up for Chemtech at Scotia….FYI see hilited below, thanks!

Jim

**From:** Vonuderitz, Joe <jvonuderitz@eaest.com>

**Sent:** Friday, March 4, 2022 9:19 AM

**To:** Hayward, Jim <jhayward@eaest.com>

**Subject:** FW: EA_Scotia Estimate

**From:** Jordan Hedvat <Jordan@chemtech.net>

**Sent:** Thursday, December 2, 2021 3:45 PM

**To:** Vonuderitz, Joe <jvonuderitz@eaest.com>

**Subject:** RE: EA_Scotia Estimate

Hi Joe,

Thanks again for the opportunity. Please find attached rates on STD TAT (10 BD). FedEx Ground shipments are included. If it comes down to pricing, just let me know and we'll fix it.

Please let me know if you have any technical questions, QC, logistics, etc.

Thanks,

Jordan Hedvat

CHEMTECH

284 Sheffield St. | Mountainside, NJ 07092

Direct: (908) 728-3144

jordan@chemtech.net | www.chemtech.net

<image001.jpg>

Your Opinion Matters! Please Give Us Your Feedback

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**From:** Vonuderitz, Joe [mailto:jvonuderitz@eaest.com]

**Sent:** Wednesday, December 1, 2021 10:24 AM

**To:** Jordan Hedvat <Jordan@chemtech.net>

**Subject:** FW: EA_Scotia Estimate

Jordan:

Attached is a bid sheet for annual groundwater sampling at the Scotia, NY site EA is currently bidding. The table represents samples per year. This will be a 5-year contract if EA is successful.

I was hoping to have the quote back next Wednesday (12/8) if possible.

Please let me know if you have any questions.

Thank you

Joe Von Uderitz, P.G.

EA Engineering, P.C. and Its Affiliate EA Science and Technology

269 W. Jefferson Street

Syracuse, New York 13202

Cell: 315-382-9534

# Laboratory Certification

| Certified By | License No. |
|---|---|
| | |
| CAS EPA CLP Contract | 68HERH20D0011 |
| | |
| Connecticut | PH-0649 |
| | |
| DOD ELAP (L-A-B) | L2219 |
| | |
| Maine | 2022022 |
| | |
| Maryland | 296 |
| | |
| New Hampshire | 255422 |
| | |
| New Jersey | 20012 |
| | |
| New York | 11376 |
| | |
| Pennsylvania | 68-00548 |
| | |
| Soil Permit | P330-21-00137 |
| | |
| Texas | T104704488-22-15 |

CHEMTECH

# LOGIN REPORT/SAMPLE TRANSFER

**Order ID :** N5248 EAEN05
**Client Name :** EA Engineering Science &
**Client Contact :** Jim Hayward
**Invoice Name :** EA Engineering Science &
**Invoice Contact :** Jim Hayward

**Order Date :** 10/21/2022 12:13:00 PM
**Project Name :** Scotia, NY - Annual Testing
**Receive DateTime :** 10/21/2022 7:21:00 AM
**Purchase Order :**

**Project Mgr :**
**Report Type :** Level 4
**EDD Type :** NYSDEC EDD V-4
**Hard Copy Date :**
**Date Signoff :**

| LAB ID | CLIENT ID | MATRIX | SAMPLE DATE | SAMPLE TIME | TEST | TEST GROUP | METHOD | FAX DATE | DUE DATES |
|---|---|---|---|---|---|---|---|---|---|
| N5248-01 | FSND-TB-20221018 | Water | 10/18/2022 | 00:00 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | | 10 Bus. Days |
| N5248-02 | FSND-MW-9-20221018 | Water | 10/18/2022 | 09:33 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | | 10 Bus. Days |
| N5248-03 | FSND-RB-20221018 | Water | 10/18/2022 | 16:00 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | | 10 Bus. Days |
| N5248-04 | FSND-MW-22R-20221018 | Water | 10/18/2022 | 14:40 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | | 10 Bus. Days |
| N5248-05 | FSND-MW-6-20221018 | Water | 10/18/2022 | 09:40 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | | 10 Bus. Days |
| N5248-06 | FSND-MW11R-20221018 | Water | 10/18/2022 | 10:55 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | | 10 Bus. Days |
| N5248-07 | FSND-GEP-2-20221018 | Water | 10/18/2022 | 15:40 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | | 10 Bus. Days |
| N5248-08 | FSND-MW-20-20221018 | Water | 10/18/2022 | 14:30 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | | 10 Bus. Days |
| N5248-09 | FSND-MW-17-20221018 | Water | 10/18/2022 | 12:25 | | | | | |

CHEMTECH

# LOGIN REPORT/SAMPLE TRANSFER

**Order ID :** N5248 EAEN05
**Client Name :** EA Engineering Science &
**Client Contact :** Jim Hayward
**Invoice Name :** EA Engineering Science &
**Invoice Contact :** Jim Hayward

**Order Date :** 10/21/2022 12:13:00 PM
**Project Name :** Scotia, NY - Annual Testing
**Receive DateTime :** 10/21/2022 7:21:00 AM
**Purchase Order :**

**Project Mgr :**
**Report Type :** Level 4
**EDD Type :** NYSDEC EDD V-4
**Hard Copy Date :**
**Date Signoff :**

| LAB ID | CLIENT ID | MATRIX | SAMPLE DATE | SAMPLE TIME | TEST | TEST GROUP | METHOD | | FAX DATE | DUE DATES |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | VOC-TCLVOA-10 | | 8260-Low | 10 Bus. Days | | |
| N5248-10 | FSND-MW-7-20221018 | Water | 10/18/2022 | 08:40 | | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | 10 Bus. Days | | |
| N5248-11 | FSND-MW-5-20221018 | Water | 10/18/2022 | 08:45 | | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | 10 Bus. Days | | |
| N5248-12 | FSND-FD-01-20221018 | Water | 10/18/2022 | 00:00 | | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | 10 Bus. Days | | |
| N5248-13 | FSND-MW-12R-20221018 | Water | 10/18/2022 | 11:10 | | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | 10 Bus. Days | | |
| N5248-14 | FSND-MW-19-20221018 | Water | 10/18/2022 | 12:45 | | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | 10 Bus. Days | | |
| N5248-15 | FSND-GEP-4-20221018 | Water | 10/18/2022 | 15:45 | | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | 10 Bus. Days | | |
| N5248-16 | FSND-MW-16-20221019 | Water | 10/19/2022 | 07:55 | | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | 10 Bus. Days | | |
| N5248-17 | FSND-MW-34-20221019 | Water | 10/19/2022 | 09:30 | | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | 10 Bus. Days | | |

CHEMTECH

# LOGIN REPORT/SAMPLE TRANSFER

**Order ID :** N5248 EAEN05
**Client Name :** EA Engineering Science &
**Client Contact :** Jim Hayward
**Invoice Name :** EA Engineering Science &
**Invoice Contact :** Jim Hayward

**Order Date :** 10/21/2022 12:13:00 PM
**Project Name :** Scotia, NY - Annual Testing
**Receive DateTime :** 10/21/2022 7:21:00 AM
**Purchase Order :**

**Project Mgr :**
**Report Type :** Level 4
**EDD Type :** NYSDEC EDD V-4
**Hard Copy Date :**
**Date Signoff :**

| LAB ID | CLIENT ID | MATRIX | SAMPLE DATE | SAMPLE TIME | TEST | TEST GROUP | METHOD | FAX DATE | DUE DATES |
|---|---|---|---|---|---|---|---|---|---|
| N5248-18 | FSND-FD-03-20221019 | Water | 10/19/2022 | 00:00 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | 10 Bus. Days | |
| N5248-19 | FSND-MW-15-20221019 | Water | 10/19/2022 | 08:25 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | 10 Bus. Days | |
| N5248-20 | FSND-MW-28-20221019 | Water | 10/19/2022 | 09:45 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | 10 Bus. Days | |
| N5248-23 | N5248-13MS | Water | 10/18/2022 | 11:10 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | 10 Bus. Days | |
| N5248-24 | N5248-13MSD | Water | 10/18/2022 | 11:10 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | 10 Bus. Days | |
| N5248-25 | N5248-16MS | Water | 10/19/2022 | 07:55 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | 10 Bus. Days | |
| N5248-26 | N5248-16MSD | Water | 10/19/2022 | 07:55 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | 10 Bus. Days | |

CHEMTECH

# LOGIN REPORT/SAMPLE TRANSFER

| | | | | | |
|---|---|---|---|---|---|
| **Order ID :** | N5248 EAEN05 | **Order Date :** | 10/21/2022 12:13:00 PM | **Project Mgr :** | |
| **Client Name :** | EA Engineering Science & | **Project Name :** | Scotia, NY - Annual Testing | **Report Type :** | Level 4 |
| **Client Contact :** | Jim Hayward | **Receive DateTime :** | 10/21/2022 7:21:00 AM | **EDD Type :** | NYSDEC EDD V-4 |
| **Invoice Name :** | EA Engineering Science & | **Purchase Order :** | | **Hard Copy Date :** | |
| **Invoice Contact :** | Jim Hayward | | | **Date Signoff :** | |

| LAB ID | CLIENT ID | MATRIX | SAMPLE DATE | SAMPLE TIME | TEST | TEST GROUP | METHOD | FAX DATE | DUE DATES |
|---|---|---|---|---|---|---|---|---|---|

**Relinguished By :** _____
**Date / Time :** 10/21/22 1450

**Received By :** _____
**Date / Time :** 10.21.22 14:50

**Storage Area :** VOA Refridgerator Room

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# ANALYTICAL RESULTS SUMMARY

VOLATILE ORGANICS

**PROJECT NAME : SCOTIA, NY - ANNUAL TESTING**

**EA ENGINEERING SCIENCE & TECHNOLOGY**

**269 W. Jefferson Street**

**Syracuse, NY - 13202**

**Phone No: 315-431-4610**

**ORDER ID : N5249**

**ATTENTION : Jim Hayward**

NELAP ACCREDITED TNI LABORATORY

ANAB ACCREDITED ISO/IEC 17025 DOD ELAP

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# Cover Page

**Order ID :** N5249

**Project ID :** Scotia, NY - Annual Testing

**Client :** EA Engineering Science & Technology

| Lab Sample Number | Client Sample Number |
|---|---|
| N5249-01 | FSND-FD-02-20221019 |
| N5249-02 | FSND-MW-26-20221019 |
| N5249-03 | FSND-MW-32-20221019 |
| N5249-04 | FSND-MW-29-20221019 |
| N5249-05 | FSND-MW-30-20221019 |
| N5249-06 | FSND-MW-31-20221019 |
| N5249-07 | FSND-MW-33-20221019 |
| N5249-08 | FSND-MW-35-20221019 |
| N5249-09 | FSND-MW-24-20221019 |
| N5249-10 | FSND-RB-20221019 |
| N5249-11 | FSND-MW-14-20221020 |
| N5249-12 | FSND-GEP-1-20221020 |
| N5249-13 | FSND-MW-B-3-20221020 |
| N5249-14 | FSND-RB-20221020 |

I certify that the data package is in compliance with the terms and conditions of the contract,both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : S. M. Jodhani

**APPROVED**

*By Sohil Jodhani, QA/QC Director at 9:53 am, Nov 08, 2022*

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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# CASE NARRATIVE

**EA Engineering Science & Technology**
**Project Name: Scotia, NY - Annual Testing**
**Project # N/A**
**Chemtech Project # N5249**
**Test Name: VOC-TCLVOA-10**

**A. Number of Samples and Date of Receipt:**
14 Water samples were received on 10/21/2022.

**B. Parameters**
According to the Chain of Custody document, the following analyses were requested: VOC-TCLVOA-10. This data package contains results for VOC-TCLVOA-10.

**C. Analytical Techniques:**
The analysis performed on instrument MSVOA_X were done using GC column DB-624UI 20m 0.18mm 1.0 um. Cat#121-1324UIThe analysis of VOC-TCLVOA-10 was based on method 8260D.

**D. QA/ QC Samples:**
The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria except for FSND-MW-29-20221019 [4-Bromofluorobenzene - 84%], As corrective action sample reanalyzed but hits not match therefore lab reported sample with surrogate failure and raw data of second analysis reported as screening data in miscellaneous section.

The Internal Standards Areas met the acceptable requirements.
The Retention Times were acceptable for all samples.
The RPD met criteria .
The Blank Spike met requirements for all samples .
The Blank Spike Duplicate met requirements for all samples .
The Blank analysis did not indicate the presence of lab contamination.

The %RSD is greater than 15% in the Initial Calibration method (82X101922W.M) for Chloromethane, t-1,3-Dichloropropene, Bromoform these compounds are passing on Linear Regression and Chloroethane this compound is passing on Quadratic Regression.

The Continuous Calibration met the requirements .
The Tuning criteria met requirements.

Samples FSND-MW-33-20221019 and FSND-GEP-1-20221020 were diluted due to high concentrations.

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Samples FSND-FD-02-20221019, FSND-MW-29-20221019 required dilution but not analyzed. Mentioned samples VIAL A analyzed but Internal standard fail as corrective action sample reanalyzed from VIAL B but need dilution, now no more vial left for confirmation therefore lab reported VIAL B as final analysis with E flag of Trichloroethene on form-1 and hit summary while raw data of VIAL A reported as screening data in Miscellaneous section.

**E. Additional Comments:**
Samples for MS/MSD for VOC analysis were not provided with this set of samples. The Blank Spike Duplicate is reported with the data.

Trip Blank was not provided with this set of samples.
The not QT review data is reported in the Miscellaneous.

Please use %D calculated based on Avg RF and CCRF for all compounds using Average Response Factor when the %RSD value for a compound is <15% for the Initial Calibration curve and use %D calculated based on Amount added and Calculated amount for all compounds using Linear Regression when the %RSD value for a compound is > 15% for the Initial Calibration curve for SW-846 analysis.

**F. Manual Integration Comments:**
Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

---

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature S. M. Jodhani

**APPROVED**
*By Sohil Jodhani, QA/QC Director at 9:54 am, Nov 08, 2022*

## DATA REPORTING QUALIFIERS- ORGANIC

For reporting results, the following " Results Qualifiers" are used:

| | |
|---|---|
| Value | If the result is a value greater than or equal to the detection limit, report the value |
| **U** | Indicates the compound was analyzed for but was not detected. Report the minimum detection limit for the sample with the U, i.e. "10 U". This is not necessarily the instrument detection limit attainable for this particular sample based on any concentration or dilution that may have been required. |
| **ND** | Indicates the analyte was analyzed for, but not detected |
| **J** | Indicates an estimated value**.** This flag is used:<br>(1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed.)<br>(2) When the mass spectral data indicated the identification, however the result was less than the specified detection limit greater than zero. If the detection limit was 10ug/L and a concentration of 3 ug/L was calculated report as 3 J. This is flag is used when similar situation arise on any organic parameter i.e. Pest, PCB and others. |
| **B** | Indicates the analyte was found in the blank as well as the sample report as "12 B". |
| **E** | Indicates the analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis. |
| **D** | This flag identifies all compounds identified in an analysis at a secondary dilution factor. |
| **P** | This flag is used for Pesticide/PCB target analyte when there is >25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form 1 and flagged with a "P". |
| **N** | This flag indicates presumptive evidence of a compound. This is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It applies to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the flag is not used. |
| **A** | This flag indicates that a Tentatively Identified Compound is a suspected aldol-condensation product. |
| **Q** | Indicates the LCS did not meet the control limits requirements |

## APPENDIX A

## QA REVIEW GENERAL DOCUMENTATION

**Project #:** N5249

| | Completed |
|---|---|
| **For thorough review, the report must have the following:** | |
| **GENERAL:** | |
| **Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)** | ✓ |
| **Check chain-of-custody for proper relinquish/return of samples** | ✓ |
| **Is the chain of custody signed and complete** | ✓ |
| **Check internal chain-of-custody for proper relinquish/return of samples /sample extracts** | ✓ |
| **Collect information for each project id from server. Were all requirements followed** | ✓ |
| **COVER PAGE:** | |
| **Do numbers of samples correspond to the number of samples in the Chain of Custody on login page** | ✓ |
| **Do lab numbers and client Ids on cover page agree with the Chain of Custody** | ✓ |
| **CHAIN OF CUSTODY:** | |
| **Do requested analyses on Chain of Custody agree with form I results** | ✓ |
| **Do requested analyses on Chain of Custody agree with the log-in page** | ✓ |
| **Were the correct method log-in for analysis according to the Analytical Request and Chain of Castody** | ✓ |
| **Were the samples received within hold time** | ✓ |
| **Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle** | ✓ |
| **ANALYTICAL:** | |
| **Was method requirement followed?** | ✓ |
| **Was client requirement followed?** | ✓ |
| **Does the case narrative summarize all QC failure?** | ✓ |
| **All runlogs and manual integration are reviewed for requirements** | ✓ |
| **All manual calculations and /or hand notations verified** | ✓ |

**1st Level QA Review Signature:** MOHAMMAD AHMED **Date:** 11/08/2022

**2nd Level QA Review Signature:** S. M. Jodhani

APPROVED
By Sohil Jodhani, QA/QC Director at 9:54 am, Nov 08, 2022

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# Hit Summary Sheet
**SW-846**



**SDG No.:** N5249

**Client:** EA Engineering Science & Technology

| Sample ID | Client ID | Matrix | Parameter | | Concentration | C | MDL | LOD | RDL | Units |
|---|---|---|---|---|---|---|---|---|---|---|
| **Client ID:** | **FSND-FD-02-20221019** | | | | | | | | | |
| N5249-01 | FSND-FD-02-2022 | Water | cis-1,2-Dichloroethene | | 3.60 | | 0.17 | 0.75 | 1.00 | ug/L |
| N5249-01 | FSND-FD-02-2022 | Water | Chloroform | | 0.59 | J | 0.18 | 0.75 | 1.00 | ug/L |
| N5249-01 | FSND-FD-02-2022 | Water | Trichloroethene | | 230 | E | 0.27 | 0.50 | 1.00 | ug/L |
| N5249-01 | FSND-FD-02-2022 | Water | Tetrachloroethene | | 30.9 | | 0.18 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | | 265 | | | | | |
| | | | **Total Concentration:** | | 265 | | | | | |
| **Client ID:** | **FSND-MW-26-20221019** | | | | | | | | | |
| N5249-02 | FSND-MW-26-202 | Water | Acetone | | 5.10 | | 1.20 | 3.80 | 5.00 | ug/L |
| N5249-02 | FSND-MW-26-202 | Water | Trichloroethene | | 0.59 | J | 0.27 | 0.50 | 1.00 | ug/L |
| N5249-02 | FSND-MW-26-202 | Water | Toluene | | 0.93 | J | 0.17 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | | 6.62 | | | | | |
| N5249-02 | FSND-MW-26-202 | Water | Isopropyl Alcohol | * | 10.5 | J | 0 | | 1.00 | ug/L |
| | | | **Total Tics :** | | 10.5 | | | | | |
| | | | **Total Concentration:** | | 17.1 | | | | | |
| **Client ID:** | **FSND-MW-32-20221019** | | | | | | | | | |
| N5249-03 | FSND-MW-32-202 | Water | 1,1-Dichloroethene | | 0.29 | J | 0.23 | 0.75 | 1.00 | ug/L |
| N5249-03 | FSND-MW-32-202 | Water | Acetone | | 2.10 | J | 1.20 | 3.80 | 5.00 | ug/L |
| N5249-03 | FSND-MW-32-202 | Water | cis-1,2-Dichloroethene | | 1.70 | | 0.17 | 0.75 | 1.00 | ug/L |
| N5249-03 | FSND-MW-32-202 | Water | Trichloroethene | | 110 | | 0.27 | 0.50 | 1.00 | ug/L |
| N5249-03 | FSND-MW-32-202 | Water | Toluene | | 0.80 | J | 0.17 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | | 115 | | | | | |
| N5249-03 | FSND-MW-32-202 | Water | Butane | * | 6.00 | J | 0 | | 0 | ug/L |
| | | | **Total Tics :** | | 6.00 | | | | | |
| | | | **Total Concentration:** | | 121 | | | | | |
| **Client ID:** | **FSND-MW-29-20221019** | | | | | | | | | |
| N5249-04 | FSND-MW-29-202 | Water | cis-1,2-Dichloroethene | | 3.30 | | 0.17 | 0.75 | 1.00 | ug/L |
| N5249-04 | FSND-MW-29-202 | Water | 1,1,1-Trichloroethane | | 7.70 | | 0.18 | 0.50 | 1.00 | ug/L |
| N5249-04 | FSND-MW-29-202 | Water | Trichloroethene | | 210 | E | 0.27 | 0.50 | 1.00 | ug/L |
| N5249-04 | FSND-MW-29-202 | Water | Tetrachloroethene | | 29.8 | | 0.18 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | | 251 | | | | | |
| | | | **Total Concentration:** | | 251 | | | | | |
| **Client ID:** | **FSND-MW-30-20221019** | | | | | | | | | |
| N5249-05 | FSND-MW-30-202 | Water | Acetone | | 3.10 | J | 1.20 | 3.80 | 5.00 | ug/L |
| N5249-05 | FSND-MW-30-202 | Water | Methyl Acetate | | 1.10 | | 0.53 | 0.75 | 1.00 | ug/L |
| N5249-05 | FSND-MW-30-202 | Water | cis-1,2-Dichloroethene | | 0.58 | J | 0.17 | 0.75 | 1.00 | ug/L |
| N5249-05 | FSND-MW-30-202 | Water | Trichloroethene | | 2.30 | | 0.27 | 0.50 | 1.00 | ug/L |
| N5249-05 | FSND-MW-30-202 | Water | Toluene | | 0.23 | J | 0.17 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | | 7.31 | | | | | |

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# Hit Summary Sheet
**SW-846**

**SDG No.:** N5249

**Client:** EA Engineering Science & Technology

| Sample ID | Client ID | Matrix | Parameter | | Concentration | C | MDL | LOD | RDL | Units |
|---|---|---|---|---|---|---|---|---|---|---|
| N5249-05 | FSND-MW-30-202 | Water | Butane | * | 20.0 | J | 0 | | 0 | ug/L |
| N5249-05 | FSND-MW-30-202 | Water | Pentane | * | 9.10 | J | 0 | | 0 | ug/L |
| N5249-05 | FSND-MW-30-202 | Water | Propene | * | 22.6 | J | 0 | | 0 | ug/L |
| | | | **Total Tics :** | | 51.7 | | | | | |
| | | | **Total Concentration:** | | 59.0 | | | | | |
| **Client ID:** | **FSND-MW-31-20221019** | | | | | | | | | |
| N5249-06 | FSND-MW-31-202 | Water | cis-1,2-Dichloroethene | | 0.31 | J | 0.17 | 0.75 | 1.00 | ug/L |
| N5249-06 | FSND-MW-31-202 | Water | Trichloroethene | | 38.4 | | 0.27 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | | 38.7 | | | | | |
| | | | **Total Concentration:** | | 38.7 | | | | | |
| **Client ID:** | **FSND-MW-33-20221019** | | | | | | | | | |
| N5249-07 | FSND-MW-33-202 | Water | Acetone | | 2.00 | J | 1.20 | 3.80 | 5.00 | ug/L |
| N5249-07 | FSND-MW-33-202 | Water | Trichloroethene | | 160 | E | 0.27 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | | 162 | | | | | |
| N5249-07 | FSND-MW-33-202 | Water | Isopropyl Alcohol | * | 16.2 | J | 0 | | 1.00 | ug/L |
| | | | **Total Tics :** | | 16.2 | | | | | |
| | | | **Total Concentration:** | | 178 | | | | | |
| **Client ID:** | **FSND-MW-33-20221019DL** | | | | | | | | | |
| N5249-07DL | FSND-MW-33-202 | Water | Trichloroethene | | 140 | D | 0.54 | 1.00 | 2.00 | ug/L |
| | | | **Total Voc :** | | 140 | | | | | |
| | | | **Total Concentration:** | | 140 | | | | | |
| **Client ID:** | **FSND-MW-35-20221019** | | | | | | | | | |
| N5249-08 | FSND-MW-35-202 | Water | Trichloroethene | | 44.0 | | 0.27 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | | 44.0 | | | | | |
| | | | **Total Concentration:** | | 44.0 | | | | | |
| **Client ID:** | **FSND-MW-24-20221019** | | | | | | | | | |
| N5249-09 | FSND-MW-24-202 | Water | 1,1-Dichloroethene | | 45.9 | | 0.23 | 0.75 | 1.00 | ug/L |
| N5249-09 | FSND-MW-24-202 | Water | trans-1,2-Dichloroethene | | 2.00 | | 0.20 | 0.50 | 1.00 | ug/L |
| N5249-09 | FSND-MW-24-202 | Water | cis-1,2-Dichloroethene | | 4.10 | | 0.17 | 0.75 | 1.00 | ug/L |
| N5249-09 | FSND-MW-24-202 | Water | Trichloroethene | | 6.30 | | 0.27 | 0.50 | 1.00 | ug/L |
| N5249-09 | FSND-MW-24-202 | Water | Toluene | | 0.66 | J | 0.17 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | | 59.0 | | | | | |
| | | | **Total Concentration:** | | 59.0 | | | | | |
| **Client ID:** | **FSND-RB-20221019** | | | | | | | | | |
| N5249-10 | FSND-RB-2022101 | Water | Acetone | | 3.90 | J | 1.20 | 3.80 | 5.00 | ug/L |
| N5249-10 | FSND-RB-2022101 | Water | Benzene | | 0.36 | J | 0.16 | 0.50 | 1.00 | ug/L |
| N5249-10 | FSND-RB-2022101 | Water | Toluene | | 2.50 | | 0.17 | 0.50 | 1.00 | ug/L |
| N5249-10 | FSND-RB-2022101 | Water | Ethyl Benzene | | 0.24 | J | 0.17 | 0.50 | 1.00 | ug/L |
| N5249-10 | FSND-RB-2022101 | Water | m/p-Xylenes | | 0.87 | J | 0.33 | 1.00 | 2.00 | ug/L |
| N5249-10 | FSND-RB-2022101 | Water | o-Xylene | | 0.36 | J | 0.18 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | | 8.23 | | | | | |

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# Hit Summary Sheet
**SW-846**

**SDG No.:** N5249

**Client:** EA Engineering Science & Technology

| Sample ID | Client ID | Matrix | Parameter | Concentration | C | MDL | LOD | RDL | Units |
|---|---|---|---|---|---|---|---|---|---|
| | | | **Total Concentration:** | 8.23 | | | | | |
| **Client ID:** | **FSND-MW-14-20221020** | | | | | | | | |
| N5249-11 | FSND-MW-14-202 | Water | Carbon Tetrachloride | 0.65 | J | 0.18 | 0.75 | 1.00 | ug/L |
| N5249-11 | FSND-MW-14-202 | Water | cis-1,2-Dichloroethene | 4.80 | | 0.17 | 0.75 | 1.00 | ug/L |
| N5249-11 | FSND-MW-14-202 | Water | Chloroform | 0.39 | J | 0.18 | 0.75 | 1.00 | ug/L |
| N5249-11 | FSND-MW-14-202 | Water | 1,1,1-Trichloroethane | 7.60 | | 0.18 | 0.50 | 1.00 | ug/L |
| N5249-11 | FSND-MW-14-202 | Water | Trichloroethene | 7.90 | | 0.27 | 0.50 | 1.00 | ug/L |
| N5249-11 | FSND-MW-14-202 | Water | Tetrachloroethene | 45.4 | | 0.18 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | 66.7 | | | | | |
| | | | **Total Concentration:** | 66.7 | | | | | |
| **Client ID:** | **FSND-GEP-1-20221020** | | | | | | | | |
| N5249-12 | FSND-GEP-1-2022 | Water | 1,1-Dichloroethene | 0.46 | J | 0.23 | 0.75 | 1.00 | ug/L |
| N5249-12 | FSND-GEP-1-2022 | Water | Acetone | 2.60 | J | 1.20 | 3.80 | 5.00 | ug/L |
| N5249-12 | FSND-GEP-1-2022 | Water | 1,1,1-Trichloroethane | 6.50 | | 0.18 | 0.50 | 1.00 | ug/L |
| N5249-12 | FSND-GEP-1-2022 | Water | Trichloroethene | 170 | E | 0.27 | 0.50 | 1.00 | ug/L |
| N5249-12 | FSND-GEP-1-2022 | Water | Tetrachloroethene | 1.10 | | 0.18 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | 181 | | | | | |
| | | | **Total Concentration:** | 181 | | | | | |
| **Client ID:** | **FSND-GEP-1-20221020DL** | | | | | | | | |
| N5249-12DL | FSND-GEP-1-2022 | Water | Methylene Chloride | 0.74 | JD | 0.36 | 1.00 | 2.00 | ug/L |
| N5249-12DL | FSND-GEP-1-2022 | Water | 1,1,1-Trichloroethane | 5.20 | D | 0.36 | 1.00 | 2.00 | ug/L |
| N5249-12DL | FSND-GEP-1-2022 | Water | Trichloroethene | 130 | D | 0.54 | 1.00 | 2.00 | ug/L |
| N5249-12DL | FSND-GEP-1-2022 | Water | Tetrachloroethene | 0.76 | JD | 0.36 | 1.00 | 2.00 | ug/L |
| | | | **Total Voc :** | 137 | | | | | |
| | | | **Total Concentration:** | 137 | | | | | |
| **Client ID:** | **FSND-MW-B-3-20221020** | | | | | | | | |
| N5249-13 | FSND-MW-B-3-20 | Water | Trichloroethene | 0.57 | J | 0.27 | 0.50 | 1.00 | ug/L |
| N5249-13 | FSND-MW-B-3-20 | Water | Toluene | 1.30 | | 0.17 | 0.50 | 1.00 | ug/L |
| N5249-13 | FSND-MW-B-3-20 | Water | Tetrachloroethene | 0.54 | J | 0.18 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | 2.41 | | | | | |
| | | | **Total Concentration:** | 2.41 | | | | | |
| **Client ID:** | **FSND-RB-20221020** | | | | | | | | |
| N5249-14 | FSND-RB-2022102 | Water | Acetone | 4.50 | J | 1.20 | 3.80 | 5.00 | ug/L |
| N5249-14 | FSND-RB-2022102 | Water | Benzene | 0.34 | J | 0.16 | 0.50 | 1.00 | ug/L |
| N5249-14 | FSND-RB-2022102 | Water | Toluene | 2.40 | | 0.17 | 0.50 | 1.00 | ug/L |
| N5249-14 | FSND-RB-2022102 | Water | m/p-Xylenes | 0.88 | J | 0.33 | 1.00 | 2.00 | ug/L |
| N5249-14 | FSND-RB-2022102 | Water | o-Xylene | 0.29 | J | 0.18 | 0.50 | 1.00 | ug/L |
| | | | **Total Voc :** | 8.41 | | | | | |
| | | | **Total Concentration:** | 8.41 | | | | | |

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# Hit Summary Sheet
**SW-846**

**SDG No.:** N5249

**Client:** EA Engineering Science & Technology

| Sample ID | Client ID | Matrix | Parameter | Concentration | C | MDL | LOD | RDL | Units |
|---|---|---|---|---|---|---|---|---|---|

# SAMPLE DATA

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-FD-02-20221019 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032362.D | 1 | | 10/25/22 14:26 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 3.80 | U | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 0.75 | U | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 3.60 | | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 0.59 | J | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 230 | E | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-FD-02-20221019 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032362.D | 1 | | 10/25/22 14:26 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 30.9 | | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.00 | U | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | U | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 48.6 | | 81 - 118 | | 97% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 45.8 | | 80 - 119 | | 92% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 46.7 | | 89 - 112 | | 93% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 44.6 | | 85 - 114 | | 89% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 132000 | 5.555 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 206000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 180000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 86000 | 12.024 | | | | |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-FD-02-20221019 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-01 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032362.D | 1 | | 10/25/22 14:26 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-26-20221019 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-02 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032363.D | 1 | | 10/25/22 14:49 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 5.10 | | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 0.75 | U | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 0.75 | U | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 0.59 | J | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 0.93 | J | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-26-20221019 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-02 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032363.D | 1 | | 10/25/22 14:49 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.00 | U | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | U | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 48.9 | | 81 - 118 | | 98% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 47.1 | | 80 - 119 | | 94% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 46.5 | | 89 - 112 | | 93% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 44.6 | | 85 - 114 | | 89% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 129000 | 5.556 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 205000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 176000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 83400 | 12.024 | | | | |
| **TENTATIVE IDENTIFIED COMPOUNDS** | | | | | | | |
| 67-63-0 | Isopropyl Alcohol | 10.5 | J | | | 2.54 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-26-20221019 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-02 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032363.D | 1 | | 10/25/22 14:49 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-32-20221019 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-03 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032364.D | 1 | | 10/25/22 15:13 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 0.29 | J | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 2.10 | J | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 0.75 | U | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 1.70 | | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 110 | | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 0.80 | J | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-32-20221019 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-03 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032364.D | 1 | | 10/25/22 15:13 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.00 | U | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | U | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 48.3 | | 81 - 118 | | 97% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 46.3 | | 80 - 119 | | 93% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 47.3 | | 89 - 112 | | 95% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 44.4 | | 85 - 114 | | 89% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 134000 | 5.556 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 209000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 182000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 85600 | 12.024 | | | | |
| **TENTATIVE IDENTIFIED COMPOUNDS** | | | | | | | |
| 000106-97-8 | Butane | 6.00 | J | | | 1.37 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-32-20221019 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-03 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032364.D | 1 | | 10/25/22 15:13 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-29-20221019 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-04 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032365.D | 1 | | 10/25/22 15:36 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 3.80 | U | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 0.75 | U | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 3.30 | | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 7.70 | | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 210 | E | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-29-20221019 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-04 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032365.D | 1 | | 10/25/22 15:36 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 29.8 | | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.00 | U | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | U | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 48.1 | | 81 - 118 | | 96% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 46.7 | | 80 - 119 | | 93% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 46.7 | | 89 - 112 | | 93% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 42.0 | * | 85 - 114 | | 84% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 128000 | 5.556 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 201000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 171000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 72200 | 12.024 | | | | |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-29-20221019 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-04 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032365.D | 1 | | 10/25/22 15:36 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-30-20221019 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-05 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032367.D | 1 | | 10/25/22 16:23 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 3.10 | J | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 1.10 | | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 0.58 | J | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 2.30 | | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 0.23 | J | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-30-20221019 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-05 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032367.D | 1 | | 10/25/22 16:23 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.00 | U | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | U | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 47.9 | | 81 - 118 | | 96% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 46.4 | | 80 - 119 | | 93% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 46.9 | | 89 - 112 | | 94% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 43.7 | | 85 - 114 | | 87% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 129000 | 5.556 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 203000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 177000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 80700 | 12.024 | | | | |
| **TENTATIVE IDENTIFIED COMPOUNDS** | | | | | | | |
| 000115-07-1 | Propene | 22.6 | J | | | 1.14 | ug/L |
| 000106-97-8 | Butane | 20.0 | J | | | 1.37 | ug/L |
| 000109-66-0 | Pentane | 9.10 | J | | | 1.95 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-30-20221019 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-05 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032367.D | 1 | | 10/25/22 16:23 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-31-20221019 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-06 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032368.D | 1 | | 10/25/22 16:46 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 3.80 | U | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 0.75 | U | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 0.31 | J | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 38.4 | | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-31-20221019 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-06 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032368.D | 1 | | 10/25/22 16:46 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.00 | U | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | U | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 48.5 | | 81 - 118 | | 97% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 46.1 | | 80 - 119 | | 92% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 46.9 | | 89 - 112 | | 94% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 42.4 | | 85 - 114 | | 85% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 126000 | 5.556 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 198000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 168000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 76700 | 12.024 | | | | |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-31-20221019 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-06 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032368.D | 1 | | 10/25/22 16:46 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-33-20221019 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-07 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032369.D | 1 | | 10/25/22 17:09 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 2.00 | J | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 0.75 | U | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 0.75 | U | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 160 | E | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-33-20221019 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-07 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032369.D | 1 | | 10/25/22 17:09 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.00 | U | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | U | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 49.1 | | 81 - 118 | | 98% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 46.6 | | 80 - 119 | | 93% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 47.4 | | 89 - 112 | | 95% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 43.7 | | 85 - 114 | | 87% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 128000 | 5.556 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 201000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 174000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 80200 | 12.024 | | | | |
| **TENTATIVE IDENTIFIED COMPOUNDS** | | | | | | | |
| 67-63-0 | Isopropyl Alcohol | 16.2 | J | | | 2.55 | ug/L |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-33-20221019 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-07 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032369.D | 1 | | 10/25/22 17:09 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-33-20221019DL | SDG No.: | N5249 |
| Lab Sample ID: | N5249-07DL | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032442.D | 2 | | 10/27/22 20:33 | VX102722 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 1.00 | UD | 0.34 | 1.00 | 2.00 | ug/L |
| 74-87-3 | Chloromethane | 1.50 | UD | 0.40 | 1.50 | 2.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 1.00 | UD | 0.44 | 1.00 | 2.00 | ug/L |
| 74-83-9 | Bromomethane | 5.00 | UD | 3.10 | 5.00 | 10.0 | ug/L |
| 75-00-3 | Chloroethane | 1.50 | UD | 0.52 | 1.50 | 2.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 1.00 | UD | 0.40 | 1.00 | 2.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 1.00 | UD | 0.34 | 1.00 | 2.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 1.50 | UD | 0.46 | 1.50 | 2.00 | ug/L |
| 67-64-1 | Acetone | 7.50 | UD | 2.30 | 7.50 | 10.0 | ug/L |
| 75-15-0 | Carbon Disulfide | 1.50 | UD | 0.52 | 1.50 | 2.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 1.00 | UD | 0.36 | 1.00 | 2.00 | ug/L |
| 79-20-9 | Methyl Acetate | 1.50 | UD | 1.10 | 1.50 | 2.00 | ug/L |
| 75-09-2 | Methylene Chloride | 1.00 | UD | 0.36 | 1.00 | 2.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 1.00 | UD | 0.40 | 1.00 | 2.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 1.00 | UD | 0.40 | 1.00 | 2.00 | ug/L |
| 110-82-7 | Cyclohexane | 5.00 | UD | 2.40 | 5.00 | 10.0 | ug/L |
| 78-93-3 | 2-Butanone | 5.00 | UD | 1.60 | 5.00 | 10.0 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 1.50 | UD | 0.36 | 1.50 | 2.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 1.50 | UD | 0.34 | 1.50 | 2.00 | ug/L |
| 74-97-5 | Bromochloromethane | 1.50 | UD | 0.38 | 1.50 | 2.00 | ug/L |
| 67-66-3 | Chloroform | 1.50 | UD | 0.36 | 1.50 | 2.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 1.00 | UD | 0.36 | 1.00 | 2.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 1.00 | UD | 0.26 | 1.00 | 2.00 | ug/L |
| 71-43-2 | Benzene | 1.00 | UD | 0.32 | 1.00 | 2.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 1.00 | UD | 0.36 | 1.00 | 2.00 | ug/L |
| 79-01-6 | Trichloroethene | 140 | D | 0.54 | 1.00 | 2.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 1.00 | UD | 0.34 | 1.00 | 2.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 1.00 | UD | 0.36 | 1.00 | 2.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 5.00 | UD | 1.70 | 5.00 | 10.0 | ug/L |
| 108-88-3 | Toluene | 1.00 | UD | 0.34 | 1.00 | 2.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 1.00 | UD | 0.28 | 1.00 | 2.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 1.00 | UD | 0.32 | 1.00 | 2.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-33-20221019DL | SDG No.: | N5249 |
| Lab Sample ID: | N5249-07DL | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032442.D | 2 | | 10/27/22 20:33 | VX102722 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 1.00 | UD | 0.38 | 1.00 | 2.00 | ug/L |
| 591-78-6 | 2-Hexanone | 5.00 | UD | 1.50 | 5.00 | 10.0 | ug/L |
| 124-48-1 | Dibromochloromethane | 1.00 | UD | 0.36 | 1.00 | 2.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 1.00 | UD | 0.28 | 1.00 | 2.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 1.00 | UD | 0.36 | 1.00 | 2.00 | ug/L |
| 108-90-7 | Chlorobenzene | 1.00 | UD | 0.34 | 1.00 | 2.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 1.00 | UD | 0.34 | 1.00 | 2.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 2.00 | UD | 0.66 | 2.00 | 4.00 | ug/L |
| 95-47-6 | o-Xylene | 1.00 | UD | 0.36 | 1.00 | 2.00 | ug/L |
| 100-42-5 | Styrene | 1.00 | UD | 0.26 | 1.00 | 2.00 | ug/L |
| 75-25-2 | Bromoform | 1.00 | UD | 0.32 | 1.00 | 2.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 1.00 | UD | 0.38 | 1.00 | 2.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.50 | UD | 0.46 | 1.50 | 2.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 1.00 | UD | 0.40 | 1.00 | 2.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 1.00 | UD | 0.38 | 1.00 | 2.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 1.00 | UD | 0.34 | 1.00 | 2.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 1.50 | UD | 0.84 | 1.50 | 2.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1.00 | UD | 0.46 | 1.00 | 2.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1.50 | UD | 0.66 | 1.50 | 2.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 47.9 | | 81 - 118 | | 96% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 45.5 | | 80 - 119 | | 91% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 47.7 | | 89 - 112 | | 95% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 45.0 | | 85 - 114 | | 90% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 121000 | 5.556 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 196000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 172000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 78800 | 12.024 | | | | |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-33-20221019DL | SDG No.: | N5249 |
| Lab Sample ID: | N5249-07DL | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032442.D | 2 | | 10/27/22 20:33 | VX102722 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-35-20221019 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-08 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032370.D | 1 | | 10/25/22 17:33 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 3.80 | U | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 0.75 | U | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 0.75 | U | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 44.0 | | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-35-20221019 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-08 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032370.D | 1 | | 10/25/22 17:33 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.00 | U | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | U | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 49.1 | | 81 - 118 | | 98% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 46.4 | | 80 - 119 | | 93% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 47.4 | | 89 - 112 | | 95% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 45.0 | | 85 - 114 | | 90% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 126000 | 5.556 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 201000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 178000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 83100 | 12.024 | | | | |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-35-20221019 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-08 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032370.D | 1 | | 10/25/22 17:33 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-24-20221019 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-09 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032371.D | 1 | | 10/25/22 17:56 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 45.9 | | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 3.80 | U | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 0.75 | U | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 2.00 | | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 4.10 | | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 6.30 | | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 0.66 | J | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-24-20221019 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-09 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032371.D | 1 | | 10/25/22 17:56 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.00 | U | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | U | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 49.6 | | 81 - 118 | | 99% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 46.4 | | 80 - 119 | | 93% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 46.6 | | 89 - 112 | | 93% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 43.9 | | 85 - 114 | | 88% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 126000 | 5.556 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 203000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 177000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 81400 | 12.024 | | | | |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-24-20221019 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-09 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032371.D | 1 | | 10/25/22 17:56 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-RB-20221019 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-10 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032372.D | 1 | | 10/25/22 18:19 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 3.90 | J | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 0.75 | U | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 0.75 | U | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.36 | J | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 0.50 | U | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 2.50 | | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-RB-20221019 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-10 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032372.D | 1 | | 10/25/22 18:19 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.24 | J | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 0.87 | J | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.36 | J | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | U | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 49.1 | | 81 - 118 | | 98% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 46.2 | | 80 - 119 | | 92% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 46.6 | | 89 - 112 | | 93% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 42.5 | | 85 - 114 | | 85% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 124000 | 5.556 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 199000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 169000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 77200 | 12.024 | | | | |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/19/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-RB-20221019 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-10 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032372.D | 1 | | 10/25/22 18:19 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/20/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-14-20221020 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-11 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032373.D | 1 | | 10/25/22 18:43 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 3.80 | U | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 0.75 | U | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 0.65 | J | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 4.80 | | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 0.39 | J | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 7.60 | | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 7.90 | | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/20/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-14-20221020 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-11 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032373.D | 1 | | 10/25/22 18:43 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 45.4 | | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.00 | U | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | U | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 49.9 | | 81 - 118 | | 100% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 46.8 | | 80 - 119 | | 94% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 47.4 | | 89 - 112 | | 95% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 44.8 | | 85 - 114 | | 90% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 127000 | 5.556 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 202000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 175000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 82400 | 12.024 | | | | |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/20/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-14-20221020 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-11 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032373.D | 1 | | 10/25/22 18:43 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/20/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-GEP-1-20221020 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-12 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032374.D | 1 | | 10/25/22 19:06 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 0.46 | J | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 2.60 | J | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 0.75 | U | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 0.75 | U | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 6.50 | | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 170 | E | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/20/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-GEP-1-20221020 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-12 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032374.D | 1 | | 10/25/22 19:06 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 1.10 | | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.00 | U | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | U | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 48.7 | | 81 - 118 | | 97% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 46.6 | | 80 - 119 | | 93% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 47.0 | | 89 - 112 | | 94% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 43.8 | | 85 - 114 | | 88% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 126000 | 5.55 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 199000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 172000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 79400 | 12.024 | | | | |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/20/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-GEP-1-20221020 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-12 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032374.D | 1 | | 10/25/22 19:06 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/20/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-GEP-1-20221020DL | SDG No.: | N5249 |
| Lab Sample ID: | N5249-12DL | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032443.D | 2 | | 10/27/22 20:56 | VX102722 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 1.00 | UD | 0.34 | 1.00 | 2.00 | ug/L |
| 74-87-3 | Chloromethane | 1.50 | UD | 0.40 | 1.50 | 2.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 1.00 | UD | 0.44 | 1.00 | 2.00 | ug/L |
| 74-83-9 | Bromomethane | 5.00 | UD | 3.10 | 5.00 | 10.0 | ug/L |
| 75-00-3 | Chloroethane | 1.50 | UD | 0.52 | 1.50 | 2.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 1.00 | UD | 0.40 | 1.00 | 2.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 1.00 | UD | 0.34 | 1.00 | 2.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 1.50 | UD | 0.46 | 1.50 | 2.00 | ug/L |
| 67-64-1 | Acetone | 7.50 | UD | 2.30 | 7.50 | 10.0 | ug/L |
| 75-15-0 | Carbon Disulfide | 1.50 | UD | 0.52 | 1.50 | 2.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 1.00 | UD | 0.36 | 1.00 | 2.00 | ug/L |
| 79-20-9 | Methyl Acetate | 1.50 | UD | 1.10 | 1.50 | 2.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.74 | JD | 0.36 | 1.00 | 2.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 1.00 | UD | 0.40 | 1.00 | 2.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 1.00 | UD | 0.40 | 1.00 | 2.00 | ug/L |
| 110-82-7 | Cyclohexane | 5.00 | UD | 2.40 | 5.00 | 10.0 | ug/L |
| 78-93-3 | 2-Butanone | 5.00 | UD | 1.60 | 5.00 | 10.0 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 1.50 | UD | 0.36 | 1.50 | 2.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 1.50 | UD | 0.34 | 1.50 | 2.00 | ug/L |
| 74-97-5 | Bromochloromethane | 1.50 | UD | 0.38 | 1.50 | 2.00 | ug/L |
| 67-66-3 | Chloroform | 1.50 | UD | 0.36 | 1.50 | 2.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 5.20 | D | 0.36 | 1.00 | 2.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 1.00 | UD | 0.26 | 1.00 | 2.00 | ug/L |
| 71-43-2 | Benzene | 1.00 | UD | 0.32 | 1.00 | 2.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 1.00 | UD | 0.36 | 1.00 | 2.00 | ug/L |
| 79-01-6 | Trichloroethene | 130 | D | 0.54 | 1.00 | 2.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 1.00 | UD | 0.34 | 1.00 | 2.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 1.00 | UD | 0.36 | 1.00 | 2.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 5.00 | UD | 1.70 | 5.00 | 10.0 | ug/L |
| 108-88-3 | Toluene | 1.00 | UD | 0.34 | 1.00 | 2.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 1.00 | UD | 0.28 | 1.00 | 2.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 1.00 | UD | 0.32 | 1.00 | 2.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/20/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-GEP-1-20221020DL | SDG No.: | N5249 |
| Lab Sample ID: | N5249-12DL | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032443.D | 2 | | 10/27/22 20:56 | VX102722 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 1.00 | UD | 0.38 | 1.00 | 2.00 | ug/L |
| 591-78-6 | 2-Hexanone | 5.00 | UD | 1.50 | 5.00 | 10.0 | ug/L |
| 124-48-1 | Dibromochloromethane | 1.00 | UD | 0.36 | 1.00 | 2.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 1.00 | UD | 0.28 | 1.00 | 2.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 0.76 | JD | 0.36 | 1.00 | 2.00 | ug/L |
| 108-90-7 | Chlorobenzene | 1.00 | UD | 0.34 | 1.00 | 2.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 1.00 | UD | 0.34 | 1.00 | 2.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 2.00 | UD | 0.66 | 2.00 | 4.00 | ug/L |
| 95-47-6 | o-Xylene | 1.00 | UD | 0.36 | 1.00 | 2.00 | ug/L |
| 100-42-5 | Styrene | 1.00 | UD | 0.26 | 1.00 | 2.00 | ug/L |
| 75-25-2 | Bromoform | 1.00 | UD | 0.32 | 1.00 | 2.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 1.00 | UD | 0.38 | 1.00 | 2.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.50 | UD | 0.46 | 1.50 | 2.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 1.00 | UD | 0.40 | 1.00 | 2.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 1.00 | UD | 0.38 | 1.00 | 2.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 1.00 | UD | 0.34 | 1.00 | 2.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 1.50 | UD | 0.84 | 1.50 | 2.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1.00 | UD | 0.46 | 1.00 | 2.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1.50 | UD | 0.66 | 1.50 | 2.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 48.6 | | 81 - 118 | | 97% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 45.4 | | 80 - 119 | | 91% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 48.0 | | 89 - 112 | | 96% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 46.3 | | 85 - 114 | | 93% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 126000 | 5.556 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 209000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 186000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 85800 | 12.024 | | | | |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/20/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-GEP-1-20221020DL | SDG No.: | N5249 |
| Lab Sample ID: | N5249-12DL | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032443.D | 2 | | 10/27/22 20:56 | VX102722 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/20/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-B-3-20221020 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-13 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032375.D | 1 | | 10/25/22 19:30 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 3.80 | U | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 0.75 | U | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 0.75 | U | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 0.57 | J | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 1.30 | | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/20/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-B-3-20221020 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-13 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032375.D | 1 | | 10/25/22 19:30 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 0.54 | J | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.00 | U | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | U | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 49.2 | | 81 - 118 | | 98% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 46.6 | | 80 - 119 | | 93% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 46.7 | | 89 - 112 | | 93% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 43.9 | | 85 - 114 | | 88% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 125000 | 5.55 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 199000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 173000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 79800 | 12.024 | | | | |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/20/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-MW-B-3-20221020 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-13 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032375.D | 1 | | 10/25/22 19:30 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/20/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-RB-20221020 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-14 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032376.D | 1 | | 10/25/22 19:53 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 74-87-3 | Chloromethane | 0.75 | U | 0.20 | 0.75 | 1.00 | ug/L |
| 75-01-4 | Vinyl Chloride | 0.50 | U | 0.22 | 0.50 | 1.00 | ug/L |
| 74-83-9 | Bromomethane | 2.50 | U | 1.60 | 2.50 | 5.00 | ug/L |
| 75-00-3 | Chloroethane | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 75-69-4 | Trichlorofluoromethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-35-4 | 1,1-Dichloroethene | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 67-64-1 | Acetone | 4.50 | J | 1.20 | 3.80 | 5.00 | ug/L |
| 75-15-0 | Carbon Disulfide | 0.75 | U | 0.26 | 0.75 | 1.00 | ug/L |
| 1634-04-4 | Methyl tert-butyl Ether | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-20-9 | Methyl Acetate | 0.75 | U | 0.53 | 0.75 | 1.00 | ug/L |
| 75-09-2 | Methylene Chloride | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 156-60-5 | trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 75-34-3 | 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 110-82-7 | Cyclohexane | 2.50 | U | 1.20 | 2.50 | 5.00 | ug/L |
| 78-93-3 | 2-Butanone | 2.50 | U | 0.82 | 2.50 | 5.00 | ug/L |
| 56-23-5 | Carbon Tetrachloride | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 156-59-2 | cis-1,2-Dichloroethene | 0.75 | U | 0.17 | 0.75 | 1.00 | ug/L |
| 74-97-5 | Bromochloromethane | 0.75 | U | 0.19 | 0.75 | 1.00 | ug/L |
| 67-66-3 | Chloroform | 0.75 | U | 0.18 | 0.75 | 1.00 | ug/L |
| 71-55-6 | 1,1,1-Trichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-87-2 | Methylcyclohexane | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.34 | J | 0.16 | 0.50 | 1.00 | ug/L |
| 107-06-2 | 1,2-Dichloroethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 79-01-6 | Trichloroethene | 0.50 | U | 0.27 | 0.50 | 1.00 | ug/L |
| 78-87-5 | 1,2-Dichloropropane | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 75-27-4 | Bromodichloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-10-1 | 4-Methyl-2-Pentanone | 2.50 | U | 0.87 | 2.50 | 5.00 | ug/L |
| 108-88-3 | Toluene | 2.40 | | 0.17 | 0.50 | 1.00 | ug/L |
| 10061-02-6 | t-1,3-Dichloropropene | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/20/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-RB-20221020 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-14 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032376.D | 1 | | 10/25/22 19:53 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 591-78-6 | 2-Hexanone | 2.50 | U | 0.76 | 2.50 | 5.00 | ug/L |
| 124-48-1 | Dibromochloromethane | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 106-93-4 | 1,2-Dibromoethane | 0.50 | U | 0.14 | 0.50 | 1.00 | ug/L |
| 127-18-4 | Tetrachloroethene | 0.50 | U | 0.18 | 0.50 | 1.00 | ug/L |
| 108-90-7 | Chlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 0.88 | J | 0.33 | 1.00 | 2.00 | ug/L |
| 95-47-6 | o-Xylene | 0.29 | J | 0.18 | 0.50 | 1.00 | ug/L |
| 100-42-5 | Styrene | 0.50 | U | 0.13 | 0.50 | 1.00 | ug/L |
| 75-25-2 | Bromoform | 0.50 | U | 0.16 | 0.50 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.75 | U | 0.23 | 0.75 | 1.00 | ug/L |
| 541-73-1 | 1,3-Dichlorobenzene | 0.50 | U | 0.20 | 0.50 | 1.00 | ug/L |
| 106-46-7 | 1,4-Dichlorobenzene | 0.50 | U | 0.19 | 0.50 | 1.00 | ug/L |
| 95-50-1 | 1,2-Dichlorobenzene | 0.50 | U | 0.17 | 0.50 | 1.00 | ug/L |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.75 | U | 0.42 | 0.75 | 1.00 | ug/L |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.50 | U | 0.23 | 0.50 | 1.00 | ug/L |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.75 | U | 0.33 | 0.75 | 1.00 | ug/L |
| **SURROGATES** | | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 49.2 | | 81 - 118 | | 98% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 46.7 | | 80 - 119 | | 93% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 47.3 | | 89 - 112 | | 95% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 43.4 | | 85 - 114 | | 87% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | | |
| 363-72-4 | Pentafluorobenzene | 124000 | 5.556 | | | | |
| 540-36-3 | 1,4-Difluorobenzene | 197000 | 6.763 | | | | |
| 3114-55-4 | Chlorobenzene-d5 | 172000 | 10.055 | | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 77300 | 12.024 | | | | |

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922



# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | EA Engineering Science & Technology | Date Collected: | 10/20/22 |
| Project: | Scotia, NY - Annual Testing | Date Received: | 10/21/22 |
| Client Sample ID: | FSND-RB-20221020 | SDG No.: | N5249 |
| Lab Sample ID: | N5249-14 | Matrix: | Water |
| Analytical Method: | SW8260 | % Moisture: | 100 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOC-TCLVOA-10 |
| GC Column: | DB-624UI ID : 0.18 | Level : | LOW |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VX032376.D | 1 | | 10/25/22 19:53 | VX102522 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

CHEMTECH
284 Sheffield Street, Mountainside, New Jersey - 07092
Phone: (908) 789 8900 Fax: (908) 789 8922



# LAB CHRONICLE

| | | | |
|---|---|---|---|
| **OrderID:** | N5249 | **OrderDate:** | 10/21/2022 12:14:00 PM |
| **Client:** | EA Engineering Science & Technology | **Project:** | Scotia, NY - Annual Testing |
| **Contact:** | Jim Hayward | **Location:** | E11,VOA Ref. #3 Water |

| LabID | ClientID | Matrix | Test | Method | Sample Date | Prep Date | Anal Date | Received |
|---|---|---|---|---|---|---|---|---|
| **N5249-01** | **FSND-FD-02-20221019** | **Water** | | | **10/19/22** | | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | | 10/25/22 | |
| **N5249-02** | **FSND-MW-26-20221019** | **Water** | | | **10/19/22** | | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | | 10/25/22 | |
| **N5249-03** | **FSND-MW-32-20221019** | **Water** | | | **10/19/22** | | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | | 10/25/22 | |
| **N5249-04** | **FSND-MW-29-20221019** | **Water** | | | **10/19/22** | | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | | 10/25/22 | |
| **N5249-05** | **FSND-MW-30-20221019** | **Water** | | | **10/19/22** | | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | | 10/25/22 | |
| **N5249-06** | **FSND-MW-31-20221019** | **Water** | | | **10/19/22** | | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | | 10/25/22 | |
| **N5249-07** | **FSND-MW-33-20221019** | **Water** | | | **10/19/22** | | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | | 10/25/22 | |
| **N5249-07DL** | **FSND-MW-33-20221019DL** | **Water** | | | **10/19/22** | | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | | 10/27/22 | |
| **N5249-08** | **FSND-MW-35-20221019** | **Water** | | | **10/19/22** | | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | | 10/25/22 | |

# LAB CHRONICLE

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **N5249-09** | **FSND-MW-24-20221019** | **Water** | | | **10/19/22** | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | 10/25/22 | |
| **N5249-10** | **FSND-RB-20221019** | **Water** | | | **10/19/22** | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | 10/25/22 | |
| **N5249-11** | **FSND-MW-14-20221020** | **Water** | | | **10/20/22** | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | 10/25/22 | |
| **N5249-12** | **FSND-GEP-1-20221020** | **Water** | | | **10/20/22** | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | 10/25/22 | |
| **N5249-12DL** | **FSND-GEP-1-20221020DL** | **Water** | | | **10/20/22** | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | 10/27/22 | |
| **N5249-13** | **FSND-MW-B-3-20221020** | **Water** | | | **10/20/22** | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | 10/25/22 | |
| **N5249-14** | **FSND-RB-20221020** | **Water** | | | **10/20/22** | | **10/21/22** |
| | | | VOC-TCLVOA-10 | 8260-Low | | 10/25/22 | |

# SHIPPING DOCUMENTS

# CHEMTECH
## CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 • Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO.
QUOTE NO. N5248
COC Number 2036760

(1)

6
6.1

### CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: EA Engineering
ADDRESS: 269 West Jefferson St
CITY Syracuse STATE: NY ZIP: 13202
ATTENTION: Amanda ~~Kbert~~ Kohn
PHONE: FAX:

### CLIENT PROJECT INFORMATION

PROJECT NAME: Former Scotia Navy Dept
PROJECT NO.: 160530104 LOCATION: Scotia NY
PROJECT MANAGER: Jim Hayward
e-mail: jhayward@eaest.com
PHONE: FAX:

### CLIENT BILLING INFORMATION

BILL TO: mdina@eaest.com PO#: 160530104
ADDRESS: 25 Western Ave ~~Marlboro~~
CITY Marlboro STATE: NY ZIP: 12542
ATTENTION: PHONE: 914 475 0331

### DATA TURNAROUND INFORMATION

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): _____ DAYS*
EDD: _____ DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

### DATA DELIVERABLE INFORMATION

- ☐ Level 1 (Results Only)
- ☒ Level 4 (QC + Full Raw Data)
- ☐ Level 2 (Results + QC)
- ☐ NJ Reduced
- ☐ US EPA CLP
- ☐ Level 3 (Results + QC + Raw Data)
- ☐ NYS ASP A
- ☐ NYS ASP B
- ☐ Other _____
- ☒ EDD FORMAT _____

### ANALYSIS

1 VOC (SW 8260 D) 2 3 4 5 6 7 8 9

| CHEMTECH SAMPLE ID | PROJECT SAMPLE IDENTIFICATION | SAMPLE MATRIX | SAMPLE TYPE COMP | SAMPLE TYPE GRAB | SAMPLE COLLECTION DATE | SAMPLE COLLECTION TIME | # OF BOTTLES | PRESERVATIVES 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | A | | | | | | | | | ← Specify Preservatives A-HCl D-NaOH B-HN03 E-ICE C-H2SO4 F-OTHER |
| 1. | FSNO-TB-20221018 | W | | X | 10/18/22 | — | 2 | X | | | | | | | | | |
| 2. | FSNO-MW-9-20221018 | GW | | X | 10/18/22 | 0933 | 2 | X | | | | | | | | | |
| 3. | FSNO-RB-20221018 | W | | X | 10/18/22 | 1600 | 2 | X | | | | | | | | | |
| 4. | FSNO-MW-22R-20221018 | GW | | X | 10/18/22 | 1440 | 2 | X | | | | | | | | | |
| 5. | FSNO-MW-6-20221018 | GW | | X | 10/18/22 | 0940 | 2 | X | | | | | | | | | |
| 6. | FSNO-MW-11R-20221018 | GW | | X | 10/18/22 | 1055 | 2 | X | | | | | | | | | |
| 7. | FSNO-GEP-2-20221018 | GW | | X | 10/18/22 | 1540 | 2 | X | | | | | | | | | |
| 8. | FSNO-MW-20-20221018 | GW | | X | 10/18/22 | ~~1430~~ | 2 | X | | | | | | | | | |
| 9. | FSNO-MW-17-20221018 | GW | | X | 10/18/22 | 1225 | 2 | X | | | | | | | | | |
| 10. | FSNO-MW-7-20221018 | GW | | X | 10/18/22 | 0940 | 2 | X | | | | | | | | | |

### SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

| RELINQUISHED BY SAMPLER: | DATE/TIME: | RECEIVED BY: |
|---|---|---|
| 1. | 10/20/22 1300 | 1. |
| 2. | 10.21.2022 0721 | 2. |
| 3. | | 3. |

Conditions of bottles or coolers at receipt: ☒ COMPLIANT ☒ NON COMPLIANT ☐ COOLER TEMP 5.1 °C
Comments:

Page ____ of ____

CLIENT: ☐ Hand Delivered ☒ Other _____
CHEMTECH: ☐ Picked Up ☐ Field Sampling

Shipment Complete ☐ YES ☐ NO

# CHEMTECH
## CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 • Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO.
QUOTE NO. N5248
COC Number 2036761

(2)

6
6.1

**CLIENT INFORMATION** (REPORT TO BE SENT TO:)

COMPANY: SAME AS PAGE 1
ADDRESS:
CITY STATE: ZIP:
ATTENTION:
PHONE: FAX:

**CLIENT PROJECT INFORMATION**

PROJECT NAME:
PROJECT NO.: LOCATION:
PROJECT MANAGER:
e-mail:
PHONE: FAX:

**CLIENT BILLING INFORMATION**

BILL TO: PO#:
ADDRESS:
CITY STATE: ZIP:
ATTENTION: PHONE:

**DATA TURNAROUND INFORMATION**

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): _____ DAYS*
EDD: _____ DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

**DATA DELIVERABLE INFORMATION**

❑ Level 1 (Results Only) ❑ Level 4 (QC + Full Raw Data)
❑ Level 2 (Results + QC) ❑ NJ Reduced ❑ US EPA CLP
❑ Level 3 (Results + QC + Raw Data) ❑ NYS ASP A ❑ NYS ASP B ❑ Other _____
❑ EDD FORMAT _____

**ANALYSIS**

VOC (SW8260C)

| CHEMTECH SAMPLE ID | PROJECT SAMPLE IDENTIFICATION | SAMPLE MATRIX | SAMPLE TYPE COMP | SAMPLE TYPE GRAB | SAMPLE COLLECTION DATE | SAMPLE COLLECTION TIME | # OF BOTTLES | PRESERVATIVES 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | VA | | | | | | | | | ← Specify Preservatives A-HCl D-NaOH B-HN03 E-ICE C-H2SO4 F-OTHER |
| 1. | FSND-MW-5-20221014 | GW | | X | 10/18/22 | 0845 | 2 | X | | | | | | | | | |
| 2. | FSND-FD-01-20221014 | GW | | X | 10/18/22 | — | 2 | X | | | | | | | | | |
| 3. | FSND-MW-12R-20221014 | GW | | X | 10/18/22 | 1110 | 6 | X | | | | | | | | | MS/MSD |
| 4. | FSND-MW-19-20221018 | GW | | X | 10/18/22 | 1245 | 2 | X | | | | | | | | | |
| 5. | FSND-[redacted]GEP-4-20221018 | GW | | X | 10/18/22 | 1545 | 2 | X | | | | | | | | | |
| 6. | FSND-MW-16-20221019 | GW | | X | 10/19/22 | 0755 | 6 | X | | | | | | | | | MS/MSD |
| 7. | FSND-MW-34-20221019 | GW | | X | 10/19/22 | 0930 | 2 | X | | | | | | | | | |
| 8. | FSND-FD-03-20221019 | GW | | X | 10/19/22 | — | 2 | X | | | | | | | | | |
| 9. | FSND-MW-15-20221019 | GW | | X | 10/19/22 | 0825 | 2 | X | | | | | | | | | |
| 10. | FSND-MW-28-20221019 | GW | | X | 10/19/22 | 0945 | 2 | X | | | | | | | | | |

**SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY**

| RELINQUISHED BY SAMPLER: | DATE/TIME: | RECEIVED BY: |
|---|---|---|
| 1. | | 1. |
| RELINQUISHED BY SAMPLER: 2. | DATE/TIME: 0721 10.21.2022 | RECEIVED BY: 2. |
| RELINQUISHED BY SAMPLER: 3. | DATE/TIME: | RECEIVED BY: 3. |

Conditions of bottles or coolers at receipt: X COMPLIANT ❑ NON COMPLIANT ❑ COOLER TEMP 5.1 °C
Comments:

Page ____ of ____

CLIENT: ❑ Hand Delivered X Other _____
CHEMTECH: ❑ Picked Up ❑ Field Sampling

Shipment Complete X YES ❑ NO

# CHEMTECH
## CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
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www.chemtech.net

CHEMTECH PROJECT NO.
QUOTE NO. N5249
COC Number 2036758

(3)

6
6.1

**CLIENT INFORMATION** (REPORT TO BE SENT TO:)
COMPANY: Same AS PAGE 1
ADDRESS:
CITY STATE: ZIP:
ATTENTION:
PHONE: FAX:

**CLIENT PROJECT INFORMATION**
PROJECT NAME:
PROJECT NO.: LOCATION:
PROJECT MANAGER:
e-mail:
PHONE: FAX:

**CLIENT BILLING INFORMATION**
BILL TO: PO#:
ADDRESS:
CITY STATE: ZIP:
ATTENTION: PHONE:

**DATA TURNAROUND INFORMATION**
FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): _____ DAYS*
EDD: _____ DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

**DATA DELIVERABLE INFORMATION**
❑ Level 1 (Results Only) ❑ Level 4 (QC + Full Raw Data)
❑ Level 2 (Results + QC) ❑ NJ Reduced ❑ US EPA CLP
❑ Level 3 (Results + QC + Raw Data) ❑ NYS ASP A ❑ NYS ASP B ❑ Other _____
❑ EDD FORMAT _____

**ANALYSIS**
VOC (SW8260C)

**PRESERVATIVES**

**COMMENTS**
← Specify Preservatives
A-HCl D-NaOH
B-HN03 E-ICE
C-H2SO4 F-OTHER

| CHEMTECH SAMPLE ID | PROJECT SAMPLE IDENTIFICATION | SAMPLE MATRIX | SAMPLE TYPE COMP | SAMPLE TYPE GRAB | SAMPLE COLLECTION DATE | SAMPLE COLLECTION TIME | # OF BOTTLES | A 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | FSND-FD-02-~~[illegible]~~20221019 | GW | | X | 10/19/21 | — | 2 | X | | | | | | | | |
| 2. | FSND-MW-26-20221019 | GW | | X | 10/19 | 1120 | 2 | X | | | | | | | | |
| 3. | FSND-MW-32-20221019 | GW | | X | 10/19 | 1300 | 2 | X | | | | | | | | |
| 4. | FSND-MW-29-20221019 | GW | | X | 10/19 | 1140 | 2 | X | | | | | | | | |
| 5. | FSND-MW-30-20221019 | GW | | X | 10/19 | 1305 | 2 | X | | | | | | | | |
| 6. | FSND-MW-31-20221019 | GW | | X | 10/19 | 1410 | 2 | X | | | | | | | | |
| 7. | FSND-MW-33-20221019 | GW | | X | 10/19 | 1420 | 2 | X | | | | | | | | |
| 8. | FSND-MW-35-20221019 | GW | | X | 10/19 | 1605 | ~~2~~ | X | | | | | | | | |
| 9. | FSND-MW-24-20221019 | GW | | X | 10/19 | 1540 | 2 | X | | | | | | | | |
| 10. | FSND-RB-20221019 | W | | X | 10/19 | 1430 | 2 | X | | | | | | | | |

**SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY**

| RELINQUISHED BY SAMPLER: | DATE/TIME: | RECEIVED BY: |
|---|---|---|
| 1. | | 1. |
| 2. | 0721 10.21.2021 | 2. |
| 3. | | 3. |

Conditions of bottles or coolers at receipt: ✓ COMPLIANT ❑ NON COMPLIANT ❑ COOLER TEMP 5.1 °C
Comments:

Page ____ of ____

CLIENT: ❑ Hand Delivered ✓ Other _____
CHEMTECH: ❑ Picked Up ❑ Field Sampling

Shipment Complete ✓ YES ❑ NO

# CHEMTECH
## CHAIN OF CUSTODY RECORD

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CHEMTECH PROJECT NO.
QUOTE NO. N5249
COC Number 2036397

(4)

6
6.1

**CLIENT INFORMATION** (REPORT TO BE SENT TO:)

COMPANY:
ADDRESS: Same As Page 1
CITY STATE: ZIP:
ATTENTION:
PHONE: FAX:

**CLIENT PROJECT INFORMATION**

PROJECT NAME:
PROJECT NO.: LOCATION:
PROJECT MANAGER:
e-mail:
PHONE: FAX:

**CLIENT BILLING INFORMATION**

BILL TO: PO#:
ADDRESS:
CITY STATE: ZIP:
ATTENTION: PHONE:

**DATA TURNAROUND INFORMATION**

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): _____ DAYS*
EDD: _____ DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

**DATA DELIVERABLE INFORMATION**

- ❑ Level 1 (Results Only)
- ❑ Level 2 (Results + QC)
- ❑ Level 3 (Results + QC + Raw Data)
- ❑ EDD FORMAT _____
- ❑ Level 4 (QC + Full Raw Data)
- ❑ NJ Reduced ❑ US EPA CLP
- ❑ NYS ASP A ❑ NYS ASP B
- ❑ Other _____

**ANALYSIS**

**PRESERVATIVES**

| CHEMTECH SAMPLE ID | PROJECT SAMPLE IDENTIFICATION | SAMPLE MATRIX | SAMPLE TYPE COMP | SAMPLE TYPE GRAB | SAMPLE COLLECTION DATE | SAMPLE COLLECTION TIME | # OF BOTTLES | PRESERVATIVES 1 (VOC) | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | FSND-MW-14-20221020 | GW | | X | 10/20/22 | 0915 | 2 | X | | | | | | | | |
| 2. | FSND-GEP-1-20221020 | GW | | X | 10/20/22 | 0835 | 2 | X | | | | | | | | |
| 3. | FSND-MW-B-3-20221020 | GW | | X | 10/20/22 | 0925 | 2 | X | | | | | | | | |
| 4. | FSND-RB-20221020 | W | | X | 10/20/22 | 1000 | 2 | X | | | | | | | | |
| 5. | | | | | | | | | | | | | | | | |
| 6. | | | | | | | | | | | | | | | | |
| 7. | | | | | | | | | | | | | | | | |
| 8. | | | | | | | | | | | | | | | | |
| 9. | | | | | | | | | | | | | | | | |
| 10. | | | | | | | | | | | | | | | | |

**COMMENTS**

← Specify Preservatives
A-HCl D-NaOH
B-HN03 E-ICE
C-H2SO4 F-OTHER

**SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY**

| RELINQUISHED BY SAMPLER: | DATE/TIME: | RECEIVED BY: |
|---|---|---|
| 1. | | 1. |
| 2. | 0721 10-21-2022 | 2. L. Cotton |
| 3. | | 3. |

Conditions of bottles or coolers at receipt: ❑ COMPLIANT ❑ NON COMPLIANT ❑ COOLER TEMP _____ °C
Comments:

Page ____ of ____

CLIENT: ❑ Hand Delivered ❑ Other _____
CHEMTECH: ❑ Picked Up ❑ Field Sampling

Shipment Complete ❑ YES ❑ NO

2/6/15

WHITE - CHEMTECH COPY FOR RETURN TO CLIENT YELLOW - CHEMTECH COPY PINK - SAMPLER COPY

# Laboratory Certification

| Certified By | License No. |
|---|---|
| CAS EPA CLP Contract | 68HERH20D0011 |
| Connecticut | PH-0649 |
| DOD ELAP (L-A-B) | L2219 |
| Maine | 2022022 |
| Maryland | 296 |
| New Hampshire | 255422 |
| New Jersey | 20012 |
| New York | 11376 |
| Pennsylvania | 68-00548 |
| Soil Permit | P330-21-00137 |
| Texas | T104704488-22-15 |

CHEMTECH

# LOGIN REPORT/SAMPLE TRANSFER

**Order ID :** N5249 EAEN05
**Client Name :** EA Engineering Science &
**Client Contact :** Jim Hayward
**Invoice Name :** EA Engineering Science &
**Invoice Contact :** Jim Hayward

**Order Date :** 10/21/2022 12:14:00 PM
**Project Name :** Scotia, NY - Annual Testing
**Receive DateTime :** 10/21/2022 7:21:00 AM
**Purchase Order :**

**Project Mgr :**
**Report Type :** Level 4
**EDD Type :** NYSDEC EDD V-4
**Hard Copy Date :**
**Date Signoff :**

| LAB ID | CLIENT ID | MATRIX | SAMPLE DATE | SAMPLE TIME | TEST | TEST GROUP | METHOD | FAX DATE | DUE DATES |
|---|---|---|---|---|---|---|---|---|---|
| N5249-01 | FSND-FD-02-20221019 | Water | 10/19/2022 | 00:00 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | | 10 Bus. Days |
| N5249-02 | FSND-MW-26-20221019 | Water | 10/19/2022 | 11:20 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | | 10 Bus. Days |
| N5249-03 | FSND-MW-32-20221019 | Water | 10/19/2022 | 13:00 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | | 10 Bus. Days |
| N5249-04 | FSND-MW-29-20221019 | Water | 10/19/2022 | 14:40 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | | 10 Bus. Days |
| N5249-05 | FSND-MW-30-20221019 | Water | 10/19/2022 | 13:05 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | | 10 Bus. Days |
| N5249-06 | FSND-MW-31-20221019 | Water | 10/19/2022 | 14:15 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | | 10 Bus. Days |
| N5249-07 | FSND-MW-33-20221019 | Water | 10/19/2022 | 14:20 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | | 10 Bus. Days |
| N5249-08 | FSND-MW-35-20221019 | Water | 10/19/2022 | 16:05 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | | 10 Bus. Days |
| N5249-09 | FSND-MW-24-20221019 | Water | 10/19/2022 | 15:40 | | | | | |

CHEMTECH

# LOGIN REPORT/SAMPLE TRANSFER

**Order ID :** N5249 EAEN05
**Client Name :** EA Engineering Science &
**Client Contact :** Jim Hayward
**Invoice Name :** EA Engineering Science &
**Invoice Contact :** Jim Hayward

**Order Date :** 10/21/2022 12:14:00 PM
**Project Name :** Scotia, NY - Annual Testing
**Receive DateTime :** 10/21/2022 7:21:00 AM
**Purchase Order :**

**Project Mgr :**
**Report Type :** Level 4
**EDD Type :** NYSDEC EDD V-4
**Hard Copy Date :**
**Date Signoff :**

| LAB ID | CLIENT ID | MATRIX | SAMPLE DATE | SAMPLE TIME | TEST | TEST GROUP | METHOD | | FAX DATE | DUE DATES |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | VOC-TCLVOA-10 | | 8260-Low | 10 Bus. Days | | |
| N5249-10 | FSND-RB-20221019 | Water | 10/19/2022 | 16:30 | | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | 10 Bus. Days | | |
| N5249-11 | FSND-MW-14-20221020 | Water | 10/20/2022 | 08:15 | | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | 10 Bus. Days | | |
| N5249-12 | FSND-GEP-1-20221020 | Water | 10/20/2022 | 08:35 | | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | 10 Bus. Days | | |
| N5249-13 | FSND-MW-B-3-20221020 | Water | 10/20/2022 | 09:25 | | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | 10 Bus. Days | | |
| N5249-14 | FSND-RB-20221020 | Water | 10/20/2022 | 10:00 | | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260-Low | 10 Bus. Days | | |

**Relinguished By :**
**Date / Time :** 10/21/22 1450

**Received By :**
**Date / Time :** 10.21.22 14:50

**Storage Area :** VOA Refridgerator Room

# Appendix E

# Data Usability Summary Report (DUSR)

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# DATA VALIDATION REPORT

**Scotia, NY - Annual Testing**

**October 2022 Sampling**

**SDGs: N5212, N5248, and N5249**

**CHEMTECH: Mountainside, NJ**

Prepared by

**ENVIRONMENTAL DATA SERVICES, LTD.**

Prepared for

**EA Engineering, Science, and Technology, Inc.**

**Report Released 2/3/2023**

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

ENVIRONMENTAL DATA SERVICES, LTD.

## EXECUTIVE NARRATIVE

**SDG:** N5212
**Laboratory:** CHEMTECH
**Site:** Scotia, NY Annual Testing
**Sampling dates:** 10/19/2022
**Test Method:** SW-846 6010D
**Analysis:** Total and Dissolved Iron

**Quality Assurance Project Plan:** Uniform Federal Policy Quality Assurance Project Plan, Draft Final, Operations and Maintenance and Long-Term Monitoring Former Scotia Navy Depot, Glenville, New York, August 2022 (QAPP).

**Validation Guidelines:** United States Department of Defense (DOD) Environmental Data Quality Workgroup (EDQW), General Data Validation Guidelines, November 2019, Department of Defense Quality Systems Manual (DoD QSM) for Environmental Laboratories Version 5.3 (DoD and DOE 2019), United States Department of Defense Data Validation Guidelines Module 2: Data Validation Procedure for Metals by ICP_OES, Environmental Data Quality Workgroup, May 11, 2020, United States Department of Defense Data Validation Guidelines Modules 1, 2, 3, and 4 Revised Table for Sample Qualification in the Presence of Blank Contamination, February 09, 2022.

| Client Sample Identification | Laboratory Sample Identification | Matrix | Validation Stage |
|---|---|---|---|
| FSND-MW-16-20221019-20221019 (total) | N5212-01 | groundwater | S2BVM |
| FSND-MW-16-20221019-20221019 (dissolved) | N5212-02 | groundwater | S2BVM |
| FSND-MW-34-20221019-20221019 (total) | N5212-07 | groundwater | S2BVM |
| FSND-MW-34-20221019-20221019 (dissolved) | N5212-08 | groundwater | S2BVM |
| FSND-FD-03-20221019-20221019 (total) | N5212-09 | groundwater | S2BVM |
| FSND-FD-03-20221019-20221019 (dissolved) | N5212-10 | groundwater | S2BVM |
| FSND-FD-02-20221019-20221019 (total) | N5212-11 | groundwater | S2BVM |
| FSND-FD-02-20221019-20221019 (dissolved) | N5212-12 | groundwater | S2BVM |
| FSND-MW-15-20221019-20221019 (total) | N5212-13 | groundwater | S2BVM |
| FSND-MW-15-20221019-20221019 (dissolved) | N5212-14 | groundwater | S2BVM |
| FSND-MW-28-20221019-20221019 (total) | N5212-15 | groundwater | S2BVM |
| FSND-MW-28-20221019-20221019 (dissolved) | N5212-16 | groundwater | S2BVM |
| FSND-MW-26-20221019-20221019 (total) | N5212-17 | groundwater | S2BVM |
| FSND-MW-26-20221019-20221019 (dissolved) | N5212-18 | groundwater | S2BVM |
| FSND-MW-32-20221019-20221019 (total) | N5212-19 | groundwater | S2BVM |
| FSND-MW-32-20221019-20221019 (dissolved) | N5212-20 | groundwater | S2BVM |
| FSND-MW-29-20221019-20221019 (total) | N5212-21 | groundwater | S2BVM |
| FSND-MW-29-20221019-20221019 (dissolved) | N5212-22 | groundwater | S2BVM |
| FSND-MW-30-20221019-20221019 (total) | N5212-23 | groundwater | S2BVM |
| FSND-MW-30-20221019-20221019 (dissolved) | N5212-24 | groundwater | S2BVM |
| FSND-MW-31-20221019-20221019 (total) | N5212-25 | groundwater | S2BVM |
| FSND-MW-31-20221019-20221019 (dissolved) | N5212-26 | groundwater | S2BVM |
| FSND-MW-31-20221019-20221019 (total) | N5212-27 | groundwater | S2BVM |
| FSND-MW-33-20221019-20221019 (dissolved) | N5212-28 | groundwater | S2BVM |

| Client Sample Identification | Laboratory Sample Identification | Matrix | Validation Stage |
|---|---|---|---|
| FSND-MW-35-20221019-20221019 (total) | N5212-29 | groundwater | S2BVM |
| FSND-MW-35-20221019-20221019 (dissolved) | N5212-30 | groundwater | S2BVM |
| FSND-MW-24-20221019-20221019 (total) | N5212-31 | groundwater | S2BVM |
| FSND-MW-24-20221019-20221019 (dissolved) | N5212-32 | groundwater | S2BVM |
| FSND-RB-20221019-20221019 (total) | N5212-33 | rinse blank | S2BVM |
| FSND-RB-20221019-20221019 (dissolved) | N5212-34 | rinse blank | S2BVM |

Table 1 provides a summary of the major and minor data quality issues identified in this data set. All data are acceptable except those results which have been qualified with “X”, 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 "X" 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. "X" 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.

# DATA ASSESSMENT

## 1. NARRATIVE AND COMPLETENESS REVIEW

*The case narrative was reviewed, and the data package was checked for completeness. No discrepancies were noted.*

## 2. SAMPLE DELIVERY AND CONDITION

*The samples arrived at the laboratory in acceptable condition. Proper custody was documented.*

## 3. HOLDING TIME

**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 detected in the samples whose holding time has been exceeded will be qualified as estimated, "J-". The non-detects will be flagged as not detected at an estimated quantitation limit, "UJ", unless the holding time is grossly exceeded (by more than two times the holding time specified), in which case non-detect results are flagged "X", rejected. Qualifications were applied to the samples and analytes as shown below.**

*No problems were found for this criterion.*

## 4. CALIBRATION

**Method requirements for satisfactory instrument 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.**

**Initial and Continuing Calibration Verification:**

**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 one for every 10 field samples analyzed during an analytical run, at the beginning of the run, and again after the last analytical sample. The percent recovery acceptable limits for ICV/CCV are 90 – 110% for metals. The percent recovery acceptable limits for the Contract Required Detection Limit (CRDL) standard for metals are 80-120%. Qualifications were applied to the samples and analytes as shown below.**

*No problems were found for this criterion.*

## 5. BLANK CONTAMINATION

**Quality assurance blanks, i.e., instrument, preparation, field, or rinse blanks are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Calibration blanks (ICB and CCB) are used to ensure a stable instrument baseline before and during the analysis of analytical samples. Preparation blanks measure laboratory contamination. Field and rinse blanks measure cross-contamination of samples during field operations. Field blanks or lab blanks should not have an analyte detection greater than ½ the analyte Limit of Quantitation (LOQ), or one tenth the concentration of associated samples. However, any positive blank result is assessed against all associated field sample results per validation guidance and data are flagged accordingly. Qualifications were applied to the samples and analytes as shown below.**

**A) Method blank contamination:**

*No problems were found for this criterion.*

**B) Instrument blank contamination:**

*No problems were found for this criterion.*

**C) Field / Equipment blank contamination:**

*Sample FSND-RB-20221019-20221019 was submitted as the rinse blank sample in association with the samples in this sample delivery group (SDG). No problems were found for this criterion with the following exceptions. Total and dissolved iron were positively identified. Positive sample results for the impacted analytes have been evaluated and qualified per validation guidance as appropriate.*

## 6. INTERFERENCE CHECK SAMPLE

**The Interference Check Sample (ICS) verifies the analytical instrument's ability to overcome interferences typical of those found in samples. The laboratory analyzed and reported ICS results for all elements being reported from the analytical run and for all interferents (target and non-target) for these reported elements. The ICS consists of two solutions: Solution A and Solution AB. Solution A consists of the interferents, and Solution AB consists of the analytes mixed with the interferents. Results for the analysis of ICS Solution must fall within the control limits of ± 20% or ±CRQL (whichever is greater) of the true value for the analytes and interferents included in the solution. If results that are greater than or equal to the level of detection (LOD) are observed for analytes that are not present in the ICS solution, the possibility of false positives exists. If negative results are observed for analytes that are not present in the ICS solution, and their absolute value is greater than or equal to the LOD, the possibility of false negatives in the samples exists. In general, sample data can be accepted if the concentrations of Al, Ca, Fe, and Mg in the sample are found to be less than or equal to their respective concentrations in the ICS. Qualifications were applied to the samples and analytes as shown below.**

*No problems were found for this criterion.*

## 7. LABORATORY CONTROL SAMPLE

**The Laboratory Control Sample (LCS) serves as a monitor of 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 limits specified in the US DOD Quality Systems Manual 5.3. Qualifications were applied to the samples and analytes as shown below.**

*No problems were found for this criterion.*

## 8. MATRIX SPIKE/MATRIX SPIKE DUPLICATE/LABORATORY 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 matrix spike percent recoveries and relative percent difference (RPD) values must fall within the control limits specified in the US DOD Quality Systems Manual 5.3. However, spike recovery limits do not apply when the sample concentration is greater than or equal to four times the spike added.**

*Sample FSND-MW-16-20221019 was submitted for MS/MSD pair evaluations for total and dissolved iron in association with this SDG. Upon evaluation, all precision and accuracy indicators were acceptable with the following exception. The observed percent recoveries for total iron in the MS and MSD were greater than the upper acceptance limit. The detected total iron result reported for the parent sample has been qualified estimated high "J+" on this basis.*

*Sample FSND-MW-16-20221019 was submitted for matrix duplicate (MD) pair evaluations for total and dissolved iron in association with this SDG. Adequate laboratory precision was noted with the exception of dissolved iron. The non-detected dissolved iron result reported for the parent sample has been qualified estimated "UJ" on this basis.*

## 9. 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 LOQ), 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 only the field sample used to prepare the serial dilution sample.**

*Sample FSND-MW-16-20221019 was analyzed as a serial dilution in association with this SDG. Upon evaluation, no problems were found for this criterion.*

## 10. FIELD DUPLICATES

**Field duplicates may be taken and analyzed as an indication of overall precision. These analyses measure both field and laboratory precision. A control limit of ≤ 30% for the Relative Percent Difference (RPD) for water samples shall be used for original and duplicate sample values greater than or equal to the sample specific LOQ. For field duplicate analyses that do not meet the technical criteria, the action was applied to only the parent sample and its duplicate.**

*Samples FSND-MW-28-20221019 and FSND-FD-02-20221019 were submitted as a field duplicate pair in association with this SDG. Upon evaluation, adequate field precision was demonstrated with the exception of total iron. Results reported for the impacted analyte in the parent and field duplicate samples have been qualified estimated "J" on this basis.*

*Samples FSND-MW-34-20221019 and FSND-FD-03-20221019 were submitted as a field duplicate pair in association with this SDG. Upon evaluation, adequate field precision was demonstrated with the exception of dissolved iron. Results reported for the impacted analyte in the parent and field duplicate samples have been qualified estimated "J" on this basis.*

## 11. ANALYTE QUANTIFICATION AND REPORTED DETECTION LIMITS

*Analyte quantitation was not verified as part of the Level 2B data validation.*

## 12. SYSTEM PERFORMANCE

*No other problems were found with the following exception.*

**Table 1 Major and Minor Findings**

| | Were acceptance criteria met? | | |
|---|---|---|---|
| | Yes | No | |
| **Metals 6010** | | Major | Minor |
| Holding Time | X | | |
| Calibration | X | | |
| Blank Contamination | | | X |
| Interference Check Samples | X | | |
| Laboratory Control Samples | X | | |
| Matrix Spike/Matrix Spike Duplicate | | | X |
| ICP Serial Dilution | X | | |
| Field Duplicate | | | 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 not detected and was reported as less than the LOD or as defined by the customer. The LOD has been adjusted for any dilution or concentration of the sample.** |
| **J** | **The reported result was an estimated value with an unknown bias.** |
| **J+** | **The result was an estimated quantity, but the result may be biased high.** |
| **J-** | **The result is an estimated quantity, but the result may be biased low.** |
| **N** | **The analysis indicates the presence of an analyte for which there was presumptive evidence to make a "tentative identification."** |
| **NJ** | **The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value was the estimated concentration in the sample.** |
| **UJ** | **The analyte was not detected and was reported as less than the LOD or as defined by the customer. However, the associated numerical value is approximate.** |
| **X** | **The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team (which should include a project chemist), but exclusion of the data is recommended.** |

ENVIRONMENTAL DATA SERVICES, LTD.

## EXECUTIVE NARRATIVE

**SDG:** N5212
**Laboratory:** CHEMTECH
**Site:** Scotia, NY Annual Testing
**Sampling dates:** 10/19/2022
**Test Method:** SW-846 9056A; SM 2320B; SW-846 9060A
**Analysis**: Chloride, Nitrate, and Sulfate; Alkalinity, Total Organic Carbon (TOC)

**Quality Assurance Project Plan:** Uniform Federal Policy Quality Assurance Project Plan, Draft Final, Operations and Maintenance and Long-Term Monitoring Former Scotia Navy Depot, Glenville, New York, August 2022 (QAPP).

**Validation Guidelines:** United States Department of Defense (DOD) Environmental Data Quality Workgroup (EDQW), General Data Validation Guidelines, November 2019, Department of Defense Quality Systems Manual (DoD QSM) for Environmental Laboratories Version 5.3 (DoD and DOE 2019), and Environmental Protection Agency, United States (EPA), 2020; National Functional Guidelines for Inorganic Superfund Data Review, EPA-542-R-20-00, OLEM 9240.1-66, Washington, DC: Office of Superfund Remediation and Technology Innovation, November 2020.

| Client Sample Identification | Laboratory Sample Identification | Matrix | Validation Stage |
|---|---|---|---|
| FSND-MW-16-20221019 | N5212-01 | groundwater | S2BVM |
| FSND-MW-34-20221019 | N5212-07 | groundwater | S2BVM |
| FSND-FD-03-20221019 | N5212-09 | groundwater | S2BVM |
| FSND-FD-02-20221019 | N5212-11 | groundwater | S2BVM |
| FSND-MW-15-20221019 | N5212-13 | groundwater | S2BVM |
| FSND-MW-28-20221019 | N5212-15 | groundwater | S2BVM |
| FSND-MW-26-20221019 | N5212-17 | groundwater | S2BVM |
| FSND-MW-32-20221019 | N5212-19 | groundwater | S2BVM |
| FSND-MW-29-20221019 | N5212-21 | groundwater | S2BVM |
| FSND-MW-30-20221019 | N5212-23 | groundwater | S2BVM |
| FSND-MW-31-20221019 | N5212-25 | groundwater | S2BVM |
| FSND-MW-33-20221019 | N5212-27 | groundwater | S2BVM |
| FSND-MW-35-20221019 | N5212-29 | groundwater | S2BVM |
| FSND-MW-24-20221019 | N5212-31 | groundwater | S2BVM |
| FSND-RB-20221019 | N5212-33 | rinse blank | S2BVM |

Table 1 provides a summary of the major and minor data quality issues identified this data set. All data are acceptable except those results which have been qualified with “X”, 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 “X” 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. “X” 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.

# DATA ASSESSMENT

## 1. NARRATIVE AND COMPLETENESS REVIEW:

*The case narrative was reviewed, and the data package was checked for completeness. No discrepancies were noted.*

## 2. SAMPLE DELIVERY AND CONDITION:

*The samples arrived at the laboratory in acceptable condition. Proper custody was documented.*

## 3. HOLDING TIME:

**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 detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detect results will be flagged "X", rejected. Qualifications were applied to the samples and analytes as shown below.**

*All sample analyses reported were within the validation guidance.*

## 4. 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) should be less than 20% or the correlation coefficient greater than 0.995. Observed CCV percent recoveries must be with quality control criterion. Qualifications were applied to the samples and analytes as shown below.**

*Calibrations were performed at the appropriate frequency and resulted in %RSD or correlation coefficient values within guidance in all cases. Please note, initial calibration correlation coefficient data for TOC were not present in the laboratory data package. Stage 2B data validation requires only the utilization of summarized data from the laboratory to qualify data. Therefore, initial calibrations could not be evaluated for TOC. No result qualification was made on this basis. Further, all ICV and CCV evaluations were within acceptance criteria.*

## 5. BLANK CONTAMINATION:

**Quality assurance blanks, i.e., instrument, preparation, field, or rinse blanks are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Both initial calibration and continuing calibration blanks (ICB and CCB) are used to ensure a stable instrument baseline before and during the analysis of analytical samples. Preparation blanks measure laboratory contamination. Field and rinse blanks measure cross-contamination of samples during field operations. Field blanks or lab blanks should not have an analyte detection greater than ½ the analyte Limit of Quantitation (LOQ), or one tenth the concentration of associated samples. However, any positive blank result is assessed against all associated field sample results per validation guidance and data are flagged accordingly.**

### A) Calibration Blank

*All associated initial and continuing calibration blanks met validation criteria with the following exception. One calibration blank exhibited positive results for TOC. Upon evaluation, no validation action was required.*

### B) Method Blank

*All method blanks met validation criteria.*

### C) Equipment / Rinse Blank

*Sample FSND-RB-20221019 was the rinse blank submitted in association with the samples in this sample delivery group (SDG). No problems were found for this criterion with the following exception. TOC was positively identified. Upon evaluation, no validation action was required.*

## 6. 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. Qualifications were applied to the samples and analytes as shown below.**

*No problems were found for this criterion.*

**7. 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 with a relative percent difference between the two must fall within the established acceptance criteria. However, spike recovery limits do not apply when the sample concentration is greater than or equal to four times the spike added. For a spike analysis that does not meet the technical criteria, the action was applied to the parent sample only.**

*Sample FSND-MW-16-20221019 was submitted for MS/MSD and/or matrix duplicate evaluations for anions, TOC, and alkalinity. Upon evaluation all accuracy and precision indicators were acceptable.*

**8. FIELD DUPLICATES:**

**Field duplicates may be taken and analyzed as an indication of overall precision. These analyses measure both field and laboratory precision. A control limit of ≤ 30% for the Relative Percent Difference (RPD) for water samples shall be used for original and duplicate sample values greater than or equal to the sample specific LOQ. For field duplicate analyses that do not meet the technical criteria, the action was applied to only the parent sample and its duplicate.**

*Samples FSND-MW-28-20221019 and FSND-FD-02-20221019 were submitted as a field duplicate pair in association with this SDG. Upon evaluation, adequate field precision was demonstrated.*

*Samples FSND-MW-34-20221019 and FSND-FD-03-20221019 were submitted as a field duplicate pair in association with this SDG. Upon evaluation, adequate field precision was demonstrated.*

**9. ANALYTE QUANTIFICATION AND IDENTIFICATION:**

*Analyte quantitation and identification were not verified as part of the Level 2B data validation.*

**10. OTHER PROBLEMS:**

*None.*

**Table 1 Major and Minor Findings**

| | Were acceptance criteria met? | | |
|---|---|---|---|
| | Yes | No | |
| **Alkalinity** | | Major | Minor |
| Holding Time | x | | |
| Laboratory Blank | x | | |
| Field Blank | x | | |
| Matrix Duplicate | x | | |
| Matrix Spike | NA | | |
| Laboratory Control Sample | x | | |
| Field Duplicate | x | | |
| Other | x | | |
| | **Were acceptance criteria met?** | | |
| | **Yes** | **No** | |
| **Chloride, Sulfate, Nitrate** | | **Major** | **Minor** |
| Holding Time | x | | |
| Initial Calibration | x | | |
| Continuing Calibration | x | | |
| Laboratory Blank | x | | |
| Field Blank | x | | |
| Matrix Duplicate | NA | | |
| Matrix Spike | x | | |
| Laboratory Control Sample | x | | |
| Field Duplicate | x | | |
| Other | x | | |
| | **Were acceptance criteria met?** | | |
| | **Yes** | **No** | |
| **Total Organic Carbon** | | **Major** | **Minor** |
| Holding Time | x | | |
| Initial Calibration | x | | |
| Continuing Calibration | x | | |
| Laboratory Blank | x | | |
| Field Blank | x | | |
| Matrix Duplicate | NA | | |
| Matrix Spike | x | | |
| Laboratory Control Sample | x | | |
| Field Duplicate | 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. |
| UJ | The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise. |
| X | The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. |
| N | The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tentative identification. |
| NJ | The analyte was tentatively identified, and the associated numerical value represents its approximate concentration. |

ENVIRONMENTAL DATA SERVICES, LTD.

## EXECUTIVE NARRATIVE

**Sample Delivery Group:** N5212
**Laboratory:** CHEMTECH
**Site:** Scotia, NY Annual Testing
**Sampling dates:** 10/19/2022
**Number of Samples:** 15
**Test Method:** RSK-175 (8015 M)
**Analysis:** Dissolved Gases**;** Methane, Ethane, and Ethene

**Quality Assurance Project Plan:** Uniform Federal Policy Quality Assurance Project Plan, Draft Final, Operations and Maintenance and Long-Term Monitoring Former Scotia Navy Depot, Glenville, New York, August 2022 (QAPP).

**Validation Guidelines:** Department of Defense Module 4: Data Validation Procedure for Organic Analysis by GC, March 2021; DOD Data Validation Guidelines Module 1, 2, 3, and 4 Revised Table for Sample Qualification in the Prescence of Blank Contamination (02/09/2022); United States Environmental Protection Agency (USEPA) and United States Department of Defense (DOD) Environmental Data Quality Workgroup (EDQW), November 2019, General Data Validation Guidelines.

| Client Sample Identification | Laboratory Sample Identification | Matrix | Validation Stage |
|---|---|---|---|
| FSND-MW-16-20221019 | N5212-01 | groundwater | S2BVM |
| FSND-MW-34-20221019 | N5212-07 | groundwater | S2BVM |
| FSND-FD-03-20221019 | N5212-09 | groundwater | S2BVM |
| FSND-FD-02-20221019 | N5212-11 | groundwater | S2BVM |
| FSND-MW-15-20221019 | N5212-13 | groundwater | S2BVM |
| FSND-MW-28-20221019 | N5212-15 | groundwater | S2BVM |
| FSND-MW-26-20221019 | N5212-17 | groundwater | S2BVM |
| FSND-MW-32-20221019 | N5212-19 | groundwater | S2BVM |
| FSND-MW-29-20221019 | N5212-21 | groundwater | S2BVM |
| FSND-MW-30-20221019 | N5212-23 | groundwater | S2BVM |
| FSND-MW-31-20221019 | N5212-25 | groundwater | S2BVM |
| FSND-MW-33-20221019 | N5212-27 | groundwater | S2BVM |
| FSND-MW-35-20221019 | N5212-29 | groundwater | S2BVM |
| FSND-MW-24-20221019 | N5212-31 | groundwater | S2BVM |
| FSND-RB-20221019 | N5212-33 | rinse blank | S2BVM |

Table 1 provides a summary of the major and minor data quality issues applied to this data set. All data are acceptable except those results which have been qualified with “X”, 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 "X" 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. "X" 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.

# DATA ASSESSMENT

## 1. NARRATIVE AND COMPLETENESS REVIEW:

*The case narrative was reviewed, and the data package was checked for completeness. No discrepancies were noted.*

## 2. SAMPLE DELIVERY AND CONDITION:

*The samples arrived at the laboratory in acceptable condition. No qualification of sample results was necessary on this basis.*

## 3. HOLDING TIME:

**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 detected in the samples whose holding time has been exceeded will be qualified as estimated, "J" or "UJ" as appropriate. When holding times are exceeded by more than three times the holding time specified, the non-detects will be flagged as unusable, "X". Qualifications were applied to the samples and analytes as shown below.**

*All sample analyses reported were within the 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.**

### A) 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.*

**B) 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. BLANK CONTAMINATION:

**Quality assurance blanks, i.e., instrument, preparation, field, or rinse blanks are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Both initial calibration and continuing calibration blanks (ICB and CCB) are used to ensure a stable instrument baseline before and during the analysis of analytical samples. Preparation blanks measure laboratory contamination. Field and rinse blanks measure cross-contamination of samples during field operations. When an equipment blank or lab blank has an analyte detection greater than ½ the analyte Limit of Quantitation (LOQ), or one tenth the concentration of associated samples, then all associated field samples are flagged per validation guidance.**

***A) Method Blank***

*Method blanks were analyzed with appropriate frequency. No problems were found for this criterion.*

***B) Equipment Blank***

*Sample FSND-RB-20221019 was submitted as a rinse blank in association with all the samples in this sample delivery group (SDG). Methane, ethane, and ethene were positively identified in the rinse blank. Positive sample results for the impacted analytes have been evaluated and qualified per validation guidance as appropriate.*

***C) Trip Blank***

*No sample was submitted as a trip blank in association with the samples in this SDG.*

## 6. 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 QSM criteria. Qualifications were applied to the samples and analytes as shown below.**

*No problems were found for this criterion.*

**7. MATRIX SPIKE/MATRIX SPIKE DUPLICATE/LABORATORY 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 must fall within the established QAPP acceptance limits which are equivalent to QSM, with a relative percent difference between the two of less than 30%. However, spike recovery limits do not apply when the sample concentration is greater than or equal to four times 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 FSND-MW-16-20221019 was submitted for MS/MSD evaluation in association with this SDG. Upon evaluation all precision and accuracy indicators were favorable.*

**8. FIELD DUPLICATES:**

**Field duplicates may be taken and analyzed as an indication of overall precision. These analyses measure both field and laboratory precision. A control limit of ≤ 30% for the Relative Percent Difference (RPD) for samples, shall be used for original and duplicate sample values greater than or equal to the sample specific LOQ. For field duplicate analyses that do not meet the technical criteria, the action was applied to only the parent sample and its duplicate.**

*Samples FSND-MW-28-20221019 and FSND-FD-02-20221019 were submitted as a field duplicate pair in association with this SDG. Adequate field precision was demonstrated.*

*Samples FSND-MW-34-20221019 and FSND-FD-03-20221019 were submitted as a field duplicate pair in association with this SDG. Adequate field precision was demonstrated with the exception of methane. Results reported for methane in the field duplicate samples have been qualified "J" on this basis.*

**9. OTHER:**

*None.*

**10. ANALYTE QUANTIFICATION AND REPORTED DETECTION LIMITS:**

*Analyte quantitation and identification were not verified as part of the Stage 2B data validation.*

*Manual integrations were not reviewed as part of the Stage 2B data validation.*

**Table 1 Major and Minor Findings**

| | Were acceptance criteria met? | | |
|---|---|---|---|
| | Yes | No | |
| **RSK-175** | | Major | Minor |
| Sample Delivery Condition | x | | |
| Holding Time | x | | |
| Calibration | x | | |
| Percent Relative Standard Deviation and Percent Deviation | x | | |
| Method Blank | x | | |
| Rinse/Equipment Blank | | | x |
| Trip Blank | NA | | |
| Matrix Spike/Matrix Spike Duplicate | x | | |
| Laboratory Duplicate | NA | | |
| Field Duplicate | | | x |
| 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. |
| UJ | The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise. |
| X | The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. |
| N | The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tentative identification. |
| NJ | The analyte was tentatively identified, and the associated numerical value represents its approximate concentration. |

ENVIRONMENTAL DATA SERVICES, LTD.

## EXECUTIVE NARRATIVE

**Sample Delivery Group**: N5248
**Laboratory:** CHEMTECH
**Site:** Scotia, NY Annual Testing
**Sampling dates**: 10/18/2022-10/19/2022
**Number of Samples:** 20
**Test Method:** SW-846 8260D
**Analysis:** Target Compound List (TCL)

**Quality Assurance Project Plan:** Uniform Federal Policy Quality Assurance Project Plan, Draft Final, Operations and Maintenance and Long-Term Monitoring Former Scotia Navy Depot, Glenville, New York, August 2022 (QAPP).

**Validation Guidelines:** Department of Defense Module 1 Data Validation Guidelines: Data Validation Procedure for Organic Analysis by GC/MS May 2020 Revision 1; DOD Data Validation Guidelines Module 1, 2, 3, and 4 Revised Table for Sample Qualification in the Prescence of Blank Contamination (02/09/2022)**;** United States Environmental Protection Agency (USEPA) and United States Department of Defense (DOD) Environmental Data Quality Workgroup (EDQW), November 2019, General Data Validation Guidelines.

| Client Sample Identification | Laboratory Sample Identification | Matrix | Validation Stage |
|---|---|---|---|
| FSND-TB-20221018 | N5248-01 | trip blank | S2BVM |
| FSND-MW-9-20221018 | N5248-02 | groundwater | S2BVM |
| FSND-RB-20221018 | N5248-03 | rinse blank | S2BVM |
| FSND-MW-22R-20221018 | N5248-04 | groundwater | S2BVM |
| FSND-MW-6-20221018 | N5248-05 | groundwater | S2BVM |
| FSND-MW11R-20221018 | N5248-06 | groundwater | S2BVM |
| FSND-GEP-2-20221018 | N5248-07 | groundwater | S2BVM |
| FSND-MW-20-20221018 | N5248-08 | groundwater | S2BVM |
| FSND-MW-17-20221018 | N5248-09 | groundwater | S2BVM |
| FSND-MW-7-20221018 | N5248-10 | groundwater | S2BVM |
| FSND-MW-5-20221018 | N5248-11 | groundwater | S2BVM |
| FSND-FD-01-20221018 | N5248-12 | groundwater | S2BVM |
| FSND-MW-12R-20221018 | N5248-13 | groundwater | S2BVM |
| FSND-MW-19-20221018 | N5248-14 | groundwater | S2BVM |
| FSND-GEP-4-20221018 | N5248-15 | groundwater | S2BVM |
| FSND-MW-16-20221019 | N5248-16 | groundwater | S2BVM |
| FSND-MW-34-20221019 | N5248-17 | groundwater | S2BVM |
| FSND-FD-03-20221019 | N5248-18 | groundwater | S2BVM |
| FSND-MW-15-20221019 | N5248-19 | groundwater | S2BVM |
| FSND-MW-28-20221019 | N5248-20 | groundwater | S2BVM |

Table 1 provides a summary of the major and minor data quality issues identified in this data set. All data are acceptable except those results which have been qualified with “X”, 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 “X” 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. “X” 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.

# DATA ASSESSMENT

## 1. NARRATIVE AND COMPLETENESS REVIEW:

*The case narrative was reviewed, and the data package was checked for completeness. No discrepancies were noted.*

## 2. SAMPLE DELIVERY AND CONDITION:

*The samples arrived at the laboratory in acceptable condition. Proper custody was documented.*

## 3. HOLDING TIME:

**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 detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detect results will be flagged as not detected at an estimated quantitation limit, "UJ", unless the holding time is grossly exceeded (by more than two times the holding time specified), in which case non-detect results are flagged "X", rejected. Qualifications were applied to the samples and analytes as shown below.**

*No problems were found for this criterion.*

## 4. 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 volatile organics is bromofluorobenzene. If the mass calibration is in error, all associated data will be classified as unusable "X". Qualifications were applied to the samples and analytes as shown below.**

*No problems were found for this criterion.*

## 5. 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.**

### A) Response Factor:

**The response factor measures the instrument's response to specific chemical compounds. All analytes for initial and continuing calibration should meet the minimum relative response factor (RRF) criteria. If the RRF is less than minimum RRF specified, professional judgment is used, and all detects in the sample will be qualified as "J". All non-detects for that compound will be rejected "X". Qualifications were applied to the samples and analytes as shown below.**

*No problems were found for this criterion.*

**B) Percent Relative Standard Deviation and Percent Difference:**

**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 difference (%D) compares the response factor of the continuing calibration check to the mean RRF from the initial calibration.**

**Percent RSD must be less than maximum %RSD listed in the Department of Defense Quality Systems Manual or, in cases where linear and non-linear regressions are used, correlation coefficients must be greater than those listed in the Department of Defense Quality Systems Manual. For the opening or closing continuing calibration verification (CCV) the %D must be within the inclusive opening or closing maximum %D limits as listed in the Department of Defense Quality Systems Manual for all target compounds. A value outside of these limits indicates potential detection and quantitation errors. If the %RSD exceeds quality control criteria, detects may be qualified as "J" and professional judgment is used to qualify non-detects. 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 with the following exceptions.*

*The %D values for bromomethane and trans-1,3-dichloropropene were outside acceptance limits in one continuing calibration associated with the samples listed below. The results reported for the impacted analytes in the associated samples have been qualified "UJ" on this basis.*

| | | |
|---|---|---|
| *FSND-TB-20221018* | *FSND-MW-6-20221018* | *FSND-MW-20-20221018* |
| *FSND-MW-9-20221018* | *FSND-MW11R-20221018* | *FSND-MW-17-20221018* |
| *FSND-MW-22R-20221018* | *FSND-GEP-2-20221018* | |

*The %D value for bromoform was outside acceptance limits in one continuing calibration associated with sample FSND-RB-20221018. The bromoform result reported in the associated sample has been qualified "UJ" on this basis.*

**6. BLANK CONTAMINATION:**

**Quality assurance (QA) blanks, i.e., 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. Method blanks measure laboratory contamination. Trip blanks (TB) measure cross-contamination of samples during shipment. Field and rinse blanks measure cross-contamination of samples during field operations. When an equipment blank, trip blank, or lab blank has an analyte detection greater than ½ the analyte Limit of Quantitation (LOQ), then all associated field samples are flagged per validation guidance.**

**A) Method blank contamination:**

*Method blanks were analyzed with appropriate frequency. No problems were found for this criterion.*

**B) Field/Equipment blank contamination:**

*Samples FSND-RB-20221018 and FSND-RB-20221019 (located in SDG N5249) were submitted as rinse blanks blank in association with the sample in this sample delivery group (SDG). The target compounds listed below were positively identified in one or both rinse blanks. Positive sample results for the impacted analytes in the associated samples have been evaluated and qualified per validation guidance.*

| | | |
|---|---|---|
| *benzene* | *toluene* | *ethylbenzene* |
| *o-xylene* | *m,p-xylene* | *acetone* |

**C) Trip blank contamination:**

*Sample FSND-TB-20221018 was submitted as a trip blank in association with the samples in this SDG. No problems were found for this criterion with the following exceptions. Acetone, methylene chloride, and ethylbenzene were positively identified in the trip blank. Positive sample results for the impacted analytes have been evaluated and qualified per validation guidance.*

**D) Storage Blank associated with volatile samples only:**

*No storage blank was submitted in association with this SDG.*

**7. 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 established in the Department of Defense Quality Systems Manual, qualifications were applied to all the samples and analytes as shown below.**

*No problems were found for this criterion.*

**8. COMPOUND IDENTIFICATION AND QUANTIFICATION:**

**Compound Identification**

**The 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 an ion spectrum which has a ratio of the primary and secondary m/e 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.**

*Target compound identifications were not reviewed at the Stage 2B level.*

*Tentatively Identified Compounds (TICs) were not reviewed at the Stage 2B level.*

**Compound Quantification**

*Target compound results quantitation were not reviewed at the Stage 2B level.*

*Manual integrations were not reviewed for samples at the Stage 2B level.*

**9. MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY:**

**Matrix spike/matrix spike duplicate (MS/MSD) data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD data may be used in conjunction with other quality control criteria for additional qualification of data. All MS/MSD percent recoveries must fall within the Department of Defense Quality Systems Manual limits. In addition, relative percent differences observed between results reported for the pair must be ≤ 20%.**

*Sample FSND-MW-12R-20221018 was submitted for MS/MSD evaluation in association with this SDG. Upon evaluation all precision and accuracy indicators were favorable.*

*Sample FSND-MW-16-20221019 was submitted for MS/MSD evaluation in association with this SDG. Upon evaluation all precision and accuracy indicators were favorable or did not require qualification of sample results.*

**10. 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 ±10 seconds from the associated continuing calibration standard. The area count must be within a (50-200%) range of the associated standard. If the area count is greater than 200%, non-detected results are not qualified and positive results are flagged as estimated with potential negative bias, "J-". If the area count is less than 50%, positive results are flagged as estimated with potential positive bias, "J+", and non-detected results are flagged "UJ". If the area count is less than 20%, positive results and non-detected results will be classified as unusable "X". Qualifications were applied to the samples and analytes as shown below.**

*No problems were found for this criterion.*

**11. FIELD DUPLICATES:**

**Field duplicates may be taken and analyzed as an indication of overall precision. These analyses measure both field and laboratory precision. A control limit of ≤ 30% for the Relative Percent Difference (RPD) for water samples shall be used for original and duplicate sample values greater than or equal to the sample specific LOQ. For field duplicate analyses that do not meet the technical criteria, the action was applied to only the parent sample and its duplicate.**

*Samples FSND-MW-5-20221018 and FSND-FD-01-20221018 were submitted as a field duplicate pair in association with this SDG. Adequate field precision was demonstrated.*

*Samples FSND-MW-34-20221019 and FSND-FD-03-20221019 were submitted as a field duplicate pair in association with this SDG. Adequate field precision was demonstrated.*

**12. LABORATORY CONTROL SAMPLES:**

**The Laboratory Control Sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Aqueous/water, soil/sediment, wipe, and filter LCSs shall be analyzed for each analyte utilizing the same sample preparations, analytical methods, and quality assurance/quality control (QA/QC) procedures as employed for the samples. All LCS percent recoveries must fall within the Department of Defense Quality Systems Manual limits. Qualifications were applied to the samples and analytes as shown below.**

*The LCS evaluations were performed at the appropriate frequency. No problems were found for this criterion.*

**13. DILUTIONS, RE-EXTRACTIONS & REANALYSIS:**

**Samples may be re-analyzed for dilution, re-extraction and for other QC reasons. In such cases, the best result values are used.**

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

*Samples listed below were analyzed at dilutions due to high concentrations of target compounds.*

| | |
|---|---|
| *FSND-GEP-2-20221018* | *FSND-GEP-4-20221018* |
| *FSND-MW-15-20221019* | *FSND-MW-28-20221019* |

**14. OTHER PROBLEMS:**

*None.*

**Table 1 Major and Minor Findings**

| | Were acceptance criteria met? | | |
|---|---|---|---|
| | Yes | No | |
| **Volatiles** | | Major | Minor |
| Holding Time | x | | |
| Mass Spectrometer Tuning | x | | |
| Response Factor | x | | |
| Percent Relative Standard Deviation and Percent Difference | | | x |
| Internal Standards | x | | |
| Method Blank | x | | |
| Equipment/Rinse Blank | | | x |
| Trip Blank | | | x |
| Storage Blank | NA | | |
| Surrogates | x | | |
| Compound Identification | NA | | |
| Matrix Spike/Matrix Spike Duplicate | x | | |
| Field Duplicate | x | | |
| Laboratory Control Samples | x | | |
| Other Quality Control Data out of Specification Dilutions | x | | |
| Required Reporting Limits | 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. |
| X | The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. |
| N | The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tentative identification. |
| NJ | The analyte was tentatively identified, and the associated numerical value represents its approximate concentration. |

ENVIRONMENTAL DATA SERVICES, LTD.

## EXECUTIVE NARRATIVE

**Sample Delivery Group**: N5249
**Laboratory:** CHEMTECH
**Site:** Scotia, NY Annual Testing
**Sampling dates**: 10/19/2022-10/20/2022
**Number of Samples:** 14
**Test Method:** SW 846-8260D
**Analysis:** Target Compound List (TCL)

**Quality Assurance Project Plan:** Uniform Federal Policy Quality Assurance Project Plan, Draft Final, Operations and Maintenance and Long-Term Monitoring Former Scotia Navy Depot, Glenville, New York, August 2022 (QAPP).

**Validation Guidelines:** Department of Defense Module 1 Data Validation Guidelines: Data Validation Procedure for Organic Analysis by GC/MS May 2020 Revision 1; DOD Data Validation Guidelines Module 1, 2, 3, and 4 Revised Table for Sample Qualification in the Prescence of Blank Contamination (02/09/2022)**;** United States Environmental Protection Agency (USEPA) and United States Department of Defense (DOD) Environmental Data Quality Workgroup (EDQW), November 2019, General Data Validation Guidelines.

| Client Sample Identification | Laboratory Sample Identification | Matrix | Validation Stage |
|---|---|---|---|
| FSND-FD-02-20221019 | N5249-01 | groundwater | S2BVM |
| FSND-MW-26-20221019 | N5249-02 | groundwater | S2BVM |
| FSND-MW-32-20221019 | N5249-03 | groundwater | S2BVM |
| FSND-MW-29-20221019 | N5249-04 | groundwater | S2BVM |
| FSND-MW-30-20221019 | N5249-05 | groundwater | S2BVM |
| FSND-MW-31-20221019 | N5249-06 | groundwater | S2BVM |
| FSND-MW-33-20221019 | N5249-07 | groundwater | S2BVM |
| FSND-MW-35-20221019 | N5249-08 | groundwater | S2BVM |
| FSND-MW-24-20221019 | N5249-09 | groundwater | S2BVM |
| FSND-RB-20221019 | N5249-10 | rinse blank | S2BVM |
| FSND-MW-14-20221020 | N5249-11 | groundwater | S2BVM |
| FSND-GEP-1-20221020 | N5249-12 | groundwater | S2BVM |
| FSND-MW-B-3-20221020 | N5249-13 | groundwater | S2BVM |
| FSND-RB-20221020 | N5249-14 | rinse blank | S2BVM |

Table 1 provides a summary of the major and minor data quality issues identified in this data set. All data are acceptable except those results which have been qualified with “X”, 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 “X” 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. “X” 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.

# DATA ASSESSMENT

## 1. NARRATIVE AND COMPLETENESS REVIEW:

*The case narrative was reviewed, and the data package was checked for completeness. No discrepancies were noted.*

## 2. SAMPLE DELIVERY AND CONDITION:

*The samples arrived at the laboratory in acceptable condition. Proper custody was documented.*

## 3. HOLDING TIME:

**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 detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detect results will be flagged as not detected at an estimated quantitation limit, "UJ", unless the holding time is grossly exceeded (by more than two times the holding time specified), in which case non-detect results are flagged "X", rejected. Qualifications were applied to the samples and analytes as shown below.**

*No problems were found for this criterion.*

## 4. 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 volatile organics is bromofluorobenzene. If the mass calibration is in error, all associated data will be classified as unusable "X". Qualifications were applied to the samples and analytes as shown below.**

*No problems were found for this criterion.*

## 5. 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.**

### A) Response Factor:

**The response factor measures the instrument's response to specific chemical compounds. All analytes for initial and continuing calibration should meet the minimum relative response factor (RRF) criteria. If the RRF is less than minimum RRF specified, professional judgment is used, and all detects in the sample will be qualified as "J". All non-detects for that compound will be rejected "X". Qualifications were applied to the samples and analytes as shown below.**

*No problems were found for this criterion.*

**B) Percent Relative Standard Deviation and Percent Difference:**

**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 difference (%D) compares the response factor of the continuing calibration check to the mean RRF from the initial calibration.**

**Percent RSD must be less than maximum %RSD listed in the Department of Defense Quality Systems Manual or, in cases where linear and non-linear regressions are used, correlation coefficients must be greater than those listed in the Department of Defense Quality Systems Manual. For the opening or closing continuing calibration verification (CCV) the %D must be within the inclusive opening or closing maximum %D limits as listed in the Department of Defense Quality Systems Manual for all target compounds. A value outside of these limits indicates potential detection and quantitation errors. If the %RSD exceeds quality control criteria, detects may be qualified as "J" and professional judgment is used to qualify non-detects. 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 with the following exceptions.*

*The %D value for chloromethane was outside acceptance limit in one continuing calibration associated with all the samples in this sample delivery group (SDG). The results reported for the impacted analyte have been qualified "UJ" on this basis.*

**6. BLANK CONTAMINATION:**

**Quality assurance (QA) blanks, i.e., 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. Method blanks measure laboratory contamination. Trip blanks (TB) measure cross-contamination of samples during shipment. Field and rinse blanks measure cross-contamination of samples during field operations. When an equipment blank, trip blank, or lab blank has an analyte detection greater than ½ the analyte Limit of Quantitation (LOQ), then all associated field samples are flagged per validation guidance.**

**A) Method blank contamination:**

*Method blanks were analyzed with appropriate frequency. No problems were found for this criterion.*

**B) Field/Equipment blank contamination:**

*Samples FSND-RB-20221019 and FSND-RB-20221020 were submitted as rinse blanks blank in association with the samples in this SDG. The target compounds listed below were positively identified in one or both rinse blanks. Positive sample results for the impacted analytes in the associated samples have been evaluated and qualified per validation guidance.*

| | | |
|---|---|---|
| *benzene* | *toluene* | *ethylbenzene* |
| *o-xylene* | *m,p-xylene* | *acetone* |

**C) Trip blank contamination:**

*Sample FSND-TB-20221018 (located in SDG N5248) was submitted as a trip blank in association with this SDG. No problems were found for this criterion with the following exceptions. Acetone, methylene chloride, and ethylbenzene were positively identified in the trip blank. Positive sample results for the impacted analytes have been evaluated and qualified per validation guidance.*

**D) Storage Blank associated with volatile samples only:**

*No storage blank was submitted in association with this SDG.*

## 7. 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 established in the Department of Defense Quality Systems Manual, qualifications were applied to all the samples and analytes as shown below.**

*No problems were found for this criterion with the following exceptions. The surrogate recovery observed during the analysis of sample FSND-MW-29-20221019 was less than the lowest acceptance limit. Potential low bias is indicated. Results reported for the target analytes in the impacted sample have been qualified "J-" or "UJ" as appropriate on this basis.*

## 8. COMPOUND IDENTIFICATION AND QUANTIFICATION:

**Compound Identification**

**The 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 an ion spectrum which has a ratio of the primary and secondary m/e 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.**

*Target compound identifications were not reviewed at the Stage 2B level.*

*Tentatively Identified Compounds (TICs) were not reviewed at the Stage 2B level.*

**Compound Quantification**

*Target compound results quantitation were not reviewed at the Stage 2B level.*

*Manual integrations were not reviewed for samples at the Stage 2B level.*

**9. MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY:**

**Matrix spike/matrix spike duplicate (MS/MSD) data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD data may be used in conjunction with other quality control criteria for additional qualification of data. All MS/MSD percent recoveries must fall within the Department of Defense Quality Systems Manual limits. In addition, relative percent differences observed between results reported for the pair must be ≤ 20%.**

*No sample was submitted for MS/MSD evaluation in association with this SDG.*

**10. 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 ±10 seconds from the associated continuing calibration standard. The area count must be within a (50-200%) range of the associated standard. If the area count is greater than 200%, non-detected results are not qualified and positive results are flagged as estimated with potential negative bias, "J-". If the area count is less than 50%, positive results are flagged as estimated with potential positive bias, "J+", and non-detected results are flagged "UJ". If the area count is less than 20%, positive results and non-detected results will be classified as unusable "X". Qualifications were applied to the samples and analytes as shown below.**

*No problems were found for this criterion.*

**11. FIELD DUPLICATES:**

**Field duplicates may be taken and analyzed as an indication of overall precision. These analyses measure both field and laboratory precision. A control limit of ≤ 30% for the Relative Percent Difference (RPD) for soil samples shall be used for original and duplicate sample values greater than or equal to the sample specific LOQ. For field duplicate analyses that do not meet the technical criteria, the action was applied to only the parent sample and its duplicate.**

*Samples FSND-MW-28-20221019 (located in SDG N5248) and FSND-FD-02-20221019 were submitted as a field duplicate pair in association with this SDG. Adequate field precision was demonstrated.*

## 12. LABORATORY CONTROL SAMPLES:

**The Laboratory Control Sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Aqueous/water, soil/sediment, wipe, and filter LCSs shall be analyzed for each analyte utilizing the same sample preparations, analytical methods, and quality assurance/quality control (QA/QC) procedures as employed for the samples. All LCS percent recoveries must fall within the Department of Defense Quality Systems Manual limits. Qualifications were applied to the samples and analytes as shown below.**

*The LCS evaluations were performed at the appropriate frequency. No problems were found for this criterion.*

## 13. DILUTIONS, RE-EXTRACTIONS & REANALYSIS:

**Samples may be re-analyzed for dilution, re-extraction and for other QC reasons. In such cases, the best result values are used.**

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

*Samples FSND-MW-33-20221019 and FSND-GEP-1-20221020 were analyzed at dilutions due to high concentrations of target compounds.*

## 14. OTHER PROBLEMS:

*None.*

**Table 1 Major and Minor Findings**

| | Were acceptance criteria met? | | |
|---|---|---|---|
| | Yes | No | |
| **Volatiles** | | Major | Minor |
| Holding Time | x | | |
| Mass Spectrometer Tuning | x | | |
| Response Factor | x | | |
| Percent Relative Standard Deviation and Percent Difference | | | x |
| Internal Standards | x | | |
| Method Blank | x | | |
| Equipment/Rinse Blank | | | x |
| Trip Blank | | | x |
| Storage Blank | NA | | |
| Surrogates | | | x |
| Compound Identification | NA | | |
| Matrix Spike/Matrix Spike Duplicate | x | | |
| Field Duplicate | x | | |
| Laboratory Control Samples | x | | |
| Other Quality Control Data out of Specification Dilutions | x | | |
| Required Reporting Limits | 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. |
| X | The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. |
| N | The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tentative identification. |
| NJ | The analyte was tentatively identified, and the associated numerical value represents its approximate concentration. |

# Calculation Documentation

Field Duplicate Calculations

| Parameters | Original Sample | Duplicate Sample | | LOQ | Flag |
|---|---|---|---|---|---|
| | FSND-MW-28-20221019 | FSND-FD-02-20221019 | RPD | | |
| Methane | 0 | 0 | 0.0 | 4.7 | |
| Ethane | 0 | 0 | 0.0 | 9.6 | |
| Ethene | 10.9 | 16.9 | 43.2 | 13.2 | ok, diff <LOQ |
| Iron (total) | 796 | 52.6 | 175.2 | 50 | > LOQ, Q J |
| Alkalinity, Total (As CaCO3) | 325 | 336 | 3.3 | 2 | |
| Total Organic Carbon | 2.4 | 2.4 | 0.0 | 1 | |
| Nitrogen, Nitrate (As N) | 0.78 | 0.78 | 0.0 | 0.5 | |
| Sulfate (As SO4) | 37.3 | 37.5 | 0.5 | 3 | |
| Chloride (As Cl) | 48.6 | 49.2 | 1.2 | 0.6 | |
| Iron (dissolved) | 307 | 0 | 0.0 | 50 | |
| | FSND-MW-34-20221019 | FSND-FD-03-20221019 | | | |
| Methane | 22.7 | 39 | 52.8 | 4.7 | out Q J |
| Ethane | 0 | 0 | 0.0 | 9.6 | |
| Ethene | 0 | 8.6 | 200.0 | 13.2 | ok, diff <LOQ |
| Iron (total) | 895 | 1020 | 13.1 | 50 | |
| Alkalinity, Total (As CaCO3) | 182 | 180 | 1.1 | 2 | |
| Total Organic Carbon | 3 | 2.9 | 3.4 | 1 | |
| Nitrogen, Nitrate (As N) | 0 | 0 | 0.0 | 0.5 | |
| Sulfate (As SO4) | 10.4 | 10.2 | 1.9 | 3 | |
| Chloride (As Cl) | 14.9 | 15.4 | 3.3 | 0.6 | |
| Iron (dissolved) | 979 | 575 | 52.0 | 50 | > LOQ, Q J |

Field Duplicate Calculations

| Parameters | Original Sample | Duplicate Sample | | LOQ | Flag |
|---|---|---|---|---|---|
| | FSND-MW-5-20221018 | FSND-FD-01-20221018 | RPD | | |
| Methylcyclohexane | 0 | 0 | 0.0 | 1 | |
| Bromochloromethane | 0 | 0 | 0.0 | 1 | |
| 1,2,3-Trichlorobenzene | 0 | 0 | 0.0 | 1 | |
| 1,2-Dibromo-3-Chloropropane | 0 | 0 | 0.0 | 1 | |
| Methyl Acetate | 0 | 0 | 0.0 | 1 | |
| Chloromethane (Methyl Chloride) | 0 | 0 | 0.0 | 1 | |
| Acetone | 0 | 0 | 0.0 | 5 | |
| Vinyl Chloride | 0 | 0 | 0.0 | 1 | |
| Chloroethane | 0 | 0 | 0.0 | 1 | |
| Methyl Ethyl Ketone (2-Butanone) | 0 | 0 | 0.0 | 5 | |
| Carbon Disulfide | 0 | 0 | 0.0 | 1 | |
| Benzene | 0 | 0 | 0.0 | 1 | |
| Cyclohexane | 0 | 0 | 0.0 | 5 | |
| Methyl Chloride | 0 | 0 | 0.0 | 1 | |
| Tert-Butyl Methyl Ether | 0 | 0 | 0.0 | 1 | |
| Toluene | 0 | 0 | 0.0 | 1 | |
| Bromomethane | 0 | 0 | 0.0 | 5 | |
| Cis-1,2-Dichloroethylene | 0 | 0 | 0.0 | 1 | |
| Trans-1,2-Dichloroethene | 0 | 0 | 0.0 | 1 | |
| 1,1-Dichloroethene | 0 | 0 | 0.0 | 1 | |
| 1,2-Dichloroethane | 0 | 0 | 0.0 | 1 | |
| 1,1-Dichloroethane | 0 | 0 | 0.0 | 1 | |
| 2-Hexanone | 0 | 0 | 0.0 | 5 | |
| Methyl Isobutyl Ketone (4-Methyl-2-Pentanone) | 0 | 0 | 0.0 | 5 | |
| Styrene | 0 | 0 | 0.0 | 1 | |
| Ethylbenzene | 0 | 0 | 0.0 | 1 | |
| O-Xylene (1,2-Dimethylbenzene) | 0 | 0 | 0.0 | 1 | |
| m,p-Xylene | 0 | 0 | 0.0 | 2 | |
| Trans-1,3-Dichloropropene | 0 | 0 | 0.0 | 1 | |
| Cis-1,3-Dichloropropene | 0 | 0 | 0.0 | 1 | |
| Chlorobenzene | 0 | 0 | 0.0 | 1 | |
| 1,2-Dichloropropane | 0 | 0 | 0.0 | 1 | |
| Chloroform | 2.9 | 3 | 3.4 | 1 | |
| Isopropylbenzene (Cumene) | 0 | 0 | 0.0 | 1 | |
| Dichlorodifluoromethane | 0 | 0 | 0.0 | 1 | |
| Trichloroethylene (TCE) | 0 | 0 | 0.0 | 1 | |
| 1,1,1-Trichloroethane (TCA) | 0 | 0 | 0.0 | 1 | |
| 1,1,2-Trichloroethane | 0 | 0 | 0.0 | 1 | |
| Trichlorofluoromethane | 0 | 0 | 0.0 | 1 | |
| 1,2-Dichlorobenzene | 0 | 0 | 0.0 | 1 | |
| 1,4-Dichlorobenzene | 0 | 0 | 0.0 | 1 | |
| 1,3-Dichlorobenzene | 0 | 0 | 0.0 | 1 | |
| Carbon Tetrachloride | 0 | 0 | 0.0 | 1 | |
| Bromodichloromethane | 3.6 | 3.6 | 0.0 | 1 | |
| Tetrachloroethylene (PCE) | 0 | 0 | 0.0 | 1 | |
| 1,1,2,2-Tetrachloroethane | 0 | 0 | 0.0 | 1 | |
| 1,2,4-Trichlorobenzene | 0 | 0 | 0.0 | 1 | |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 0 | 0 | 0.0 | 1 | |
| 1,2-Dibromoethane (Ethylene Dibromide) | 0 | 0 | 0.0 | 1 | |
| Dibromochloromethane | 3.8 | 3.8 | 0.0 | 1 | |
| Bromoform | 3.4 | 3.4 | 0.0 | 1 | |

| | FSND-MW-34-20221019 | FSND-FD-03-20221019 | | |
|---|---|---|---|---|
| Methylcyclohexane | 0 | 0 | 0.0 | 1 |
| Bromochloromethane | 0 | 0 | 0.0 | 1 |
| 1,2,3-Trichlorobenzene | 0 | 0 | 0.0 | 1 |
| 1,2-Dibromo-3-Chloropropane | 0 | 0 | 0.0 | 1 |
| Methyl Acetate | 0 | 0 | 0.0 | 1 |
| Chloromethane (Methyl Chloride) | 0 | 0 | 0.0 | 1 |
| Acetone | 0 | 0 | 0.0 | 5 |
| Vinyl Chloride | 0 | 0 | 0.0 | 1 |
| Chloroethane | 0 | 0 | 0.0 | 1 |
| Methyl Ethyl Ketone (2-Butanone) | 0 | 0 | 0.0 | 5 |
| Carbon Disulfide | 0 | 0 | 0.0 | 1 |
| Benzene | 0 | 0 | 0.0 | 1 |
| Cyclohexane | 0 | 0 | 0.0 | 5 |
| Methyl Chloride | 0 | 0 | 0.0 | 1 |
| Tert-Butyl Methyl Ether | 0 | 0 | 0.0 | 1 |
| Toluene | 0.72 | 0.69 | 4.3 | 1 |
| Bromomethane | 0 | 0 | 0.0 | 5 |
| Cis-1,2-Dichloroethylene | 0.95 | 0.93 | 2.1 | 1 |
| Trans-1,2-Dichloroethene | 0 | 0 | 0.0 | 1 |
| 1,1-Dichloroethene | 0 | 0 | 0.0 | 1 |
| 1,2-Dichloroethane | 0 | 0 | 0.0 | 1 |
| 1,1-Dichloroethane | 0 | 0 | 0.0 | 1 |
| 2-Hexanone | 0 | 0 | 0.0 | 5 |
| Methyl Isobutyl Ketone (4-Methyl-2-Pentanone) | 0 | 0 | 0.0 | 5 |
| Styrene | 0 | 0 | 0.0 | 1 |
| Ethylbenzene | 0 | 0 | 0.0 | 1 |
| O-Xylene (1,2-Dimethylbenzene) | 0 | 0 | 0.0 | 1 |
| m,p-Xylene | 0 | 0 | 0.0 | 2 |
| Trans-1,3-Dichloropropene | 0 | 0 | 0.0 | 1 |
| Cis-1,3-Dichloropropene | 0 | 0 | 0.0 | 1 |
| Chlorobenzene | 0 | 0 | 0.0 | 1 |
| 1,2-Dichloropropane | 0 | 0 | 0.0 | 1 |
| Chloroform | 0 | 0 | 0.0 | 1 |
| Isopropylbenzene (Cumene) | 0 | 0 | 0.0 | 1 |
| Dichlorodifluoromethane | 0 | 0 | 0.0 | 1 |
| Trichloroethylene (TCE) | 22.5 | 21.6 | 4.1 | 1 |
| 1,1,1-Trichloroethane (TCA) | 0 | 0 | 0.0 | 1 |
| 1,1,2-Trichloroethane | 0 | 0 | 0.0 | 1 |
| Trichlorofluoromethane | 0 | 0 | 0.0 | 1 |
| 1,2-Dichlorobenzene | 0 | 0 | 0.0 | 1 |
| 1,4-Dichlorobenzene | 0 | 0 | 0.0 | 1 |
| 1,3-Dichlorobenzene | 0 | 0 | 0.0 | 1 |
| Carbon Tetrachloride | 0 | 0 | 0.0 | 1 |
| Bromodichloromethane | 0 | 0 | 0.0 | 1 |
| Tetrachloroethylene (PCE) | 0 | 0 | 0.0 | 1 |
| 1,1,2,2-Tetrachloroethane | 0 | 0 | 0.0 | 1 |
| 1,2,4-Trichlorobenzene | 0 | 0 | 0.0 | 1 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 0 | 0 | 0.0 | 1 |
| 1,2-Dibromoethane (Ethylene Dibromide) | 0 | 0 | 0.0 | 1 |
| Dibromochloromethane | 0 | 0 | 0.0 | 1 |
| Bromoform | 0 | 0 | 0.0 | 1 |
| | | | | |
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| | | | | |
| | | | | |

Field Duplicate Calculations

| | Found in SDG N5248 | Found in SDG N5249 | | | |
|---|---|---|---|---|---|
| Parameters | Original Sample | Duplicate Sample | | LOQ | Flag |
| | FSND-MW-28-20221019 | FSND-FD-02-20221019 | RPD | | |
| 1,1,1-Trichloroethane (TCA) | 7.2 | 0 | 0.0 | 1 | |
| 1,1,2,2-Tetrachloroethane | 0 | 0 | 0.0 | 1 | |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 0 | 0 | 0.0 | 1 | |
| 1,1,2-Trichloroethane | 0 | 0 | 0.0 | 1 | |
| 1,1-Dichloroethane | 0 | 0 | 0.0 | 1 | |
| 1,1-Dichloroethene | 0.26 | 0 | 0.0 | 1 | |
| 1,2,3-Trichlorobenzene | 0 | 0 | 0.0 | 1 | |
| 1,2,4-Trichlorobenzene | 0 | 0 | 0.0 | 1 | |
| 1,2-Dibromo-3-Chloropropane | 0 | 0 | 0.0 | 1 | |
| 1,2-Dibromoethane (Ethylene Dibromide) | 0 | 0 | 0.0 | 1 | |
| 1,2-Dichlorobenzene | 0 | 0 | 0.0 | 1 | |
| 1,2-Dichloroethane | 0 | 0 | 0.0 | 1 | |
| 1,2-Dichloropropane | 0 | 0 | 0.0 | 1 | |
| 1,3-Dichlorobenzene | 0 | 0 | 0.0 | 1 | |
| 1,4-Dichlorobenzene | 0 | 0 | 0.0 | 1 | |
| 2-Hexanone | 0 | 0 | 0.0 | 5 | |
| Acetone | 0 | 0 | 0.0 | 5 | |
| Benzene | 0 | 0 | 0.0 | 1 | |
| Bromochloromethane | 0 | 0 | 0.0 | 1 | |
| Bromodichloromethane | 0 | 0 | 0.0 | 1 | |
| Bromoform | 0 | 0 | 0.0 | 1 | |
| Bromomethane | 0 | 0 | 0.0 | 5 | |
| Carbon Disulfide | 0 | 0 | 0.0 | 1 | |
| Carbon Tetrachloride | 0.52 | 0 | 0.0 | 1 | |
| Chlorobenzene | 0 | 0 | 0.0 | 1 | |
| Chloroethane | 0 | 0 | 0.0 | 1 | |
| Chloroform | 0.51 | 0.59 | 14.5 | 1 | |
| Chloromethane (Methyl Chloride) | 0 | 0 | 0.0 | 1 | |
| Cis-1,2-Dichloroethylene | 3.3 | 3.6 | 8.7 | 1 | |
| Cis-1,3-Dichloropropene | 0 | 0 | 0.0 | 1 | |
| Cyclohexane | 0 | 0 | 0.0 | 5 | |
| Dibromochloromethane | 0 | 0 | 0.0 | 1 | |
| Dichlorodifluoromethane | 0 | 0 | 0.0 | 1 | |
| Ethylbenzene | 0 | 0 | 0.0 | 1 | |
| Isopropylbenzene (Cumene) | 0 | 0 | 0.0 | 1 | |
| m,p-Xylene | 0 | 0 | 0.0 | 2 | |
| Methyl Acetate | 0 | 0 | 0.0 | 1 | |
| Methyl Ethyl Ketone (2-Butanone) | 0 | 0 | 0.0 | 5 | |
| Methyl Isobutyl Ketone (4-Methyl-2-Pentanone) | 0 | 0 | 0.0 | 5 | |
| Methylcyclohexane | 0 | 0 | 0.0 | 1 | |
| Methylene Chloride | 0 | 0 | 0.0 | 1 | |
| O-Xylene (1,2-Dimethylbenzene) | 0 | 0 | 0.0 | 1 | |
| Styrene | 0 | 0 | 0.0 | 1 | |
| Tert-Butyl Methyl Ether | 0 | 0 | 0.0 | 1 | |
| Tetrachloroethylene (PCE) | 27.1 | 30.9 | 13.1 | 1 | |
| Toluene | 0 | 0 | 0.0 | 1 | |
| Trans-1,2-Dichloroethene | 0.28 | 0 | 0.0 | 1 | |
| Trans-1,3-Dichloropropene | 0 | 0 | 0.0 | 1 | |
| Trichloroethylene (TCE) | 220 | 230 | 4.4 | 5 | |
| Trichlorofluoromethane | 0 | 0 | 0.0 | 1 | |
| Vinyl Chloride | 0 | 0 | 0.0 | 1 | |

# Data Validation Worksheet

Validated on: 1/26/2023

Validate by: PMH

Reviewed by: GAP

Reviewed on: 2/2/2023

ICP Checklist 6010

**DOD**

Project: Scotia Annual Testing

SDG: N5212

Analytes: Total and Dissolved Iron

Matrix: Water

Temp. (0-6 degrees C) ok at 2.1 degC

**Preservation Holding Time** –

Date collected : 10/19/2022

pH < 2 yes

6 months HT yes analyzed on 10/21, 10/25, 10/26

Per module - if exceeded, detect qualify J- and non-detects as X

---

Calibration-

All met criteria unless noted below.

**Low Level Std. (LLICV/LLCCV)** (80-120%) yes per module: if >120% J+; if 50-80% J-/UJ; if <50% J-/X

**Initial Calib Verif**. ICV (90-110 %R) yes per module: if out X all data

**Continuing Calib. Verif**. CCV (90-110 %R) yes per module: if out X all data

**Initial Calib Blank ICB** (ND or U) all ok unless listed below

**Continuing Calib. Blank CCB** (ND or U) all ok unless listed below

Frequency every ten samples: yes

**INST ID: P5**

**Run Sequence: 10/21/2022**

ICV01 1 1254

LLICV01 1 1259

ICB01 1 1307

CCV07 1 1923 Samples 1,7

CCB07 1 1927

CCV08 1 2009 Samples 9,11,13,15,17,19,21,23,25,27

CCB08 1 2012

CCV09 1 2055 Samples 29,31,33

CCB09 1 2058

CCV10 1 2141 Samples 8,16,18,20,22,24

CCB10 1 2144

CCV11 1 2227 Samples 26,28,32,34

CCB11 1 2230

CCV12 1 2254

CCB12 1 2257

**Run Sequence 10/25/22**

ICV01 1 1321

LLICV01 1 1432

ICB01 1 1435

CCV03 1 1718 Samples 2,10,12,14

CCB03 1 1722

CCV04 1 1832

CCB04 1 1835

CCV05 1 1918

CCB05 1 1921

**Run Sequence 10/26/22**

ICV01 1 1352

LLICV01 1 1357

ICB01 1 1401

CCV01 1 1416 Samples 30

LLCCV01 1 1420

CCB01 1 1424

CCV02 1 1519

CCB02 1 1523

**Blanks: (Remember never qualify a blank for a blank and always use highest blank value)**

**Method/Preparation Blank (ND or U)**

PB148466BL (total samples) ND

PB148467BL (dissolved samples) ND

All OK

**Field Blanks/Equipment Blanks/Rinse Blanks (ND or U)**

**FSND-RB-20221019-20221019 (*total*) = 347 ug/L,**

Sample 13 < LOD, Q U at the LOD

Samples 19 and 31 > 5x blank, no Q

All other total iron sample results were >LOD but <5x blank conc., qualified J+ at sample result

**FSND-RB-20221019-20221019 (*dissolved*) = 110 ug/L**

Samples 2, 12, 14, 22, 30 all non-detect or < LOD, Q U at LOD

Samples 16, 18, 24, 28 all >LOD but < 5X blank conc., qualified J+ at sample result

Samples 8, 10, 20, 26, 32 all > 5X blank conc., no Q

Data Validation Guidelines Modules 1, 2, 3, and 4 Revised Table for Sample Qualification in the Presence of Blank Contamination, February 09, 2022

Table A: Sample Qualification in the Presence of Blank Contamination

| | Sample | | |
|---|---|---|---|
| Row Number | Result | Validated Result | Validation Qualifier |
| 1 | non-detect or detect ≤ LOD | Report at LOD | U |
| 2 | > LOD and ≤ 5x blank | Report at Sample Result | J+ |
| 3 | > 5x blank | Report at Sample Result | None |

*LOD = Limit of Detection*

**Interference Check Sample (ICS)**

**ICSA (+/- LOD or 80-120 %R and unspiked anlaytes <1/2LOQ ) yes**

**ICSAB (+/- LOD or 80-120 %R) yes**

**Instrument:**

**Table III: ICS/SIC Qualifications**

| *Target Analyte* | *Sample Result* | *Qualifier(s)* |
|---|---|---|
| %R > 120% | Non-detect | None |
| %R > 120% | Detect | J+ |
| %R ≥ 50% < 80% | Non-detect | UJ |
| %R ≥ 50% < 80% | Detect | J- |
| %R < 50% | Non-detect | X |
| %R < 50% | Detect | J- |
| **Positive Unspiked Element** | | |
| > LLOQ or ½ LOQ | Non-detect | None |
| > LLOQ or ½ LOQ | Detect < 5x [unspiked] | J+ |
| > LLOQ or ½ LOQ | Detect ≥ 5x [unspiked] | None |
| **Negative Unspiked Element** | | |
| Absolute value > LLOQ or ½ LOQ | Non-detect | UJ |
| Absolute value > LLOQ or ½ LOQ | Detect ≤ 5x \|unspiked\| | J- |
| Absolute value > LLOQ or ½ LOQ | Detect > 5x \|unspiked\| | None |

**Method 6010D SIC (LLOQ); DoD QSM ICS (1/2 LOQ)**

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**Laboratory Control Sample (LCS) USE QSM**

**Appendix C requirements met yes**

**Per module: if ↑ J+, if ↓ but >60% J-/UJ; if <60% J-/X**

PB148466BS ok

PB148467BS ok

**Duplicates: 1 in 20**

**Yes/No Yes**

**FSND-MW-16-20221019 (N5212-1 = total and N5212-2 = dissolved)**

**RPD < 20%. Y total OK, N dissolved out 68%, sample previously Q U from rinse blank, Q UJ**

**per module: if out qualify positive J and nondetect UJ**

---

**Matrix Spike (MS) (only if sample concentration is less than 4x spike added)**

**Yes/No Yes**

**If yes, sample name: FSND-MW-16-20221019 (total) N5212-1**

| Metal | MS %R | MSD %R | RPD | PDS | FLAG |
|---|---|---|---|---|---|
| Fe | 147%↑ | 147%↑ | ok | ok | J+ |

**If yes, sample name: FSND-MW-16-20221019 (dissolved) N5212-2**

| Metal | MS %R | MSD %R | RPD | PDS | FLAG |
|---|---|---|---|---|---|
| Fe | ok | ok | ok | n/a | none |

**%R (see appendix C tables below) per module: ↑ and PDS out J+; if ↑ and PDS ok J; ↓ but >30% and PDS out J-/UJ; if ↓ but >30% and PDS ok J/UJ; <30% and PDS out J-/X; if <30% and PDS ok J/UJ**

**%RPD < 20% per module: if out qualify positive J and nondetect UJ**

**PDS 80-120%R per module: required if MS/MSD out;**

---

**Serial Dilution**

**Yes/No Yes**

**If yes, sample name: FSND-MW-16-20221019**

**%D < 10% (only if undiluted result is > 50x IDL) All OK**

**per module: required if MS/MSD out; IF >10% J**

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**Field Duplicates (use project specific limit – if not stated use: Solid +/- 50% RPD; Liquid +/- 50% RPD)**

**Per Scotia NY QAPP: < 30% for ICP metals**

**List Field Duplicates:**

**FSND-MW-28-20221019 and FSND-FD-02-20221019**

Total Fe out 175%, previously Q J+ for RB contamination, changed to Q J on this basis.

Dissolved Fe ok

**FSND-MW-34-20221019 and FSND-FD-03-20221019**

Total Fe OK

Dissolved Fe out 52%, Q J

**Precision acceptable (Y/N)** **See field duplicate worksheet**

DoD/DOE QSM 5.3
Appendix C
2019

**Table C-3. Method 6010 Solid Matrix**

| CAS ID | Analyte | N Records | Mean | Standard Deviation | Lower Control Limit | Upper Control Limit |
|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 6258 | 96.7 | 7.5 | 74 | 119 |
| 7440-36-0 | Antimony | 5997 | 96.4 | 5.7 | 79 | 114 |
| 7440-38-2 | Arsenic | 9530 | 96.2 | 4.9 | 82 | 111 |
| 7440-39-3 | Barium | 9236 | 98.3 | 5 | 83 | 113 |
| 7440-41-7 | Beryllium | 6799 | 97.8 | 5.1 | 83 | 113 |
| 7440-42-8 | Boron | 2312 | 93 | 7.1 | 72 | 114 |
| 7440-43-9 | Cadmium | 9466 | 97.5 | 5.3 | 82 | 113 |
| 7440-70-2 | Calcium | 6347 | 98.1 | 5.8 | 81 | 116 |
| 7440-47-3 | Chromium | 9598 | 98.9 | 4.6 | 85 | 113 |
| 7440-48-4 | Cobalt | 6725 | 98.7 | 4.5 | 85 | 112 |
| 7440-50-8 | Copper | 7839 | 99.1 | 6 | 81 | 117 |
| 7439-89-6 | Iron | 5746 | 99.7 | 6.1 | 81 | 118 |
| 7439-92-1 | Lead | 10160 | 96.8 | 5.1 | 81 | 112 |
| 7439-93-2 | Lithium | 551 | 98.8 | 4.5 | 85 | 112 |
| 7439-95-4 | Magnesium | 6283 | 96.1 | 6.1 | 78 | 115 |
| 7439-96-5 | Manganese | 6732 | 99.1 | 4.9 | 84 | 114 |
| 7439-98-7 | Molybdenum | 4424 | 98.7 | 5.7 | 82 | 116 |
| 7440-02-0 | Nickel | 7412 | 98.1 | 4.9 | 83 | 113 |
| 7723-14-0 | Phosphorus | 189 | 103.1 | 3.8 | 92 | 114 |
| 7440-09-7 | Potassium | 6574 | 98.3 | 5.8 | 81 | 116 |
| 7782-49-2 | Selenium | 8862 | 94.5 | 5.6 | 78 | 111 |
| 7440-22-4 | Silver | 9105 | 97.3 | 5 | 82 | 112 |
| 7440-23-5 | Sodium | 5825 | 100.1 | 5.8 | 83 | 118 |
| 7440-24-6 | Strontium | 2573 | 98.5 | 5 | 83 | 114 |
| 7440-28-0 | Thallium | 6416 | 96.8 | 4.6 | 83 | 111 |
| 7440-31-5 | Tin | 2780 | 100.1 | 6.6 | 80 | 120 |
| 7440-32-6 | Titanium | 2107 | 98.2 | 5.2 | 83 | 114 |
| 7440-61-1 | Uranium | 109 | 97.4 | 5.2 | 82 | 113 |
| 7440-62-2 | Vanadium | 6934 | 98.3 | 5.4 | 82 | 114 |
| 7440-66-6 | Zinc | 7882 | 97.4 | 5 | 82 | 113 |

DoD/DOE QSM 5.3
Appendix C
2019

**Table C-4. Method 6010 Aqueous Matrix**

| CAS ID | Analyte | N Records | Mean | Standard Deviation | Lower Control Limit | Upper Control Limit |
|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 11532 | 100 | 4.8 | 86 | 115 |
| 7440-36-0 | Antimony | 10737 | 100.2 | 4.2 | 88 | 113 |
| 7440-38-2 | Arsenic | 14123 | 99.9 | 4.3 | 87 | 113 |
| 7440-39-3 | Barium | 14476 | 100.3 | 4.1 | 88 | 113 |
| 7440-41-7 | Beryllium | 11552 | 100.4 | 4 | 89 | 112 |
| 7440-69-9 | Bismuth | 147 | 95.8 | 3.2 | 86 | 105 |
| 7440-42-8 | Boron | 3871 | 98.8 | 4.8 | 85 | 113 |
| 7440-43-9 | Cadmium | 13922 | 100.8 | 4.1 | 88 | 113 |
| 7440-70-2 | Calcium | 11382 | 100 | 4.2 | 87 | 113 |
| 7440-47-3 | Chromium | 15027 | 101.1 | 3.9 | 90 | 113 |
| 7440-48-4 | Cobalt | 11824 | 101.2 | 4.2 | 89 | 114 |
| 7440-50-8 | Copper | 12910 | 100.2 | 4.6 | 86 | 114 |
| 7439-89-6 | Iron | 13797 | 100.7 | 4.7 | 87 | 115 |
| 7439-92-1 | Lead | 14391 | 99.3 | 4.4 | 86 | 113 |
| 7439-93-2 | Lithium | 938 | 100.7 | 5.3 | 85 | 117 |
| 7439-95-4 | Magnesium | 11423 | 98.8 | 4.8 | 85 | 113 |
| 7439-96-5 | Manganese | 12767 | 101.9 | 4.1 | 90 | 114 |
| 7439-98-7 | Molybdenum | 8251 | 101.1 | 4 | 89 | 113 |
| 7440-02-0 | Nickel | 12699 | 100.5 | 4.1 | 88 | 113 |
| 7440-05-3 | Palladium | 492 | 99.8 | 4 | 88 | 112 |
| 7723-14-0 | Phosphorus | 203 | 100.5 | 4.2 | 88 | 113 |
| 7440-09-7 | Potassium | 11006 | 99.9 | 4.7 | 86 | 114 |
| 7782-49-2 | Selenium | 13264 | 98.5 | 5.2 | 83 | 114 |
| 7440-21-3 | Silicon | 1525 | 100.6 | 6.1 | 82 | 119 |
| 7440-22-4 | Silver | 13770 | 99.1 | 5.1 | 84 | 115 |
| 7440-23-5 | Sodium | 10893 | 100.9 | 4.7 | 87 | 115 |
| 7440-24-6 | Strontium | 3782 | 101.3 | 3.8 | 90 | 113 |
| 7704-34-9 | Sulfur | 145 | 100.7 | 3.9 | 89 | 112 |
| 7440-28-0 | Thallium | 10063 | 99.5 | 4.7 | 85 | 114 |
| 7440-31-5 | Tin | 4502 | 101.3 | 4.4 | 88 | 115 |
| 7440-32-6 | Titanium | 5625 | 101.1 | 3.4 | 91 | 111 |
| 7440-61-1 | Uranium | 223 | 101.3 | 5.8 | 84 | 119 |

| Table C-4. Method 6010 Aqueous Matrix | | | | | | |
|---|---|---|---|---|---|---|
| **CAS ID** | **Analyte** | **N Records** | **Mean** | **Standard Deviation** | **Lower Control Limit** | **Upper Control Limit** |
| 7440-62-2 | Vanadium | 12032 | 100.2 | 3.6 | 90 | 111 |
| 7440-66-6 | Zinc | 13549 | 100.6 | 4.6 | 87 | 115 |

**Red Hill GW Alkalinity Validation Checklist**

| | |
|---|---|
| **Site:** | Scotia NY Annual Testing |
| **Laboratory:** | CHEMTECH |
| **SDG:** | N5212 |
| **Data Validator:** | PMH |
| **Validation Date:** | 2/1/2023 |
| **Reviewer:** | GAP |
| **Review Date:** | 2/2/2023 |
| **Method:** | SM 2320B |

**Data Completeness and Deliverables**

***Have any missing deliverable been recieved and added to the data package?***
**ACTION:** Call lab for explanation/resubmittal of any missing deliverables. If the lab cannot probive them, note the effect on review of the data in the non-compliance section of the data assessment narrative.

☐ Yes ☑ No

Notes and validation action: all acceptable except if noted.

**Custody Documents and Narratives**

***Are chains of custody present and complete for all samples?***

☑ Yes ☐ No

**ACTION:** Contract lab for replacement of missing documents.

***Do chains of custody or lab narratives indicate any problems with sample receipt, condition of samples, analytical problems or special notations affecting the quality of the data?***

☐ Yes ☑ No

Notes and validation action: all exceptable except if noted

**Temperature:**

***Sample coolers received @ 0-6 ℃ ?***

**Preservation: none required**

**ACTION**: If samples were not iced upon receipt, flag all positive results as estimated, an all non-detects “UJ”.

☑ Yes ☐ No

Notes and validation action: all acceptable except if noted

**Holding Time**

***Does the holding time exceed 14 days?***

**ACTION:** If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J" or “UJ” as appropriate. When holding times are exceeded by more than twice the time specified, the non-detects will be flagged as unusable, "X”.

☐ Yes ☑ No

Notes and validation action:
Sampled: 10/19/2022

Analyzed: 10/25-10/26/2022 all ok

**Calibration Verification**

***Did the lab provide prof of calibration and/or ICV/CCVs within lab limits?***

☐ Yes ☑ No

Notes and validation action: No calibration provided in data package. No ICV or CCVs were run by the lab. Could not evaluate.

**Blanks**

***Has a method blank analysis been reported per twenty samples of a similar matrix or concentration level, and for each extraction batch?***

☐ Yes ☑ No

***Upon examination of laboratory and field blank data, do any blanks contain positive results?***

☐ Yes ☑ No

***Are there field/rinse/equipment blanks associated with every sample?***

☑ Yes ☐ No

**ACTION:** If yes, qualify associated results as follows:
**if sample result is <RL:**
flag sample result as non-detect ("U") at the RL.
**If sample result is > RL but <5X the blank contamination:**
flag sample result J+

Notes and validation action:

| blank | analyte | positive result | associated sample | flag |
|---|---|---|---|---|
| LB122623BLW | | ND | | none |
| LB122625BL | | ND | | none |
| Rinse Blank<br>FSND-RB-20221019 | | ND | | none |

**Matrix Spike**

***Is a matrix spike/matrix spike duplicate summary present?***

☐ Yes ☑ No

***Are all matrix spike and/or matrix spike duplicate %Rs or RPDs within acceptance range? 75-125%?***

☐ Yes ☐ No

**Action: if %R <80 but >35 flag parent result J-/UJ; if %R >120% flag parent result J+: if %R <35% flag parent result X**

Notes and validation action:

| Sample | MS %R | MSD %R | RPD | Flag |
|---|---|---|---|---|
| none/ NA | | | | |

**Laboratory Duplicate**

***Is a laboratory duplicate summary present?***

☑ Yes ☐ No

***Are the RPDs within the control limit of +/- 20%?***

☑ Yes ☐ No

**Action: When both original sample and duplicate sample results are ≥ 5x QL and RPD > 20% flag duplicate sample results J; when both parent and duplicate sample results are < 5x QL (including non-detects) and absolute difference between sample and duplicate > QL flag duplicate sample results**

Notes and validation action:

| | RPD |
|---|---|
| N5212-01 | ok |
| FSND-MW-16-20221019 | |

**Laboratory Control Sample**

***Were LCS samples evaluated with each batch of 20 samples or less and were observed percent recoveries within the laboratory defined limits? 90-110% ?***

☑ Yes ☐ No

***Per Scotia QAPP: 80-120%***

**Action: if %R <80 but >35 flag assocaited results J-/UJ; if %R >120% flag assocaited results J+: if %R <35% flag associated results X**

Notes and validation action:

| LCS or LCSD | %R | Flag | Associated samples: |
|---|---|---|---|
| LB122623BSW | ok | none | |
| LB122625BS | ok | none | |

**Field Duplicates**

***Were field duplicates submitted ?***

☐ Yes ☑ No

***Is the RPD <50% for results >LOQ?***

☐ Yes ☐ No

***Per Scotia QAPP: field duplicate RPD <30%***

**ACTION: if RPD>50% for results >LOQ: qualify parent and duplicate sample J**

Notes and validation action:
see field duplicate worksheet

| | |
|---|---|
| FSND-MW-28-20221019 and FSND-FD-02-20221019 | ok |
| FSND-MW-34-20221019 and FSND-FD-03-20221019 | ok |

**Review Level**

***Is a level 4 review required for this project?***

☐ Yes ☑ No

List samples reviewed :
**level 2B**

As part of the data validation process, the following validation qualifiers and their meanings will be used:

“U” - Non-Detect – The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

“J” - Estimated Value – The analyte was positively identified; but the associated numerical value is the approximate concentration of the analyte in the sample.

“NJ” - The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents its approximate concentration.

“UJ” - Estimated Non-Detect – The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

“X” - The sample results are rejected. Due to significant QA/QC problems the analysis is invalid and provides no information as to whether the analyte is present or not. Once the data are flagged with “X”, any further review or consideration is unnecessary.

If no determination of the overall bias of a result qualified as estimated can be made, the result will be flagged with “J”. If the data reviewer can determine the overall bias for sample data qualified as estimated, the data reviewer will qualify the sample result as either an estimated minimum value (JL) or an estimated maximum value
(JH).

**Red Hill GW Anions Validation Checklist**

| | |
|---|---|
| **Site:** | Scotia NY Annual Testing |
| **Laboratory:** | CHEMTECH |
| **SDG:** | N5212 |
| **Data Validator:** | PMH |
| **Validation Date:** | 2/1/2023 |
| **Reviewer:** | GAP |
| **Review Date:** | 2/2/2023 |
| **Anions:** | Nitrate, Sulfate, Chloride |
| **Method:** | 9056 |

**Data Completeness and Deliverables**

***Have any missing deliverable been recieved and added to the data package?*** ☐ Yes ☑ No

**ACTION:** Call lab for explanation/resubmittal of any missing deliverables. If the lab cannot probive them, note the effect on review of the data in the non-compliance section of the data assessment narrative.

Notes and validation action: all acceptable except if noted.

**Custody Documents and Narratives**

***Are chains of custody present and complete for all samples?*** ☑ Yes ☐ No

**ACTION:** Contract lab for replacement of missing documents.

***Do chains of custody or lab narratives indicate any problems with sample receipt, condition of samples, analytical problems or special notations affecting the quality of the data?*** ☐ Yes ☑ No

Notes and validation action: all acceptable except if noted

**Temperature:**

***Sample coolers received @ 0-6 ℃ ?***

**Preservation: none required**

**ACTION**: If samples were not iced upon receipt, flag all positive results as estimated, an all non -detects "UJ".

☑ Yes ☐ No

Notes and validation action: all acceptable except if noted

**Holding Time**

***Does the holding time exceed 28 days for chloride and sulfate or 48 hours for nitrate?***
**ACTION:** If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J-" or "UJ" as appropriate. When holding times are exceeded by more than twice the time specified, the non-detects will be flagged as unusable, "X".

☑ Yes ☐ No

Notes and validation action:
Sampled: 10/19/2022

Analyzed: Nitrate: initial run 10/20/22 and 10/21/22 (RB sample only on 10/21, sampled 15:10 analyzed 16:30 HT ok)

dilution run 10/20/2022 and 10/21/2022:

| | analyzed | sampled | | |
|---|---|---|---|---|
| N5212-07DL | 10/20/2022 23:26:00 | 10/19/2022 09:30:00 | ok | |
| N5212-09DL | 10/21/2022 01:29:00 | 10/19/2022 00:00:00 | ok | |
| N5212-11DL | 10/21/2022 01:59:00 | 10/19/2022 00:00:00 | ok | |
| N5212-13DL | 10/21/2022 02:30:00 | 10/19/2022 08:25:00 | ok | |
| N5212-15DL | 10/21/2022 03:01:00 | 10/19/2022 09:45:00 | ok | |
| N5212-17DL | 10/21/2022 03:31:00 | 10/19/2022 11:20:00 | ok | |
| N5212-19DL | 10/21/2022 04:02:00 | 10/19/2022 13:00:00 | ok | |
| N5212-21DL | 10/21/2022 12:06:00 | 10/19/2022 11:40:00 | out by ~ 30 mins | Dilution result not reported |
| N5212-23DL | 10/21/2022 12:37:00 | 10/19/2022 13:05:00 | ok | |
| N5212-25DL | 10/21/2022 13:07:00 | 10/19/2022 14:10:00 | ok | |
| N5212-27DL | 10/21/2022 13:38:00 | 10/19/2022 14:20:00 | ok | |
| N5212-29DL | 10/21/2022 14:08:00 | 10/19/2022 16:05:00 | ok | |
| N5212-31DL | 10/21/2022 14:39:00 | 10/19/2022 15:40:00 | ok | |

Chloride/Sulfate: initial run 10/20-10/21/2022 ok
dilution run (only chloride reported) 10/20-10/21/2022 ok

**Initial/Continuing Calibration Verification**

***Are raw data and summary sheets present for both inital and continuing calibrations?*** ☑ Yes ☐ No

***All ICV and CCVs performed initially and every ten samples thereafter?*** ☑ Yes ☐ No

***At least 3 standards and a calibration blank?*** ☑ Yes ☐ No

***Correlation coeff > 0.995?*** ☑ Yes ☐ No

***All ICV and CCV % recoveries between 90-110%?*** ☑ Yes ☐ No

**ACTION:** If the ICV or CCV fail - if possible, indicate bias in the validation report and qualify affected data. 75-89% J-/UJ; 111-125% J+; <75% use professional judgement J- or X; >125% use professional judgement J+ or X

Notes and validation action: all ok

| | %R | Associated Samples |
|---|---|---|
| **INST: IC-2** | | |
| ICAL 10/17/2022 | Cl, N, SO4 all ok | |
| ICV1 10/17/22 15:53 | ok | |
| ICB1 10/17/22 16:24 | ok | |
| CCV1 10/20/22 10:29 | ok | samples 7,9,11,13,15,17,19,21 |
| CCB1 10/20/22 11:01 | ok | |
| CCV2 10/20/22 17:49 | ok | samples 23,25,27,29,31,1,7DL |
| CCB2 10/20/22 18:20 | ok | |
| CCV3 10/21/22 00:27 | ok | samples 9DL,11DL,13DL,15DL,17DL,19DL |
| CCB3 10/21/22 00:58 | ok | |
| CCV5 10/21/22 09:51 | ok | samples 21DL,23DL, 25DL,27DL,29DL,31DL, 33 |
| CCB5 10/21/22 10:29 | ok | |
| CCV6 10/21/22 15:40 | ok | |
| CCB6 10/21/22 16:24 | ok | |

**Preparation blanks/ICB/CCB**

| | | |
|---|---|---|
| ***Preparation blanks present for each prep batch not to exceed 20 samples?***<br>**ACTION:** If no list impacted samples. | ☑ Yes | ☐ No |
| ***Preparation blanks < Method Detection Limit?***<br>**ACTION:** If no, list impacted samples below. | ☑ Yes | ☐ No |
| ***Preparation blanks < Negative Reporting Limit?***<br>**ACTION:** If yes, list impacted samples below. | ☐ Yes | ☑ No |
| ***ALL ICB and CCBs performed initially and every ten samples thereafter?***<br>**ACTION:** If no, list impacted samples below. | ☑ Yes | ☐ No |
| ***All ICB and CCBs < Method Detection Limit?***<br>**ACTION:** If no, list impacted samples below. | ☑ Yes | ☐ No |
| ***All ICB and CCBs < Negative Reporting Limit?***<br>**ACTION:** If yes, list impacted samples below. | ☐ Yes | ☑ No |

Notes and validation action:

all ok see above

**Blanks**

| | | |
|---|---|---|
| ***Has a method blank analysis been reported per twenty samples of a similar matrix or concentration level, and for each extraction batch?*** | ☑ Yes | ☐ No |
| ***Upon examination of laboratory and field blank data, do any blanks contain positive results?*** | ☐ Yes | ☑ No |
| ***Are there field/rinse/equipment blanks associated with every sample?*** | ☑ Yes | ☐ No |

**ACTION:** If yes, qualify associated results as follows:
**if sample result is <RL:**
flag sample result as non-detect ("U") at the RL.
**If sample result is > RL but <5X the blank contamination:**
flag sample result J+

Notes and validation action:

| blank | | positives | Flag | assocated samples |
|---|---|---|---|---|
| LB122579BLW | Chloride | ND | none | |
| | Sulfate | ND | none | |
| | Nitrate | ND | none | |
| LB122579BLW2 | Chloride | ND | none | |
| | Sulfate | ND | none | |
| | Nitrate | ND | none | |
| Rinse Blank | Chloride | ND | none | |
| FSND-RB-20221019-20221019 | Sulfate | ND | none | |
| | Nitrate | ND | none | |

**Matrix Spike**

***Is a matrix spike/matrix spike duplicate summary present?***

☑ Yes ☐ No

**ACTION:** If any matrix spike data are missing, call the lab for explanation/re-submittal. If information is not available, document the effect in narrative notes.

***Are all matrix spike and/or matrix spike duplicate %Rs or RPDs within acceptance range?***
***Per QSM 5.3: Nitrate 88-111%, Sulfate 87-112%; Chloride 87-111%***
**RPD < 15% Per Scotia QAPP**

☑ Yes ☐ No

**Action: if %R <lower limit but >35 flag parent result J-/UJ; if %R >upper limit % flag parent result J+: if %R <35% flag parent result X**

Notes and validation action:

| Sample | | MS %R | MSD %R | RPD | Flag |
|---|---|---|---|---|---|
| N5212-01 | Nitrate | ok | ok | ok | |
| FSND-MW-16-20221019 | Chloride | ok | ok | ok | |
| | Sulfate | ok | ok | ok | |

**Laboratory Duplicate**

***Is a laboratory duplicate summary present for each prep batch not to exceed 20 samples?***

☐ Yes ☑ No

***Are the RPDs within the control limit of +/- 20%?***
**Action: When both original sample and duplicate sample results are ≥ 5x QL and RPD > 20% flag duplicate sample results J; when both parent and duplicate sample results are < 5x QL (including non-detects) and absolute difference between sample and duplicate > QL flag duplicate sample results J/UJ**

☐ Yes ☐ No

Notes and validation action:
none

**Laboratory Control Sample**

***Were LCS samples evaluated with each batch of 20 samples or less and were observed percent recoveries within the laboratory defined limits ?***

☑ Yes ☐ No

***Per QSM 5.3: Nitrate 88-111%, Sulfate 87-112%; Chloride 87-111%***

**Action: if %R <lower limit but >35 flag assocaited results J-/UJ; if %R >upper limit % flag assocaited results J+: if %R <35% flag associated results**

Notes and validation action:

| LCS or LCSD | | %R | Flag | Associated samples: |
|---|---|---|---|---|
| LB122579BSW | Nitrate | ok | | |
| | Chloride | ok | | |
| | Sulfate | ok | | |
| LB122579BSW2 | Nitrate | ok | | |
| | Chloride | ok | | |
| | Sulfate | ok | | |

**Field Duplicates**

***Were field duplicates submitted for analysis?***

☑ Yes ☐ No

***Is the RPD <50% for results >LOQ?***

☑ Yes ☐ No

***Per Scotia QAPP: field duplicate RPD < 30%***

**ACTION: if RPD>50% for results >LOQ: qualify parent and duplicate sample J**

Notes and validation action: all ok, see FD worksheet

FSND-MW-28-20221019
FSND-MW-34-20221019
FSND-FD-02-20221019
FSND-FD-03-20221019

***Were all sample results lower than the highest calibration standard?***
**ACTION:** If no, list impacted samples below.

☑ Yes ☐ No

Notes and validation action:
samples 7-31 were diluted between 5 and 10x due to high conc. or chloride.
dilution result orignally set in EDD as not reportable result, changed dilution result to reportable and initial result to not reportable.

**Review Level**
***Is a level 4 review required for this project?***

☐ Yes ☑ No

List samples reviewed :
**level 2B**

As part of the data validation process, the following validation qualifiers and their meanings will be used:

"U" - Non-Detect – The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

"J" - Estimated Value – The analyte was positively identified; but the associated numerical value is the approximate concentration of the analyte in the sample.

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

"UJ" - Estimated Non-Detect – The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

"X" - The sample results are rejected. Due to significant QA/QC problems the analysis is invalid and provides no information as to whether the analyte is present or not. Once the data are flagged with "X", any further review or consideration is unnecessary.

If no determination of the overall bias of a result qualified as estimated can be made, the result will be flagged with "J". If the data reviewer can determine the overall bias for sample data qualified as estimated, the data reviewer will qualify the sample result as either an estimated minimum value (JL) or an estimated maximum value (JH).

**TOC (SW-846 Method 9060A) Validation Checklist**

| | |
|---|---|
| **Site:** | Scotia NY Annual Testing |
| **Laboratory:** | CHEMTECH |
| **SDG:** | N5212 |
| **Data Validator:** | PMH |
| **Validation Date:** | 2/1/2023 |
| **Reviewer:** | GAP |
| **Review Date:** | 2/2/2023 |
| **Method:** | 9060A |

| | |
|---|---|
| **Date Collected:** | 10/19/2022 |
| **Date of Analysis:** | 10/31/2022 |
| | 11/3/2022 |

**Data Completeness and Deliverables**

***Have any missing deliverable been recieved and added to the data package?***
**ACTION:** Call lab for explanation/resubmittal of any missing deliverables. If the lab cannot probive them, note the effect on review of the data in the non-compliance section of the data assessment narrative.

☐ Yes ☑ No

Notes and validation action:

**Custody Documents and Narratives**

***Are chains of custody present and complete for all samples?***

☑ Yes ☐ No

**ACTION:** Contract lab for replacement of missing documents.

***Do chains of custody or lab narratives indicate any problems with sample receipt, condition of samples, analytical problems or special notations affecting the quality of the data?***

☐ Yes ☑ No

**Temperature:**

***Sample coolers received @ 0-6 ℃ ?***

**Preservation:**

***Sulfuric or hydrochloric acid pH of 2?***

**ACTION:** Samples improperly preserved shall be noted in the data validation report. Professional judgement may result in the results of an analysis of an improperly preserved sample by the laboratory being qualified as estimated "J-" or "R".

**ACTION**: If samples >6°C but <10° C flag all positive results as estimated "J" an all non-detects “UJ”.

☑ Yes ☐ No

☑ Yes ☐ No

Notes and validation action:

**Holding Time**

***Does the holding time exceed 28 days?***

**ACTION:** If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J-" or “R” as appropriate.

☐ Yes ☑ No

Notes and validation action:

**Calibration Verification**

***Are raw data and summary sheets present for both inital and continuing calibrations?***

***At least the number of standards requried by QAPP and a blank?***

***Correlation coeff > 0.995?***

***Are the %D values between lab limits?***

***Are the ICV/CCV %r within 80-120%?***
**ACTION:** If criteria not met, qualify with bias per NFG

☐ Yes ☑ No

☐ Yes ☐ No

☐ Yes ☐ No

☑ Yes ☐ No

☑ Yes ☐ No

Notes and validation action:all ok

| | %R | Associated samples | |
|---|---|---|---|
| INST: TOC | | | |
| CAL1 09/28/22 11:17 | ICAL shown in run log summary, no ICAL data/readouts provided as a summary or in raw data, could not evaluate. | | |
| ICV1 09/28/22 14:29 | ok | | |
| ICB1 09/28/22 14:53 | ok | | |
| CCV1 10/31/22 10:25 | ok | samples 7,9,11,13,15,1 | |
| CCB1 10/31/22 10:48 | ok | | |
| CCV2 10/31/22 16:05 | ok | samples 17,19,21,23,25,27,29,31 | qualified for rinse blank contamination below, higher conc. |
| CCB2 10/31/22 16:28 | ok | | |
| CCV3 10/31/22 20:46 | ok | | |
| CCB3 10/31/22 21:10 | 0.45 mg/L | | |
| CCV5 11/03/22 11:36 | ok | sample 33 | |
| CCB5 11/03/22 11:59 | ok | | |
| CCV6 11/03/22 13:47 | ok | | |
| CCB6 11/03/22 14:10 | ok | | |

**Blanks**

***Has a method blank analysis been reported per twenty samples of a similar matrix or concentration level, and for each extraction batch?*** ☑ Yes ☐ No

***Upon examination of laboratory and field blank data, do any blanks contain positive results?*** ☑ Yes ☐ No

***Have calibration blanks been analyzed at the proper frequency?*** ☑ Yes ☐ No

***Are there field/rinse/equipment blanks associated with every sample?*** ☑ Yes ☐ No

**ACTION:** If contamination is present, qualify per NFG.

Notes and validation action:

| blank | positives | Flag | assocated samples |
|---|---|---|---|
| ICB/CCBs all ok except if listed above | | | |
| LB122690BLW | ND | none | |
| LB122690BLW2 | ND | none | |

Rinse Blank

| | | |
|---|---|---|
| FSND-RB-20221019 | 0.96 J | all samples detected >QL, no flag |

**Matrix Spike**

***Is a matrix spike/matrix spike duplicate summary present?*** ☑ Yes ☐ No

**ACTION:** If any matrix spike data are missing, call the lab for explanation/re-submittal. If information is not available, document the effect in narrative notes.

***Are all matrix spike and/or matrix spike duplicate %Rs or RPDs within 70-130%?*** ☑ Yes ☐ No
**Per Scotia QAPP: 75-125%; RPD <20%**

**ACTION:** If no, qualify with bias per NFG.

Notes and validation action:

| Sample | MS %R | MSD %R | RPD | Flag |
|---|---|---|---|---|
| N5212-01 | | | | |
| FSND-MW-16-20221019 | ok | ok | ok | |

**Laboratory Duplicate**

***Is a laboratory duplicate summary present?*** ☐ Yes ☑ No

***Are the RPDs within 20%?*** ☐ Yes ☐ No

**ACTION:** If orginal and duplicate results are ≥ 5X CRQL and RPD is >20% or original and duplicate results are <5X CRQL and the absolute difference between sample and duplicate is >CRQL then qualify as "J" and/or "UJ."

Notes and validation action:
none

**Laboratory Control Sample**

***Were LCS samples evaluated with each batch of 20 samples or less and were observed percent recoveries within the laboratory defined limits of (75-125%)?*** ☑ Yes ☐ No

**Per Scotia QAPP: 90-110%**

**ACTION**: If LCS %R fall outside the control limits, qualify per NFG

Notes and validation action:

| LCS or LCSD | %R | Flag | Associated samples: |
|---|---|---|---|
| LB122690BSW | ok | none | |
| LB122690BSW2 | ok | none | |

**Field Duplicates**

***Were field duplicates submitted for TOC analysis?*** ☑ Yes ☐ No

***Per Scotia QAPP: field duplicates RPD <30%***

**ACTION**: For field duplicate analyses that do not meet the technical criteria as required by QAPP, apply action to only the parent sample and its duplicate.

Notes and validation action:

FSND-MW-28-20221019 and FSND-FD-02-20221019

FSND-MW-34-20221019 and FSND-FD-03-20221019

**Review Level** ☐ Yes ☑ No

List samples reviewed and bold samples used for calculations:
level 2B

**RSK175 METHOD VALIDATION CHECKLIST**

| | |
|---|---|
| Site: | Scotia, NY Annual Testing |
| Laboratory: | CHEMTECH |
| SDG: | N5212 |
| Data Validator: | LL |
| Validation Date: | 1/26/2023 |
| Reviewer: | GAP |
| Review Date: | 2/2/2023 |

Methane, ethane, ethene

**Data Completeness and Deliverables**

***Have any missing deliverable been recieved and added to the data package?***

☐ Yes ☑ No

**ACTION:** Call lab for explanation/resubmittal of any missing deliverables. If the lab cannot provide them, note the effect on review of the data in the non-compliance

Notes and validation action:

**Custody Documents and Narratives**

***Are chains of custody present and complete for all samples?***

☑ Yes ☐ No

**ACTION:** Contact lab for replacement of missing documents.

***Do chains of custody or lab narratives indicate any problems with sample receipt, condition of samples, analytical problems or special notations affecting the quality of the data?***

☐ Yes ☑ No

**ACTION:** If any sample analyzed as a soil other than a TCLP, contains 50-90% water, flag all data as estimated. If the soil sample, other than TCLP, contains more than 90% water, all data would be flagged as unusable.
**ACTION:** If samples were not iced upon receipt, flag all positive results as estimated, an all non-detects "UJ".

Notes and validation action:

**Holding Times**

***Have any RSK175 technical holding times, determined from date of collection to date of extraction been exceeded?***

☐ Yes ☑ No

**NOTE:** Water and Soil sample must be analyzed within 14 days of sample collection. Water samples preserved HCL pH<2, water and soil temp. <6 degrees C. Headspace free for water samples.

**ACTION**: If holding times are exceeded, flag all data as estimated ("J" for detects and "UJ" for non-detects). If holding times were grossly exceeded (i.e., more than 2x the holding time), flag all positive data as estimated and reject all non-detects as unusable ("X").

Notes and validation action:
Collected: 10/19/22
Analyzed: 10/27/22 ok

**Matrix Spike**

***Is a matrix spike/matrix spike duplicate summary present?***
☑ Yes ☐ No

Were matrix spikes analyzed at the required frequency for each of the following matrixes:

| | | | |
|---|---|---|---|
| ***a. low water?*** | ☑ Yes | ☐ No | ☐ NA |
| ***b. low soil?*** | ☐ Yes | ☐ No | ☑ NA |
| ***c. medium soil?*** | ☐ Yes | ☐ No | ☑ NA |

**ACTION:** If ay matrix spike data are missing, call the lab for explanation/re-submittal. If information is not available, document the effect in narrative notes.
Criteria per QSM 5.3

***Are all matrix spike and/or matrix spike duplicate %Rs or RPDs within acceptance range?***
☑ Yes ☐ No ☐ NA

**ACTION:** Do not qualify associated sample results on the basis of the MS/MSD data alone. Use the MS/MSD results in conjunction with other QC criteria to determine the need for qualification of associated data. If the MS and MSD both have less than 10 percent recovery for an analyte, reject non-detect results for that analyte and qualify positive results for that analyte as estimated for the sample used for the MS/MSD analysis. If the MS and MSD both have greater than 200 percent recovery for an analyte, reject detected results for that analyte and qualify non-detect results for that analyte as estimated for the sample used for the MS/MSD analysis. Use professional judgment in applying this criterion to other samples.

Notes and validation action:

| Sample | MS %R | MSD %R | RPD | Flag | Matrix | |
|---|---|---|---|---|---|---|
| FSND-MW-16-20221019 | ok | ok | ok | | | Sample 3 |

**Table C-42. Method RSK-175 Aqueous Matrix**

| CAS ID | Analyte | N Records | Mean | Standard Deviation | Lower Control Limit | Upper Control Limit |
|---|---|---|---|---|---|---|
| 74-86-2 | Acetylene | 719 | 99.6 | 9.8 | 70 | 129 |
| 106-97-8 | Butane | 262 | 97.3 | 7.3 | 75 | 119 |
| 124-38-9 | Carbon dioxide | 441 | 100.8 | 6.9 | 80 | 122 |
| 74-84-0 | Ethane | 2240 | 102.6 | 9.6 | 74 | 131 |
| 74-85-1 | Ethylene | 2284 | 102.5 | 10.2 | 72 | 133 |
| 75-28-5 | Isobutane | 267 | 97.6 | 6.6 | 78 | 117 |
| 74-82-8 | Methane | 2459 | 99.2 | 8.7 | 73 | 125 |
| 74-98-6 | Propane | 900 | 98.1 | 8.2 | 74 | 123 |

**Laboratory Control Sample**

***Were LCS samples evaluated with each batch of 20 samples or less and were observed percent recoveries within the laboratory defined limits of (70-120%)?*** ☑ Yes ☐ No
Criteria per QSM 5.3
**ACTION**: Document in Data Assessment Narrative.

Notes and validation action:
BSA1027G1 ok

**Blanks:**
***Has a method blank analysis been reported per twenty samples of a similar matrix or concentration level, and for each extraction batch?*** ☑ Yes ☐ No

***Upon examination of laboratory and field blank data, do any blanks contain positive results?*** ☐ Yes ☑ No
**ACTION:** If yes, qualify associated results as follows:
If the sample result is greater than the laboratory reporting limit but less than 5 times the blank concentration, flag sample result as non-detect ("U"). If the sample result is reported as detected at a concentration less than the reporting limit and less than 5 times the blank concentration, qualify the sample result as non-detectable at the laboratory reporting limit. For aqueous blanks applied to soil/sediment samples, compare the sample result to the equivalent concentration of the blank. The equivalent concentration is determined by assuming that all of the analyte present in the blank aliquot analyzed is present in the sample aliquot analyzed.
Prepare a list of sample effected.

***Are there field/rinse/equipment blanks associated with every sample?*** ☐ Yes ☑ No

Notes and validation action:
VBA1027G1 all ND

FSND-RB-20221019 LOD Sample 33
Ethane 1.4J 1.92
Sample 1 >LOD <5X blank, Q J+ @ result
Ethylene 4.5J 2.64
Sample 1 <LOD, Q U @ LOD
Samples 9, 11, 13, 15, 19,23 >LOD <5X blank, Q J+ @ result
Methane 4J 0.94
Sample 1 <LOD, Q U @ LOD
Samples 13, 21 >LOD <5X blank, Q J+ @ result
all other samples ND or >5X blank

## Table A: Sample Qualification in the Presence of Blank Contamination

| | Sample | | |
|---|---|---|---|
| Row Number | Result | Validated Result | Validation Qualifier |
| 1 | non-detect or detect ≤ LOD | Report at LOD | U |
| 2 | > LOD and ≤ 5x blank | Report at Sample Result | J+ |
| 3 | > 5x blank | Report at Sample Result | None |

*LOD = Limit of Detection*

*Note 1: The laboratory blank contamination qualifier (typically, B) is a part of the laboratory report. The validation qualifier is identified in the validation report with reason codes for the qualifiers traceable to the blank contamination. See the General Data Validation Guidelines appendices 5 and 7 for examples. During the data usability assessment, the DUA team has both sets of information available.*

*Note 2: The Data Validation Subgroup acknowledges the differences in the QSM requirements for qualification of the method blank by the laboratory and qualification of all blanks by the validator. The method blank, having gone through only the laboratory processing steps and not the field sample handling, should be the most controlled of the blanks. Additionally, the laboratory may reprocess the method blank and samples in order to address the contamination. The laboratory does not evaluate the results of or qualify data based upon field, equipment, trip, or other blanks.*

*The Data Validation Subgroup encourages project development teams to set acceptance requirements for blanks based upon project DQOs. In the absence of those project-specific requirements, these guidelines are written to allow for a higher blank contamination tolerance resulting in a more conservative approach to qualification based upon potential contamination. In other words, the assumption that detects in samples are attributed to contamination rather than true sample concentration is minimized, thus minimizing the assumption of false positives.*

*It is expected that during data usability analysis, the DUA team will review qualifications from the laboratory and from the validator as well as comments contained in the laboratory case narrative and the validation report. The DUA team can then take into consideration whether they believe it more appropriate to consider a result qualified as biased high as a non-detect based upon decision criteria and other quality measures within the data set.*

**Calibration**

***Are raw data and summary sheets present for both initial and continuing calibrations?*** ☑ Yes ☐ No

***Are the % RSD values for the initial calibration less than or equal to 20% or correlation coefficient greater than 0.995?*** ☑ Yes ☐ No

**ACTION**: Associated sample data for those analytes with % RSD > 20 will be qualified as estimated.

***Are the % D values between the true and measured concentration values for the continuing calibrations + 20?*** ☑ Yes ☐ No

**ACTION**: If no, data following the last in-control standard to the next-in-control standard are potentially affected. Associated detected sample data will be qualified as estimated and associated non-detected sample data will be qualified as estimated if low bias is determined to be present.
Check calibration factors and % RSD values back to raw data for 10% of data received. Level 3 and 4 only.

***Are miss-calculations or transcription errors found?*** ☐ Yes ☑ No
**NOTE**: If yes, contact the laboratory.

Notes and validation action:

| | |
|---|---|
| ICAL 10/27/22 | ok |
| FA003570.D | ok |
| FA003571.D | ok |
| FA003582.D | ok |
| FA003593.D | ok |
| FA003599.D | ok |

**Compound Quantitation and Reported Detection Limits**
***Level 3 and 4 only**

Check data for one or more detected target analytes per sample for ten percent of the data packages. Recalculate from the raw data to check for calculation and transcription errors.

***Were miscalculation/transcription errors found?*** ☐ Yes ☐ No ☑ NA

Notes and validation action:

**Field Duplicates**

***Were field duplicates submitted for RSK-175 analysis?***

☑ Yes ☐ No

**ACTION:** Where both the sample duplicate values are greater than 5 times the SQL, acceptable sampling and analytical precision is indicated by an RPD for the two field duplicate results of less than or equal to 100 percent. Where one or both analytes of the field duplicate pair are less than 5 times the SQL, satisfactory precision is indicated if the field duplicate results agree within 2 times the SQL. If the above criteria are not met for an analyte, qualify all associated sample data for that analyte as estimated ("J").
QAPP: 30% for aqueous

Notes and validation action:
see field duplicate worksheet

| | | |
|---|---|---|
| SND-MW-28-20221019 | FSND-FD-02-20221019 | all ok |
| FSND-MW-34-20221019 | FSND-FD-03-20221019 | methane out Q J |

As part of the data validation process, the following validation qualifiers and their meanings will be used:

“U” - Non-Detect – The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

“J” - Estimated Value – The analyte was positively identified; but the associated numerical value is the approximate concentration of the analyte in the sample.

“NJ” - The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents its approximate concentration.

“UJ” - Estimated Non-Detect – The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

“R” - The sample results are rejected. Due to significant QA/QC problems the analysis is invalid and provides no information as to whether the analyte is present or not. Once the data are flagged with “R”, any further review or consideration is unnecessary.

If no determination of the overall bias of a result qualified as estimated can be made, the result will be flagged with “J”. If the data reviewer can determine the overall bias for sample data qualified as estimated, the data reviewer will qualify the sample result as either an estimated minimum value (JL) or an estimated maximum value (JH).

EDS internal checklist for:

Standard Operating Procedure Number: 11-B
March 2015
Revision 1: April 2021

**CLIENT:** EA

**PROJECT:** Scotia, NY Annual Testing

**SDG:** N5248

**Validated by:** LL 1/25/23

**Reviewed by: GAP 2/2/23**

**LAB:** CHEMTECH

TCL list

**Sample Receipt / Hold times (COC, receipt logs, case narrative)**

- ✓ VOC: aqueous: ≤6◦C analyzed and properly preserved analyzed within 14 days
- ✓ VOC: solid: ≤6◦C and properly preserved analyzed within 14 days
- ✓ VOC: if sample vial has air bubble or headspace, is cracked, or improperly sealed qualify J- / UJ
- ✓ If hold time is exceeded qualify J- / UJ
- ✓ If hold time is grossly exceeded by a factor of 2 qualify J- / X

Collected: 10/18-19
Analyzed: 10/21,22,24,26 ok (pH < 2 for all)

**Instrument Performance Check, Calibration and Verification (Form V, run log)**

✓ BFB before calibrations and verifications and every 12 hours

✓ all ion abundance criteria within range

Instrument ID: MSVOA_X

1 BFB VX032196.D 19 Oct 2022 09:32 JC/MD Ok
1 BFB VX032279.D 21 Oct 2022 10:38 JC/MD Ok
27 BFB VX032306.D 21 Oct 2022 22:21 JC/MD Ok
1 BFB VX032327.D 24 Oct 2022 09:46 JC/MD Ok
1 BFB VX032396.D 26 Oct 2022 09:26 JC/MD Ok

All ok

**Calibration and Verification (run log, Form VI, Form VII)**

VOC

- ✓ minimum RF ≥0.05 unless listed below in Table VI or 0.01 for analytes in Table VIII in Module 1
- ✓ if RF out then qualify J / X
- ✓ Per QAPP

  ICAL: Analytes <15% RSD or correlation coefficient > 0.990

  ICV/CCV 20%D

  Closing CCV 50% (using QSM criteria not QAPP 20%)
- ✓ if %RSD out then qualify J / UJ (>30% J / X)

Instrument ID: MSVOA_X

ICAL: 10/19/22
2 VSTDICC001 VX032197.D 19 Oct 2022 10:59 JC/MD Ok,M
10 VSTDICV050 VX032205.D 19 Oct 2022 14:04 JC/MD Ok,M

2 VSTDCCC050 VX032280.D 21 Oct 2022 11:36 JC/MD Ok,M samples 1,2, 4-9
Bromomethane 24.42%D Q UJ
t-1,3-Dichloropropene 23.06%D Q UJ
26 VSTDCCC050 VX032305.D 21 Oct 2022 21:35 JC/MD Ok,M samples 1,2, 4-9

28 VSTDCCC050 VX032307.D 21 Oct 2022 23:02 JC/MD Ok,M samples 10-20
47 VSTDCCC050 VX032326.D 22 Oct 2022 07:06 JC/MD Ok,M samples 10-20

DLs for TCE only
2 VSTDCCC050 VX032328.D 24 Oct 2022 10:19 JC/MD Ok,M samples 7DL, 19DL, 20DL, 15DL, 3
Bromoform 29.5%D sample 3 Q UJ
25 VSTDCCC050 VX032351.D 24 Oct 2022 19:26 JC/MD Ok,M samples 7DL, 19DL, 20DL, 15DL, 3

ICAL: 10/26/22
4 VSTDICC001 VX032399.D 26 Oct 2022 13:02 JC/MD Ok,M
11 VSTDICV050 VX032406.D 26 Oct 2022 15:45 JC/MD Ok,M samples 08RE
23 VSTDCCC050 VX032418.D 26 Oct 2022 20:34 JC/MD Ok,M samples 08RE

all ok except as noted above

**Table VI: SPCCs average RFs should meet the following criteria (Method 8260B):**

| Analyte | Minimum Average RF (method uses the term "mean") |
|---|---|
| Chloromethane | 0.1 |
| 1,1-Dichloroethane | 0.1 |
| Bromoform | 0.1 |
| Chlorobenzene | 0.3 |
| 1,1,2,2-Tetrachloroethane | 0.3 |





**Table VII: CCCs (Method 8260B)**

| Analyte | |
|---|---|
| 1,1-Dichloroethene | Toluene |
| Chloroform | Ethylbenzene |
| 1,2-Dichloropropane | Vinyl Chloride |

**Table VIII: VOC Poor Performers (Method 8260B):**

| Analyte | |
|---|---|
| Acetone | 1,2-Dibromo-3-chloropropane |
| 2-Butanone | Isopropylbenzene |
| Carbon disulfide | Methyl acetate |
| Chloroethane | Methylene chloride |
| Cyclohexane | Methylcyclohexane |
| 1,2-Dibromoethane | Methyl-tert-butyl ether |
| Dichlorodifluoromethane | trans-1,2-Dichloroethene |
| 1,2-Dichloropropane | 4-Methyl-2-pentanone |
| cis-1,2-Dichloroethene | 2-Hexanone |
| 1,4-Dioxane | Trichlorofluoroethane |
| 1,2-Dibromo-3-chloropropane | 1,1,2-Trichloro-1,2,2-triflouroethane |

*Evaluation of VOC RFs and %RSD*

**Blanks (Form IV, Form 1)**

- ✓ evaluate storage, method, field and trip blanks
- ✓ method blank were prepared and analyzed in association with all samples in SDG
- ✓ method blank – analyzed one per prep batch

*Department of Defense Data Validation Guidelines Modules 1, 2, and 4 Revised Blank Qualification Table 02/09/2022*

*The Table A below replaces the following tables in the DoD Data Validation Guidelines Modules and supersedes the previous replacement table dated 05/05/2021.*

Table A: Sample Qualification in the Presence of Blank Contamination

| | Sample | | |
|---|---|---|---|
| Row Number | Result | Validated Result | Validation Qualifier |
| 1 | non-detect or detect ≤ LOD | Report at LOD | U |
| 2 | > LOD and ≤ 5x blank | Report at Sample Result | J+ |
| 3 | > 5x blank | Report at Sample Result | None |

*LOD = Limit of Detection*

*Note 1: The laboratory blank contamination qualifier (typically, B) is a part of the laboratory report. The validation qualifier is identified in the validation report with reason codes for the qualifiers traceable to the blank contamination. See the General Data Validation Guidelines appendices 5 and 7 for examples. During the data usability assessment, the DUA team has both sets of information available.*

*Note 2: The Data Validation Subgroup acknowledges the differences in the QSM requirements for qualification of the method blank by the laboratory and qualification of all blanks by the validator. The method blank, having gone through only the laboratory processing steps and not the field sample handling, should be the most controlled of the blanks. Additionally, the laboratory may reprocess the method blank and samples in order to address the contamination. The laboratory does not evaluate the results of or qualify data based upon field, equipment, trip, or other blanks.*

*The Data Validation Subgroup encourages project development teams to set acceptance requirements for blanks based upon project DQOs. In the absence of those project-specific requirements, these guidelines are written to allow for a higher blank contamination tolerance resulting in a more conservative approach to qualification based upon potential contamination. In other words, the assumption that detects in samples are attributed to contamination rather than true sample concentration is minimized, thus minimizing the assumption of false positives.*

*It is expected that during data usability analysis, the DUA team will review qualifications from the laboratory and from the validator as well as comments contained in the laboratory case narrative and the validation report. The DUA team can then take into consideration whether they believe it more appropriate to consider a result qualified as biased high as a non-detect based upon decision criteria and other quality measures within the data set.*

Method Blanks

VX1021WBL01 all ND

VX1021WBL02 all ND

Trip Blanks

FSND-TB-20221018 (sample 1) all samples associated except 3 (RB)

| | | |
|---|---|---|
| Acetone | 1.4J | LOD=3.8, samples 4-9, 13 are detect <LOD, Q U @ LOD |
| | | Use higher RB (FSND-RB-20221019) for samples 16-20 Q |
| Methylene Chloride | 0.69J | LOD=0.5, all ND no Q |
| Ethylbenzene | 0.31J | LOD=0.5, all ND no Q |

Rinse Blanks

FSND-RB-20221018 (sample 3) Samples 2, 4-15 associated

| | | |
|---|---|---|
| Benzene | 0.46J | LOD=0.5, all D no Q |
| Toluene | 3.1 | LOD=0.5, LOQ=1 |
| | | samples 2, 4,8,9,10,13 detects are >LOD and <5X blank, Q J+ at result |
| Ethylbenzene | 0.27J | use TB for Q |
| o-Xylene | 0.41J | LOD=0.5, all D no Q |
| m,p-Xylene | 1J | LOD=1.0, all D no Q |

FSND-RB-20221019 (sample 10 in SDG N5249) Samples 16-20 associated

| | | |
|---|---|---|
| Acetone | 3.9J | all ND no Q |
| Benzene | 0.36J | all ND no Q |
| Toluene | 2.5 | LOD=0.5, LOQ=1 |
| | | sample 16 detect <LOD, Q U @ LOD |
| | | samples 17,18 detects >LOD and <5X blank, Q J+ at result |
| Ethylbenzene | 0.24J | all ND no Q |
| o-Xylene | 0.36J | all ND no Q |
| m,p-Xylene | 0.87J | all ND no Q |

Professional judgment should be applied to any field blank result that was associated with a contaminated method blank. Generally, if the blank result was qualified as a non-detect due to the method blank, it does not need to be applied to the associated sample results.





However, the fact that the field blank was qualified should be noted in the data validation report.

Multiple blank contaminations (such as a batch with field blanks and a method blank) does not establish a 'hierarchy' of one blank over another. Each blank must be evaluated individually. Blanks should not be qualified due to the results of other blanks.

**Surrogates (Form II)**

✓ Use laboratory or method specific criteria to evaluate QSM 5.3 limits used

Solids

| Parameter | QC LIMITS |
|---|---|
| Toluene-d8 | 85.0 - 116 |
| 4-Bromofluorobenzene | 79.0 - 119 |
| 1,2-Dichloroethane-d4 | 71.0 - 136 |
| Dibromofluoromethane | 78-119 |

Aqueous

| Parameter | QC LIMITS |
|---|---|
| Toluene-d8 | 89.0 - 112 |
| 4-Bromofluorobenzene | 85.0 - 114 |
| 1,2-Dichloroethane-d4 | 81.0 - 118 |
| Dibromofluoromethane | 80-119 |

✓ do not evaluate if surrogates are diluted out

✓ if surrogate %R is outside limits qualify as noted below

**ACTION:** if any surrogate is below the lower acceptance limit but has a recovery greater than 10%, qualify positive results as estimated "J-" and non-detects as estimated "UJ". If any surrogate is above the upper acceptance limit, qualify detects in the sample as estimated "J+". Compounds with non-detects should not be qualified. If any surrogate in a fraction shows less than 10% recovery, flag detects for that fraction as estimated "J-", and non-detects for the fraction as unusable "X".

N5248-08RE FSND-MW-20-20221018RE

4-Bromofluorobenzene 83%↓ no Q sample not reported, original analysis used

**LCS (Form III, batch worksheet)**

✓ use lab limits to evaluate accuracy (%R) QSM 5.3 limits used

**ACTION: -**If the LCS results are below the control limits, but above 10%, but the MS/MSD results are within control limits, sample data associated with the out-of-control point shall be discussed in the data validation report. No qualification of the data is necessary.

-If the LCS results are below the control limits, but above 10% and if the MS/MSD results are below the control limits but above 10%, spiked analytes that showed low recovery in all associated samples shall be flagged as estimated "J" or "UJ".

-If the LCS results are below 10% and if the MS/MSD results are below 10%, only the spiked analytes that showed low recovery in all associated samples shall be flagged as "X" for non-detects and "J" for detects.

-If the associated blank spike and the MS/MSD recoveries are above the control limits, all positive results for only the spiked analyte that showed high recovery shall be estimated "J" in the associated samples.

-If the blank spike/LCS results are outside the control limits and no MS/MSD results are available, only the spiked analytes in all associated samples shall be qualified as listed:

a) If blank spike/LCS results are below the control limits (above 10%), spiked analytes that showed low recovery in all associated samples shall be flagged as estimated "UJ" or "J".

b) If blank spike/LCS results are below 10%, only the spiked analytes that showed low recovery in all associated samples shall be flagged as "X" for non-detects and "J" for detects.

c) If blank spike/LCS results are above the control limits, detects for only the spiked analytes that showed high recovery in all associated samples shall be flagged as "J".

✓ if qualification is required, qualified all samples prepped with the LCS

LCS VX1021WBS01
LCS VX1021WBS02
LCS VX1024WBS01
LCS VX1026WBS01

All ok

**MS/MSD (Form III)**

✓ one per prep batch

✓ do not evaluate if sample concentration is >4X spike concentration

✓ if %R >upper limit qualify parent sample J+

- ✓ if %R <lower limit but >10%qualify parent sample J- / UJ
- ✓ if %R <10%qualify parent sample J- / X
- ✓ if RPD out qualify J (positive results only)
- ✓ qualify parent sample only

List samples, results affected and qualifications below.

| | MS | MSD | RPD | |
|---|---|---|---|---|
| FSND-MW-12R-20221018 | | | | (sample 13) |
| All | ok | ok | ok | |
| | | | | |
| FSND-MW-16-20221019 | | | | ( sample 16) |
| Methyl tert-butyl Ether | ↑ | ok | ok | no Q, inconclusive |
| Methylcyclohexane | ↓ | ok | out | ND, no Q |
| 1,2-Dibromo-3-Chloropropane | ↑ | ok | ok | no Q, inconclusive |
| 1,1,2-Trichlorotrifluoroethane | ok | ok | out | ND, no Q |
| Cyclohexane | ok | ok | out | ND, no Q |
| 1,1,2,2-Tetrachloroethane | ok | ok | out | ND, no Q |

**Internal Standards (Form VIII)**

areas within -50% to +100% of ICAL midpoint standard

- ✓ if area >200% of ICAL midpoint standard qualify J- (no qual for ND)
- ✓ if area <50% but >20% of ICAL midpoint standard qualify J+ / UJ
- ✓ if area <20% of ICAL midpoint standard qualify positive and NDs X
- ✓ RTs within 30 seconds of midpoint standard
- ✓ if RTs not withing 30 seconds qualify NDs X

List samples, results affected and qualifications below.

All ok

**Target Compound Identification (Form1, raw data)**

- ✓ RRTs for all positive results withing ±0.06 of standard
- ✓ primary and secondary ion intensities within 20% of that in the standard

NA

**TICs (Form 1)**

✓ all TICs should be qualified as tentatively identified - NJ

✓ any semi-volatile reported as a TIC should be qualified as rejected, "X"

NA

**Compound Quantitation (Form 1, run log, prep log, EDD)**

✓ evaluate dilutions, re-extractions and re-analyses to confirm best results is reported and all other results are not reportable in EDD Level 2B

**Field Duplicates**

✓ Evaluate and qualify per QAPP if available for project

✓ see field duplicate worksheet

see field duplicate table

FSND-MW-5-20221018 and FSND-FD-01-20221018

FSND-MW-34-20221019 and FSND-FD-03-20221019

All ok

EDS internal checklist for:

Standard Operating Procedure Number: 11-B
March 2015
Revision 1: April 2021

**CLIENT:** EA

**PROJECT:** Scotia, NY Annual Testing

**SDG:** N5249

**Validated by:** LL 1/26/23

**Reviewed by: GAP 2/2/2023**

**LAB:** CHEMTECH

TCL list

**Sample Receipt / Hold times (COC, receipt logs, case narrative)**

- ✓ VOC: aqueous: ≤6◦C analyzed and properly preserved analyzed within 14 days
- ✓ VOC: solid: ≤6◦C and properly preserved analyzed within 14 days
- ✓ VOC: if sample vial has air bubble or headspace, is cracked, or improperly sealed qualify J- / UJ
- ✓ If hold time is exceeded qualify J- / UJ
- ✓ If hold time is grossly exceeded by a factor of 2 qualify J- / X

Collected: 10/19-20
Analyzed: 10/25, 27 ok (pH < 2 for all)

**Instrument Performance Check, Calibration and Verification (Form V, run log)**

✓ BFB before calibrations and verifications and every 12 hours

✓ all ion abundance criteria within range

Instrument ID: MSVOA_X

1 BFB VX032196.D 19 Oct 2022 09:32 JC/MD Ok
1 BFB VX032352.D 25 Oct 2022 09:46 JC/MD Ok
1 BFB VX032396.D 26 Oct 2022 09:26 JC/MD Ok
1 BFB BFB VX032419.D 27 Oct 2022 11:14 JC/MD Ok

All ok

**Calibration and Verification (run log, Form VI, Form VII)**

VOC

- ✓ minimum RF ≥0.05 unless listed below in Table VI or 0.01 for analytes in Table VIII in Module 1
- ✓ if RF out then qualify J / X
- ✓ Per QAPP

  ICAL: Analytes <15% RSD or correlation coefficient > 0.990

  ICV/CCV 20%D

  Closing CCV 50% (using QSM criteria not QAPP 20%)
- ✓ if %RSD out then qualify J / UJ (>30% J / X)

Instrument ID: MSVOA_X

ICAL: 10/19/22
2 VSTDICC001 VX032197.D 19 Oct 2022 10:59 JC/MD Ok,M
10 VSTDICV050 VX032205.D 19 Oct 2022 14:04 JC/MD Ok,M

2 VSTDCCC050 VX032353.D 25 Oct 2022 10:17 JC/MD Ok,M all samples DF1
Chloromethane -22.61%D Q UJ all samples
28 VSTDCCC050 VX032379.D 25 Oct 2022 21:03 JC/MD Ok,M all samples DF1

ICAL: 10/26/22
4 VSTDICC001 VX032399.D 26 Oct 2022 13:02 JC/MD Ok,M (TCE only)
11 VSTDICV050 VX032406.D 26 Oct 2022 15:45 JC/MD Ok,M (TCE only)
2 VSTDCCC050 VX032420.D 27 Oct 2022 11:41 JC/MD Ok,M samples 07DL, 12DL (TCE only)
27 VSTDCCC050 VX032445.D 27 Oct 2022 21:43 JC/MD Ok,M samples 07DL, 12DL(TCE only)

all ok except as noted above

**Table VI: SPCCs average RFs should meet the following criteria (Method 8260B):**

| Analyte | Minimum Average RF (method uses the term "mean") |
|---|---|
| Chloromethane | 0.1 |
| 1,1-Dichloroethane | 0.1 |
| Bromoform | 0.1 |
| Chlorobenzene | 0.3 |
| 1,1,2,2-Tetrachloroethane | 0.3 |





**Table VII: CCCs (Method 8260B)**

| Analyte | |
|---|---|
| 1,1-Dichloroethene | Toluene |
| Chloroform | Ethylbenzene |
| 1,2-Dichloropropane | Vinyl Chloride |

**Table VIII: VOC Poor Performers (Method 8260B):**

| Analyte | |
|---|---|
| Acetone | 1,2-Dibromo-3-chloropropane |
| 2-Butanone | Isopropylbenzene |
| Carbon disulfide | Methyl acetate |
| Chloroethane | Methylene chloride |
| Cyclohexane | Methylcyclohexane |
| 1,2-Dibromoethane | Methyl-tert-butyl ether |
| Dichlorodifluoromethane | trans-1,2-Dichloroethene |
| 1,2-Dichloropropane | 4-Methyl-2-pentanone |
| cis-1,2-Dichloroethene | 2-Hexanone |
| 1,4-Dioxane | Trichlorofluoroethane |
| 1,2-Dibromo-3-chloropropane | 1,1,2-Trichloro-1,2,2-triflouroethane |

*Evaluation of VOC RFs and %RSD*

**Blanks (Form IV, Form 1)**

- ✓ evaluate storage, method, field and trip blanks
- ✓ method blank were prepared and analyzed in association with all samples in SDG
- ✓ method blank – analyzed one per prep batch

*Department of Defense Data Validation Guidelines Modules 1, 2, and 4 Revised Blank Qualification Table 02/09/2022*

*The Table A below replaces the following tables in the DoD Data Validation Guidelines Modules and supersedes the previous replacement table dated 05/05/2021.*

Table A: Sample Qualification in the Presence of Blank Contamination

| | Sample | | |
|---|---|---|---|
| Row Number | Result | Validated Result | Validation Qualifier |
| 1 | non-detect or detect ≤ LOD | Report at LOD | U |
| 2 | > LOD and ≤ 5x blank | Report at Sample Result | J+ |
| 3 | > 5x blank | Report at Sample Result | None |

*LOD = Limit of Detection*

*Note 1: The laboratory blank contamination qualifier (typically, B) is a part of the laboratory report. The validation qualifier is identified in the validation report with reason codes for the qualifiers traceable to the blank contamination. See the General Data Validation Guidelines appendices 5 and 7 for examples. During the data usability assessment, the DUA team has both sets of information available.*

*Note 2: The Data Validation Subgroup acknowledges the differences in the QSM requirements for qualification of the method blank by the laboratory and qualification of all blanks by the validator. The method blank, having gone through only the laboratory processing steps and not the field sample handling, should be the most controlled of the blanks. Additionally, the laboratory may reprocess the method blank and samples in order to address the contamination. The laboratory does not evaluate the results of or qualify data based upon field, equipment, trip, or other blanks.*

*The Data Validation Subgroup encourages project development teams to set acceptance requirements for blanks based upon project DQOs. In the absence of those project-specific requirements, these guidelines are written to allow for a higher blank contamination tolerance resulting in a more conservative approach to qualification based upon potential contamination. In other words, the assumption that detects in samples are attributed to contamination rather than true sample concentration is minimized, thus minimizing the assumption of false positives.*

*It is expected that during data usability analysis, the DUA team will review qualifications from the laboratory and from the validator as well as comments contained in the laboratory case narrative and the validation report. The DUA team can then take into consideration whether they believe it more appropriate to consider a result qualified as biased high as a non-detect based upon decision criteria and other quality measures within the data set.*

Method Blanks

VX1025WBL01 all ND

VX1027WBL01 all ND

Trip Blanks

FSND-TB-20221018 (this is sample 1 in SDG N5248) all samples associated except 10, 14 (RB's)

| | | |
|---|---|---|
| Acetone | 1.4J | use RB results to Q |
| Methylene Chloride | 0.69J | LOD=0.5, all ND no Q |
| Ethylbenzene | 0.31J | LOD=0.5, all ND no Q |

Rinse Blanks

FSND-RB-20221019 (sample 10) Samples 1-9 associated

| | | |
|---|---|---|
| Acetone | 3.9J | LOD=3.8, samples 3,5,7 are detect <LOD, Q U @ LOD |
| | | sample 2 >LOD and <5X blank, Q J+ at result |
| Benzene | 0.36J | all ND no Q |
| Toluene | 2.5 | LOD=0.5, LOQ=1 |
| | | sample 5 detect <LOD, Q U @ LOD |
| | | samples 2,3,9 detects >LOD and <5X blank, Q J+ at result |
| Ethylbenzene | 0.24J | use TB results to Q |
| o-Xylene | 0.36J | all ND no Q |
| m,p-Xylene | 0.87J | all ND no Q |

FSND-RB-20221020 (sample 14) Samples 11-13 associated

| | | |
|---|---|---|
| Acetone | 4.5J | LOD=3.8, sample 12 detect <LOD, Q U @ LOD |
| Benzene | 0.34J | all ND no Q |
| Toluene | 2.4 | LOD=0.5, LOQ=1 |
| | | Sample 13 detects >LOD and <5X blank, Q J+ at result |
| o-Xylene | 0.29J | all ND no Q |
| m,p-Xylene | 0.88J | all ND no Q |

Professional judgment should be applied to any field blank result that was associated with a contaminated method blank. Generally, if the blank result was qualified as a non-detect due to the method blank, it does not need to be applied to the associated sample results.





However, the fact that the field blank was qualified should be noted in the data validation report.

Multiple blank contaminations (such as a batch with field blanks and a method blank) does not establish a 'hierarchy' of one blank over another. Each blank must be evaluated individually. Blanks should not be qualified due to the results of other blanks.

**Surrogates (Form II)**

✓ Use laboratory or method specific criteria to evaluate QSM 5.3 limits used

Solids

| Parameter | QC LIMITS |
|---|---|
| Toluene-d8 | 85.0 - 116 |
| 4-Bromofluorobenzene | 79.0 - 119 |
| 1,2-Dichloroethane-d4 | 71.0 - 136 |
| Dibromofluoromethane | 78-119 |

Aqueous

| Parameter | QC LIMITS |
|---|---|
| Toluene-d8 | 89.0 - 112 |
| 4-Bromofluorobenzene | 85.0 - 114 |
| 1,2-Dichloroethane-d4 | 81.0 - 118 |
| Dibromofluoromethane | 80-119 |

✓ do not evaluate if surrogates are diluted out

✓ if surrogate %R is outside limits qualify as noted below

**ACTION:** if any surrogate is below the lower acceptance limit but has a recovery greater than 10%, qualify positive results as estimated "J-" and non-detects as estimated "UJ". If any surrogate is above the upper acceptance limit, qualify detects in the sample as estimated "J+". Compounds with non-detects should not be qualified. If any surrogate in a fraction shows less than 10% recovery, flag detects for that fraction as estimated "J-", and non-detects for the fraction as unusable "X".

N5249-04 FSND-MW-29-20221019

4-Bromofluorobenzene 84%↓ Q J-/UJ

**LCS (Form III, batch worksheet)**

✓ use lab limits to evaluate accuracy (%R) QSM 5.3 limits used

**ACTION: -**If the LCS results are below the control limits, but above 10%, but the MS/MSD results are within control limits, sample data associated with the out-of-control point shall be discussed in the data validation report. No qualification of the data is necessary.

-If the LCS results are below the control limits, but above 10% and if the MS/MSD results are below the control limits but above 10%, spiked analytes that showed low recovery in all associated samples shall be flagged as estimated "J" or "UJ".

-If the LCS results are below 10% and if the MS/MSD results are below 10%, only the spiked analytes that showed low recovery in all associated samples shall be flagged as "R" for non-detects and "J" for detects.

-If the associated blank spike and the MS/MSD recoveries are above the control limits, all positive results for only the spiked analyte that showed high recovery shall be estimated "J" in the associated samples.

-If the blank spike/LCS results are outside the control limits and no MS/MSD results are available, only the spiked analytes in all associated samples shall be qualified as listed:

a) If blank spike/LCS results are below the control limits (above 10%), spiked analytes that showed low recovery in all associated samples shall be flagged as estimated "UJ" or "J".

b) If blank spike/LCS results are below 10%, only the spiked analytes that showed low recovery in all associated samples shall be flagged as "R" for non-detects and "J" for detects.

c) If blank spike/LCS results are above the control limits, detects for only the spiked analytes that showed high recovery in all associated samples shall be flagged as "J".

✓ if qualification is required, qualified all samples prepped with the LCS

LCS VX1025WBS01
LCSD VX1025WBSD01
LCS VX1027WBS01

All ok

**MS/MSD (Form III)**

✓ one per prep batch

✓ do not evaluate if sample concentration is >4X spike concentration

✓ if %R >upper limit qualify parent sample J+

- ✓ if %R <lower limit but >10%qualify parent sample J- / UJ
- ✓ if %R <10%qualify parent sample J- / X
- ✓ if RPD out qualify J (positive results only)
- ✓ qualify parent sample only

List samples, results affected and qualifications below.

MS MSD RPD

None

**Internal Standards (Form VIII)**

areas within -50% to +100% of ICAL midpoint standard

- ✓ if area >200% of ICAL midpoint standard qualify J- (no qual for ND)
- ✓ if area <50% but >20% of ICAL midpoint standard qualify J+ / UJ
- ✓ if area <20% of ICAL midpoint standard qualify positive and NDs X
- ✓ RTs within 30 seconds of midpoint standard
- ✓ if RTs not withing 30 seconds qualify NDs X

List samples, results affected and qualifications below.

All ok

**Target Compound Identification (Form1, raw data)**

- ✓ RRTs for all positive results withing ±0.06 of standard
- ✓ primary and secondary ion intensities within 20% of that in the standard

NA

**TICs (Form 1)**

- ✓ all TICs should be qualified as tentatively identified - NJ
- ✓ any semi-volatile reported as a TIC should be qualified as rejected, “R”

NA

**Compound Quantitation (Form 1, run log, prep log, EDD)**

✓ evaluate dilutions, re-extractions and re-analyses to confirm best results is reported and all other results are not reportable in EDD Level 2B

**Field Duplicates**

✓ Evaluate and qualify per QAPP if available for project

✓ see field duplicate worksheet

see field duplicate table

FSND-MW-28-20221019 (located in SDG N5248) and FSND-FD-02-20221019

All ok

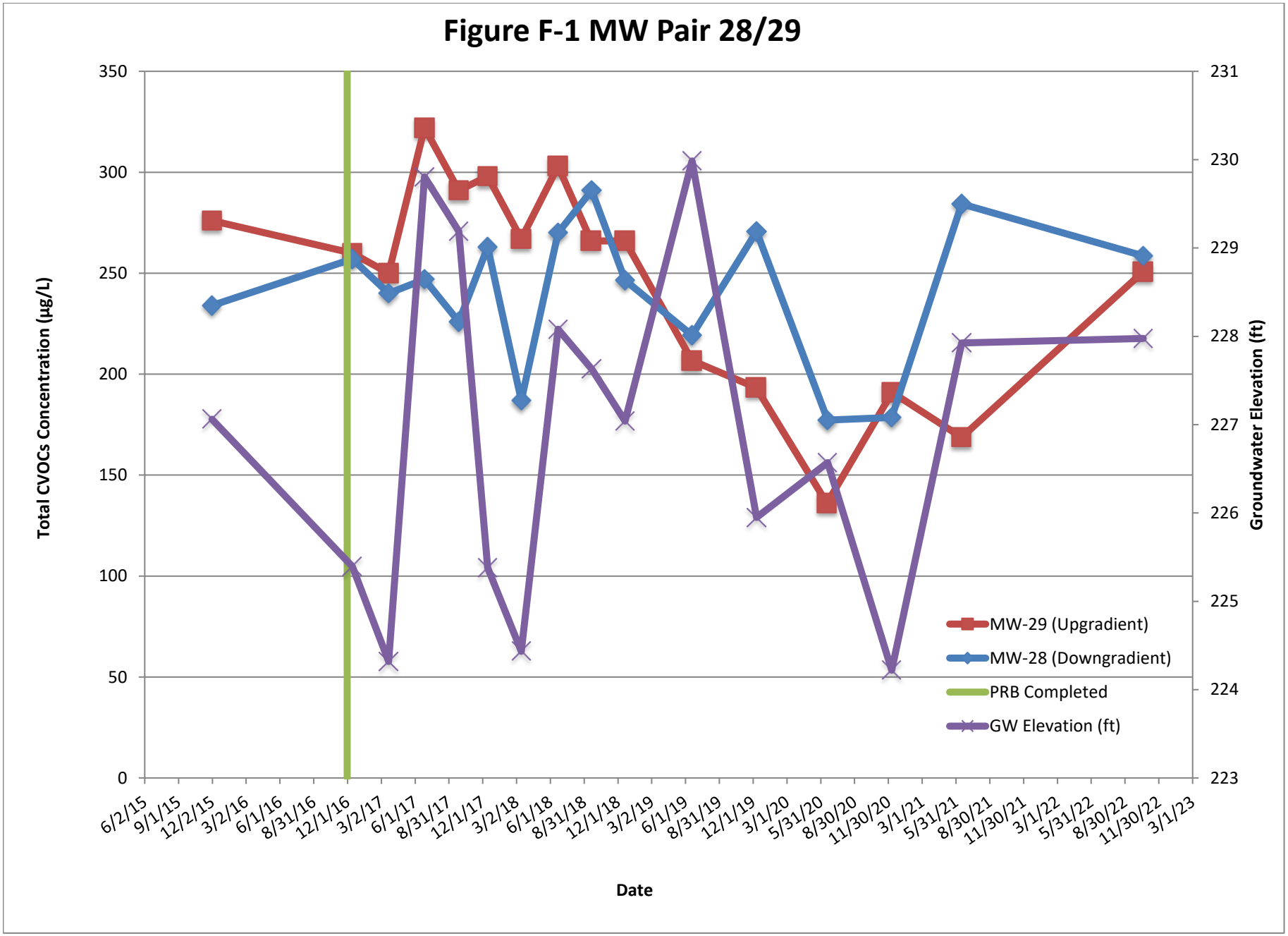
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# Appendix F

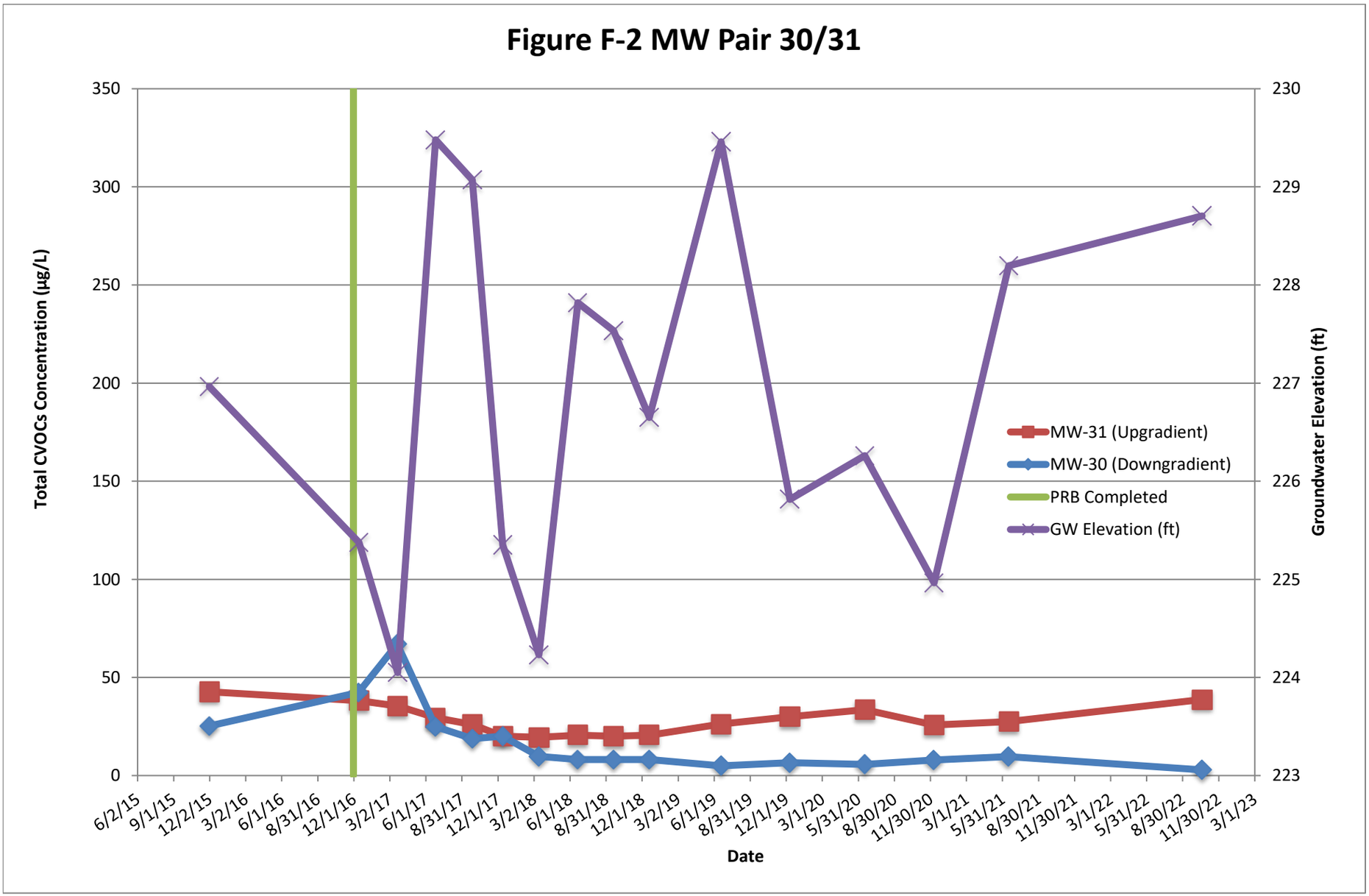
# Groundwater Concentration Trend Plots

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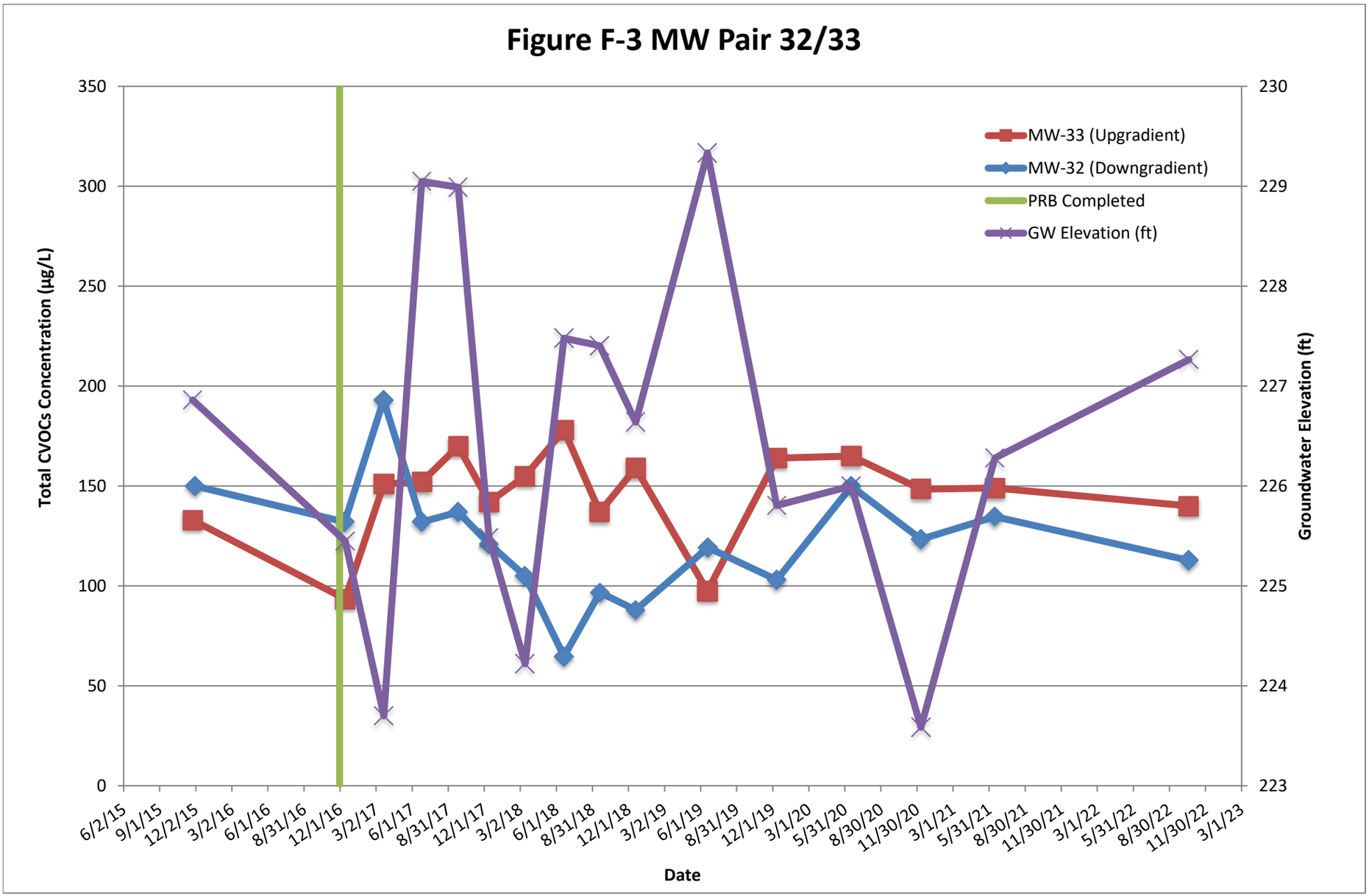
# Figure F-1 MW Pair 28/29



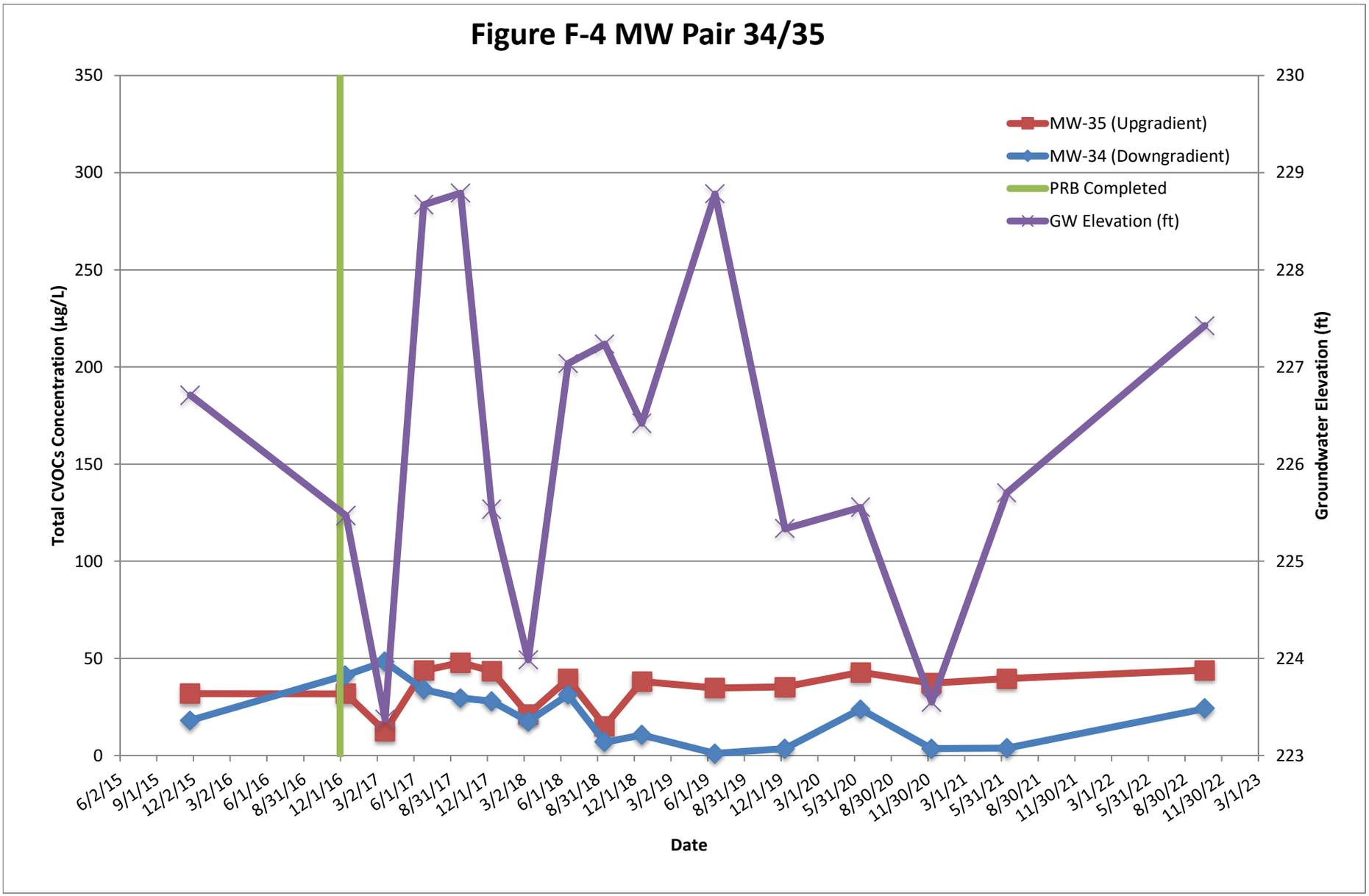
# Figure F-2 MW Pair 30/31



# Figure F-3 MW Pair 32/33



# Figure F-4 MW Pair 34/35



# Appendix G

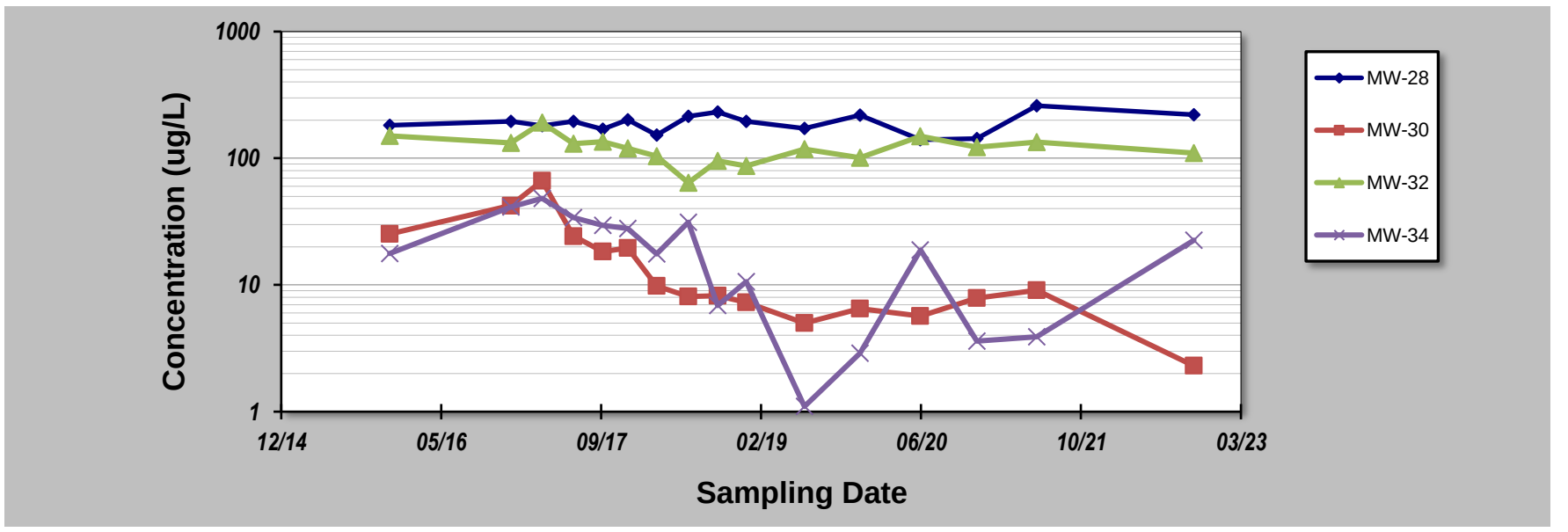
# Mann Kendall Trend Analysis Results

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# GSI MANN-KENDALL TOOLKIT
## for Constituent Trend Analysis

| | | | |
|---|---|---|---|
| Evaluation Date: | February 2023 | Job ID: | 60440641 |
| Facility Name: | Former Scotia Navy Depot | Constituent: | TCE - Downgradient |
| Conducted By: | EA Engineering, Science, and Technology | Concentration Units: | ug/L |

| Sampling Point ID: | MW-28 | MW-30 | MW-32 | MW-34 | | | |
|---|---|---|---|---|---|---|---|
| Sampling Event | Sampling Date | TCE - DOWNGRADIENT CONCENTRATION (ug/L) | | | | | | |
| 1 | 1-Dec-15 | 182 | 25.2 | 150 | 17.7 | | | |
| 2 | 14-Dec-16 | 196 | 42.3 | 132 | 41.3 | | | |
| 3 | 22-Mar-17 | 181 | 66.3 | 191 | 48.3 | | | |
| 4 | 27-Jun-17 | 195 | 24.3 | 130 | 34 | | | |
| 5 | 27-Sep-17 | 170 | 18.4 | 135 | 29.6 | | | |
| 6 | 14-Dec-17 | 201 | 19.6 | 120 | 28 | | | |
| 7 | 15-Mar-18 | 153 | 9.8 | 104 | 17.6 | | | |
| 8 | 22-Jun-18 | 214 | 8.1 | 64.1 | 31.3 | | | |
| 9 | 21-Sep-18 | 232 | 8.2 | 95.4 | 6.9 | | | |
| 10 | 20-Dec-18 | 195 | 7.3 | 87.1 | 10.6 | | | |
| 11 | 20-Jun-19 | 172 | 5 | 118 | 1.1 | | | |
| 12 | 10-Dec-19 | 219 | 6.5 | 101 | 2.9 | | | |
| 13 | 16-Jun-20 | 140 | 5.7 | 149 | 18.9 | | | |
| 14 | 10-Dec-20 | 143 | 7.9 | 122 | 3.6 | | | |
| 15 | 14-Jun-21 | 260 | 9.1 | 134 | 3.9 | | | |
| 16 | 19-Oct-22 | 220 | 2.3 | 110 | 22.5 | | | |
| 17 | | | | | | | | |
| 18 | | | | | | | | |
| 19 | | | | | | | | |
| 20 | | | | | | | | |
| Coefficient of Variation: | | 0.17 | 1.01 | 0.24 | 0.73 | | | |
| Mann-Kendall Statistic (S): | | 15 | -84 | -30 | -56 | | | |
| Confidence Factor: | | 73.3% | >99.9% | 90.3% | 99.4% | | | |
| Concentration Trend: | | No Trend | Decreasing | Prob. Decreasing | Decreasing | | | |




**Notes:**

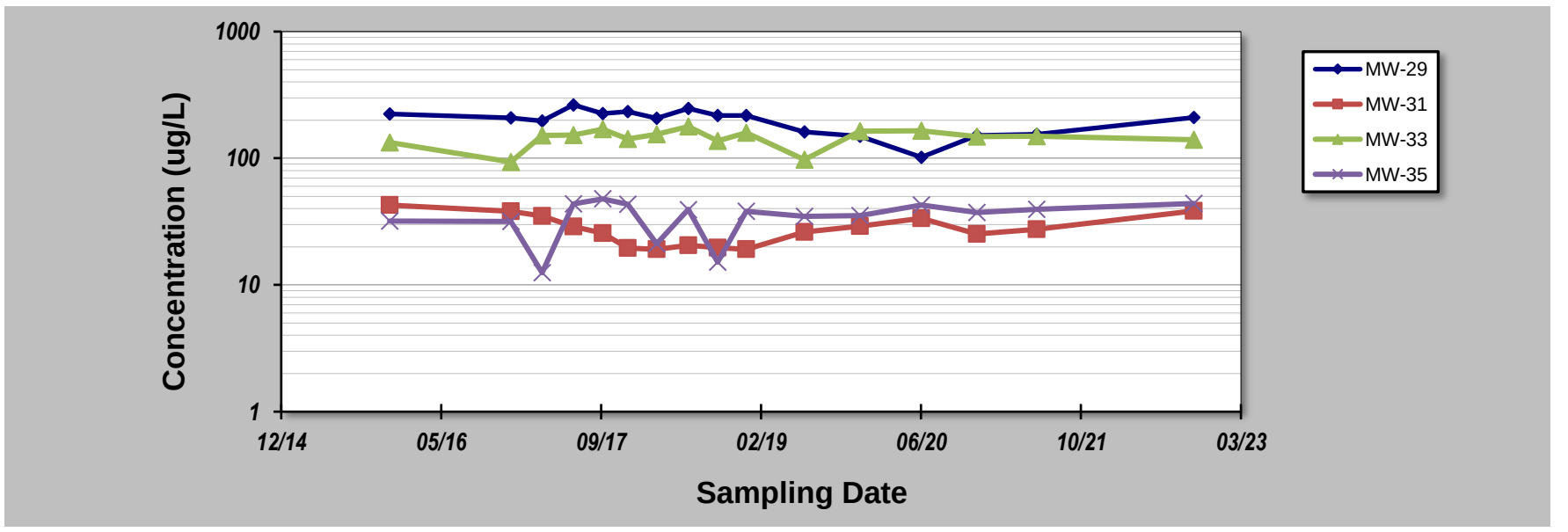
1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably 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: | February 2023 | Job ID: | 60440641 |
| Facility Name: | Former Scotia Navy Depot | Constituent: | TCE - Upgradient |
| Conducted By: | EA Engineering, Science, and Technology | Concentration Units: | ug/L |

| Sampling Point ID: | MW-29 | MW-31 | MW-33 | MW-35 | | | |
|---|---|---|---|---|---|---|---|
| Sampling Event | Sampling Date | TCE - UPGRADIENT CONCENTRATION (ug/L) | | | | | | |
| 1 | 1-Dec-15 | 224 | 42.7 | 133 | 31.9 | | | |
| 2 | 14-Dec-16 | 209 | 38.2 | 93.5 | 31.8 | | | |
| 3 | 22-Mar-17 | 197 | 35 | 151 | 12.5 | | | |
| 4 | 27-Jun-17 | 264 | 29 | 152 | 43.8 | | | |
| 5 | 27-Sep-17 | 226 | 25.6 | 170 | 47.8 | | | |
| 6 | 14-Dec-17 | 233 | 19.6 | 142 | 43.5 | | | |
| 7 | 15-Mar-18 | 207 | 19.1 | 155 | 21.2 | | | |
| 8 | 22-Jun-18 | 248 | 20.6 | 178 | 39.4 | | | |
| 9 | 21-Sep-18 | 218 | 19.7 | 137 | 15.2 | | | |
| 10 | 20-Dec-18 | 218 | 19.1 | 159 | 38.1 | | | |
| 11 | 20-Jun-19 | 161 | 26.2 | 97.4 | 34.8 | | | |
| 12 | 10-Dec-19 | 149 | 29.2 | 164 | 35.4 | | | |
| 13 | 19-Jun-20 | 102 | 33.5 | 165 | 42.9 | | | |
| 14 | 10-Dec-20 | 151 | 25.2 | 148 | 37.3 | | | |
| 15 | 14-Jun-21 | 155 | 27.5 | 149 | 39.6 | | | |
| 16 | 19-Oct-22 | 210 | 38.4 | 140 | 44 | | | |
| 17 | | | | | | | | |
| 18 | | | | | | | | |
| 19 | | | | | | | | |
| 20 | | | | | | | | |
| Coefficient of Variation: | | 0.22 | 0.27 | 0.16 | 0.30 | | | |
| Mann-Kendall Statistic (S): | | -47 | -11 | 14 | 24 | | | |
| Confidence Factor: | | 98.2% | 67.1% | 71.8% | 84.7% | | | |
| Concentration Trend: | | Decreasing | Stable | No Trend | No Trend | | | |




**Notes:**

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

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